

DRAFT

Chapter II: Language Arts, Mathematics & Science Performance Standards Connections

Primary Literacy *Early Childhood*

| Primary Literacy Early Childhood | | | | | |
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| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
| Standard 1: Reading Habits | By the end of the year, students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| Grade K Reading A Lot Reading Behaviors Discussing Books Vocabulary | Pay attention to what the words they read are saying. Listen to one or two books read aloud each day in school and discuss. Use newly learned vocabulary. ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 1 | Use word processing to match objects to words. Use drawing programs to create pictorial reaction to readings. Record oral responses as sound background for written responses. | T9. Use word processing T10. Create products | Reader Rabbit's Interactive Reading-Journey 2 Reader Rabbit's Reading Stanley's Sticker Stories Orchard's Flashcard Maker Living Books Library Steck-Vaughn | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com The LightSpan Network http://www.lightspan.com |

**Primary Literacy
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| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | & 2 pages 103-107 Writing mechanics levels 1 & 2 pages 127 – 129 | | | interactive readers | |
| Grade 1 Independent & Assisted Reading Being Read To Discussing Books Vocabulary | Read four or more books each day independently or with assistance. Compare two books by the same author. Learn new words each day from talk and books read aloud. ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 3 & 4 pages 107 – 109 Writing mechanics levels 3 & 4 pages 131 – 133 | Create pictorial storyboards. Use Internet to capture author photos for comparison. Compose KidPix sight and sound examples of new words. | T7. Use age-appropriate digital resources T8. Use related peripheral devices T9. Use word processing T10. Create products T13. Use the Internet | Reader Rabbit’s Interactive Reading Journey 2 Reader Rabbit’s Reading 1 & 2 Living Books Library | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/ The LightSpan Network http://www.lightspan.com |
| Grade 2 Independent & Assisted Reading Being Read To Discussing Books | Hear texts read aloud from a variety of genres. Read their own writing and writing of peers. | Use Internet for biographical synopsis of authors. Create story webs. Develop original | T7. Use age-appropriate digital resources T8. Use related peripheral devices | Student Writing Center Reader Rabbit’s Reading Development Library Level 1/2 & _ KidPix | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com |

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| Vocabulary | <p>Discuss recurring themes across work.</p> <p>Learn new words each day from their reading and talk.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 5 & 6 page 111 Writing mechanics levels 5 & 6 pages 133</p> | stories. | <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>Storybook Weaver Deluxe</p> <p>Stanley’s Sticker Stories</p> <p>Orchard’s Flashcard Maker</p> <p>Lightspan Network Flashcard maker and printable worksheets</p> <p>Inspiration</p> | <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cia.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> <p>Merriam-Webster Online: The Language Center - Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com</p> |
| <p>Grade 3 Independent & Assisted Reading</p> <p>Being Read To</p> <p>Discussing Books</p> <p>Vocabulary</p> | <p>Read & hear texts read aloud from a variety of genres.</p> <p>Discuss underlying themes or messages.</p> <p>Read and respond to poems, stories, memoirs and plays written by peers.</p> | <p>Create thematic slide show.</p> <p>Use Internet for research.</p> <p>Create an author’s biographical web.</p> <p>Create original multimedia poem or story as response to</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>Student Writing Center</p> <p>Reader Rabbit’s Reading Development Library Level 1/2</p> <p>KidPix</p> <p>Storybook Weaver Deluxe</p> <p>Imagination Express</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson</p> |

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| | Use information that is accurate. | material read. Use word processing/ create spreadsheet to record responses to peer's work. | T12 use and create spreadsheets T13. Use the Internet | (various titles) | plans. http://www.sdcoe.k12.ca.us/score/cla.html Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/ The LightSpan Network http://www.lightspan.com Merriam-Webster Online: The Language Center - Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com |
| Reading Standard 2: Getting The Meaning Accuracy & Fluency Self-monitoring & Self – Correcting Strategies Comprehension | By the end of the year, students will: | Students will: | Students will: | | |
| Grade K | Create artwork or a written response that shows comprehension of the story that was read. Retelling what they have read using their | Use word processing to match objects to initial sounds. Use drawing programs to create pictorial reaction to readings. | T9. Use word processing T10. Create products | The Art Lesson KidPix Paint, Write & Play Storybook Weaver Deluxe | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com |

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| | <p>own words.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand level 1 & 2 pages 103 – 107</p> <p>ABC sight words level 1 & 2 page 65-71</p> <p>Phonemic awareness levels 1 & 2 page 87</p> | <p>Record oral responses as sound background for written stimulus.</p> | | | <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 1 | <p>Tell if words make sense in context.</p> <p>Make predictions about what might happen.</p> <p>Retell a story.</p> <p>Extend a story.</p> <p>Use cues of punctuation to help in reading fluently & to get the meaning.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strands levels 2,3 &4 pages 107 – 109</p> | <p>Create pictorial flashcards of new words.</p> <p>Compose kidpix sight and sound examples of new words.</p> <p>Use word processor to write alternate ending.</p> <p>Create a graphic web to demonstrate comprehension.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>AppleWorks-ClarixWorks</p> <p>ClarixWorks for Kids</p> <p>Student Writing Center</p> <p>Inspiration</p> <p>Lightspan Network Flashcard maker and printable worksheets</p> <p>KidPix</p> <p>Orly's Draw a Story</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> |

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| | <p>Phonemic awareness levels 3 & 4 page 89</p> <p>ABC sight words level 3 & 4 p. 73</p> | | | | <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 2 | <p>Combine information from two different parts of the text.</p> <p>Compare relationships between parts of a story.</p> <p>Discuss or write about the themes of a book.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE</p> <p>Reading strand levels 5 & 6 page 111</p> <p>ABC sight words levels 5 & 6 pages 75-78</p> <p>Phonemic awareness levels 5</p> | <p>Create a graphic organizer.</p> <p>Use CD –ROM encyclopedia for author backgrounds.</p> <p>Use word processor thesaurus for synonyms.</p> <p>Create a talking book using a similar theme.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>Appleworks-ClarisWorks</p> <p>ClarisWorks for kids</p> <p>Inspiration</p> <p>Lightspan Network Flashcard maker and printable worksheets</p> <p>KidPix</p> <p>Orly’s Draw a Story</p> <p>DK Eyewitness Children’s Dictionary</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Reader Rabbit’s Interactive Reading 1-2</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 3 | <p>Compare stories they have read or heard.</p> <p>Use cues of punctuation to guide them in getting</p> | <p>Create a thematic slide show.</p> <p>Use Internet for research.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related</p> | <p>Cornerstone : Reading Vocabulary & Reading Comprehension</p> <p>Appleworks-</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> |

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| | <p>meaning.</p> <p>Retrieve information.</p> | <p>Create a graphic web comparison.</p> <p>Create original multimedia poem or story as response to material read.</p> | <p>peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>ClarisWorks</p> <p>ClarisWorks for kids</p> <p>Inspiration</p> <p>Lightspan Network Flashcard maker and printable worksheets</p> <p>KidPix</p> <p>Orly's Draw a Story</p> <p>DK Eyewitness Children's Dictionary</p> <p>DK Eyewitness Children's Encyclopedia</p> | <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| <p>Reading Standard 3: Print-Sound Code</p> <p>Knowledge of Letters & their Sounds</p> <p>Phonemic Awareness</p> <p>Reading Words</p> | <p>By the end of the year, students will:</p> | <p>Students will:</p> | <p>Students will:</p> | | |
| <p>Grade K</p> | <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE</p> <p>Writing mechanics levels 1 & 2 pages 127</p> | <p>Use word processor to record word lists.</p> <p>Match objects to words.</p> | <p>T9. Use word processing</p> | <p>Let's Go Read! 1</p> <p>Let's Go Read! 2</p> <p>Living Books Library</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> |

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| | <p>– 129</p> <p>ABC sight words level 1 & 2 page 71</p> <p>Phonemic awareness levels 1 & 2 page 87</p> | <p>Create pictorial flashcards of new words.</p> | | <p>A to Zap</p> <p>KidPix</p> | <p>Scholastic Online http://www.scholastic.com</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 1 | <p>Know regular letter-sound correspondences.</p> <p>Recognize about 150 high frequency words encountered in reading.</p> <p>Use onsets and rhymes to create new words.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Writing mechanics levels 3 & 4 pages 131 – 133 ABC Sight Words levels 3 & 4 page 73 Phonemic Awareness levels 3 & 4 page 89</p> | <p>Use word processor to record word lists.</p> <p>Create pictorial flash cards of new words.</p> <p>Use drawing program to illustrate a rhyme.</p> <p>Use painting program stamps and letters for sound symbol pictures.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>Reader Rabbit’s Learn to Read & Reading 1</p> <p>Living Books Library</p> <p>A to Zap</p> <p>KidPix</p> <p>WriteOutLoud</p> <p>Lightspan Network Flashcard maker and printable worksheets</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 2 | <p>Read regularly spelled one- and two-syllable words automatically.</p> | <p>Use CD-ROM dictionary to hear spelled words.</p> | <p>T7. Use age-appropriate digital resources</p> | <p>Reader Rabbit’s Reading 2</p> <p>Reader Rabbit 3</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> |

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| | <p>Recognize or figure out most irregularly spelled words and spelling patterns.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Writing mechanics levels 5 & 6 page 133</p> <p>ABC Sight Words levels 5 & 6 pages 75-78</p> <p>Phonemic Awareness levels 5 & 6 page 91</p> | <p>Use word processor to create listing of irregular words.</p> | <p>T9. Use word processing</p> | <p>WriteOutLoud</p> <p>DK Eyewitness Children's Dictionary</p> <p>ClarisWorks for Kids</p> <p>AppleWorks-ClarisWorks</p> <p>Student Writing Center</p> | <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 3 | <p>Decode words automatically across the whole span of language.</p> <p>Continue to learn about words.</p> | <p>Use CD-ROM dictionary to hear spelled words.</p> <p>Use word processor to create listing of irregular words.</p> <p>Use word processing thesaurus.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T9. Use word processing</p> | <p>Reader Rabbit's Reading Development Library 3 / 4</p> <p>WriteOutLoud</p> <p>DK Eyewitness Children's Dictionary</p> <p>ClarisWorks for Kids</p> <p>AppleWorks-ClarisWorks</p> <p>Student Writing Center</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> |

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| | | | | | Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/ The LightSpan Network http://www.lightspan.com |
| Writing Standard 1: Habits and Processes | By the end of the year, students will: | Students will: | Students will: | | |
| Grade K | Write daily. Use whatever means are at hand to communicate and make meaning (e.g., drawings, letter strings, scribbles). ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 1 & 2 pages 103-107 | Use drawing programs to create pictorial stories. Create pictorial flashcards of new words. | T8. Use related peripheral devices T10. Create products T13. Use the Internet | Stanley’s Sticker Stories StoryBook Weaver Deluxe KidPix Student Writing Center Kid Works Deluxe | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com The LightSpan Network http://www.lightspan.com |
| Grade 1 | Write daily. Revise, edit and proofread work as appropriate. ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 3 | Create basic journal outline using word processor and spell check. Create stories. Write story reviews. | T9. Use word processor T10. Create products | ClarisWorks for Kids AppleWorks-ClarisWorks Stanley’s Sticker Stories StoryBook Weaver Deluxe | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com The Schools of California Online Resources for Educators: |

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| | & 4 pages 107 - 109 | | | KidPix Orly's Draw a Story Paint, Write & Play Student Writing Center Kid Works Deluxe | language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/ The LightSpan Network http://www.lightspan.com |
| Grade 2 | Write daily. Routinely reread, revise, edit and proof read work. Write alternate endings to stories. ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 5 & 6 page 111 | Create basic journal outline using word processor and spell check. Create stories. Write story reviews. Write a research report. | T8. Use related peripheral devices T9. Use word processing T10. Create products T16. Create and implement assessment components | ClarisWorks for Kids AppleWorks-ClarisWorks Stanley's Sticker Stories StoryBook Weaver Deluxe KidPix Orly's Draw a Story Paint, Write and Play Student Writing Center Kid Works Deluxe | A great location for primary literacy activities http://school.aol.com/primary/index.adp Scholastic Online http://www.scholastic.com The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/ |

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| | | | | | <p>The LightSpan Network http://www.lightspan.com</p> <p>Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com</p> |
| Grade 3 | <p>Routinely rework, revise, edit and proofread work.</p> <p>Write for a specific purpose.</p> <p>Create own stories, poems, plays and songs.</p> | <p>Create basic journal outline using word processor and spell check.</p> <p>Create mobiles, pictographs, signs, etc. to illustrate the story.</p> <p>Create stories.</p> <p>Write story reviews.</p> <p>Write a research report.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T16. Create and implement assessment components</p> | <p>ClarisWorks for Kids</p> <p>AppleWorks-ClarisWorks</p> <p>StoryBook Weaver Deluxe</p> <p>KidPix</p> <p>Orly's Draw a Story</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> <p>Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders.</p> |

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| <p>Writing Standard 2: Writing Purposes and Resulting Genres</p> <p>Getting Things Done: Functional Writing</p> <p>Producing & Responding to Literature</p> | <p>By the end of the year, students will:</p> | <p>Students will:</p> | <p>Students will:</p> | | <p>http://www.m-w.com</p> |
| <p>Grade K Sharing Events</p> <p>Telling Stories</p> <p>Narrative Writing</p> <p>Informing others: Report or informational writing</p> | <p>Name and label objects and places.</p> <p>Gather, collect and share information about a topic.</p> <p>Create their own stories, poems, plays and songs.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 1 & 2 Pages 103 – 107 Writing mechanics levels 1 & 2 pages 127 - 129</p> | <p>Create flashcards for new words.</p> <p>Use word processor to write their own stories.</p> <p>Use age-appropriate encyclopedia.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>Lightspan Network Flashcard maker and printable worksheets</p> <p>Orchard Software</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| <p>Grade 1</p> | <p>Share events.</p> <p>Tell stories.</p> | <p>Use draw programs to draw stories.</p> <p>Use word processing</p> | <p>T7. Use age-appropriate digital resources</p> | <p>ClarisWorks for Kids</p> <p>AppleWorks- ClarisWorks</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> |

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| | <p>Write narratives.</p> <p>Write recipes.</p> <p>Write story reviews.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 3 & 4 pages 107 – 109 Writing mechanics levels 3 & 4 pages 131 - 133</p> | <p>write stories, narratives recipes and reviews.</p> <p>Create animated books.</p> | <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T16. Create and implement assessment components</p> | <p>Storybook Weaver Deluxe</p> <p>Paint, Write & Play</p> <p>Orly’s Draw a Story</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cia.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 2 | <p>Use diagrams, charts or illustrations as appropriate to enhance written text.</p> <p>Write letters to authors telling what they thought or to seek information.</p> <p>Write stories, poems, memoirs, songs and dramas.</p> <p>ECLAS</p> | <p>Create illustrated story book.</p> <p>Use word processing to write to authors.</p> <p>Create a web of a story’s plot.</p> <p>Use Internet to select pictures for use in story.</p> | <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T16. Create and implement assessment</p> | <p>ClarisWorks for Kids</p> <p>AppleWorks-ClarisWorks</p> <p>Storybook Weaver Deluxe</p> <p>KidPix</p> <p>Paint, Write and Play</p> <p>Orly’s Draw a Story</p> <p>Student Writing Center</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cia.html</p> |

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| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
| | <p>INSTRUCTIONAL RESOURCE GUIDE Reading strand levels 5 & 6 page 111 Writing mechanics levels 5 & 6 page 133</p> | | components | Kid Works Deluxe | <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> <p>Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com</p> |
| Grade 3 | <p>Creates a sequence of events that unfolds naturally.</p> <p>Use illustrations detailing steps in procedural writing.</p> <p>Compare two works by an author.</p> <p>Write stories, memoirs, poetry & plays.</p> | <p>Create illustrated story and poetry book.</p> <p>Use word processor to write to authors.</p> <p>Create a graphic web of a story’s plot.</p> <p>Create a slide show comparison of works of the author.</p> <p>Create autobiographical timeline.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T16. Create and implement assessment components</p> | <p>AppleWorks-ClarisWorks</p> <p>KidPix</p> <p>Storybook Weaver Deluxe</p> <p>Inspiration</p> <p>Timeliner</p> <p>HyperStudio</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> |

**Primary Literacy
Early Childhood**

| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|--|---|--|--|---|
| | | | | | <p>The LightSpan Network http://www.lightspan.com</p> <p>Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com</p> |
| <p>Writing Standard 3: Language Use and Conventions</p> <p>Style & Syntax</p> <p>Vocabulary & Word choice</p> <p>Spelling Conventions</p> | <p>By the end of the year, students will:</p> | <p>Students will:</p> | <p>Students will:</p> | | |
| <p>Grade K</p> | <p>Write using inventive spelling.</p> <p>Write words used in daily speech.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Writing mechanics levels 1 & 2 pages 127 – 129 Phonemic awareness levels 1 & 2 page 87</p> | <p>Create an original illustrated story.</p> <p>Create pictorial flashcards of new words.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>Cornerstone Vocabulary</p> <p>Storybook Weaver</p> <p>KidPix</p> <p>Stanley’s Sticker Stories</p> <p>Orly’s Draw-a- Story</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| <p>Grade 1</p> | <p>Draw on a range of resources to spell</p> | <p>Create pictorial flashcards for new</p> | <p>T7. Use age-appropriate digital</p> | <p>KidPix</p> | <p>A great location for primary literacy activities</p> |

| Primary Literacy Early Childhood | | | | | |
|---|---|---|---|--|---|
| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
| | <p>unfamiliar words.</p> <p>Produce writing which uses words in their speaking vocabulary.</p> <p>Demonstrate awareness by approximating the use of punctuation.</p> <p>Use newly learned words in writing.</p> <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE Writing mechanics levels 3 & 4 pages 131 – 133 Phonemic awareness level 3 & 4 page 89</p> | <p>words.</p> <p>Write and illustrate stories.</p> <p>Use digital dictionaries and encyclopedias.</p> | <p>resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T16. Create and implement assessment components</p> | <p>Stanley’s Sticker Stories</p> <p>Orly’s Draw-a- Story</p> <p>Storybook Weaver Deluxe</p> <p>Paint, Write & Play</p> <p>Flash Card Maker</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock’s Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| Grade 2 | <p>Produce writing in which most high frequency words are spelled correctly.</p> <p>Extend writing vocabulary by using words related to the topic or setting.</p> <p>Reproduce sentence structures found in various genres.</p> | <p>Create illustrated story books.</p> <p>Use word processor to correspond with authors.</p> <p>Create an graphic web of a story’s plot.</p> <p>Use CD-Rom or online thesaurus to find and list synonyms.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>AppleWorks-ClarisWorks</p> <p>KidPix</p> <p>Storybook Weaver Deluxe</p> <p>Paint, Write and Play</p> <p>Orly’s Draw a Story</p> <p>Student Writing Center</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans.</p> |

**Primary
Early
Literacy
Childhood**

| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
|---------------------------|--|--|---|---|--|
| | <p>ECLAS INSTRUCTIONAL RESOURCE GUIDE</p> <p>Writing mechanics levels 5 & 6 page 133</p> <p>Phonemic awareness levels 5 & 6 page 91</p> | | <p>T13. Use the Internet</p> <p>T16. Create and implement assessment components</p> | <p>Kid Works Deluxe</p> | <p>http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| <p>Grade 3</p> | <p>Produce writing in which most high frequency words are spelled correctly.</p> <p>Use strategies to edit spelling and punctuation.</p> <p>Extend writing vocabulary by using specialized words related to topic.</p> | <p>Create illustrated story and poetry book.</p> <p>Use word processor and spell check.</p> <p>Create a graphic web of a story's plot.</p> <p>Create a slide show comparison of two authors.</p> <p>Use CD-ROM or online dictionary to find and list synonyms.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T16. Create and implement assessment components</p> | <p>KidPix</p> <p>Inspiration</p> <p>Paint, Write and Play</p> <p>Orly's Draw a Story</p> <p>AppleWorks-ClarWorks</p> <p>Storybook Weaver Deluxe</p> <p>EasyBook Deluxe</p> <p>HyperStudio</p> <p>Student Writing Center</p> <p>Kid Works Deluxe</p> | <p>A great location for primary literacy activities http://school.aol.com/primary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>The LightSpan Network http://www.lightspan.com</p> |

| Primary Literacy Early Childhood | | | | | |
|-------------------------------------|--------------------|--|----------------------|----------------------------------|---|
| NYC Performance Standards | Content Activities | Technology-based Performance Products/Projects | Technology standards | Suggested Software and Resources | Web Sites |
| | | | | | Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com |

English Language Arts

Elementary School

Language Arts
Elementary School

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---------------------------|--------------------|--|--|----------------------------------|--|
| E1 Reading | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | <p>A great location for primary literacy activities http://school.aol.com/elementary/index.adp</p> <p>Scholastic Online http://www.scholastic.com</p> <p>The Schools of California Online Resources for Educators: language arts links, a teacher resources section, and lesson plans. http://www.sdcoe.k12.ca.us/score/cla.html</p> <p>Kathy Schrock's Educational Site http://school.discovery.com/schrockguide/</p> <p>Merriam-Webster Online: Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com</p> <p>The LightSpan Network http://www.lightspan.com</p> |
| E1a Read twenty-five | Read articles and | Use the Internet as a | T7. Use age- | AppleWorks- | Mr. William Shakespeare |

Language Arts
Elementary School

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|---|---|---|---|--|
| books of the quality and complexity illustrated in the sample reading list. | <p>stories.</p> <p>Create a reading log (titles, authors, genre, and comments).</p> <p>Use and create webs as planning devices.</p> | <p>resource.</p> <p>Use databases.</p> | <p>appropriate digital resources</p> <p>T11. Use and create databases</p> <p>T13. Use the Internet</p> | <p>ClarisWorks</p> <p>MS Office</p> | <p>http://daphne.palomar.edu/shakespeare/</p> |
| E1b Read and comprehend at least four books on the same subject, or by the same author, or in the same genre and produce evidence of reading. | <p>Sort and analyze words, plot trends, settings by specific authors.</p> <p>Create graphic organizers to chart information and compare/contrast.</p> <p>Produce a literary response paper.</p> | <p>Use databases.</p> <p>Design a plot and character web.</p> <p>Create an alternate ending to a story.</p> <p>Use drawing tools.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T10. Create products</p> <p>T11. Use and create databases</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>Inspiration</p> <p>KidPix Studio</p> | <p>The Realm of Books and Dreams: a wide array of children's stories, fables, fairytales and mysteries. Includes homework help and activities for children. http://www.bconnex.net/~mbuchana/realms/page1/index.html</p> <p>The Encyclopedia Mythica: An encyclopedia of mythology, folklore and legends. http://www.pantheon.org/mythica</p> <p>Sparknotes: Online study guides for literary works http://www.thespark.com/sparknotes/</p> |
| E1c Read and comprehend informational materials to develop understanding and expertise and produces written or oral work | <p>Create webs as planning devices.</p> <p>Create a magazine.</p> <p>Use encyclopedias.</p> | <p>Use desktop publishing</p> <p>Use CD-ROM libraries and digital encyclopedias.</p> <p>Create a magazine.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T10. Create products</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>Press Writer</p> | <p>Library of Congress http://www.loc.gov</p> <p>MidLink Magazine: interactive 'zine for middle-schoolers to promote creative writing http://longwood.cs.ucf.edu/~Mid</p> |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---------------------------------|---|--|---|--|--|
| | <p>Contribute to an attribute book</p> <p>Present information to an audience of peers</p> | <p>Create a multimedia presentation.</p> <p>Create graphic organizers.</p> | | <p>Student Writing Center</p> <p>DK Multimedia Encyclopedia</p> <p>Golden Book Digital Encyclopedia</p> <p>MS Encarta</p> <p>Grolier's Encyclopedia</p> <p>Inspiration</p> | <p>Link/</p> <p>Merriam-Webster Online: http://www.m-w.com/</p> <p>The Internet Public Library http://www.ipl.org/</p> <p>United States Holocaust Memorial Museum: The Museum's archives, including photographs, transcripts of lectures, and guidelines for teaching the Holocaust. http://www.ushmm.org/</p> |
| <p>E1d Read aloud fluently.</p> | <p>Read original stories to younger children.</p> <p>Present plot summaries to the class.</p> <p>Create webs as planning devices.</p> | <p>Create an slide show or animation of a story.</p> <p>Create a portfolio of plot synopses.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>AppleWorks-ClarisWorks</p> <p>MS Office</p> <p>Student Writing Center</p> <p>Inspiration</p> <p>HyperStudio</p> | <p>The Federal Web Locator: a list of all Federal government information on the Internet. http://www.law.vill.edu/fed-agency/fedwebloc.html</p> <p>GovBot: allows searches of U.S. government Web pages, documents, statistics, agencies, departments and resources. http://www.nwbuildnet.com/nwb n/govbot.html</p> <p>The Jonsson Library of Government Documents: a collection of both American and foreign materials http://www-sul.stanford.edu/depts/jonsson/</p> |

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|--------------------------------------|--|---|--|---|---|
| | | | | | The National Archives and Records Administration: primary documents for use in the classroom. http://www.nara.gov/ |
| E2 Writing | Students will: | Students will: | Students will: (t1-t6 are implied throughout the listed activities) | | |
| E2a Produce a report of information. | <p>Write an informative report.</p> <p>Write an “all-about” book.</p> <p>Write a chapter book.</p> <p>Create webs as planning devices.</p> | <p>Recognize and use keywords to narrow a search.</p> <p>Import or scan pictures and charts to support information.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices.</p> <p>T9. Use word processing</p> <p>T10- create products</p> <p>T13. Use the Internet</p> <p>T14- select appropriate technologies</p> <p>T15- understand and practice responsible use of information</p> | <p>AppleWorks-ClarWorks</p> <p>MS Office</p> <p>Adobe Photoshop</p> <p>KidPix Studio</p> <p>Student Writing Center</p> <p>Inspiration</p> | <p>TIME For Kids: the popular magazine, features views of current events from kids’ perspectives http://www.pathfinder.com/TFKI</p> <p>Alphabet Superhighway Cyberzine: www.ash.udel.edu/ash/index.html</p> <p>Writing Den: writing and reading exercises with good graphics and audio. http://www2.actden.com/writ_den/index.htm</p> <p>AOL presents an excellent multi-purpose site: www.school.aol.com</p> |

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|---|--|---|--|--|--|
| <p>E2b Produce a response to literature.</p> | <p>Write: A book review; A parody; A literary analysis paper; or A comparison of a children’s literary classic with a televised version.</p> <p>Create and illustrate original stories mirroring the text.</p> <p>Publish book reviews in a literary newsletter.</p> <p>Create pop-up or tunnel books.</p> <p>Create an info web</p> | <p>Use word processing.</p> <p>Use and create graphics.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices.</p> <p>T9. Use word processing</p> <p>T10- create products</p> <p>T13. Use the Internet</p> <p>T14- select appropriate technologies</p> <p>T15- understand and practice responsible use of information</p> | <p>HyperStudio</p> <p>AppleWorks-ClarısWorks</p> <p>MS Office</p> <p>Press Writer</p> <p>Student Writing Center</p> <p>Inspiration</p> | <p>Interactive Language Arts and Journalism Page: Students can discover what’s behind the who, what, where, when and why as they take on the roles of journalists. http://www.writesite.org</p> <p>Fascinating topics: http://edsitement.neh.gov/websites.html</p> <p>Inkspots, workshops & tutorials for young writers, including tips on how books get published: http://www.interlog.com/~ohi/inkspot/young.htm</p> |
| <p>E2c Produce a narrative account (fictional or autobiographical).</p> | <p>Write: An autobiographical account; An imaginative story; A narrative picture book; or A retelling of a traditional tale from an alternate point of view</p> | <p>Create graphic organizers as part of the pre-writing process.</p> <p>Use word processing to write a report.</p> <p>Import photographic images to enhance personal writing.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices.</p> <p>T9. Use word processing</p> | <p>Inspiration</p> <p>AppleWorks-ClarısWorks</p> <p>MS Office</p> <p>Click Art</p> | <p>Documenting the American South: primary materials documenting the cultural history of the American South from the viewpoint of Southerners. http://metalab.unc.edu/docsouth/</p> <p>Fascinating topics: http://edsitement.neh.gov/websites.html</p> |

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|---|---|---|---|--|
| | <p>Create webs as planning devices</p> | <p>Create an audio slide story.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create graphic organizers.</p> | <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T14. Select appropriate technologies</p> <p>T15 Understand and practice responsible use of information</p> | | <p>Bartlett’s Familiar Quotations (Who said What?) http://www.columbia.edu/acis/bartleby/bartlett/</p> <p>Biography.Com: The World’s Best Bios http://www.biography.com/</p> |
| <p>E2d Produce a narrative procedure.</p> | <p>Create: A how-to book; A set of rules for playing a game; A chapter book based on procedures; Rules for running a class meeting; or Procedures for accessing information in the library.</p> <p>Create an illustrated recipe book using word processing or desktop publishing.</p> <p>Devise and create a board game with rules.</p> | <p>Use word processing.</p> <p>Use desktop publishing to create an illustrated recipe book.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices.</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> <p>T14. Select appropriate technologies</p> | <p>Inspiration</p> <p>AppleWorks-Clarworks</p> <p>MS Office</p> <p>PressWriter</p> <p>KidPix Studio</p> | <p>Online recipe for Dr. Seuss’s green eggs and ham: www.randomhouse.com/seussville</p> <p>Realkids is an informative site for young writers, featuring guidelines and hints as well as book reviews: www.realkids.com/club.shtml</p> |

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|--|--|--|---|---|
| | <p>Prepare a research manual for using the library.</p> <p>Create webs as planning devices.</p> | | <p>T15. Understand and practice responsible use of information</p> | | |
| <p>E3 Speaking, Listening and Viewing</p> | <p>Students will:</p> | <p>Students will:</p> | <p>Students will: (T1-T6 are implied throughout the listed activities)</p> | | |
| <p>E3a Participate in one-to-one conferences with the teacher, paraprofessional or adult volunteer.</p> | <p>Present and discuss a draft book review, report or interview.</p> <p>Analyze a TV or movie program with a teacher or parent.</p> <p>Discuss a collection of the student's work with an adult.</p> <p>Create webs as planning devices.</p> | <p>Create a multimedia presentation.</p> <p>Create a "Roger Ebert" type TV show discussing a book.</p> <p>Use word processing to write a report.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources.</p> <p>T8. Use peripheral devices.</p> <p>T9 . Use word processing.</p> <p>T10. Create products.</p> <p>T13. Use the Internet.</p> | <p>HyperStudio</p> <p>AppleWorks-ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>Apple iMovie</p> <p>Inspiration</p> | <p>Great Speeches: audio library of famous speeches. Includes speeches by Martin Luther King Jr., Mahatma Gandhi, and feminist Gloria Steinem, et al. http://www.historychannel.com/speeches/</p> |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|--|--|--|--|--|
| E3b Participate in group meetings. | <p>Participate in live author conferences.</p> <p>Create a plan for a group project.</p> <p>Create webs as planning devices.</p> <p>Role play to better understand an historical event.</p> <p>Have an on-line debate.</p> <p>Stage a remote panel discussion.</p> | <p>Create a multimedia presentation.</p> <p>Use word processing.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T9. Use word processing</p> <p>T13. Use the Internet</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>Inspiration</p> <p>HyperStudio</p> | <p>Book Radio – Listen to interviews with contemporary authors. http://www.bookradio.com</p> |
| E3c Prepare and deliver an individual presentation. | <p>Develop a multimedia presentation for a report, review or persuasive essay.</p> <p>Record a report presented as a newsperson.</p> <p>Report on research of a topic of interest to the class</p> <p>Present an explanation of a science project to parents</p> | <p>Emcee a multimedia presentation.</p> <p>Create a multimedia presentation.</p> <p>Use word processing to write a report.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet</p> | <p>HyperStudio</p> <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>Press Writer</p> <p>Student Writing Center</p> <p>Inspiration</p> | <p>Eserver: Literary collections & links (including multimedia). http://english-server.hss.cmu.edu/</p> <p>Giving a Speech: lists eight communication power tools for delivering a speech http://www.agric.gov.ab.ca/ruraldev/rurallea/rgvsp1.html</p> |

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|--|--|---|---|--|
| | Create webs as planning devices | | | | |
| E3d Make informed judgments about T.V., radio, and film productions. | Present a paper on reasons for selecting one media choice over another. Analyze the appeal of certain commercials. | Create a report. Record a report presented as a newsperson. Create a multimedia presentation. | T7. Use age-appropriate digital resources T9. Use word processing T13. Use the Internet | AppleWorks-Clarworks MS Office Student Writing Center | |
| E4 Conventions Grammar, and Usage of the English Language | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| E4a Demonstrate a basic understanding of the rules of the English language (in written and oral work). Select the structures and features of language appropriate to the purpose, audience and context of the work. | Write for a variety of purposes. Proofread other students' work. Write the same piece for different audiences. | Create a report. Use the spell check feature of a word processing program. Use the thesaurus feature of a word processing program. | T9. Use word processing | AppleWorks-Clarworks MS Office Student Writing Center | Webster Online: grammar lessons, including sentence and essay sections. Includes over 150 interactive quizzes. http://www.webster.comnet.edu/HP/pages/darling/grammar.htm Roget's Thesaurus Online http://humanities.uchicago.edu/forms_unrest/ROGET.html Great vocabulary site: www.syndicate.com/index.html Dictionaries Online http://www.yahoo.com/Reference/Dictionaries/ |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|--|---|---|---|--|--|
| E4b Analyze and subsequently revise work, to clarify it or make it more effective, in communicating the intended message or thought. | Revise work. Incorporate suggestions of peers into a written piece. Critique the writing of a peer. | Use formatting functions such as cut/paste, font size, style and bullets. Use word processing. | T9. Use word processing | AppleWorks-ClarissWorks MS Office Student Writing Center | |
| E 5: literature | Students will: | Students will: | Students will: (t1-t6 are implied throughout the listed activities) | | |
| E5a Respond to non-fiction, fiction, poetry, and drama using interpretive and critical processes. | Determine why certain characters behave the way they do. Create webs as planning devices. Create a verse by verse paraphrase of a poem. Make connections between literary works based on a single theme. | Create multimedia presentations. Use desktop publishing. Use word processing. Create graphic organizers. | T9. Use word processing T10. Create products | HyperStudio AppleWorks-ClarissWorks MS Office Press Writer Student Writing Center Inspiration | Mark Twain resources. http://marktwain.miningco.com/ The C. S. Lewis Web Site http://www.cache.net/~john/cslewis/index.html Emily Dickinson's Poetry http://www.inform.umd.edu:8080/EdRes/Topic/WomensStudies/ReadingRoom/Poetry/Dickinson American Verse Project: archive of American poetry prior to 1920. http://www.hti.umich.edu/english/amverse/ |
| E5b Produce work in at least one genre that follows the conventions of the | Create an original work in a particular genre. Create webs as | Use graphics and formatting functions. Create a multimedia | T9. Use word processing T10. Create | AppleWorks-ClarissWorks MS Office | Surfing with the Bard: Your Shakespeare Classroom on the Internet http://www.ulen.com/shakespear |

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| genre. | planning devices. | presentation that illustrates an original work. Create graphic organizers. | products | HyperStudio Inspiration | e/ Realkids is an informative site for young writers, featuring guidelines and hints as well as book reviews: www.realkids.com/club.shtml Bibliomania: classic books and references http://www.bibliomania.com/ |

English Language Arts

Middle School

| Language Arts Middle School | | | | | |
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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
| E1 Reading | Students will: | Students will: | Students will: (t1-t6 are implied throughout the listed activities) | | |
| E1a Read twenty-five books of the quality and complexity illustrated in the sample reading list. | <p>Read articles and stories.</p> <p>Create a reading log (titles, authors, genre, and comments).</p> <p>Use and create webs as planning devices.</p> | <p>Use the Internet and digital encyclopedias for content-specific research and author information.</p> <p>Create a reading log database and print a report of books read.</p> <p>Create graphic organizers.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T11. Use and create databases</p> <p>T13. Use the Internet</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>Inspiration</p> | <p>The Children's Literature Web Guide: resources related to books for children and young adults. http://www.acs.ucalgary.ca/~dkbrown/aboutclwg.html</p> <p>Mr. William Shakespeare http://daphne.palomar.edu/shakespeare/</p> |
| E1b Read and comprehend at least four books on the same subject, or by the same author, or in the same genre and produce evidence of reading comprehension. | <p>Sort and analyze word usage, plot trends, settings by specific authors.</p> <p>Create graphic organizers to chart information and compare/contrast.</p> <p>Produce a literary response or informative</p> | <p>Create a reading log database and print a booklist organized according to author, theme or genre.</p> <p>Use drawing tools or graphic organizers to create Venn diagrams that compare and contrast themes, characters, and ideas.</p> | <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T11. Use and create databases</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>Inspiration</p> <p>KidPix Studio</p> | <p>The Realm of Books and Dreams: a wide array of children's stories, fables, fairytales and mysteries. Includes homework help and activities for children. http://www.bconnex.net/~mbuchana/realms/page1/index.html</p> <p>The Encyclopedia Mythica: An encyclopedia of mythology, folklore and legends.</p> |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | <p>report.</p> <p>Produce illustrated synopses of stories read.</p> | <p>Use a word processor to write, edit and publish a literary response or informative report.</p> <p>Use a graphics program to create illustrated booklet.</p> | | | <p>http://www.pantheon.org/mythica</p> <p>Sparknotes: Online study guides for literary works http://www.thespark.com/sparknotes/</p> |
| <p>E1c Read and comprehend informational materials to develop understanding and expertise and produce written or oral work</p> | <p>Use encyclopedias for research.</p> <p>Create a magazine.</p> <p>Write a report, speech or position paper.</p> <p>Create a multimedia presentation.</p> <p>Use and create webs as planning devices.</p> | <p>Use CD-ROM libraries and digital encyclopedias.</p> <p>Use the Internet as a resource to locate and acquire appropriate information.</p> <p>Publish printed material.</p> <p>Use a word processor to create a report, speech or position paper.</p> <p>Use presentation software to produce a slideshow.</p> <p>Use digital camcorders and moviemaking</p> | <p>T7. Use age-appropriate digital resources</p> <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T13. Use the Internet.</p> | <p>DK Eyewitness Multimedia Encyclopedia</p> <p>Golden Book Digital Encyclopedia</p> <p>MS Encarta</p> <p>Grolier's Encyclopedia</p> <p>Compton's Digital and Online Encyclopedia</p> <p>World Book Digital Encyclopedia</p> <p>AppleWorks-ClarWorks</p> <p>Apple iMovie</p> <p>Adobe Premiere</p> | <p>Library of Congress http://www.loc.gov</p> <p>MidLink Magazine: interactive 'zine for middle-schoolers to promote creative writing http://longwood.cs.ucf.edu/~MidLink/</p> <p>Merriam-Webster Online: The Language Center - Online dictionary, thesaurus, and vocabulary builders. http://www.m-w.com/</p> <p>The Internet Public Library http://www.ipl.org/</p> <p>United States Holocaust Memorial Museum: The Museum's archives, including photographs, transcripts of lectures, and guidelines for</p> |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | | <p>software to create a digital movie.</p> <p>Create graphic organizers.</p> | | <p>MS Office</p> <p>Inspiration</p> <p>KidPix Studio</p> <p>Press Writer</p> <p>Student Writing Center</p> <p>Adobe PageMaker</p> | <p>teaching the Holocaust. http://www.ushmm.org/</p> |
| <p>E1d Demonstrate familiarity with a variety of public documents and produce a written or oral work.</p> | <p>Review laws, regulations, records, documents, and bulletins.</p> <p>Respond to a magazine or news article.</p> <p>Produce a persuasive essay on a controversial topic.</p> | <p>Use the Internet as a resource to access public documents and news articles.</p> <p>Use digital databases to access news and magazine abstracts and complete articles.</p> <p>Use a word processor to create a summary and critique of article(s).</p> <p>Use a word processor to write, edit and print a letter to an editor in response to an article of local or national importance.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T9. Use word processing</p> <p>T11. Use and create databases</p> <p>T13. Use the Internet.</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>Student Writing Center</p> | <p>The Federal Web Locator: a list of all Federal government information on the Internet. http://www.law.vill.edu/fed-agency/fedwebloc.html</p> <p>GovBot: allows searches of U.S. government Web pages, documents, statistics, agencies, departments and resources. http://www.nwbuildnet.com/nwbn/govbot.html</p> <p>The Jonsson Library of Government Documents: a collection of both American and foreign materials http://www-sul.stanford.edu/depts/jonsson/</p> <p>The National Archives and Records Administration:</p> |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | | | | | primary documents for use in the classroom. http://www.nara.gov/ N.Y. Times online http://www.nytimes.com/ |
| E1e Demonstrate familiarity with a variety of functional documents. | Design coupons, flyers, catalogues, and directories. | Use desktop publishing to design coupons, flyers, catalogues, and directories. Use word processing to design coupons, flyers, catalogues, and directories. Use and create graphics. | T9. Use word processing T10. Create products | AppleWorks-ClarissWorks MS Office KidPix Studio Adobe PageMaker Press Writer Print Shop Student Writing Center | Great site for all kinds of graphics http://www.ditto.com |
| E2 Wwriting | Students will: | Students will: | Students will: (t1-t6 are implied throughout the listed activities) | | |
| E2a Produce a report of information. | Recognize and use keywords. Use pictures and charts to support information. | Use the Internet as a resource. Use and create graphics. Use a scanner to | T7. Use age-appropriate digital resources T8. Use related peripheral devices | AppleWorks-ClarissWorks MS Office Inspiration | TIME For Kids: the popular magazine, features views of current events from kids' perspectives http://www.pathfinder.com/TFK I |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | Create a report in various formats. | import student drawings. Use word processing to produce a report. | T9. Use word processing T13. Use the Internet | KidPix Studio Adobe Photoshop Student Writing Center | Great site for all kinds of graphics http://www.ditto.com |
| E2b Produce a response to literature. | Create and illustrate original stories mirroring the text. Publish book reviews in a literary newsletter. Use and create webs as planning devices. | Create multimedia presentations. Use desktop publishing to publish book reviews. Create graphic organizers. | T9. Use word processing T10. Create products | AppleWorks-ClarissWorks MS Office HyperStudio Inspiration Press Writer Adobe PageMaker Student Writing Center | Interactive Language Arts and Journalism Page: Students can discover what's behind the who, what, where, when and why as they take on the roles of journalists. http://www.writesite.org Inkspots, workshops & tutorials for young writers, including tips on how books get published: http://www.interlog.com/~ohi/inkspot/young.htm |
| E2c Produce a narrative account (fictional or autobiographical). | Create graphic organizers as part of the pre-writing process. Import photographic images to enhance personal writing. Write illustrated account. | Create a multimedia presentation. Use desktop publishing to publish a narrative account. Create graphic organizers. | T8. Use related peripheral devices T9. Use word processing T10. Create products | Inspiration AppleWorks-ClarissWorks MS Office Click Art Inspiration | Documenting the American South: primary materials documenting the cultural history of the American South from the viewpoint of Southerners. http://metalab.unc.edu/docsouth/ Bartlett's Familiar Quotations (Who said What?) http://www.columbia.edu/acis/bartleby/bartlett/ Biography.Com: The World's |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|------------------------------------|--|---|--|---|--|
| | | | | | Best Bios http://www.biography.com/ |
| E2d Produce a narrative procedure. | <p>Create a storyboard. Illustrate steps in a procedure.</p> <p>Use and create webs as planning devices.</p> <p>Change font size, style and to help create a visual hierarchy.</p> | <p>Create a multimedia presentation.</p> <p>Use desktop publishing to publish a narrative procedure.</p> <p>Create graphic organizers.</p> | <p>T8. Use related peripheral devices</p> <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>KidPix Studio</p> <p>Inspiration</p> <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>HyperStudio</p> | <p>Interactive Language Arts and Journalism Page: Students can discover what's behind the who, what, where, when and why as they take on the roles of journalists. www.writesite.org</p> <p>Great site for all kinds of graphics www.ditto.com</p> |
| E2e Produce a persuasive essay. | <p>Develop, revise, and publish a position paper</p> <p>Represent data that supports a viewpoint</p> | <p>Use CD-ROM libraries, digital encyclopedias and online forums</p> <p>Use desktop publishing to publish a persuasive essay.</p> <p>Add a data chart into a word-processed report.</p> <p>Use the Internet as a resource to access public documents and news articles.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T9. Use word processing</p> <p>T12. Use and create spreadsheets</p> <p>T13. Use the Internet</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>DK Multimedia Encyclopedia</p> <p>Golden Book Digital Encyclopedia</p> <p>MS Encarta</p> <p>Grolier's Encyclopedia</p> | <p>Interactive Language Arts and Journalism Page: Students can discover what's behind the who, what, where, when and why as they take on the roles of journalists. www.writesite.org</p> <p>Great site for all kinds of graphics www.ditto.com</p> |
| E3 Speaking, Listening and Viewing | Students will: | Students will: | Students will: (T1-T6 are implied throughout the | | (Applies to all listening standards) Book Radio - Listen to |

**Language Arts
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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | | | listed activities) | | interviews with contemporary authors. http://www.bookradio.com |
| E3a Participate in one-to-one conferences with the teacher. | Present and discuss a book review, report or interview. Use and create webs as planning devices. | Create multimedia presentations. Create graphic organizers. | T10. Create products | HyperStudio AppleWorks-ClarissWorks MS Office Inspiration KidPix Studio | Great Speeches: audio library of famous speeches. Includes speeches by Martin Luther King Jr., Mahatma Gandhi, and feminist Gloria Steinem. http://www.historychannel.com/speeches/ |
| E3b Participate in group meetings. | Participate in live author conferences. | Communicate with an author in an online discussion forum. | T7. Use age-appropriate digital resources T13. Use the Internet | | Chat with authors online www.scholastic.com |
| E3c Prepare and deliver an individual presentation. | Develop a presentation for a report, review or persuasive essay. Use and create webs as planning devices. Create a document to be used in a presentation. | Create a multimedia presentation. Create graphic organizers Use desktop publishing to publish a presentation. | T7. Use age-appropriate digital resources T10. Create products | HyperStudio KidPix Studio AppleWorks-ClarissWorks MS Office Inspiration Press Writer | Eserver: Literary collections & links (including multimedia). http://english-server.hss.cmu.edu/ Giving a Speech: lists eight communication power tools for delivering a speech http://www.agric.gov.ab.ca/ruraldev/rurallea/rgvsp1.html |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | | | | Adobe PageMaker Student Writing Center | |
| E3d Make informed judgments about T.V., radio, and film. | Access reviews from various sources (out-of-town newspapers or national magazines) to read and evaluate. Write a press review of a T.V., radio program, or movie. | Use the Internet as a resource to access public documents and news articles. Use desktop publishing to publish a critique. | T7. Use age-appropriate digital resources T13. Use the Internet | AppleWorks-ClarissWorks MS Office Press Writer Adobe PageMaker Student Writing Center | Great site of reviews of different programming. http://tv.yahoo.com/main/ Public Television review site http://cinemaclips.com/ More Reviews http://www.reelingreviews.com/ |
| E4 Conventions of Grammar and Usage of the English Language | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | Dictionaries Online http://www.yahoo.com/Reference/Dictionaries/ |
| E4a Demonstrate an understanding of the rules of the English language in written and oral work. | Write for a variety of purposes. | Use desktop publishing to publish a report. | T9. Use word processing | MS Office AppleWorks-ClarissWorks Student Writing Center | Webster Online: grammar lessons, including sentence and essay sections. Includes over 150 interactive quizzes. http://www.webster.comnet.edu/HP/pages/darling/grammar.htm Roget's Thesaurus Online http://humanities.uchicago.edu/forms_unrest/ROGET.html Writing Den: writing and reading exercises with good graphics and audio. http://www2.actden.com/writ_de |

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| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
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| | | | | | n/index.htm |
| E4b Analyze and subsequently revise work to improve its clarity and effectiveness. | Revise work. | Use word processing formatting functions such as cut/paste, font size, style and bullets, spell check and grammar check. | T9. Use word processing | MS Office AppleWorks- ClarisWorks | Writing Den: writing and reading exercises with good graphics and audio. http://www2.actden.com/writ_den/index.htm |
| E5 Literature | Students will: | Students will: | Students will: (t1-t6 are implied throughout the listed activities) | | |

Language Arts
Middle School

| Nyc performance standards | Content activities | Technology-based Performance products/projects | Technology standards | Suggested Software and Resources | Web Sites |
|---|---|---|--|--|--|
| E5a Respond to non-fiction, fiction, poetry, and drama using interpretive and critical processes. | <p>Share personal reactions, responses or reflections about works of fiction, poetry, non-fiction or drama.</p> <p>Develop a literature review process.</p> | <p>Create a multimedia response to literature.</p> <p>Use desktop publishing to publish a response to literature.</p> | <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>Press Writer</p> <p>Adobe PageMaker</p> <p>Student Writing Center</p> | <p>Mark Twain Resources http://marktwain.miningco.com/</p> <p>The C. S. Lewis Web Site http://www.cache.net/~john/cslewis/index.html</p> <p>Emily Dickinson's Poetry http://www.inform.umd.edu:8080/EdRes/Topic/WomensStudies/ReadingRoom/Poetry/Dickinson</p> <p>American Verse Project: archive of American poetry prior to 1920. http://www.hti.umich.edu/english/amverse/</p> |
| E5b Produce work in at least one genre that follows the conventions of the genre. | Create an original work in a particular genre. | <p>Use desktop publishing to publish a response to literature.</p> <p>Use graphics and formatting functions.</p> | <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>KidPix Studio</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> | <p>Surfing with the Bard: Your Shakespeare Classroom on the Internet http://www.ulen.com/shakespeare/</p> <p>Bibliomania: classic books and references http://www.bibliomania.com/</p> |

Mathematics

Early Childhood

| Mathematics Early Childhood | | | | | |
|---|--|---|--|--|---|
| Nyc performance standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
| M1 Arithmetic and Number Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| M1a Add, subtract, multiply, and divide whole numbers with and without calculators. | <p>Add and subtract numbers.</p> <p>Multiply numbers.</p> <p>Demonstrate the commutative property of addition and multiplication.</p> <p>Divide numbers.</p> | <p>Use painting program number stamps to have students add, subtract and multiply numbers.</p> <p>Use painting program number stamps or their own drawings to illustrate equations such as $3 + 2 = 2 + 3$ and $3 \times 2 = 2 \times 3$.</p> <p>Use painting program number stamps or their own drawings to group and share a certain number of items.</p> | <p>T7. Use age-appropriate digital resources</p> <p>T10. Create products</p> | <p>KidPix</p> <p>Millie's Math House</p> <p>Mighty Math Zoo Zillions</p> <p>Mighty Math Carnival Countdown</p> | <p>Basic Calculator on line: http://www-sci.lib.uci.edu/HSG/RefCalculators2.html#SIMP</p> <p>Seussville Math: children will learn to recognize numerals and number words, to count, and to do simple addition through on-screen games or downloaded printouts. http://www.randomhouse.com/seussville/university/math</p> |
| M1b Demonstrate understanding of the base ten value system and use this knowledge to solve arithmetic calculations. | Show place value of two and three digit numbers. | Use drawing software to create coins that illustrates place value. | <p>T7. Use age-appropriate digital resources</p> <p>T10. Create products</p> | <p>KidPix</p> <p>Millie's Math House</p> <p>Mighty Math Zoo Zillions</p> | Digital Flashcards: http://edu4kids.com/math/ |

Mathematics Early Childhood

| Nyc performance standards | Content Activities | Technology-Based Performance Productss/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|--|---|---|---|--|---|
| | | | | Mighty Math Carnival Countdown | |
| M1c | n/a | n/a | n/a | n/a | n/a |
| M1d Describe and compare quantities by using concrete and real world models of simple fractions. | Find simple parts of whole. Recognize the place of simple fractions on number lines. | Use software to draw real world objects, such as a pizza pie, to recognize parts of the whole or simple fractions. Use software to draw a number line (0 to 1) with correctly placed simple fractions. | T10. Create products | KidPix Mighty Math Calculating Crew | |
| M1e | n/a | n/a | n/a | n/a | n/a |
| M1f | n/a | n/a | n/a | n/a | n/a |
| M2 Geometry and Measurement Concepts | Students will: | Students will: | Students will: | | |
| M2a Give and respond to directions about location. | Locate places on a simple street map. | Create pictures that describe the following terms: “in front of,” “right,” and “above.” | T10. Create products | KidPix Trudy’s Time and Place House | Seussville Reasoning Children will compare size, number, patterns, and directions and learn about opposites through on-screen games or downloaded printouts. http://www.randomhouse.com/seussville/university/reasoning/ |
| M2b Visualize and represent two-dimensional views of simple rectangular | Show the front, back and side views of buildings. | Use drawing software to create geometric shapes. | T7. Use age-appropriate digital resources | KidPix Millie’s Math House | |

Mathematics Early Childhood

| Nyc performance standards | Content Activities | Technology-Based Performance Productss/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|---|---|---|----------------------|--|-----------|
| three-dimensional shapes. | | | T10. Create products | Mighty Math Calculating Crew TABS+ Community Construction Kit | |
| M2c | n/a | n/a | n/a | n/a | n/a |
| M2d Use many types of figures and identify the figures by their properties. | Draw different geometric figures classify them and list their properties. | Use drawing software to create a book character, such as a dog, that contains each category of geometric shapes. Use drawing software to draw symmetrical designs. | T10. Create products | KidPix | |
| M2e Solve problems by showing relationships between and among figures. | Draw congruent figures. | Use drawing software to check congruence by cutting and pasting. | T10. Create products | KidPix | |
| M2f Extend and create geometric patterns using concrete and pictoral models. | Create geometric patterns. | Use drawing software to create geometric shapes and picture patterns. | T10. Create products | KidPix | |
| M2g Use basic ways of estimating and measuring the size of figures and objects in the real world. | Measure the length of lines. | Use drawing software to estimate the length of lines by cutting and pasting a unit of measure along the line. | T10. Create products | KidPix | |
| M2h | n/a | n/a | n/a | n/a | n/a |

Mathematics Early Childhood

| Nyc performance standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|---|---|--|----------------------|----------------------------------|-----------|
| M2i | n/a | n/a | n/a | n/a | n/a |
| M2j | n/a | n/a | n/a | n/a | n/a |
| M2k | n/a | n/a | n/a | n/a | n/a |
| M3 Function and Algebra Concepts | Students will: | Students will: | Students will: | | |
| M3a Use linear patterns to solve problems. | Recognize a linear pattern by its rule. | Use painting program stamps or typed numbers to create a pattern and rule for the pattern. | T10. Create products | KidPix | |
| M3b | n/a | n/a | n/a | n/a | n/a |
| M3c | n/a | n/a | n/a | n/a | n/a |
| M3d | n/a | n/a | n/a | n/a | n/a |
| M4 Statistics and Probability Concepts | Students will: | Students will: | Students will: | | |
| M4a | n/a | n/a | n/a | n/a | n/a |
| M4b Display data in line plots, graphs, tables, and charts. | Create picture graphs from data gathered. | Use painting program stamps to create a picture graph. | T10. Create products | The Graph Club | |
| M4c | n/a | n/a | n/a | n/a | n/a |
| M4d | n/a | n/a | n/a | n/a | n/a |
| M4e | n/a | n/a | n/a | n/a | n/a |
| M4f Find all possible combinations and arrangements within certain constraints (involving a limited number of variables). | Show all the possible arrangements for a given number of items. | Use drawing software to illustrate the various ways two shirts and two pairs of pants can be arranged. | T10. Create products | KidPix | |
| M5 Problem Solving and Reasoning | Students will: | Students will: | Students will: | | |
| M5a Formulation M5b Implementation | Solve problems presented in a pictorial | Use problem-solving software. | T10. Create products | Millie's Math House | |

Mathematics Early Childhood

| Nyc performance standards | Content Activities | Technology-Based Performance Productss/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|--|---|---|---|----------------------------------|--|
| M5c Conclusion | format. | | | | |
| M6 Mathematical Skills and Tools | Students will: | Students will: | Students will: | | |
| M6a | n/a | n/a | n/a | n/a | n/a |
| M6b | n/a | n/a | n/a | n/a | n/a |
| M6c | n/a | n/a | n/a | n/a | n/a |
| M6d | n/a | n/a | n/a | n/a | n/a |
| M6e | n/a | n/a | n/a | n/a | n/a |
| M6f Use arithmetic signs and symbols, including the decimal point, correctly in number sentences and expressions. | Create an equation using arithmetic signs and symbols. Create a fact book. | Use word processing to write number sentences. Create a word problem for your number sentence. | T9. Use word processing T10. Create products | Kid Works Deluxe | CTW Family Workshop Use the search command to type in math concept. Great games for early childhood. http://www.ctw.org/preschool |
| M6g Read, create, and represent data in line plots, charts, tables, diagrams, bar graphs, simple circle graphs, and coordinate graphs. | Create picture graphs from data. | Use painting program stamps to create a picture graph. | T10. Create products | The Graph Club | |
| M6h | n/a | n/a | n/a | n/a | n/a |
| M7 Mathematical Communication | Students will: | Students will: | Students will: | | |
| M7a Use appropriate mathematical terms, vocabulary, and language, based on prior conceptual work. | Explain a math operation. | Create a daily math journal, dictionary, and word problems with “how” and “why” questions. | T9. Use word processing T10. Create products | Kid Works Deluxe | Animated Glossary: http://www.hbschool.com/glossary/math/glossary1.html |
| M7b Show mathematical ideas in a variety of ways, including words, | Use pictures and symbols to compare different quantities. | Use painting program stamps, or draw pictures, that compare quantities. | T10. Create products | KidPix | |

Mathematics Early Childhood

| Nyc performance standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|--|---|--|---|----------------------------------|---|
| numbers, symbols, pictures, charts, graphs, tables, diagrams, and models. | | | | | |
| M7c Explain solutions to problems clearly and logically, and support solutions with evidence, in both oral and written work. | Demonstrate understanding through oral presentations. | Create a slide show explaining solutions to problems. | T9. Use word processing T10. Create products | KidPix Kid Works Deluxe | Calculator Pattern Puzzles: Explore number patterns and relationships while introducing them to the calculator at the same time. http://explorer.scrtec.org/explorer/explorer-db/html/783749995-447DED81.html |
| M7d | n/a | n/a | n/a | n/a | n/a |
| M7e Comprehend mathematics from reading assignments and from other sources. | Read age level appropriate books. | Use word processing to write about how math is used in a book. | T9. Use word processing T10. Create products | Kid Works Deluxe | |
| M8 Putting Mathematics to Work | Students will: | Students will: | Students will: | | |
| M8a | n/a | n/a | n/a | n/a | n/a |
| M8b | n/a | n/a | n/a | n/a | n/a |
| M8c | n/a | n/a | n/a | n/a | n/a |
| M8d | n/a | n/a | n/a | n/a | n/a |
| M8e | n/a | n/a | n/a | n/a | n/a |

Mathematics

Elementary School

| Mathematics Elementary School | | | | | |
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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
| M1 Arithmetic and Number Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| M1a Add, subtract, multiply, and divide whole numbers with and without calculators. | Perform arithmetic calculations. | Use the computer's calculator to check mathematical calculations. | T7. Use age-appropriate digital resources | Macintosh Calculator Windows Calculator | Basic Calculator http://www.convertit.com/Go/Maps/Calculators/Math/Basic_Math_Calc.ASP |
| M1b Demonstrate understanding of the base ten value system and use this knowledge to solve arithmetic calculations. | Demonstrate place value of the base ten value system. | Use drawing software to create models of basic operation concepts. Draw arrays to show meaning of multiplication facts, for example, $5 \times 7 = 35$. | T10. Create products | KidPix AppleWorks- ClarisWorks | Basic Calculator http://www.convertit.com/Go/Maps/Calculators/Math/Basic_Math_Calc.ASP |
| M1c | n/a | n/a | n/a | n/a | n/a |
| M1d Describe and compare quantities by using simple fractions. | Find simple parts of whole. Recognize the place of simple fractions on number lines. | Use drawing software to represent fractions. Draw a number line (0 to 1) with correctly placed simple fractions. | T7. Use age-appropriate digital resources T10. Create products | KidPix AppleWorks- ClarisWorks Mighty Math Calculating Crew | E-Lab Activities http://www.hbschool.com/elab/index.html Math and Music Students learn that math and music are related as they develop understandings of how mathematical addition can be applied to music. |

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| | | | | | http://ericir.syr.edu/Virtual/Lessons/Interdisciplinary/INT0041.html |
| M1e Describe and compare quantities by using simple decimals. | Draw a chart with 10 equal boxes. Shade in 5 boxes to represent 0.5. Repeat with other values and compare. | Use drawing software to represent decimal values. | T10. Create products | KidPix AppleWorks- ClarisWorks | Shopping Lesson Plan Use this lesson to give the children a chance to apply what they have learned about money. http://ericir.syr.edu/Virtual/Lessons/Mathematics/Applied_Math/APM0009.html |
| M1f | n/a | n/a | n/a | n/a | n/a |
| M2 Geometry and Measurement Concepts | | | | | |
| M2a Give, and respond to, directions about location. | Create a neighborhood map. Create a journal to describe how to can travel from one location to another. | Use a drawing or painting program to create map. | T10. Create products | AppleWorks- ClarisWorks KidPix Kid Works Deluxe Neighborhood Map Machine SimCity Trudy's Time and place House | Locate Distances http://mapquest.com |
| M2b Visualize and represent two-dimensional views of simple rectangular three-dimensional | Create two-dimensional representations of three-dimensional shapes ("nets") using | Explore and create "nets" using software. | T10. Create products | TABS+ Poly Software Mighty Math | Poly Software Download software to view, print and construct polyhedra in 2-D and 3-D form. http://www.peda.com |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|---|--|--|--|---|---|
| shapes. | paper and pencil. | | | Calculating Crew | |
| M2c Use simple two-dimensional coordinate systems to find locations on a map. Represent points and simple figures. | Plot points or create simple figures on graph paper. | Create two columns of data in a spreadsheet and graph them as an X-Y or scatter chart. | T10. Create products T12. Use and create spreadsheets | AppleWorks-ClarissWorks The Cruncher | |
| M2d Use many types of figures and identifies the figures by their properties. | Draw different geometric figures, classify them, and list their properties. | Use drawing software to draw different geometric figures. Use drawing software to draw symmetrical designs. | T10. Create products | KidPix AppleWorks-ClarissWorks | |
| M2e Solve problems by showing relationships between and among figures. | Construct triangles and other shapes that illustrate congruence and similarity. | Use drawing tools to design and label a figures that include a line of symmetry. | T10. Create products | KidPix AppleWorks-ClarissWorks | E-Lab Activities http://www.hbschool.com/elab/index.html |
| M2f Extend and create geometric patterns using concrete and pictorial models. | Create a pattern quilt, using cloth, tiles, or blocks, that demonstrates repeating patterns. | Use painting or drawing software to create patterns. | T10. Create products | KidPix AppleWorks-ClarissWorks | E-Lab Activities http://www.hbschool.com/elab/index.html |
| M2g | n/a | n/a | n/a | n/a | n/a |
| M2h | n/a | n/a | n/a | n/a | n/a |
| M2i Select and use units for estimating and measuring quantities. | Estimate area and perimeter of a floor plan. | Use drawing tools to determine area and perimeter of figures (e.g., by placing them | T10. Create products | KidPix AppleWorks-ClarissWorks | Math-Kitecture Measure space in the classroom to create a floor plan. http://www.math-kitecture.org |

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|--|---|--|--|---|---|
| | | on grids and counting squares and side units). | | Neighborhood Map Machine | E-Lab Activities http://www.hbschool.com/elab/index.html |
| M2j | n/a | n/a | n/a | n/a | n/a |
| M2k Use scales in maps and scale drawings. | Calculate distance from one city to another by using a map's scale. | Use appropriate software to create and interpret scale drawings. | T10. Create products | AppleWorks- ClarisWorks Sunburst: Maps and Navigation Mapmaker's Toolkit PrimeTime Math: Cliffbound!! | Math-Kitecture Measure space in the classroom to create a floor plan. http://www.math-kitecture.org |
| M3 Function and Algebra Concepts | Students will: | Students will: | Students will: | | |
| M3a Use linear patterns to solve problems. | Recognize a linear pattern by its rule. | Use drawing software to create a pattern and state a rule for the pattern. | T10. Create products | AppleWorks- ClarisWorks KidPix | |
| M3b Build iterations of simple non-linear patterns and recognize that these patterns are not linear. | Create a pattern quilt, using cloth, tiles, or blocks, that demonstrates non-linear/non-repeating patterns. | Use tables, spreadsheets and drawing tools to represent growth patterns, such as square numbers (e.g., $1^2 = 1$ square, $2^2 = 4$ squares). | T10. Create products T12. Use and create spreadsheets | AppleWorks- ClarisWorks The Cruncher | |
| M3c | n/a | n/a | n/a | n/a | n/a |
| M3d Use letters, boxes, or other symbols to stand for any number, | Create a table for simple linear equations and plot | Create two columns of data in a spreadsheet and graph them as an | T10. Create products | AppleWorks- ClarisWorks | |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|---|---|---|--|--|------------------|
| measured quantity, or object in simple situations with concrete materials. | those points on a coordinate graph. | X-Y or scatter chart. | T12. Use and create spreadsheets | The Cruncher | |
| M4 Statistics and Probability Concepts | Students will: | Students will: | Students will: | | |
| M4a Collect and organize data to answer a question. | Construct a survey question and give the survey to everyone in class, then collect the results. | Enter survey data into a spreadsheet and graph the results in multiple formats. | T10. Create products T12. Use and create spreadsheets | AppleWorks-ClarissWorks The Cruncher | |
| M4b Display data in line plots, graphs, tables, and charts. | Gather data pertaining to daily weather, minutes of homework given, etc. | Enter survey data into a spreadsheet and graph the results in multiple formats. | T10. Create products T12. Use and create spreadsheets | AppleWorks-ClarissWorks The Cruncher | |
| M4c Make statements and draw simple conclusions based on data. | Interpret data (pertaining to daily weather, minutes of homework given, etc) into a written report. | Produce a report using word processing to interpret and summarize survey data. | T9. Use word processing T10. Create products | AppleWorks-ClarissWorks MS Office Press Writer Student Writing Center | |
| M4d | n/a | n/a | n/a | n/a | n/a |
| M4e | n/a | n/a | n/a | n/a | n/a |
| M4f Find all possible combinations and arrangements within certain constraints (involving a limited number of variables). | Create a factor-tree for the number 48 (for example). | Use drawing software to illustrate the various ways four shirts and two pairs of pants can be arranged. | T10. Create products | Inspiration AppleWorks-ClarissWorks | |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|---|--|--|---|---|---|
| M5 Problem Solving and Reasoning | Students will: | Students will: | Students will: | | |
| M5a Formulation M5b Implementation M5c Conclusion | Solve non-routine word problems. | Use problem solving software to practice logic and reasoning skills. Make a poster of a math word problem | T10. Create products | AppleWorks- ClarisWorks The Logical Journey of the Zoombinis | |
| M6 Mathematical Skills and Tools | Students will: | Students will: | Students will: | | |
| M6a | n/a | n/a | n/a | n/a | n/a |
| M6b | n/a | n/a | n/a | n/a | n/a |
| M6c | n/a | n/a | n/a | n/a | n/a |
| M6d | n/a | n/a | n/a | n/a | n/a |
| M6e Refer to geometric shapes and terms correctly with concrete objects or drawings. | Create and identify different parts of a geometric figure using tiles, blocks, or other manipulatives. | Draw geometric shapes and identify angles, sides, and other parts of the figure. | T10. Create products | AppleWorks- ClarisWorks KidPix Mighty Math Cosmic Geometry | Math-Kitecture Identify shapes within architecture. http://www.math-kitecture.org |
| M6f Use arithmetic symbols and signs (including the decimal point) correctly in number sentences and expressions. | Create a word sentence that uses arithmetic symbols and signs. Create a fact book. | Use word processing to create a word problem for a number sentence. | T9. Use word processing T10. Create products | AppleWorks- ClarisWorks MS Office | |
| M6g Read, create, and represent data in line plots, charts, tables, diagrams, bar graphs, | Record daily data (time of sunset, weather, etc) and create a table and | Enter data into a spreadsheet and graph the results in multiple formats. | T10. Create products T12. Use and | AppleWorks- ClarisWorks MS Office | |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
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| simple circle graphs, and coordinate graphs. | graph from the data. | | create spreadsheets | The Cruncher | |
| M6h Use recall, mental computations...and computers...to achieve solutions. | Find the average of five students' sets of six test scores. | Use a computer calculator and/or a spreadsheet to check results of computation. | T12. Use and create spreadsheets | AppleWorks- ClarisWorks MS Office The Cruncher Macintosh Calculator Windows Calculator | |
| M7 Mathematical Communication | Students will: | Students will: | Students will: | | |
| M7a Use appropriate mathematical terms, vocabulary, and language, based on prior conceptual work. | Explain a solution to a math problem. Create a daily math journal, dictionary, and word problems with "how" and "why" questions. | Word process a math journal, dictionary, and word problem with "how" and "why" questions. | T9. Use word processing T10. Create products | AppleWorks- ClarisWorks MS Office | Animated Glossary: http://www.hbschool.com/glossary/math/glossary1.html |
| M7b Show mathematical ideas in a variety of ways, including words, numbers, symbols, pictures, charts, graphs, tables, diagrams, and models. | Create a picture or diagram to explain a mathematical idea. | Use a drawing program to illustrate that $1/2$ is greater than $1/3$ (for example) or to show the sum of $1/2$ and $3/4$. | T10. Create products | AppleWorks- ClarisWorks MS Office | |
| M7c Explain solutions to problems clearly and | Demonstrate understanding through | Create a slide show that logically explains | T9. Use word processing | AppleWorks- ClarisWorks | |

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| logically, and support solutions with evidence, in both oral and written work. | oral presentations. | solutions to problems. Create and describe a flow-chart of both simple and complex activities. | T10. create products | MS Office | |
| M7d | n/a | n/a | n/a | n/a | n/a |
| M7e Comprehend mathematics from reading assignments and from other sources. | Read age-level-appropriate books. | Produce a report using word processing to demonstrate how math is used in a book. | T9. Use word processing T10. Create products | AppleWorks- ClarisWorks MS Office | |
| M8 Putting Mathematics to Work | Students will: | Students will: | Students will: | | |
| M8a Conduct a data study. | Create a survey question (e.g., favorite singer) and distribute it to classmates. Collect the results. | Use a spreadsheet to organize, graph and analyze the data. Use word processing and drawing tools to include graphs, charts and diagrams in a data study report. | T9. Use word processing T10. Create products T12. Use and create spreadsheets. | AppleWorks- ClarisWorks The Cruncher MS Office | |
| M8b Conduct a science study. | Collect, record, and display data (such as daily sunrise or sunset, cloud formations, pebbles found in the park) | Use a spreadsheet to organize, graph and analyze the data. Use word processing and drawing tools to include graphs, charts and diagrams in a data study report. | T9. Use word processing T10. Create products T12. Use and create spreadsheets | AppleWorks- ClarisWorks MS Office The Cruncher | |

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|-------------------------------------|---|---|--|--|--|
| M8c Design a physical structure. | Design a fantasy tree house using graph paper, paper and pencil. | <p>Use drawing tools to make a scale drawing of a tree house and label the dimensions of each side.</p> <p>Use a spreadsheet to budget purchases needed to build the treehouse.</p> | <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T12. Use and create spreadsheets</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>The Cruncher</p> | <p>Math-Kitecture Create a floor plan of a classroom. www.math-kitecture.org</p> |
| M8d Management and planning. | Plan a class trip to the museum. Include making a schedule, researching costs, and developing a budget. | <p>Use word processing to write/revise plans for the trip.</p> <p>Use a spreadsheet to develop a budget.</p> | <p>T9. Use word processing</p> <p>T10. Create products</p> <p>T12. Use and create spreadsheets</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>The Cruncher</p> <p>DinoPark Tycoon</p> | |
| M8e Pure Mathematics Investigation. | Investigate an idea in number theory. | Create a multimedia presentation to explain why a “number trick” works. | <p>T9. Use word processing</p> <p>T10. Create products</p> | <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> | |

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|---|--|--|--|--|--|
| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
| M1 Number and Operation Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | <p>PBS Teacher Source: http://www.pbs.org/teachersource/math.htm?default</p> <p>The Canadian Math Page: Word problems. Each has a "hint" that can be clicked to, as well as the answer and how it was reached. http://www.stfx.ca/special/mathproblems/welcome.html</p> <p>AMOF: The Amazing Mathematical Object Factory: http://www.schoolnet.ca/vp-pv/ECOS/index.html</p> |
| M1a Consistently and accurately add, subtract, multiply, and divide rational numbers. | Use rational numbers to create a monthly budget and calculate the percent of the budget that each item represents. | Enter all budget data on a spreadsheet and create formulas to complete all calculations. | T10. Create products T12. Use and create spreadsheets | <p>AppleWorks-Clarworks</p> <p>MS Office</p> <p>The Cruncher</p> | <p>Web Math: Focuses on a wide variety of real-world math problems offering tips, examples, tools and more http://www.webmath.com/</p> |
| M1b Use and understand the inverse relationships between addition and subtraction, multiplication and | Create a table of squares and square roots. | Use formulas on a spreadsheet to create a square and square root table. | T10. Create products T12. Use and create spreadsheets | <p>AppleWorks-Clarworks</p> <p>MS Office</p> | <p>Square Roots without a Calculator http://forum.swarthmore.edu/dr.math/faq/faq.sqrt.by.hand.html</p> |

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| division, and exponentiation and root-extraction. | | | | | |
| M1C Apply and convert the different kinds and forms of rational numbers. | Make a table that converts fractions to decimals to percents. | Use a spreadsheet to create the table and depict each fraction using pie graphs. | T10. Create products T12. Use and create spreadsheets | AppleWorks-ClarissWorks MS Office The Cruncher | |
| M1d Be familiar with characteristics of numbers. | Use factor trees to find the prime factors of a number. | Use a software program to create factor trees and list the prime factorization of a number. | T10. Create products | Inspiration AppleWorks-ClarissWorks | Understanding Factoring http://mathforum.com/dr.math/faq/faq.learn.factor.html |
| M1e Interpret percent as part of 100. | Use 100 boxes on a sheet of graph paper to represent a percent as part of 100. | Draw shapes that can represent percent as part of 100. | T12. Use and create spreadsheets | AppleWorks-ClarissWorks MS Office The Cruncher | |
| M1f Use ratios and rates to express relationships. | Solve problems to find equivalent ratios (e.g., if oranges are 5 for 99 cents, how much will 25 oranges cost at the same rate?) | Add formulas to a spreadsheet to find equivalent ratios. | T10. Create products T12. Use and create spreadsheets | AppleWorks-ClarissWorks MS Office The Cruncher | |
| M1g Order numbers with using “greater than” and “less than” symbols (> and <). Estimate and | Create a number line to plot temperatures above and below zero in different cities in | Construct a number line using drawing software. | T10. Create products | AppleWorks-ClarissWorks | Weather Finder http://www.accuweather.com/weather/index_corp |

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| compare rational numbers using sense of the magnitudes and relative magnitudes of numbers. | the country. | | | | Precipitation Area Maps http://www.ems.psu.edu/wx/usstats/uswxstats.html |
| M2 Geometry and Measurement Concepts | Students will: | Students will: | Students will: | | PBS Teacher Source http://www.pbs.org/teachersource/math/middle_geometry.shtm |
| M2a Be familiar with assorted two- and three-dimensional objects. | Classify different two- and three-dimensional objects by sides, angles, and surfaces. | Create a database of shapes that lists a different property (e.g., number of sides, degree of angles) within each field. | T10. Create products T11. Use and create databases | AppleWorks- ClarisWorks MS Office FileMaker Mighty Math Cosmic Geometry | |
| M2b Identify similar and congruent shapes and use transformations in the coordinate plane. | Use graph paper to create transformations in a coordinate plane. | Recreate the transformations using computer software. | T10. Create products | The Geometer's Sketchpad AppleWorks- ClarisWorks | Download a demo of The Geometer's Sketchpad http://www.keypress.com/catalog/products/software/Prod_GSP.html#Anchor-The-49575 Matrix/Spreadsheet/Transformation Lesson http://silvercrest.silverfalls.k12.or.us/scdocs/staff/lou/matst.htm |
| M2c Identify three-dimensional shapes from two-dimensional perspectives. | Use graph paper to create a two-dimensional perspective of a | Use drawing software to show several two-dimensional views of the same three- | T10. Create products | The Geometer's Sketchpad AppleWorks- | Drawing in One-Point Perspective http://www.olejarz.com/arted/perspective/index.html |

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| Draw two-dimensional sketches of three-dimensional objects. | three-dimensional solid. | dimensional object. | | ClarisWorks Mighty Math Number Heroes | |
| M2d Determines and understands length, area, and volume. | Find the area and perimeter of a rectangle, square, triangle and circle | Use a spreadsheet to create formulas for area and perimeter for each figure. Describe the relationship if you double one or more of the dimensions | T9. Use word processing T10. Create products T12. Use and create spreadsheet | The Geometer's Sketchpad AppleWorks-ClarisWorks MS Office The Cruncher | Math Lesson Plans http://www.iit.edu/~smile/mathindex.html |
| M2e Recognize similarity and rotational and bilateral symmetry in two- and three-dimensional figures. | Use graph paper to create a logo for a business using a symmetrical design | Recreate the logo using computer software. | T10. Create products T14. Select appropriate technologies for a specific situation | The Geometer's Sketchpad AppleWorks-ClarisWorks | Eye on Art Art appreciation online http://www.kn.pacbell.com/wired/art2/index.html Create a kaleidoscope http://www.nsa.gov/programs/mapp/ms/geom01.html |
| M2f Analyzes and generalizes geometric patterns. | Use graph paper to create "Escher" type drawings using polygons | Recreate these drawings using paint or draw programs | T10. create products | AppleWorks-ClarisWorks | Make Your Own Tessellations: http://www.iproject.com/escher/teaching/maketessel.html Tessellations Creations (an abstract) http://www.imsa.edu/team/spi/impact2/1990/90PAGE14.HTM |
| M2g Measures angles, | Create a pie chart | Display the data on a | T10. create | AppleWorks- | This provides a summary of |

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| weights, capacities, times, and temperatures using appropriate units. | from given data using a compass and a protractor | spreadsheet and create a pie chart. Print the chart and measure the central angles using a protractor | products T12. use and create spreadsheets. | ClarisWorks Excel | <p>most of the units of measurement to be found in use around the world today. http://www.ex.ac.uk/cimt/dictunit/dictunit.htm</p> <p>Integrates art and geometry by introducing the creation of patterns produced using a compass. Also introduces the properties of circles, arcs, tangents and bisectors. Includes graphic examples of circle designs illustrating those drawn with constant ratios. http://explorer.scrtec.org/explorer/explorer-db/html/823932058-81ED7D4C.html</p> |
| M2h Chooses appropriate units of measure and converts with ease between like units. | Create a conversion table between Celsius and Fahrenheit temperatures (or centimeters to inches, grams to ounces, and etc.) | Use spreadsheets to create conversion formulas | T10. create products T12. use and create spreadsheets. | AppleWorks- ClarisWorks Excel | <p>Celsius to Fahrenheit http://mcgees.com/kitchen/temperature.htm</p> <p>METRIC TO U.S. CONVERSIONS http://mcgees.com/kitchen/metric.htm</p> <p>This game will reinforce U.S. measurement conversions http://www.quia.com/jg/36.html</p> |
| M2i Reasons proportionally in | Use graph paper to make a scale drawing | Recreate the scale drawing using | T10. create products | AppleWorks- ClarisWorks | teacher lesson ideas Abstracts of grant winning |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
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| situations with similar figures. | of any room in your home including furnishings | computer software | | Geometer's Sketchpad Excel | <p>Learning Experiences http://www.imsa.edu/team/spi/impact2/1994/94PAGE1.HTM</p> <p>Powerful Proportions Day (lesson idea) http://www.imsa.edu/team/spi/impact2/1994/94PAGE5.HTM</p> |
| M2j Reasons proportionally with measurements. | See M2i | See M2i | See M2i | See M2i | This game will reinforce customary measurements http://www.quia.com/jg/354.html |
| M2k Models situations geometrically to formulate and solve problems. | See M2i | See M2i | See M2i | See M2i | Design the ultimate Container(teacher lesson idea) http://www.imsa.edu/team/spi/impact2/1997/97PAGE2.HTM |
| M3 Function and Algebra Concepts | Students will: | Students will: | Students will: | | <p>PBS Teacher Source: http://www.pbs.org/teachersource/math.htm?default</p> <p>A+ Math: interactive flashcards, games, a homework helper and help on advanced math problems. http://www.aplusmath.com</p> <p>Math Goodies: Offers math lessons and resources designed to meet NCTM Standards for TeachingMath</p> |

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|---|--|--|--|--|---|
| | | | | | http://www.mathgoodies.com |
| M3a Discovers, describes, and generalizes patterns, and represents them with variables and expressions. | Use graph paper to create an x/y table and graph the function n^2 or $A = r^2$ | Use computer software or spreadsheet to graph the functions. | T7.use age-appropriate digital resources T10.Create products T12. use and create spreadsheets. | Geometer's Sketchpad Graphing Calculator (Mac) AppleWorks- ClarisWorks Excel | For a trial version of Geometer's Sketchpad http://www.keypress.com/catalog/products/software/Prod_GSP.html Pre-algebra graphing http://library.thinkquest.org/20991/prealg/graph.html |
| M3b Represents relationships. | Graph paper to examine areas of rectangles that can be enclosed by 24 feet of fencing and figure out the maximum area. | Use spreadsheet, computer or drawing software to examine areas that can be enclosed by 24 feet of fencing and figure out the maximum area. | T7. Use age-appropriate digital software T10.create products T12.use and create spreadsheets. | Geometer's Sketchpad AppleWorks- ClarisWorks Excel | Geometry and Geometer's Sketchpad Web Sites http://curry.edschool.virginia.edu/teacherlink/math/links/geometry.html |
| M3c Analyzes tables to determine functional relationships. | Write an equation from a given table (find the rule) | Enter data on a spreadsheet and create the appropriate formula | T10.create products T12.use and create spreadsheets. | AppleWorks- ClarisWorks Excel | Math Forum, math resources by subject http://forum.swarthmore.edu/math.topics.html |
| M3d Finds solutions for unknown quantities in linear equations. | Will solve word problems using linear equations | Use the graphing function of the spreadsheet or computer software to solve linear equations | T7. Use age-appropriate digital software T10.create products T12.use and create spreadsheets | Geometer's Sketchpad AppleWorks- ClarisWorks Excel | Geometry and Geometer's Sketchpad Web Sites http://curry.edschool.virginia.edu/teacherlink/math/links/geometry.html |
| M4 Statistics and Probability Concepts | Students will: | Students will: | Students will: | | PBS Teacher Source: http://www.pbs.org/teachersource/math.htm?default |

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| | | | | | <p>The Dance of Chance: provides examples of naturally occurring fractals and Patterns http://polymer.bu.edu/museum/</p> <p>The following is a collection of almost 200 single concept lessons. These lessons may be freely copied and used in a classroom but they remain the copyright property of the author. http://www.iit.edu/~smile/mathindex.html</p> <p>Descriptive Statistics Introduction: An interactive introduction to mode, median, mean, range, variation, and standard deviation http://www.mste.uiuc.edu/hill/dstat/dstat.html</p> |
| M4a Organizes and displays data. | Create a table and graph from student test scores / stock data | Use spreadsheets to graph the data collected | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | Investing for Kids: This Web site is designed by kids for kids. It examines stocks, bonds, mutual funds and the like. It teaches the principles of saving and investing. It also includes a stock game. http://tqd.advanced.org/3096/index.htm |
| M4b Analyzes data with respect to frequency and | Use class test scores / data about the planets | Find the mode and range from the | T10.create products | AppleWorks- ClarisWorks | This lesson teaches students to identify a range; recognize the |

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|---|---|---|--|-------------------------------------|---|
| distribution. | in our Solar System to find the mode and range | spreadsheet table | T12.use and create spreadsheets | Excel | <p>score that occurs most frequently in a distribution; locate the middle point in a distribution; and find the average of a given set of numbers. http://www.iit.edu/~smile/ma9017.html</p> <p>The Nine Planets is an overview of the history, mythology, and current scientific knowledge of each of the planets and moons in our solar system. http://www.seds.org/billa/tnp/</p> |
| M4c Analyzes central tendencies of data. | Use class test scores /planet data / stock data to find the mean and median. | Use spreadsheet mean and median functions | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | <p>Descriptive Statistics Introduction: An interactive introduction to mode, median, mean, range, variation, and standard deviation http://www.mste.uiuc.edu/hill/dstat/dstat.html</p> <p>(see above sites for data)</p> |
| M4d Makes conclusions and recommendations based on data analysis. | Analyze the student test score data and graph and write a conclusion about the statistics | Use word-processing software to compose their conclusions | T9.use word processing T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Word | <p>The cost of living utility converts dollar values, adjusting for inflation. Find the buying power of dollar amounts dating back to 1957 http://www.newsengin.com/NewEngin.nsf/JumpOffPoints/Free+Tools</p> |

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| M4e Critiques the conclusions and recommendations of others' statistics. | Analyze a graph of data from a news article and write a letter to the editor based on the findings. | Use word processing software to compose letter | T9.use word processing T10.create products | AppleWorks- ClarisWorks Word | Newspapers from around the world on line. http://www.pscw.uva.nl/sociosite/Newspapers.html |
| M4f Considers the effects of missing or incorrect information. | Consider different scenarios for 5 students who take a make- up exam i.e. All receive 100 on exam etc.("what if") Stock data also | Use spreadsheets to analyze the additions to the data | T9.use word processing T10.create products T12.use and create spreadsheets | Word AppleWorks- ClarisWorks Excel | The Data Library contains lists of ongoing data-sharing projects as well asdownloadable Clarisworks spreadsheets and other sources of data on the web. http://mathforum.com/workshops/sum96/data.collections/datalibrary/ |
| M4g Formulates hypotheses to answer a question and uses data to test hypotheses. | Hypothesize which area is the warmest in the USA or World. They will exam data for at least 10 area. | Gather data from the internet. They will organize and analyze the data to test their hypotheses | T7.use age-appropriate digital resources T9.use word processing T10.create products T12.use and create spreadsheets T13.use the Internet | Internet AppleWorks- ClarisWorks Excel Word | National weather service for United States http://www.wrh.noaa.gov/wrhq/nwspage.html Daily Global weather http://weather.yahoo.com/graphics/temperature/US_Hi.html Weather labs - Global http://weatherlabs.com/index.html |
| M4h Represents and determines probability; recognizes equally likely outcomes, and constructs sample spaces. | Create a tree diagram showing the sample space for their school cafeteria menu. There are four different | Use computer software to create tree diagrams | T10.create products T14.select appropriate technologies for | Inspiration AppleWorks- ClarisWorks | Download a 30 day free trial copy of Inspiration http://inspiration.com/betaform.html |

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| | sandwiches served on three kinds of bread | | specific situation | | Plan an inspiration diagram. http://inspiration.com/diagrams/ed/teacher.html |
| M4i Makes predictions based on experimental or theoretical probabilities. | Survey the class' favorite colors, graph the results, and determine the probability that any particular student likes a particular color. Assume that there are ten times as many students in the class, and determine the probability of favorite colors. | Recreate the survey results and graph using a spreadsheet. | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | Format for a color survey http://www.girltech.com/Game_Cafe/GC_menu_frame.html |
| M4j Predicts the result of a series of trials once the probability for one trial is known. | Research weather reports to determine the probability of a major snowstorm occurring in Buffalo, NY and predict when the next major storm will occur. | Use the internet to conduct this research | T7.use appropriate digital devices T9.use word processing T10.create products T13.use internet | Internet AppleWorks- ClarisWorks Word | National weather service for United States http://www.wrh.noaa.gov/wrhq/nwspage.html Daily Global weather http://weather.yahoo.com/graphics/temperature/US_Hi.html |

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| M5 Problem Solving and Reasoning | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | <p>PBS Teacher Source: http://www.pbs.org/teachersource/math.htm?default</p> <p>Math Baseball: play a little math baseball and test your math problem solving ability http://www.funbrain.com/math</p> <p>Ask Dr. Math: questions and answers covering all areas of mathematics. Students can also e-mail their own questions to Dr. Math. http://forum.swarthmore.edu/dr.math/drmath.middle.html</p> |
| M5a Formulation: The student participates in the formulation of problems. | Solve the following problem: A family of four takes a trip New York Aquarium. They have \$200 to spend for the day on all aspects of the trip, tickets, tolls, programs, food and souvenirs. How can they spend the maximum amount | Research on the internet the types and costs of different items needed for trip | T9.use word processing T10.create products T13.use internet | Internet AppleWorks- ClarisWorks Word | New York Aquarium and other sites http://wcs.org/home/zoos/nyaquarium |

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| | but not more than \$200? | | | | |
| M5b Implementation: The student makes the basic choices involved in planning and carrying out a solution. | See M5a. Create a table listing each item and its cost and calculate the total cost of food for a family of four. | Create a spreadsheet listing each item and its cost. Use formulas to compute the individual item cost and the total, \$200 or less. | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | Visit Pathmark and choose from their sales and coupons. http://pathmark.com/ Go to Costco http://www.costco.com/ |
| M5c Conclusion: The student provides closure to the solution process through summary statements and general conclusions. | See M5a. Examine the data from part M5b and determine the changes necessary if more soda and ice cream must be consumed on an extremely warm day. | Using the spreadsheet examine the data from part M5b and determine the changes necessary if more soda and ice cream must be consumed on an extremely warm day. | T9.use word processing T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel Word | |
| M5d Mathematical Reasoning: The student demonstrates mathematical reasoning by generalizing patterns, making conjectures and explaining why they seem true, and by making sensible, justifiable statements. | See M5a. Determine what amount of money is realistic for this trip to the Aquarium | Determine through use of the data in the spreadsheet what amount of money is realistic for this trip to the Aquarium | T9.use word processing T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel Word | Take a trip using Amtrak in California http://www.quickaid.com/~qrail/ |
| M6 Mathematical Skills and Tools | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | PBS Teacher Source: http://www.pbs.org/teachersource/math.htm?default The Math Journal: offers tips, |

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| | | | | | <p>lesson plans for interactive projects, and also includes advice from educators around the globe. http://www.mathprojects.com</p> <p>Explorer: Good math resource search engine, includes mathematical tools http://explorer.scrtec.org/explorer/</p> <p>A Walk Through Time: The evolution of time measurement http://physics.nist.gov/GenInt/Time/time.html</p> <p>Convert It! An interactive measurement conversion table. http://microimg.com/science/</p> <p>English-Metric Converter: Converts area, distance, mass, temperature and volume from English-metric to US standards, also in Japanese. http://fuji.stanford.edu/converter/step1.html</p> |
| M6a Computes | Not applicable | | | | |

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| accurately with arithmetic operations on rational numbers. | | | | | |
| M6b Knows and uses the correct order of operations for arithmetic computations. | Solve “order of operations” problems containing parenthesis and squares. | Use spreadsheet formulas to solve “order of operations” problems | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | Using arithmetic, logical, and bitwise shift operators and parenthesis, build an arithmetic expression with as many Base digits as specified in the Number of occurrences. http://www.cut-the-knot.com/arithmetic/funny/count.html |
| M6c Estimates numerically. | Examine a book store or a supermarket bill and estimate the total cost. | Use spreadsheets to check their work | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | Visit Pathmark and choose from their sales and coupons. http://pathmark.com/ Book store on line http://www.amazon.com |
| M6d Measures accurately. | Use rulers, protractors and compasses to draw geometric figures | Use computer software to draw polygons; print drawings and measure the accuracy. | T10.create products T14.select appropriate technologies for a specific situation | Geometer’s Sketchpad AppleWorks- ClarisWorks | The Compass in Art – integrates art and geometry using a compass. http://explorer.scrtec.org/explorer/explorer-db/html/823932058-81ED7D4C.html |
| M6e Refers to geometric shapes and terms correctly. | Classify different geometric figures by side and angle | Create a data base listing within each field a different property. They can sort by property to classify the figure | T10. create products T11. use and create databases | AppleWorks- ClarisWorks MS Access | Defining Polygons http://mathforum.com/dr.math/faq/formulas/faq.figuredef.html |
| M6f Use equations, | Measure the base and | Create different | T10.create | Geometer’s Sketchpad | Formulas for Area, perimeter, |

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| formulas, and simple algebraic notation appropriately. | height of different triangles with a ruler and use the formula $A = \frac{1}{2}bh$ to find the area | triangles using computer software and find the area using computer generated measurements | products T14.select appropriate technologies for a specific situation | AppleWorks- ClarisWorks | etc http://mathforum.com/dr.math/faq/formulas/ |
| M6g Reads and organizes data on charts and graphs. | Take a class survey of their favorite TV shows; create a table; and construct a bar graph | Use a spreadsheet to organize and graph the data | T10.create products T12.use and create spreadsheets | AppleWorks- ClarisWorks Excel | |
| M6h Uses calculators and computers, as appropriate, to achieve solutions. | See any of the examples listed above | See any of the examples listed above | | | Texas Instruments: Graphing calculators in math & science http://www.ti.com/calc |
| M7 Mathematical Communication | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| M7a Uses mathematical language and representations with appropriate accuracy. | (the following is used from M7a through M7e) Form cooperative groups to investigate the value of π using the formula $C = \pi d$ /diameter | (the following is used from M7a through M7e) | (the following is used from M7a through M7e) T7.use age-appropriate digital resources T8.use related peripheral devices | (the following is used from M7a through M7e) Geometer's Sketchpad AppleWorks- ClarisWorks HyperStudio MS Office | Circle formulas http://mathforum.com/dr.math/faq/formulas/faq.circle.html |
| M7b Organizes work, explains facets of a | Use string, compasses and rulers | Use computer software to create different size | | | Math Goodies is a free educational web site featuring |

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| solution orally and in writing, labels drawings, and uses other techniques to make meaning clear to the audience. | to measure the circumference and diameter of different size circles. | circles and measure the circumference and diameter of each. | | | interactive math lessons, homework help, worksheets etc http://www.mathgoodies.com/ |
| M7c Uses mathematical language to make complex situations easier to understand. | Record their results in tabular form and use the formula to compute the value of . | Use a spreadsheet to record their results including the appropriate formula | | | why pi works in solving problems http://explorer.scrtec.org/explorer/explorer-db/html/783750035-447DED81.html |
| M7d Exhibits developing reasoning abilities by justifying statements and defending work. | Create a narrative procedure to explain the process. | Create an digital presentation of the process | | | |
| M7e Shows understanding of concepts by explaining ideas to others. | Make an oral presentation to the class. | Make an oral presentation to the class using multimedia software | | | |
| M7f Comprehends mathematics from reading assignments and other sources | Not applicable | | | | |
| M8 Putting Math to Work | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | Lemonade Stand: Players must run a virtual Lemonade Stand http://www.littlejason.com/lemonade/index.html Investing for Kids: This Web site is designed by kids for kids. It examines stocks, |

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| | | | | | <p>bonds, mutual funds and the like. It teaches the principles of saving and investing. It also includes a stock game. http://tqd.advanced.org/3096/index.htm</p> <p>AskEric: Mathematics: lots of sample problems that apply to real world situations like budgeting, shopping, and savings http://ericir.syr.edu/Virtual/Lessons/Mathematics/index.html</p> <p>Web Math: Focuses on a wide variety of real-world math problems offering tips, examples, tools and more http://www.webmath.com/</p> |
| M8a Data study | Survey two classes on each grade gathering data to determine if middle school students of the same grade level and/or sex have the same favorite singer or singing group? | <p>Use word processing to compose survey.</p> <p>Use spreadsheet to tabulate the results of survey</p> <p>Use internet resources to compare school statistics with general</p> | <p>T7.use age-appropriate digital resources</p> <p>T8.use related peripheral devices</p> <p>T9.use word processing</p> <p>T10.create products</p> <p>T12.use and create</p> | <p>Geometer's Sketchpad</p> <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>The Cruncher</p> <p>MS Office</p> | |

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| | | <p>population statistics</p> <p>Create multimedia presentations to present findings</p> | <p>Spreadsheets</p> <p>T13.use internet</p> <p>T14.select appropriate technologies for a specific situation</p> | | |
| M8b Mathematical model | <p>Compare the growth of a set of plants under a variety of conditions (e.g., amount of water, fertilizer, duration and exposure to sunlight). create a table of data and graph the results.</p> | <p>Use spreadsheets to tabulate and graph results</p> <p>Create multimedia presentations to present findings</p> | <p>T7.use age-appropriate digital resources</p> <p>T8.use related peripheral devices</p> <p>T9.use word processing</p> <p>T10.create products</p> <p>T12.use and create spreadsheets</p> <p>T13.use internet</p> <p>T14.select appropriate technologies for a specific situation</p> | <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>MS Office</p> | |
| M8c Design of a physical structure. | <p>Choose an historical landmark building in their neighborhood.</p> <p>Take pictures of the structure.</p> <p>Construct a scale drawing</p> | <p>Use digital camera to photograph the building</p> <p>Use CAD or drawing software to create a scale drawing of the building</p> <p>Use the Internet to research the landmark</p> | <p>T7.use age-appropriate digital resources</p> <p>T8.use related peripheral devices</p> <p>T9.use word processing</p> <p>T10.create products</p> <p>T12.use and create</p> | <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>MS Office</p> <p>Community Construction Kit</p> | <p>Buid It & Bust It http://library.thinkquest.org/11686</p> <p>Lego Models http://library.thinkquest.org/20551/</p> <p>Math-Kitecture Design a floor plan using CAD</p> |

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| | <p>Use cardboard, balsa wood or Popsicle sticks to construct a replica of the building</p> <p>Write a brief history of the structure</p> | <p>building</p> <p>Create multimedia presentations</p> | <p>spreadsheets</p> <p>T13.use internet</p> <p>T14.select appropriate technologies for a specific situation</p> | | <p>software.</p> <p>http://www.math-kitecture.org</p> |
| M8d Management and planning project. | <p>Determine if a Web-based trading card business is more profitable than a local store front business</p> <p>Form cooperative groups to research: financing, inventory purchases, taxes expenses, etc</p> | <p>Use the following digital resources to complete the project: Internet, word processing, spreadsheets and databases.</p> <p>Create multimedia presentations</p> | <p>T7.use age-appropriate digital resources</p> <p>T8.use related peripheral devices</p> <p>T9.use word processing</p> <p>T10.create products</p> <p>T12.use and create spreadsheets</p> <p>T13.use internet</p> <p>T14.select appropriate technologies for a specific situation</p> | <p>Internet</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>MS Office</p> | |
| M8e Pure mathematics investigation. | <p>Discover the relationships and properties of Fibonacci Numbers emphasizing their relationship with nature</p> | <p>Use the following digital resources to complete the project: Internet, word processing, spreadsheets and databases.</p> | <p>T7.use age-appropriate digital resources</p> <p>T8.use related peripheral devices</p> <p>T9.use word processing</p> <p>T10.create</p> | <p>Internet</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>MS Office</p> | <p>The Fibonacci Series</p> <p>http://library.thinkquest.org/27890/splash.html</p> |

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| | | Create multimedia presentations | products T12.use and create spreadsheets T13.use internet T14.select appropriate technologies for a specific situation | | |

Science

Early Childhood

| Science Early Childhood | | | | | |
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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
| S1 – Physical Science Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| <p>Primary Focus S1a - Demonstrates understanding of properties of objects and materials.</p> <p>Related Science Standards</p> <ul style="list-style-type: none"> • S6 a • S6 c • S7 a | <p>Identify similarities and differences in the size, weight, and color of objects.</p> <p>Sort collections of objects and materials into two or more categories.</p> | <p>Enter data in a teacher created database or spreadsheet. Convert data to a graph to show comparisons of properties.</p> <p>Use KidPix Studio stamps to make different sizes of the same graphic.</p> <p>Create Venn Diagrams to sort categories.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> | <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> <p>MS Excel</p> <p>FileMaker Pro</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>A Whale of a Tale Surf into Science</p> | <p>Exploratorium http://www.exploratorium.edu/</p> <p>Explorer http://explorer.srtec.org/explorer/</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/</p> |
| <p>Primary Focus S1b- Demonstrates an understanding of position and motion of objects.</p> | <p>Show how the motion of an object can be described by tracing and measuring its position over time.</p> | <p>Use a digital camera and a timeline to show the growth of a plant over a period of time.</p> <p>Use a drawing program</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> | <p>Tom Snyder’s Timeliner</p> <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> | <p>Exploratorium http://www.exploratorium.edu/</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> |

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| <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 c • S7 a • S7 c | <p>Observe the changing position of the sun. Observe how a push or pull changes the position of an object.</p> <p>Observe changing shadows.</p> <p>Show how sound is produced by vibrating objects.</p> | <p>to create graphics to illustrate observed changes.</p> <p>Create a multimedia presentation.</p> <p>Manipulate text in word processing program using shadow effects.</p> <p>Use the Internet as a resource.</p> | <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>MS Word</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>A Whale of a Tale Surf into Science</p> | <p>The Lighspan Network http://www.lightspan.com</p> <p>Astronomy with a Stick http://www.nsta.org</p> |
| <p>S1c—Demonstrates understanding of light, heat, electricity, and magnetism.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 c • S7 a • S7 c | <p>Explain similarities and differences of heat and friction by burning or rubbing or mixing substances together.</p> <p>Use knowledge of magnetism to predict what materials will be attracted, repelled or unaffected by a magnet.</p> | <p>Use word processing and/or create Venn diagrams to illustrate similarities and differences.</p> <p>Use word processing for predictions. Create Venn Diagrams to illustrate results of magnet studies.</p> <p>Create graphic organizers to brainstorm and predict results.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> <p>MS Excel</p> <p>Inspiration</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>A Whale of a Tale Surf into Science</p> | <p>Magnet Fun http://www.eecs.umich.edu/~coalition/sciedoutreach/funexperiments/quickndirty/magnetfun.html</p> <p>The Lighspan Network http://www.lightspan.com</p> |

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| S2 – Life Science Concepts: | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| <p>Primary Focus S2 a Demonstrates understanding of characteristics of organisms.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 a • S6 c • S7 a | <p>Examine life cycles of plants and animals.</p> <p>Plan the supplies and equipment needed for a camping trip and explain their purposes.</p> <p>Explain how humans cause changes in the environment.</p> <p>Study about recycling initiatives.</p> <p>Research endangered species.</p> | <p>Create a multimedia presentation to illustrate life cycles of animals and plants.</p> <p>Use graphic organizers to chart life cycles.</p> <p>Use word processing to keep a journal.</p> <p>Make a map of camp grounds and trails.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sammy’s Science House</p> <p>Berenstain Bears:Time to Clean Up, Pick Up, and Recycle</p> <p>A Whale of a Tale Surf into Science</p> | <p>BioPoint http://www.fi.edu/qa97/biology/</p> <p>Microbe World http://www.microbeworld.org/mlc/</p> <p>Gorillas Online http://www.selu.com/bio/gorilla/</p> <p>Zoom Dinosaurs http://www.enchantedlearning.com/subjects/dinosaurs/index.html</p> <p>Body Changers http://www.pbs.org/wnet/nature/bodychangers/multimedia/changers-game.html</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>The Lighspan Network http://www.lightspan.com</p> <p>Endangered Species http://www.esc8.net</p> |

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| | | | | | Litter Prevention http://www.dep.state.pa.us |
| Primary Focus S2 b- Demonstrates understanding of life cycles of organisms Additional Science Standards Met <ul style="list-style-type: none"> • S6 a • S6 c • S7 a | Make drawings of observations showing the life cycle of plant or animal. Write a report and/or presentation explaining the growth and development of animal. | Use KidPix Studio to illustrate observations. Use word processing to write a report. Use presentation software to create a multimedia journal of animal growth. Use the Internet as a resource. | T7. use age-appropriate resources. T9. use word processing. T10. create products. T13. use the Internet. | KidPix Studio AppleWorks- ClarisWorks DK Eyewitness Children's Encyclopedia Sammy's Science House MS Word | The Lighspan Network http://www.lightspan.com |

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| <p>Primary Focus S2c – Demonstrates understanding of organisms and environments.</p> <p>S2d – Demonstrates understanding of change over time.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 a • S6 c • S7 a | <p>List and describe Earth’s biomes.</p> <p>Describe the similarities and differences between fossils and related contemporary organisms.</p> | <p>Visit the Museum of Natural History.</p> <p>Use the Internet as a resource.</p> <p>Use Venn diagrams that show characteristics of organisms.</p> <p>Create a multimedia illustration of organisms and their environments.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>KidPix Studio</p> <p>AppleWorks-ClarissWorks</p> <p>Sammy’s Science House</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>A Whale of a Tale Surf into Science</p> | <p>Museum of Natural History http://www.amnh.org</p> <p>Face to Fossil http://www.amnh.org/paleontology/index.html</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| S3 – Earth and Space Science Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| <p>Primary Focus S3a -- Demonstrates understanding of properties of Earth materials.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S5 a • S5 e • S6 a | <p>Identifies properties of earth such as water, gases, rocks, and soils by texture, color, and ability to retain water.</p> <p>Sort rocks and soil samples into two or more categories.</p> <p>Tests the effects of different soil samples on plant growth.</p> | <p>Use word processing to keep a journal.</p> <p>Use graphic organizers.</p> <p>Record data in a chart or teacher created spreadsheet or database</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> <p>T12. use and create</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Excel</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sammy’s Science House</p> <p>Berenstain Bears:Time to Clean Up, Pick Up,</p> | <p>National Geographic www.nationalgeographic.com</p> <p>The Cyber Zoo Mobile http://www.primenet.com/~brendel/</p> <p>Scientists in the City http://sln.fi.edu/city/city.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |

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| <ul style="list-style-type: none"> S6 b S6 c S7 a | <p>Write a story that describes what happens to a drop of water.</p> <p>Study about recycling initiatives.</p> | | <p>spreadsheets</p> <p>T13. use the Internet.</p> | <p>and Recycle Inspiration</p> <p>A Whale of a Tale Surf into Science</p> | <p>KinderGARDEN http://aggie-horticulture.tamu.edu/kindergarten/kinder.htm</p> <p>Cool Science for Curious Kids http://www.hhmi.org/coolscience/</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>EPA Explorers Club http://www.epa.gov/kids/</p> <p>American Museum of Natural History http://www.amnh.org/</p> <p>The Lighspan Network http://www.lightspan.com</p> <p>Litter Prevention http://www.dep.state.pa.us/dep/dep/putate/airwaste/wm/litter/litter.htm</p> |
| <p>Primary Focus S3b- Demonstrates understanding of objects in the sky.</p> | <p>Identifies objects in the sky such as: Sun, Moon, planets, and other objects that can be observed and</p> | <p>Draw a model of the solar system.</p> <p>Keep a written and visual journal of the</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word</p> | <p>KidPix Studio</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sammy’s Science House</p> | <p>Eyes on the Sky Feet on the Ground http://www.harvard.edu/ECT/the_book/index.html</p> |

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| <p>S3c- Demonstrates understanding of changes in the Earth and sky.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 b • S6 c • S7 a | <p>described.</p> <p>Identifies the importance of the Sun to provide the light and heat.</p> <p>Observe and record the changing shape and position of the moon.</p> <p>Observe characteristics of seasons to determine change in the weather.</p> | <p>Moon's cycle over a month.</p> <p>Use graphic organizer and/or draw program to illustrate proper clothing for changing seasons.</p> <p>Use word processing to keep a journal of the morning messages.</p> <p>Use the Internet as a resource.</p> | <p>processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Word</p> <p>Inspiration</p> <p>A Whale of a Tale Surf into Science</p> | <p>Izzy's Skylog http://darkstar.swsc.k12.ar.us/~izzy/index.html</p> <p>Welcome to Knowble http://www.knowble.com</p> <p>The k-8 Aeronautics Internet Textbook http://wings.ucdavis.edu/</p> <p>Windows to the Universe http://www.windows.umich.edu/</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>The Weather Channel www.weather.com/education</p> <p>NASA www.nasa.gov</p> <p>How the Weather Works http://www.weatherworks.com/</p> <p>The Lighspan Network http://www.lightspan.com</p> |
| <p>S4 – Scientific Connections and</p> | <p>Students will:</p> | <p>Students will:</p> | <p>Students will: (T1-T6 are implied)</p> | | |

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| Applications | | | throughout the listed activities). | | |
| <p>Primary Focus S4.a Demonstrates an understanding of big ideas and unifying concepts: (such as order and organization; models, form and function; change and constancy; and cause and effect.)</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S7 | <p>Sort and classify animal species by herbivore, carnivore, and omnivore.</p> <p>Choose appropriate food pictures for the animals.</p> <p>Make mask models of different types of animal teeth (pointed flat, sharp, etc.) and describe functions of the teeth.</p> | <p>Create a factual or fictional animal story using word processing software and/or multimedia presentation software.</p> <p>Use graphic organizers to illustrate food pictures for the animals.</p> <p>Use Venn diagrams to contrast and compare. Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>AppleWorks- ClarisWorks</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Inspiration</p> <p>A Whale of a Tale</p> <p>Surf into Science</p> <p>MS Word</p> <p>KidPix Studio</p> | <p>Seeds of Change Garden http://www.nmnh.si.edu/garden/seasons/</p> <p>Corn in the Classroom http://www.ontariocorn.org/classroom.html</p> <p>Get Real http://www.wpt.org/getreal!/front.htm</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>Primary Focus S4 b Demonstrates understanding of the designed world.</p> <p>Secondary Focus</p> <ul style="list-style-type: none"> • S6 c • S7 a | <p>Use “The Three Little Pigs” as a catalyst for designing different structures.</p> <p>Build structures using different materials.</p> | <p>Create a model in a drawing program using basic geometric shapes.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>KidPix Studio</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Fun with Architecture</p> | <p>Science Museum of Minnesota http://www.sci.mus.mn.us/sln/tf/s/strongshapes/strongshapes.html</p> <p>Architecture Home Model http://communitydisc.wst.esu3.k12.ne.us/CGI/TAF/cdunitplan.taf?function=detail&Layout_0_uid1=62</p> |

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| | | | | | How Stuff Works http://www.howstuffworks.com/ The Lighspan Network http://www.lightspan.com |
| Primary Focus S4c- Demonstrates understanding of personal health, such as nutrition, substance abuse, and exercise; germs and toxic substances; personal and environmental safety. Additional Science Standards Met <ul style="list-style-type: none"> • S6 c | Investigate the need and importance of proper personal hygiene. Create a food pyramid. Have children bring healthy snacks to school. Create a journal of foods eaten over a week's time. | Use a timeline to illustrate a daily hygiene routine. Use graphic organizers to illustrate food categories. Use word processing software to keep a food journal. Create a spreadsheet that lists healthy snacks. Create a database or spreadsheet that lists food eaten. Use the Internet as a resource. | T7. use age-appropriate resources. T9. use word processing. T10. create products. T11. use and create databases. T12. use and create spreadsheets. T13. use the Internet. | Tom Snyder's Timeliner DK Eyewitness Children's Encyclopedia Inspiration AppleWorks-ClarissWorks MS Word MS Excel MS Access FileMaker Pro | KidSource Online http://www.kidsource.com/ Dole 5 A Day http://www.dole5aday.com/ TheYuckiest Site on the Internet http://www.yucky.com/ A healthy Body Makes Sense http://www.coreknowledge.org/Ckproto2/resrcs/lessons/K98MusicParade.htm Benny Goodsport http://www.bennygoodsport.com/ Kids Health http://www.kidshealth.org/index2.html The Lighspan Network http://www.lightspan.com |
| Primary Focus S4d- | Interview community helpers such as | Use word processing software to write a | T7. use age-appropriate | AppleWorks-ClarissWorks | Science Heroes http://www.myhero.com/science/ |

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| <p>Demonstrates understanding of science as a human endeavor.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> S6 c | <p>firefighters and police officers.</p> <p>Write a biography of a scientist.</p> | <p>report.</p> <p>Use a digital camera to photograph community helpers.</p> <p>Create multimedia presentations of interviews.</p> <p>Use the Internet as a resource.</p> | <p>resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>DK Eyewitness Children's Encyclopedia</p> <p>MS Word</p> <p>KidPix Studio</p> <p>Community Construction Kit by Tom Snyder</p> | <p>science_content.asp</p> <p>The Lighspan Network http://www.lightspan.com</p> <p>Early Childhood Thematic Units http://www.sbcss.k12.ca.us/sbcss/specialeducation/ecthematic/helpers</p> <p>Science Heroes http://www.myhero.com/science/science_content.asp</p> |
| S5 – Scientific Thinking | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities). | | |
| <p>Primary Focus</p> <p>S5a- Asks questions about natural phenomena; objects and organisms; and events and discoveries.</p> <p>S5c- Uses evidence from reliable sources to construct explanations.</p> | <p>Work cooperatively to identify a problem and make predictions based on S3 a. i.e. What will happen to seed growth in a mixture of potting soil and sand?</p> <p>Use "Jack and the Beanstalk" as a catalyst to discuss fact of natural phenomena</p> | <p>Use word processing software to keep a journal.</p> <p>Create a chart using spreadsheet software.</p> <p>Use digital camera to record seed growth.</p> <p>Create multimedia presentation to illustrate cooperative products.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> | <p>AppleWorks-ClarisWorks</p> <p>KidPix Studio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Inspiration</p> <p>MS Word</p> | <p>Connect with Schools and Educators http://www.sln.org/schools/index.html</p> <p>Science Whatzit! http://www.oms.edu/online/whatzit/</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> |

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| <p>S5d- Evaluates different points of view using relevant experiences, observations, and knowledge; and distinguishes between fact and opinion.</p> <p>S5e- Identifies problems; proposes and implements solutions; and evaluates the accuracy, design, and outcomes of investigations</p> <p>S5f- Works individually and in teams to collect and share information and ideas.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> • S6 a • S6 b • S6 c • S7 a • S8 a • S8 b | <p>and fiction.</p> <p>Within cooperative groups compare information in books, the Internet, and newspapers based on a specific scientific topic such as recycling.</p> <p>Write a biography about a scientist.</p> | <p>Create graphic organizers to illustrate fact and fiction in “Jack and the Beanstalk.”</p> <p>Use the Internet as a resource.</p> | <p>T12. use and create spreadsheets</p> <p>T13. use the Internet.</p> | | <p>Beakmann’s World http://www.spe.sony.com/tv/kids/beakman/</p> <p>Why Field Studies are Important http://www.fieldmuseum.org/ua/nettop.htm</p> <p>Chicago Field Museum http://www.fieldmuseum.org/</p> <p>National Academy of Sciences Education Resources http://nationalacademies.org/subjectindex/edu.html</p> <p>The Lighspan Network http://www.lightspan.com</p> |

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| S1 – Physical Science Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| Primary Focus S1a – Demonstrates understanding of properties of objects and materials. Additional Science Standards Met ♦ S5 b ♦ S5 d ♦ S5 e ♦ S6 a ♦ S7 d ♦ S8 a ♦ S8 c | Investigate the browning process of apple slices and the factors that slow or speed up the process. Investigate how an object that sinks in water can be made to float by itself. Investigate how shape and material affects the stability of a boat. | Use word processing to keep a journal of scientific observations. Use spreadsheets to create a chart. Create a multimedia presentation to illustrate scientific observations. Use a digital camera to record the affects of stability on a boat. Use the Internet as a resource. | T7. use age-appropriate resources. T8. use related peripheral devices. T9. use word processing. T10. create products. T12. use and create spreadsheets. T13. use the Internet. T15. Understand and practice responsible use of information. | KidPix Studio AppleWorks-ClarissWorks KidPix Studio MS Office HyperStudio DK Eyewitness Children’s Encyclopedia Sunburst Learn About Science | Physics 4 Kids http://www.kapili.com/physics4kids/ Magnet Fun http://www.eecs.umich.edu/~coalitn/sciedoutreach/funexperiments/quickndirty/magnetfun.html Science Learning Network http://www.sln.org/resources/ Exploratorium http://www.exploratorium.edu/ Science Museum of Minnesota http://www.sci.mus.mn.us/ Science in Action http://www.bbc.co.uk/sia/front.html |

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| <p>Primary Focus S1 b - Demonstrates understanding of position and motion of objects.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 b ◆ S6 a ◆ S6 b ◆ S7 a ◆ S7 b ◆ S7 d. ◆ S8 a | <p>Construct a magnetic pendulum.</p> <p>Control and test variables that affect the number of complete pendulum swings in a given time.</p> | <p>Create a graphic organizer that lists the steps for constructing a pendulum.</p> <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Create graphics and/or use digital camera to illustrate pendulum construction.</p> <p>Use spreadsheets to create and charts and graphs.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T15. Understand and practice responsible use of information.</p> | <p>Inspiration</p> <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> <p>The Exploratorium Science Snacks http://www.exploratorium.edu/snacks/snackintro.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>Primary Focus S1 c - Demonstrates understanding of light, heat, electricity, and magnetism, such as the variation of heat and temperature; how light</p> | <p>Plan and design a method to test materials that carry electricity and materials that do not carry electricity.</p> <p>Create an electrical</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> | <p>AppleWorks-ClarissWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>Electricity (Discovery</p> | <p>Electrified Ben http://sln.fi.edu/franklin/scientst/electric.html</p> <p>The Franklin Institute http://sln.fi.edu/tfi/info/infsumm.html</p> |

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| <p>travels in a straight line until it strikes an object or how electrical circuits work.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 c ◆ S8 a | <p>circuit.</p> | <p>Use word processing to write a report.</p> <p>Use drawing software to draw a schematic of a circuit.</p> <p>Use the Internet as a resource.</p> | <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T15. Understand and practice responsible use of information.</p> | <p>Channel)</p> <p>Sunburst Learn About Science</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>S2 - Life Science Concepts</p> | <p>Students will:</p> | <p>Students will:</p> | <p>Students will: (T1-T6 are implied throughout the listed activities)</p> | | |
| <p>Primary Focus S2 a - Demonstrates understanding of characteristics of organisms, such as survival and environmental support; the relationship between structure and function; and variations in behavior.</p> <ul style="list-style-type: none"> ◆ Additional Science Standards Met ◆ S5 a ◆ S6 a | <p>Remove, draw, count, measure and describe flower parts through writing and drawing.</p> <p>Infer the function of the various flower structures.</p> <p>Identify flower structures and their function as they relate to seed production.</p> <p>Explain how humans cause changes in the environment.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Create graphics to identify flower structures.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Use the Internet as a resource.</p> <p>Create a multimedia presentation to illustrate</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T15. Understand and practice</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Biology 4 Kids http://www.kapili.com/biology4kids/index.html</p> <p>Life Has a History http://www.ucmp.berkeley.edu/education/life/tournw.html</p> <p>BioSURF http://www.phschool.com/science/biosurf/</p> <p>BioPoint http://www.fi.edu/qa97/biology/</p> |

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| <ul style="list-style-type: none"> ◆ S6 c ◆ S7 a ◆ S8 d | <p>Study about recycling initiatives.</p> <p>Research endangered species.</p> | <p>life cycles of animals and plants.</p> <p>Use graphic organizers to chart life cycles.</p> | <p>responsible use of information.</p> | | <p>Microbe World http://www.microbeworld.org/mlc/</p> <p>Gorillas Online http://www.selu.com/bio/gorilla/</p> <p>Body Changers http://www.pbs.org/wnet/nature/bodychangers/multimedia/changers-game.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Endangered Species http://www.esc8.net</p> <p>Creature World http://www.pbs.org/kratts/world/content.html</p> |
| <p>Primary Focus S2 b - Demonstrates understanding of life cycles of organisms, such as how inheritance and environment determine</p> | <p>Make observations of a plant or animal growth through writing and drawing.</p> <p>Develop a list of questions based on</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use word processing to write a report.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> | <p>American Museum of Natural History http://www.amnh.org/</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> |

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| <p>the characteristics of an organism; and that all plants and animals have life cycles.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 f ◆ S6 a ◆ S6 b ◆ S6 c ◆ S7 a ◆ S7 b ◆ S7 d ◆ S8 a ◆ S8 d | <p>their observations of mealy worms and mealy worm behavior.</p> <p>Research and write a report about how inheritance and environment affect organisms.</p> <p>Plan and conduct responsible and appropriate experiments to foster their questions.</p> | <p>Create graphics to illustrate observations and/or experiments.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Use a digital camera to record observations</p> <p>Create a multimedia presentation.</p> <p>Use the Internet as a resource.</p> | <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | <p>HyperStudio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>BioPoint http://www.fi.edu/qa97/biology/</p> <p>Microbe World http://www.microbeworld.org/mlc/</p> <p>Gorillas Online http://www.selu.com/bio/gorilla/</p> <p>Zoom Dinosaurs http://www.zoomdinosaurs.com</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Body Changers http://www.pbs.org/wnet/nature/bodychangers/multimedia/changers-game.html</p> <p>Ecosystems http://www.mobot.org/MBGnet/just_kids.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |

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| <p>Primary Focus S2 c - Demonstrates understanding of organisms and environments, such as the interdependence of animals and plants in an ecosystem; and populations and their effects on the environment.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 b ◆ S5 f ◆ S7 b ◆ S7 c ◆ S8 b ◆ S8 c ◆ S8 d | <p>Plan, design and set up a variety of terraria to support the life cycles of the particular organisms living there.</p> <p>Observe and study the interdependence between plants and animals in the terraria.</p> <p>Create a model of a particular environment.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use a graphic organizer to describe environments and ecosystems.</p> <p>Create graphics using drawing software or digital camera.</p> <p>Create a database of consumers, producers and decomposers in the terraria.</p> <p>Create a multimedia presentation.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>Inspiration</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Swimming With Whales http://www.pbs.org/wnet/nature/spermwhales/html/whaleintro.html</p> <p>Whale Watching http://whale.wheelock.edu</p> <p>Bird Habitats http://www.kaytee.com/discovery/</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> <p>BioPoint http://www.fi.edu/qa97/biology/</p> <p>Microbe World http://www.microbeworld.org/mlc/</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Gorillas Online http://www.selu.com/bio/gorilla/</p> <p>Zoom Dinosaurs http://www.zoomdinosaurs.com</p> <p>Body Changers</p> |

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| | | | | | <p>http://www.pbs.org/wnet/nature/bodychangers/multimedia/changers-game.html</p> <p>Whatzit! http://www.omsi.edu/online/whatzit.home.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>Primary Focus S2 d - Demonstrates understanding of change over time, such as evolution and fossil evidence depicting the great diversity of organisms developed over geologic history.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 b ◆ S6 c ◆ S7 d ◆ S8 d | <p>Describe the similarities and differences between fossils and related organisms.</p> <p>Write a journal from the perspective of a paleontologist.</p> <p>Draw pictures of different fossils.</p> <p>Explain how environmental factors contributed to these similarities and differences.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use a graphic organizer to illustrate and explain similarities and differences.</p> <p>Use drawing software.</p> <p>Use Venn diagrams that show characteristics of organisms.</p> <p>Create a multimedia presentation that illustrates organisms and</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>Inspiration</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Zoom Dinosaurs http://www.zoomdinosaurs.com</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |

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| | | <p>their environments.</p> <p>Use the Internet as a resource.</p> | use of information. | | |
| S3 – Earth and Space Science Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| <p>Primary Focus S3 a - Demonstrates understanding of properties of Earth materials, such as water and gases; and the properties of rocks and soils, such as texture, color, and ability to retain water.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 a ◆ S6 a ◆ S8 b ◆ S8 d | <p>Collect rock specimens from several locations.</p> <p>Observe the physical properties of rocks.</p> <p>Group them according to their various attributes.</p> <p>Write a rock story.</p> <p>Write a story to describes what happens to a drop of water as it goes through the water cycle.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Create graphics using digital camera or paint software.</p> <p>Use a graphic organizer to illustrate and explain similarities and differences.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create a rock database.</p> <p>Use word processing to write a report.</p> <p>Create a multimedia presentation.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>Inspiration</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>US Geological Survey Learning Web http://www.usgs.gov/education/</p> <p>Web Surfer http://shell.rmi.net/~michaelg/</p> <p>Earth Alert http://www.discovery.com/news/earthalert/earthalert.html</p> <p>Athena, Earth and Space Science for K-12 http://athena.wednet.edu/</p> <p>Rader’s Tarrarum http://www.kapili.com/tarrarum/index.html</p> <p>The Globe Program http://www.globe.gov/</p> <p>Destination: Earth (NASA) http://www.earth.nasa.gov/</p> |

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| | | Use the Internet as a resource. | specific situation. T15. Understand and practice responsible use of information. | | Waterford Press Games http://www.waterfordpress.com/game1.html Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network http://www.lightspan.com |
| <p>S3b- Demonstrates understanding of objects in the sky, such as Sun, Moon, planets, and other objects that can be observed and described; and the importance of the Sun to provide the light and heat, necessary for survival.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 a ◆ S5 c ◆ S6 a ◆ S6 b ◆ S6 c ◆ S7 a | <p>Create a weather station.</p> <p>Report daily record of New York City's temperature, wind direction and speed and precipitation.</p> <p>Explore the causes of weather patterns.</p> <p>Predict weather conditions.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create graphics using paint software.</p> <p>Create databases.</p> <p>Use word processing to write a report.</p> <p>Create a multimedia presentation.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select</p> | <p>AppleWorks-ClarifyWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> <p>Tom Snyder's MapMaker software</p> | <p>Web Surfer http://shell.rmi.net/~michaelg/</p> <p>Athena, Earth and Space Science for K-12 http://athena.wednet.edu/</p> <p>The Globe Program http://www.globe.gov/</p> <p>Destination: Earth (NASA) http://www.earth.nasa.gov/</p> <p>Stormfax Weather Services http://www.stormfax.com/index.htm</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Nine Planets</p> |

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| <ul style="list-style-type: none"> ◆ S7 b ◆ S8 d | | | <p>appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | | <p>http://www.seds.org/nineplanets/nineplanets/</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>Primary Focus S3 c – Demonstrates understanding of changes in Earth and sky, such as changes caused by weathering, volcanism, and earthquakes; and the patterns of movement of objects in the sky.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 a ◆ S5 b ◆ S5 c ◆ S6 ◆ S6 c ◆ S8 d | <p>Research seismic stations.</p> <p>Construct a model seismograph.</p> <p>Measure the strength of simulated earthquakes.</p> <p>Compare model simulations with actual seismogram recordings.</p> <p>Research seismic waves.</p> <p>Track earthquakes around the world.</p> <p>Take on the role of meteorologist and report on weather</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create graphics using paint software and scanned images.</p> <p>Create multimedia presentations.</p> <p>Use word processing to write a report.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sunburst Learn About Science</p> <p>Edmark Space Academy</p> <p>Tom Snyder’s MapMaker software</p> | <p>The Weather Channel www.weatherchannel.com</p> <p>Weekly Earthquake http://www.mindspring.com/~proken/</p> <p>Volcano World http://volcano.und.edu/</p> <p>Earth and Sky Homepage http://www.earthdky.com</p> <p>Welcome to Knowble (Constellation Game) http://www.knowble.com</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> |

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| | <p>conditions.</p> <p>Take on the role of astronomer and report on constellations in the sky.</p> | | <p>and practice responsible use of information.</p> | | <p>The Lightspan Network http://www.lightspan.com</p> |
| <p>S4- Scientific Connections and Applications</p> | <p>Students will:</p> | <p>Students will:</p> | <p>Students will: (T1-T6 are implied throughout the listed activities)</p> | | |
| <p>Primary Focus S4 a – Demonstrates understanding of big ideas and unifying concepts, such as order and organization; models, form and function; change and constancy; and cause and effect.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 d ◆ S6 a ◆ S6 b ◆ S7 ◆ S7 b ◆ S7 c ◆ S8 d | <p>Conduct an experiment to determine which brand of paper towel is the best in terms of form and function, cause and effect, cost and personal preference.</p> <p>Write an advertisement highlighting findings of the experiment.</p> <p>Build a solar iced tea maker.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create a database</p> <p>Write an advertisement for a brand of paper towels.</p> <p>Create a multimedia presentation</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> | <p>AppleWorks- ClarisWorks</p> <p>KidPix Studio</p> <p>MS Office</p> <p>HyperStudio</p> <p>PrintShop</p> <p>PressWriter</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>How Stuff Works http://www.howstuffworks.com/index.htm</p> |

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| | | | <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | | |
| <p>Primary Focus S4 b - Demonstrates understanding of the designed world, such as development of agricultural techniques; and the viability of technological designs.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 c ◆ S5 d ◆ S6 a ◆ S6 b ◆ S7 a ◆ S7 b ◆ S8 a ◆ S8 c | <p>Design and build model airplanes.</p> <p>Hold contests for different flight categories, such as distance, duration of flight time, accuracy and aerobatics (stunt flying).</p> <p>Make moderations to airplane designs to solve problems posed by the different flight categories.</p> <p>Design and build bridges.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create graphics.</p> <p>Create multimedia presentaions.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children’s Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>How Stuff Works http://www.howstuffworks.com/index.htm</p> <p>Welcome to Knowble (Paper Plane Factory) http://www.knowble.com</p> |

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| | | | <p>technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | | |
| <p>Primary Focus S4 c - Demonstrates understanding of personal health, such as nutrition, substance abuse, and exercise; germs and toxic substances; personal and environmental safety.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 d ◆ S5 e ◆ S8 d | <p>Survey the school for favorite vending machine choices.</p> <p>Research the nutritional value of each vending machine item.</p> <p>Make recommendations to improve the selection of food items in the vending machines so that students can make healthier choices.</p> <p>Create advertisements for healthy foods.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Create a database.</p> <p>Write a report</p> <p>Create a multimedia presentation</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>HyperStudio</p> <p>PrintShop</p> <p>PressWriter</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Dole 5 A Day http://www.dole5aday.com/</p> <p>TheYuckiest Site on the Internet http://www.yucky.com/</p> <p>A healthy Body Makes Sense http://www.coreknowledge.org/Ckproto2/resrcs/lessons/K98MusicParade.htm</p> <p>Benny Goodsport http://www.bennygoodsport.com/</p> <p>Ontario Science Center http://www.osc.on.ca/JustFun/Interactive/Zone/izonepages/menu.htm</p> <p>Kids Health http://www.kidshealth.org/index2.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.ht</p> |

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| | | | T15. Understand and practice responsible use of information. | | ml The Lightspan Network http://www.lightspan.com |
| <p>Primary Focus S4 d – Demonstrates understanding of science as a human endeavor: the impact of technology, such as constraints and trade-offs; feedback; benefits and risks; and problems and solutions.</p> <p>Additional Science Standards Met</p> <ul style="list-style-type: none"> ◆ S5 d ◆ S6 a ◆ S6 b ◆ S7 a ◆ S7 c ◆ S8 a ◆ S8 c | <p>Participate in types of challenges (such as science fairs) where students are asked to design models that meet specific criteria (i.e. Egg Drop).</p> <p>Write a biography of a scientist.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Make models</p> <p>Use word processing to write instructions.</p> <p>Use word processing to write a report.</p> <p>Create graphics</p> <p>Create multimedia presentations.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand</p> | <p>AppleWorks-ClarifyWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> <p>How Stuff Works www.howstuffworks.com/index</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |

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| | | | and practice responsible use of information. | | |
| S5- Scientific Thinking | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |

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| <p>Primary Focus S5a- Asks questions about natural phenomena; objects and organisms; and events and discoveries.</p> <p>S5c- Uses evidence from reliable sources to construct explanations.</p> <p>S5d- Evaluates different points of view using relevant experiences, observations, and knowledge; and distinguishes between fact and opinion.</p> <p>S5e- Identifies problems; proposes and implements solutions; and evaluates the accuracy, design, and outcomes of investigations.</p> <p>S5f- Works individually and in teams to collect and</p> | <p>Evaluate the claims of a new product. Describe the questions and evidence required to substantiate the claims. Conduct an investigation to test ideas. Evaluate the accuracy of the conclusions.</p> <p>Use data from one investigation to generate a prediction and conduct a new investigation.</p> <p>Work with others to examine the changes in an environment because of recent changes.</p> <p>Summarize a series of newspaper and magazine articles on a current topic.</p> | <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use spreadsheets to create charts and graphs.</p> <p>Make models</p> <p>Use word processing to write instructions</p> <p>Create graphics.</p> <p>Create multimedia presentations.</p> <p>Use the Internet as a resource.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. Use and create databases.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. Select appropriate technologies for a specific situation.</p> <p>T15. Understand and practice responsible use of information.</p> | <p>AppleWorks- ClarisWorks</p> <p>MS Office</p> <p>KidPix Studio</p> <p>HyperStudio</p> <p>DK Eyewitness Children's Encyclopedia</p> <p>Sunburst Learn About Science</p> | <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Energy and Science Projects http://www.energy.ca.gov/education/projects/projects-html/projects.html</p> <p>Math-Science Learning Coalition http://www.eecs.umich.edu/mathscience/mainpage.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Tom Snyder's Science Court http://www.tomsnyder.com/classroom/scicourt/</p> |

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| share information and ideas. Additional Science Standards Met <ul style="list-style-type: none">• S6 a• S6 b• S6 c• S7 a• S8 a• S8 b | | | | | |

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| <p>S6 a – Uses technology and tools to gather data and extend the senses.</p> <p>S6 b – Collects and analyzes data using concepts and techniques in Mathematics Standard 4</p> <p>S6 c – Acquires information from multiple sources.</p> <p>S7 a- Represents data and results in multiple ways.</p> <p>S7 b- Uses facts to support conclusions.</p> <p>S7 c- Communicates in a form suited to the purpose and audience.</p> <p>S7 d- Critiques written and oral explanations, and uses data to resolve disagreements.</p> <p>S8 a- Demonstrates scientific competence by completing an experiment.</p> <p>S8 b- Demonstrates scientific competence by completing a systematic observation.</p> <p>S8 c- Demonstrates scientific competence by completing a design.</p> <p>S8 d- Demonstrates scientific competence by</p> | <p>For all standards 6 through 8, see previous entries addressing specific standards in table above.</p> | | | | |

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| <p>S8 a- Demonstrates scientific competence by completing an experiment.</p> <p>S8 b- - Demonstrates scientific competence by completing a systematic observation.</p> <p>S8 c- - Demonstrates scientific competence by completing a design.</p> <p>S8 d- - Demonstrates scientific competence by completing non-experimental research using print and digital information.</p> | | | | | |

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| S1—Physical Science | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |

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| <p>S1a—Demonstrates understanding of properties and changes of properties in matter.</p> | <p>Use the concept of density to explain why things float and others sink in water.</p> <p>Investigate the characteristics that are necessary to obtain an electric current from an electrochemical cell of metal(s) and a fluid medium.</p> <p>Explain the difference between recycling and reusing in terms of mass and energy conservation.</p> | <p>Use word-processing to keep a journal of scientific observations.</p> <p>Use spreadsheets to create a chart.</p> <p>Create a multimedia presentation to illustrate scientific observations.</p> <p>Use a digital camera to record physical effects.</p> <p>Use the Internet as a resource.</p> <p>Create a graphic organizer to illustrate differences between recycling and reusing.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-Clarworks</p> <p>Champ Interface</p> <p>LEAP System Interface</p> <p>Vernier Software</p> <p>Computer Probes</p> <p>Moving Molecules</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> | <p>Physics 4 Kids http://www.kapili.com/physics4kids/</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>The Atomic Age at 50 http://www.techreview.com/articles/aug95/atomic.html</p> |
| <p>S1b—Demonstrates understanding of position and motion and forces.</p> | <p>Use the concept of force to explain the roles of front and rear brakes on a bicycle.</p> <p>Build a grandfather clock and explain how</p> | <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> <p>Use word processing to write a report.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> | <p>MS Office</p> <p>AppleWorks-Clarworks</p> <p>Champ Interface</p> | <p>Physics 4 Kids http://www.kapili.com/physics4kids/</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
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| | it works. | <p>Create graphics and/or use digital camera to illustrate physical effects and characteristics; and to record the steps in building a grandfather clock.</p> <p>Create a graphic organizer that lists the steps for constructing a grandfather clock.</p> <p>Create a multimedia presentation to illustrate scientific processes, observations, and/or steps in a procedure.</p> | <p>T10. create products.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>LEAP System Interface</p> <p>Vernier Software</p> <p>Computer Probes</p> <p>Moving Molecules</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>The Particle Adventure http://particleadventure.org/</p> <p>Lenz's Law http://www.execpc.com/~rhoadley/maglenz.htm</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> |
| S1c—Demonstrates understanding of transfer of energy, and the nature of a chemical reaction. | <p>Explain the difference between recycling and reusing in terms of mass and energy conservation.</p> <p>Conduct an energy audit of the classroom and develop</p> | <p>Create a multimedia presentation to illustrate scientific observations.</p> <p>Create a graphic organizer to illustrate the difference between recycling and reusing.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> | <p>MS Office</p> <p>AppleWorks-Clarworks</p> <p>HyperStudio</p> <p>KidPix Studio</p> | <p>Physics 4 Kids http://www.kapili.com/physics4kids/</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network</p> |

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| | <p>procedures for reducing waste.</p> <p>Evaluate the claims and potential benefits of sunglasses that are advertised to screen out ultraviolet.</p> | <p>Use word processing to write a report.</p> <p>Use the Internet as a resource.</p> | <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Adobe PhotoShop</p> <p>Inspiration</p> | <p>http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>How Stuff Works www.howstuffworks.com/index</p> <p>The Franklin Institute http://sln.fi.edu/tfi/info/inf-summ.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>The Particle Adventure http://particleadventure.org/</p> <p>Fusion - Physics of a Fundamental Energy Source http://fusedweb.pppl.gov/CPEP/Chart.html</p> |
| S2—Life Science Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| S2a—Demonstrates understanding of structure and function in living systems. | Explain the effects of a particular disease (e.g., common cold) on an organism's internal structures and | Create a multimedia presentation to illustrate scientific observations. Use word processing to | T7. use age-appropriate resources. T8. use related | MS Office AppleWorks- ClarisWorks | Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network |

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| | <p>their related functions.</p> <p>Use drawings to demonstrate the structure and function relationships among a group of cells, tissues, or organs.</p> <p>Predict how long a plant will live planted in a closed glass jar located by a window; and explain what additional information regarding the plant and the surrounding environment would be needed to improve the prediction.</p> <p>Conduct an investigation to determine the kinds of seeds best suited to germination in a hydroponic system.</p> | <p>write a report.</p> <p>Using paint or drawing software create graphics to illustrate effects, characteristics and/or functions.</p> <p>Create a graphic organizer to illustrate structure and function relationships among a group of cells, tissues, or organs.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use word processing to keep a journal of scientific processes observations, and/or predictions.</p> <p>Use digital camera to record observations.</p> <p>Create a spreadsheet that delineates the results of seed investigation.</p> | <p>peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> | <p>http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>American Museum of Natural History http://www.amnh.org/</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> <p>Biology 4 Kids http://www.kapili.com/biology4kids/index.html</p> <p>Life Has a History http://www.ucmp.berkeley.edu/education/life/tournew.html</p> <p>BioSURF http://www.phschool.com/science/biosurf/</p> <p>BioPoint http://www.fi.edu/qa97/biology/</p> |

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Microbe World
<http://www.microbeworld.org/mlc/>

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|---|--|--|---|--|---|
| <p>S2b—Demonstrates understanding of reproduction and heredity and the role of genes and environment on trait expression.</p> | <p>Write a story about how a person learned to overcome an inherited physical limitation.</p> <p>Explain why offspring of organisms that reproduce sexually never look exactly like their parents.</p> <p>Explain the lines of evidence showing that dogs and cats are related by common ancestors.</p> <p>Compare and contrast historical situations where species became extinct with situations where species survived due to differences in adaptive characteristics and the degree of environmental stress or change.</p> | <p>Create a chart (spreadsheet) illustrating a class survey of typical phenotypes such as tongue rolling, earlobe attachment, eye color etc.</p> <p>Create a multimedia presentation to illustrate a simulation of the breeding of various plants and/or to depict the parts of a plant (plant anatomy).</p> <p>Use word-processing to keep a daily journal of scientific observations.</p> <p>Use word-processing to write a report.</p> <p>Create a multimedia presentation to illustrate the lines of evidence showing dogs and cats are related through common ancestors.</p> <p>Create a graphic organizer to illustrate the lines of evidence that</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>Logal Software's Genetics</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>American Museum of Natural History http://www.amnh.org/</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Virtual Fly Lab http://vcourseware3.calstatela.edu/VirtualFlyLab/IntroVflyLab.html</p> <p>Mendel Web http://www.netspace.org/MendelWeb/</p> <p>DNA From the Beginning http://vector.cshl.org/dnaftb/</p> <p>Chromosome Kindergarten http://curriculum.calstatela.edu/courses/builders/pages/games.html</p> |

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dogs and cats are related through common ancestors.

Use Desktop Publishing to create a booklet or newsletter that compares and contrasts historical situations where species became extinct, with situations where species survived.

Biology 4 Kids
<http://www.kapili.com/biology4kids/index.html>

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| <p>S2c—Demonstrates understanding of regulation and behavior and response to environmental stimuli.</p> | <p>Use drawings to demonstrate the structure and function relationships among a group of cells, tissues, or organs.</p> <p>Explain the physiology of sneezes, tears, or what happens when people laugh.</p> <p>Explain the lines of evidence showing that dogs and cats are related by common ancestors.</p> <p>Compare and contrast historical situations where species became extinct with situations where species survived due to differences in adaptive characteristics and the degree of environmental stress or change.</p> | <p>Create graphic organizers to illustrate structure and function relationships among a group of cells, tissues, or organs.</p> <p>Create a spreadsheet to record data collected from pulse rates taken at rest, immediately after walking, marching and jogging.</p> <p>Create a graph to compare pulse rate data.</p> <p>Use word-processing describing a procedure to identify and test how variables such as walking, marching jogging affect pulse rate.</p> <p>Use desktop publishing to create a brochure that explains the physiology of sneezes, tears, or what happens when people laugh.</p> <p>Create graphics to illustrate the structure</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>Champ Interface</p> <p>LEAP System Interface</p> <p>Vernier Software</p> <p>Computer Probes</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Swimming With Whales http://www.pbs.org/wnet/nature/spermwhales/html/whaleintro.html</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> <p>Swimming With Whales http://www.pbs.org/wnet/nature/spermwhales/html/whaleintro.html</p> <p>Whale Watching http://whale.wheelock.edu</p> <p>Bird Habitats http://www.kaytee.com/discovery/</p> |

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| | | <p>and function relationships among a group of cells, tissues, or organs.</p> <p>Use the Internet as a resource and to gather digital images.</p> | | | <p>BioPoint http://www.fi.edu/qa97/biology/</p> <p>Microbe World http://www.microbeworld.org/mlc/</p> |
| <p>Primary Focus S2d—Demonstrates understanding of populations and ecosystems and the effects of resources and energy transfer on populations.</p> | <p>Identify a pest in the immediate environment; and use an understanding of food webs to propose and test a way to eliminate the pest without introducing environmental poisons.</p> <p>Conduct an investigation to determine the kinds of seeds best suited to germination in a hydroponic system.</p> <p>Compare and contrast historical situations where species became extinct with situations where species survived due to differences in adaptive</p> | <p>Use appropriate digital encyclopedias to research the disappearance of plants from tropical rain forests.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create graphic organizers that illustrate food webs.</p> <p>Create a spreadsheet to record data from the research regarding the disappearance of plants from tropical rain forests and generate Graphs from that data to view the results.</p> <p>Create a graphic</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Swimming With Whales http://www.pbs.org/wnet/nature/permwhales/html/whaleintro.html</p> <p>Explorer http://explorer.scrtec.org/explorer/</p> |

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| | <p>characteristics and the degree of environmental stress or change.</p> | <p>organizer to illustrate comparisons.</p> <p>Create a spreadsheet to record the loss of rain forest acreage over the span of 100 years and generate graphs from that spreadsheet.</p> <p>Use word-processing to write a narrative report identifying the effects of plant loss on the ecosystem in tropical rain forests.</p> <p>Use word-processing to create a persuasive argument, in the form of a newspaper editorial, for or against rain forest preservation.</p> <p>Use desktop publishing to create a newspaper article that identifies a pest in the immediate environment; and use an understanding of food webs to propose and test a way to eliminate the pest without introducing</p> | <p>use of information.</p> | | |

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| | | <p>environmental poisons.</p> <p>Use desktop publishing to create a booklet that compares and contrasts historical situations where species became extinct with situations where species survived due to differences in adaptive characteristics and the degree of environmental stress or change.</p> <p>Use desktop publishing to create a booklet that explains how antibacterial soaps have allowed antibiotic resistant bacteria to thrive, thus affecting the natural selection process proposed by Charles Darwin.</p> | | | |
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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
|--|--|---|---|---|---|
| S2e—Demonstrates understanding of evolution, diversity, and adaptation of organisms. | <p>Explain why offspring of organisms that reproduce sexually never look exactly like their parents.</p> <p>Identify a pest in the immediate environment; and use an understanding of food webs to propose and test a way to eliminate the pest without introducing environmental poisons.</p> <p>Conduct an investigation to determine the kinds of seeds best suited to germination in a hydroponic system.</p> <p>Compare and contrast historical situations where species became extinct with situations where species survived due to differences in adaptive characteristics and the degree of</p> | <p>Use the Internet as a resource and to gather digital images.</p> <p>Use word-processing to write a report that shows an understanding of food webs, to propose and test a way to eliminate a pest (the Mosquito that spreads the West Nile-like Virus) without introducing environmental poisons.</p> <p>Create a graphic organizer that illustrates food webs.</p> <p>Use appropriate CD ROM libraries, and digital encyclopedias, and the Internet to research the effects of the insecticide Malathion on the ecosystem.</p> <p>Use word-processing to write a persuasive argument for or against the use of Malathion to control the spread of</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Sim Life</p> <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | environmental stress or change. | <p>West Nile-like Virus.</p> <p>Use drawing tools / clip art libraries and imported photographic images to enhance the written report (or persuasive argument).</p> <p>Use desktop publishing to create a booklet that compares and contrasts historical situations where species became extinct with situations where species survived due to differences in adaptive characteristics and the degree of environmental stress or change.</p> <p>Create a multimedia presentation to illustrate research.</p> | | | |
| S3—Earth and Space Concepts | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network</p> |

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| | | | | | http://www.sln.org/resources/index.html Boston Museum of Science http://www.mos.org/ CERES Project http://btc.montana.edu/ceres/ Astrobiology Web http://www.astrobiology.com/ Geological Time Machine http://www.ucmp.berkeley.edu/help/timeform.html Natural Perspective http://www.perspective.com/nature/index.html |

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| <p>S3a—Demonstrates understanding of structure of the Earth system.</p> | <p>Explain how earthquakes, volcanoes, and sea-floor spreading have a common cause.</p> <p>Write a story that describes what happens to a drop of water and the physical environment through which it flows as it travels from a lake to a river via the Earth's atmosphere.</p> | <p>Use appropriate CD ROM Libraries, and Digital Encyclopedias to locate tectonic plates and faults around the world.</p> <p>Create a graphic organizer that illustrates common causes.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use a drawing program (and graphics-clip art, arrows) to plot earthquake sites and faults on a world map.</p> <p>Use word-processing to create a report identifying earthquake activity and fault lines around the world and to discuss the relationship between the two.</p> <p>Research the temperature changes in NY during the past fifty years.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Sim Life</p> <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarifyWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>US Geological Survey Learning Web http://www.usgs.gov/education/</p> <p>Web Surfer http://shell.rmi.net/~michaelg/</p> <p>Earth Alert http://www.discovery.com/news/earthalert/earthalert.html</p> <p>Athena, Earth and Space Science for K-12 http://athena.wednet.edu/</p> <p>The Globe Program http://www.globe.gov/</p> <p>Destination: Earth (NASA)</p> |

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| | | <p>Create a spreadsheet to record the data obtained regarding the temperature changes in NY during the past fifty years.</p> <p>Create graphs using spreadsheet data obtained regarding the temperature changes in NY during the past fifty years.</p> <p>Use word-processing or desktop publishing to write a magazine article that explains how earthquakes, volcanoes, and sea-floor spreading have a common cause.</p> <p>Create a multimedia presentation that describes what happens to a drop of water and the physical environment through which it flows as it travels from a lake to a river via the Earth's atmosphere.</p> | | | http://www.earth.nasa.gov/ |
| S3b—Demonstrates | Explain how | Create a multimedia | T7. use age- | Grolier's Encyclopedia | Science in Action |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
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| <p>understanding of Earth's history.</p> | <p>earthquakes, volcanoes, and sea-floor spreading have a common cause.</p> | <p>presentation to illustrate a storybook to a younger child showing how occasional catastrophes such as the impact of an earthquake, asteroid, or comet can influence the Earth's structure and history.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create spreadsheets to collect and record local daily weather data.</p> <p>Create graphs from spreadsheets to analyze the weather data recorded in the aforementioned spreadsheet (i.e. the number of sunny, cloudy, rainy etc. days).</p> <p>Use a drawing program and graphics (clip art, weather map symbols), to create a local weather map and a model weather station.</p> | <p>appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Earth, Wind and Ice http://www.pbs.org/wgbh/nova/everest/earth/</p> <p>Oceanography http://www.onr.navy.mil/focus/ocean/</p> <p>Set in Stone http://www.blm.gov/education/paleo/</p> <p>Arizona Sedimentary Geology and Paleontology http://www.psiiaz.com/Schur/azpaleo/paleo.html</p> |

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| | | Use desktop publishing, to write a magazine article that explains how earthquakes, volcanoes, and sea-floor spreading have a common cause. | | | |
| S3c—Demonstrates understanding of Earth in the Solar System. | <p>Write a story that describes what happens to a drop of water and the physical environment through which it flows as it travels from a lake to a river via the Earth's atmosphere.</p> <p>Predict what will happen to the reading of your weight on a bathroom scale while riding in an elevator, investigate your predication, and explain why the prediction was or was not accurate.</p> <p>Use the concept of gravity to explain why people can jump higher on the Moon than they can on</p> | <p>Use word-processing to write a story.</p> <p>Create spreadsheets to record sunrise and sunset data and changes in day length. Generate appropriate graphs from spreadsheets.</p> <p>Use the Internet for research and to access satellite imagery.</p> <p>Use desktop publishing to write a newspaper article explaining why we experience different seasons (Summer, Winter etc.)</p> <p>Create a multimedia presentation that illustrates the phases of the moon in relation to the position of the Earth</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> <p>Rain Forest Researchers</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>US Geological Survey Learning Web http://www.usgs.gov/education/</p> <p>Web Surfer http://shell.rmi.net/~michaelg/</p> <p>Earth Alert http://www.discovery.com/news/earthalert/earthalert.html</p> <p>Athena, Earth and Space Science</p> |

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| | Earth. | <p>and the Sun.</p> <p>Create a multimedia presentation that illustrates a complete solar eclipse, and/or, a complete lunar eclipse.</p> <p>Create a multimedia presentation that describes what happens to a drop of water and the physical environment through which it flows as it travels from a lake to a river via the Earth's atmosphere.</p> | | <p>CyberSky</p> <p>Distant Suns</p> | <p>for K-12 http://athena.wednet.edu/</p> <p>Rader's Tarrarum http://www.kapili.com/terrarium/index.html</p> <p>The Globe Program http://www.globe.gov/</p> <p>Destination: Earth (NASA) http://www.earth.nasa.gov/</p> |
| S3d—Demonstrates understanding of natural resource management. | Identify a place that is subject to periodic flooding, evaluate its positive and negative consequences, and study different ways of maintaining, reducing or eliminating the likelihood of flooding. | <p>Create a database to record dry garbage items each student collected during the week.</p> <p>Create a spreadsheet to record the dry garbage items each student collected during the week and calculate the average quantity of garbage generated by each student, class and school.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Nine Planets</p> |

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| | | <p>Generate graphs using the aforementioned spreadsheet data to analyze and view the data.</p> <p>Use desktop publishing to create a brochure regarding effective school waste management.</p> <p>Use appropriate CD ROM libraries, and digital encyclopedias to determine the best way to manage the amount of garbage generated by the students.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use desktop publishing to create a booklet that identifies a place that is subject to periodic flooding, evaluate its positive and negative consequences, and study different ways of maintaining, reducing or</p> | <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>http://www.seds.org/nineplanets/nineplanets/</p> |

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| | | eliminating the likelihood of flooding. | | | |
| S4—Scientific Connections and Applications | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | Frank Potter's Science Gems http://www.sciencegems.com/ |
| S4a—Demonstrates understanding of big ideas and unifying concepts. | Create a health pamphlet for a track team that travels around North America to help them adjust to altitudes different from the place where they usually train, and explain why these adjustments are necessary. | <p>Use desktop publishing to create a health booklet for a track team that travels around North America to help them adjust to altitudes different from the place where they usually train, and explain why these adjustments are necessary.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use graphics and clip art to enhance the pamphlet.</p> <p>Create a multimedia presentation that demonstrates the order,</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> <p>Rain Forest Researchers</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Radio JOVE http://radiojove.gsfc.nasa.gov/</p> <p>How Stuff Works http://www.howstuffworks.com/index.htm</p> |

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| | | <p>organization, changes and constancy of the planets in the Solar System.</p> <p>Use word-processing to write an informative essay about the causes and effects the mosquito borne West Nile-like Virus has had on the New York area.</p> | | | |
| <p>S4b—Demonstrates understanding of the designed world.</p> | <p>Develop a plan to modify the school's fire warning system for students with disabilities.</p> <p>Analyze an automatic icemaker and explain how its design takes into account the differences in the properties of water in liquid and solid states.</p> <p>Identify a pest in a local agricultural setting; and compare and contrast the risks and benefits of chemical and biological pest</p> | <p>Use word-processing to create a report identifying a pest in a local agricultural setting and the problems that pest causes.</p> <p>Create a multimedia presentation to compare and contrast the risks and benefits of chemical versus biological pest control.</p> <p>Use desktop publishing to create a pamphlet to describe a plan to modify the school's fire warning system for students with disabilities.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Radio JOVE http://radiojove.gsfc.nasa.gov/</p> <p>How Stuff Works http://www.howstuffworks.com/index.htm</p> |

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| | control. | <p>Create a graphic organizer to illustrate comparisons.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create a multimedia presentation that illustrates the different kinds of antibiotics and why different antibiotics are used.</p> | | <p>Adobe PageMaker</p> <p>Rain Forest Researchers</p> | <p>The Tech Museum of Innovation http://www.thetech.org/</p> <p>Dante II Frame Walking Robot http://img.arc.nasa.gov/dante/dante.html</p> <p>Virtual Archaeology http://www.educ.sfu.ca/people/staff/jmd/archaeology/IntroPg.htm</p> |
| S4c—Demonstrates understanding of health. | <p>Hypothesize why people tend to get more colds and flu in the winter and discuss ways to prevent the spread of illness.</p> <p>Investigate local water quality standards and make recommendations to school officials about water quality on and near the campus.</p> <p>Identify a pest in a local agricultural setting; and compare</p> | <p>Use word-processing to hypothesize why people get more colds and flu in the winter and discuss ways to prevent the spread of illness.</p> <p>Use the Internet as a resource and to access satellite images.</p> <p>Use desktop publishing to create a booklet or brochure discussing the ways to prevent the spread of colds and flu.</p> <p>Create a multimedia</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Dole 5 A Day http://www.dole5aday.com/</p> <p>TheYuckiest Site on the Internet</p> |

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| | <p>and contrast the risks and benefits of chemical and biological pest control.</p> | <p>presentation that describes how to avoid falling and subsequent injury when there is ice on the ground.</p> <p>Create spreadsheets to record the pH of rainwater samples collected over a three-month period and create a graph from the spreadsheet data.</p> <p>Use CD ROM libraries, and digital encyclopedias to research the adverse effects of acid rain on plants and the environment in general.</p> <p>Use desktop publishing to create a newspaper article that discusses the causes of acid rain and the adverse effects it has on plants and the environment in general.</p> | <p>specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>PrintShop</p> <p>Adobe PageMaker</p> <p>Rain Forest Researchers</p> | <p>http://www.yucky.com/</p> <p>A healthy Body Makes Sense http://www.coreknowledge.org/CKproto2/resrcs/lessons/K98MusicParade.htm</p> <p>Benny Goodsport http://www.bennygoodsport.com/</p> <p>Ontario Science Center http://www.osc.on.ca/JustFun/InteractiveZone/izonepages/menu.htm</p> <p>Columbia Virtual Body http://www.medtropolis.com/vbody/</p> <p>Consumer Health http://ericir.syr.edu/Virtual/Lessons/Health/Consumer_Health/COH0001.html</p> <p>Kids Health http://www.kidshealth.org/index2.html</p> |
| <p>S4d –Demonstrates understanding of the impact of technology.</p> | <p>Create a health pamphlet for a track team that travels around North America</p> | <p>Use appropriate CD ROM libraries, digital encyclopedias, and the Internet to research the</p> | <p>T7. use age-appropriate resources.</p> | <p>Grolier’s Encyclopedia</p> <p>MS Encarta</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> |

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| | <p>to help them adjust to altitudes different from the place where they usually train, and explain why these adjustments are necessary.</p> <p>Develop a plan to modify the school's fire warning system for students with disabilities.</p> <p>Analyze an automatic icemaker and explain how its design takes into account the differences in the properties of water in liquid and solid states.</p> <p>Identify a pest in a local agricultural setting; and compare and contrast the risks and benefits of chemical and biological pest control.</p> | <p>problems created by industrial and automotive pollution.</p> <p>Use word-processing to create a persuasive argument discussing the benefits, risks, problems and possible solutions regarding pollution.</p> <p>Research the constraints put on automobile emissions by the federal government.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create a multimedia presentation depicting the changes in automobiles since 1964 and how redesigning and re-engineering automobiles affected their exhaust emissions and air pollution.</p> | <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarifyWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> <p>National Geographic</p> <p>MapMaker's Toolkit</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Science & Technology Magazine http://www.llnl.gov/str/</p> |
| S4e—Demonstrates understanding of impact of science. | Identify a pest in a local agricultural setting; and compare | Use word-processing to write a persuasive argument for or against | T7. use age-appropriate resources. | Grolier's Encyclopedia MS Encarta | Science in Action http://www.bbc.co.uk/sia/front.html |

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| | <p>and contrast the risks and benefits of chemical and biological pest control.</p> | <p>the use of Malathion to control the spread of West Nile-like Virus and/or, how using Malathion affects aquifers and well water.</p> <p>Use appropriate CD ROM libraries, digital encyclopedias, and the Internet to research how the discovery of antibiotics (Penicillin, etc.) affected the lives and health of people.</p> <p>Use desktop publishing or word-processing to create a newspaper article that would have been written at the time that Penicillin was first used and discuss how it affected the lives of soldiers during World War II, and, people in general.</p> <p>Create a multimedia presentation depicting the affect antibiotics have on bacterial cells.</p> | <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>How Stuff Works www.howstuffworks.com/index</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>National Geographic http://www.nationalgeographic.com/index.html</p> <p>Archaeology http://www.archaeology.org/main.html</p> <p>Smithsonian Magazine http://www.smithsonianmag.si.edu/</p> |
| S5 Scientific Thinking | Students will: | Students will: | Students will: | | Science Museum of Minnesota |

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| | | | (T1-T6 are implied throughout the listed activities) | | http://www.sci.mus.mn.us/ |
| <p>S5a—Frames questions to distinguish cause and effect; and identifies or controls variables.</p> | <p>Investigate the results of two fellow students' plant growth experiments and recommend ways to enhance the information.</p> <p>Determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the "Best Buy" for a particular purchase.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an aquatic plant, e.g., nutrients, light, color of container.</p> | <p>Use word processing to keep a journal of scientific observations.</p> <p>Use word-processing to create a hypothesis about the effect that different colored light may have on the growth of plants, and, to create a step-by-step experiment to test the effect different colored light has on the growth of plants.</p> <p>Create a multimedia presentation that poses questions to be answered daily regarding the status of a student's plant over the period of one month. Have students answer one question everyday and consider it as part of the observation aspect of the experiment.</p> <p>Use drawing and graphics (and a digital camera) to enhance the</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> <p>Waterford Press Games http://www.waterfordpress.com/game1.html</p> <p>Energy and Science Projects http://www.energy.ca.gov/education/projects/projects.html</p> |

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| | | <p>aforementioned presentation depicting the status of the plants from day to day.</p> <p>Use desktop publishing to write an editorial newspaper article to determine if the scientific evidence in the summary data chart found in the Consumer Reports magazine substantiates recommendations about the “Best Buy” for a particular purchase.</p> <p>Use the Internet as a resource and to gather digital images.</p> | | | |
| S5b—Uses concepts from Science Standards 1 to 4 to explain a variety of observations and phenomena. | <p>Investigate the results of two fellow students’ plant growth experiments and recommend ways to enhance the information.</p> <p>Determine if the scientific evidence in the summary data chart in Consumer</p> | <p>Use word-processing to keep a journal of scientific observations.</p> <p>Use a digital camera to record scientific investigations.</p> <p>Use word-processing to produce a brochure evaluating the potential risks and benefits of a</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> | <p>Grolier’s Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarixWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> | |

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| | <p>Reports substantiates recommendations about the “Best Buy” for a particular purchase.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an aquatic plant, e.g., nutrients, light, color of container.</p> <p>Evaluate the claims and potential risks and benefits of a newly advertised “diet pill.”</p> | <p>newly advertised diet pill.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Create a multimedia presentation that poses questions to be answered daily regarding the status of a student’s plant over the period of one month. Have students answer the questions everyday and consider it to be the observation part of this experiment.</p> <p>Use Desktop Publishing to write an editorial newspaper article to determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the “Best Buy” for a particular purchase.</p> <p>Use drawing and graphics (and a digital</p> | <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> <p>Rain Forest Researchers</p> | |
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| | | camera) to enhance the aforementioned presentation and depict the status of the plants from day to day. | | | |
| S5c—Uses evidence from reliable sources to develop descriptions, explanations, and models. | <p>Investigate the results of two fellow students' plant growth experiments and recommend ways to enhance the information.</p> <p>Determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the "Best Buy" for a particular purchase.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an aquatic plant, e.g., nutrients, light, color of container.</p> <p>Evaluate the claims</p> | <p>Use word-processing to produce a brochure evaluating the potential risks and benefits of a newly advertised diet pill.</p> <p>Use word-processing to keep a journal of scientific observations.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use desktop publishing to write an editorial newspaper article to determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the "Best Buy" for a particular purchase.</p> <p>Create a multimedia</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarifyWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | and potential risks and benefits of a newly advertised “diet pill.” | <p>presentation that poses questions to be answered daily regarding the status of a student’s plant over the period of one month. Have students answer the questions everyday and consider it to be part of the observation aspect of this experiment.</p> <p>Use drawing and graphics (and a digital camera) to enhance the presentation and depict the status of the plants from day to day.</p> | | | |
| S5d—Proposes, recognizes, analyses, considers, and critiques alternative explanations; and distinguishes between fact and opinion. | <p>Investigate the results of two fellow students’ plant growth experiments and recommend ways to enhance the information.</p> <p>Determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the “Best Buy” for a particular</p> | <p>Use appropriate CD ROM libraries, Digital encyclopedias, and the Internet to research the facts about the spread of AIDS as opposed to opinions and other unsubstantiated information.</p> <p>Use word-processing to create a booklet explaining the facts versus opinions about the spread of AIDS.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> | <p>Grolier’s Encyclopedia MS Encarta Netscape MS Internet Explorer AppleWorks- ClarisWorks MS Word Adobe PageMaker PressWriter</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Emerging Infectious Diseases (CDC)</p> |

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| | <p>purchase.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an aquatic plant, e.g., nutrients, light, color of container.</p> <p>Evaluate the claims and potential risks and benefits of a newly advertised “diet pill.”</p> | <p>Use word-processing to keep a journal of scientific observations.</p> <p>Use word-processing to produce a brochure evaluating the potential risks and benefits of a newly advertised diet pill.</p> <p>Create a multimedia presentation that poses questions to be answered daily regarding the status of a student’s plant over the period of one month. Have students answer the questions everyday and consider it to be the observation part of this experiment.</p> | <p>T15. understand and practice responsible use of information.</p> | | <p>http://www.cdc.gov/ncidod/eid/index.htm</p> |
| <p>S5e—Identifies problems; proposes and implements solutions; and evaluates the accuracy, design, and outcomes of investigations.</p> | <p>Investigate the results of two fellow students’ plant growth experiments and recommend ways to enhance the information.</p> <p>Determine if the scientific evidence in the summary data</p> | <p>Use word-processing to keep a journal of scientific observations.</p> <p>Create a multimedia presentation that poses questions to be answered daily regarding the status of a student’s plant over the period of one month. Have students answer</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> | <p>MS Office</p> <p>AppleWorks-ClarixWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> |

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| | <p>chart in Consumer Reports substantiates recommendations about the “Best Buy” for a particular purchase.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an aquatic plant, e.g., nutrients, light, color of container.</p> <p>Evaluate the claims and potential risks and benefits of a newly advertised “diet pill.”</p> | <p>the questions everyday and consider it to be the observation part of this experiment.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use desktop publishing to write an editorial newspaper article to determine if the scientific evidence in the summary data chart in Consumer Reports substantiates recommendations about the “Best Buy” for a particular purchase.</p> | <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Boston Museum of Science http://www.mos.org/</p> <p>Science Learning Network www.snl.org</p> <p>Smithsonian Institution www.si.edu</p> |
| <p>S5f—Works individually and in teams to collect and share information and ideas.</p> | <p>Investigate the results of two fellow students’ plant growth experiments and recommend ways to enhance the information.</p> <p>Work with another student to investigate the effects of several variables on oxygen production in an</p> | <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> <p>Use word-processing to critique articles discussing the spread of AIDS.</p> <p>Working as a group, create a multimedia presentation that</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select</p> | <p>MS Office</p> <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | <p>aquatic plant, e.g., nutrients, light, color of container.</p> <p>Analyze the relationship between distance, time speed and acceleration.</p> <p>In groups create a procedure to identify and test how variables affect pulse rate.</p> <p>In groups develop a persuasive argument for or against rain forest preservation.</p> <p>Create a brochure listing helpful and harmful types of bacteria.</p> | <p>illustrates collected data, observations and conclusions.</p> <p>Use the Internet as a resource and to gather digital images.</p> | <p>appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | | |
| S6 Scientific Tools and Technologies | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | |
| S6a—Uses technology and tools to observe and measure objects, organisms, and phenomena, directly, | Use a microcomputer-based investigation to compare the rates at which different carbonated beverages | Create a spreadsheet to compare the rates at which different carbonated beverages in a variety of containers | T7. use age-appropriate resources. T9. use word | MS Office AppleWorks- ClarisWorks | Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network |

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| indirectly, and remotely. | <p>in a variety of containers lose their fizz.</p> <p>Create a picture of cells and organisms seen through a microscope and label the parts.</p> <p>Create a booklet to teach another student how to conduct field observations.</p> | <p>lose their fizz.</p> <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> <p>Create a multimedia presentation that illustrates collected data, observations and conclusions.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use desktop publishing to create a brochure illustrating field observations.</p> <p>Use digital graphics to illustrate above brochure.</p> | <p>processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |
| S6b—Records and stores data using a variety of formats. | <p>Record the types of rocks found on and near the school property.</p> <p>Create a presentation that presents the types of rocks found on and</p> | <p>Create a database to record the types of rocks found.</p> <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word</p> | <p>MS Office</p> <p>AppleWorks-Clarworks</p> <p>HyperStudio</p> <p>KidPix Studio</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network</p> |

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| | <p>near the school property.</p> <p>Record the types of rocks found on and near the school property, and, to generate Graphs from that data.</p> | <p>Use the Internet as a resource.</p> <p>Use a digital camera to record types of rocks.</p> <p>Create a multimedia presentation that illustrates collected data, observations and conclusions.</p> | <p>processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Adobe PhotoShop</p> | <p>http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |
| <p>S6c—Collects and analyzes data using concepts and techniques in Mathematics Standard 4.</p> | <p>Conduct a field research project to compare the distribution of birds near the school with a field guide for the region to see if local distributions are the same as regional.</p> <p>Record the number of different types of birds near the school.</p> | <p>Create a database to record the types of birds.</p> <p>Create a spreadsheet to compare the distribution of birds near the school with a field guide for the region to see if local distributions are the same as regional</p> <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> | <p>MS Office</p> <p>AppleWorks- ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | | <p>Create a multimedia presentation that illustrates collected data, observations and conclusions.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use desktop publishing to create a brochure illustrating field observations.</p> <p>Use a digital camera to record observations.</p> | <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Adobe PageMaker</p> | |
| <p>S6d—Acquires information from multiple sources.</p> | <p>Conduct a field research project to compare the distribution of birds near the school with a field guide for the region to see if local distributions are the same as regional.</p> <p>Compare the accuracy and timeliness of local weather information from a variety of sources.</p> | <p>Create a database to record the types of birds.</p> <p>Create a spreadsheet to compare the distribution of birds near the school with a field guide for the region to see if local distributions are the same as regional.</p> <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> <p>T12. use and create spreadsheets.</p> | <p>MS Office</p> <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>Inspiration</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Connect with Schools and</p> |

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| | <p>Exchange data on the acidity of rain with students from other states or countries. Figure out why the data differ, if they do.</p> <p>Record local temperature and weather information and determine the average or mean temperature.</p> <p>Get current information on the health effects of long-term space travel.</p> <p>Create a Graph based on the data from the local weather information.</p> <p>Compare the accuracy and timeliness of local weather information from a variety of sources.</p> | <p>Create a multimedia presentation that illustrates collected data, observations and conclusions.</p> <p>Use the Internet for research and communication with students from other states and countries.</p> <p>Use desktop publishing to create a brochure illustrating field observations.</p> <p>Use digital graphics to illustrate above brochure.</p> | <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Educators http://www.sln.org/schools/index.html</p> |
| S6e—Recognizes sources of bias in data. | Show the proper way to take a core sample of soil so as to avoid errors and/or observer | Create a graphic organizer that illustrates the proper way to take a core sample of soil. | T7. use age-appropriate resources. | Encyclopedia MS Office | Science in Action http://www.bbc.co.uk/sia/front.html |

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| | <p>bias.</p> <p>Explain the problems a colorblind person would have and the errors he/she would make when describing the colors of birds or other things.</p> <p>Using obtained information hypothesize about the composition of the rocks that comprise the area beneath the school grounds Discuss the problems inherent to observer bias and sampling error.</p> | <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> <p>Use word-processing to write a newspaper article that avoids bias.</p> <p>Create a database to record the types of rocks.</p> <p>Create a multimedia presentation that discusses problems inherent to observer bias and sampling error.</p> | <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T11. use and create databases.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |
| S7 – Scientific Communication | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science</p> |

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| | | | | | http://www.mos.org/ Quantum Magazine http://www.nsta.org/quantum/ The Year in Science http://www.sciam.com/explorations/1999/122099yearend/index.html |
| S7a—represents data and results in multiple ways. | Create pictures illustrating the steps in an experiment. Record data from an experiment or other source and generate different types of graphs. | Create a graphic organizer that illustrates the steps in an experiment. Use digital photography and digital pictures to illustrate the steps in an experiment. Use word-processing to keep a journal of scientific processes and/or observations. Create a spreadsheet and graphs that illustrate data recorded from an experiment. Use the Internet as a resources and to gather digital images. | T7. use age-appropriate resources. T8. use related peripheral devices. T9. use word processing. T10. create products. T12. use and create spreadsheets. T13. use the Internet. T14. select appropriate technologies for a specific situation. T15. understand and | MS Office AppleWorks-ClarWorks Inspiration KidPix Studio HyperStudio | Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network http://www.lightspan.com Science Learning Network http://www.sln.org/resources/index.html Boston Museum of Science http://www.mos.org/ |

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| | | Create a multimedia presentation that illustrates the steps in an experiment. | practice responsible use of information. | | |
| S7b—Argues from evidence. | <p>Write an advertisement for a hair care product that explains the chemistry of how it works.</p> <p>Produce a newspaper editorial article that analyzes a ballot initiative on a local endangered species.</p> <p>Create a presentation to promote the use of biodegradable detergents based on secondary research.</p> | <p>Use word-processing or desktop publishing to write an advertisement for a hair care product that explains the chemistry of how it works.</p> <p>Use word-processing to keep a journal of scientific processes and/or observations.</p> <p>Use the Internet as a resource and to gather digital images.</p> <p>Use word-processing or desktop publishing to produce a newspaper article that analyzes a ballot initiative on a local endangered species.</p> <p>Create a multimedia presentation that promotes the use of biodegradable detergents</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | | based on secondary research. | | | |
| S7c—Critiques published materials. | <p>Analyze and give a speech about a ballot initiative on toxic chemicals.</p> <p>Critique a USA Today article which reports that eating hot dogs in childhood causes adult leukemia.</p> <p>Write a review of an episode of Beakman’s World.</p> <p>Create a newspaper editorial that analyzes a ballot initiative on toxic chemicals.</p> | <p>Use the Internet as a resource.</p> <p>Use word-processing to write a speech; critique of a newspaper article; review of a scientific television episode.</p> <p>Create a multimedia presentation to illustrate critique.</p> <p>Use word-processing or desktop publishing to produce a newspaper article that analyzes a ballot initiative on toxic chemicals.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |
| S7 d—Explains a scientific concept or procedure to other students. | <p>Make an animated video illustrating how white blood cells protect the body from infectious agents.</p> <p>Create a picture of a white blood cell engulfing and destroying an</p> | <p>Use a digital video camera to create videos that can be edited using appropriate software.</p> <p>Create a multimedia presentation that uses digital videos to explain how two white blood cells protect the body from</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> | <p>MS Office</p> <p>AppleWorks-ClarissWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> |

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| | <p>infectious agent</p> <p>Illustrate how white blood cells protect the body from infectious agents.</p> | <p>infectious agents.</p> <p>Use the Internet for research and to gather digital images and videos.</p> | <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> <p>Adobe Premier</p> <p>MovieWorks</p> <p>iMovie</p> | <p>Boston Museum of Science http://www.mos.org/</p> |
| <p>S7e—Communicates in a form suited to the purpose and the audience.</p> | <p>Create a pamphlet that offers a persuasive argument in favor of using Malathion to control mosquitoes and, as a result, the diseases they transmit to people.</p> <p>Create an advertisement for a cold relief product and explain how it works.</p> | <p>Use appropriate CD ROM libraries, and digital encyclopedias, and the Internet to research the effects of the insecticide Malathion on the ecosystem and people.</p> <p>Use the Internet as a resource and to gather digital graphics.</p> <p>Use word-processing to create a persuasive argument for or against the use of Malathion to control the spread of West Nile-like Virus.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>PressWriter</p> <p>PrintShop</p> <p>Adobe PageMaker</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> |

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| | | Use desktop publishing to create a pamphlet that includes advertisements. | | | |
| S8—Scientific Investigation | Students will: | Students will: | Students will: (T1-T6 are implied throughout the listed activities) | | Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network http://www.lightspan.com Science Learning Network http://www.sln.org/resources/index.html Boston Museum of Science http://www.mos.org/ Science Daily http://www.sciencedaily.com/ Exploratorium http://www.exploratorium.edu/exploring/index.html BioPoint http://www.fi.edu/qa97/biology/ Science Museum of Minnesota http://www.sci.mus.mn.us/ |
| S8a—Demonstrates scientific competence by completing an | Analyze de-icers for relative effectiveness, cost, and | Use word-processing to keep a journal of scientific processes | T7. use age-appropriate resources. | MS Office AppleWorks- | Science in Action http://www.bbc.co.uk/sia/front.html |

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| experiment. | <p>environmental impact.</p> <p>Study different methods for cooking chicken considering health and aesthetics.</p> <p>Create a hypothesis and design a controlled experiment to test the effects of different color lights on the growth of a plant.</p> | <p>and/or observations.</p> <p>Create a spreadsheet that illustrates research.</p> <p>Use the Internet as a resource.</p> <p>Use digital photography to illustrates steps in an experiment.</p> <p>Create a graphic organizer that illustrates steps in an experiment.</p> <p>Use word-processing to write a report.</p> <p>Create a multimedia presentation to illustrate an experiment.</p> | <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T12. use and create spreadsheets.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Inspiration</p> | <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/</p> |
| S8b—Demonstrates scientific competence by completing fieldwork. | <p>Conduct a field study of monument degradation over time at a local cemetery.</p> <p>Adopt a stream and use that location to study habitat and water quality over time.</p> | <p>Use word-processing to write a report.</p> <p>Use word processing to keep a journal of scientific processes and/or observations.</p> <p>Use digital photography to record observations.</p> | <p>T7. use age-appropriate resources.</p> <p>T8. use related peripheral devices.</p> <p>T9. use word processing.</p> | <p>MS Office</p> <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> |

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| | Record observations about the effects of weathering on the school building and property. | Use the Internet as a resource and to gather digital images. Create a multimedia presentation to illustrate observations. | T10. create products. T13. use the Internet. T14. select appropriate technologies for a specific situation. T15. understand and practice responsible use of information. | | Boston Museum of Science http://www.mos.org/ Why Field Studies are Important http://www.fieldmuseum.org/ua/nettop.htm Chicago Field Museum http://www.fieldmuseum.org/ National Academy of Sciences Education Resources http://nationalacademies.org/subjectindex/edu.html |
| S8c—Demonstrates scientific competence by completing a design. | Study different methods for cooking chicken considering health and aesthetics. Design a protective container for an uncooked egg using the concepts of force, motion, gravity, and acceleration and test the design by dropping the container (egg enclosed) from a one-story building. Write and edit | Use word processing to keep a journal of scientific processes and/or observations. Create a spreadsheet that illustrates research. Use the Internet as a resource and to gather digital images. Use digital photography to illustrate design steps. Use word-processing to write and edit | T7. use age-appropriate resources. T8. use related peripheral devices. T9. use word processing. T10. create products. T12. use and create spreadsheets. T13. use the Internet. | MS Office AppleWorks- ClarisWorks HyperStudio KidPix Studio Adobe PhotoShop Inspiration | Science in Action http://www.bbc.co.uk/sia/front.html The Lightspan Network http://www.lightspan.com Science Learning Network http://www.sln.org/resources/index.html Boston Museum of Science http://www.mos.org/ |

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| NYC Performance Standards | Content Activities | Technology-Based Performance Products/Projects | Technology Standards | Suggested Software and Resources | Web Sites |
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| | <p>instructions for building a Rube Goldberg device.</p> <p>Create a Rube Goldberg device containing as many energy transfers and transformations as possible.</p> | <p>instructions.</p> <p>Create a graphic organizer to show instructions for building a Rube Goldberg device.</p> <p>Create a multimedia presentation.</p> | <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | | |
| <p>S8d—Demonstrates scientific competence by completing secondary research.</p> | <p>Research local climate changes over the last century.</p> <p>Research the changes in Rain Forest acreage during the past 100 years.</p> | <p>Use the Internet as a resource and to gather digital images.</p> <p>Use word-processing to write a report.</p> <p>Create spreadsheet to record climate changes; changes in Rain Forest acreage.</p> <p>Create a multimedia presentation to illustrate research.</p> | <p>T7. use age-appropriate resources.</p> <p>T9. use word processing.</p> <p>T10. create products.</p> <p>T13. use the Internet.</p> <p>T14. select appropriate technologies for a specific situation.</p> <p>T15. understand and practice responsible use of information.</p> | <p>Grolier's Encyclopedia</p> <p>MS Encarta</p> <p>MS Office</p> <p>AppleWorks-ClarisWorks</p> <p>HyperStudio</p> <p>KidPix Studio</p> <p>Adobe PhotoShop</p> <p>Rain Forest Researchers</p> | <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> <p>Science Learning Network http://www.sln.org/resources/index.html</p> <p>Boston Museum of Science http://www.mos.org/</p> <p>Science Museum of Minnesota http://www.sci.mus.mn.us/sln/tf/s/strongshapes/strongshapes.html</p> <p>Science in Action http://www.bbc.co.uk/sia/front.html</p> <p>The Lightspan Network http://www.lightspan.com</p> |

Science
Middle School

NYC Performance
Standards

Content
Activities

Technology-Based
Performance
Products/Projects

Technology
Standards

Suggested Software
and Resources

Web Sites

Science Learning Network
<http://www.sln.org/resources/index.html>

Boston Museum of Science
<http://www.mos.org/>

Architecture Home Model
http://communitydisc.wst.esu3.k12.ne.us/CGI/TAF/cdunitplan.taf?function=detail&Layout_0_uid1=62

How Stuff Works
<http://www.howstuffworks.com/>