

STRUCTURED CURRICULUM LESSON PLAN

Day: 091

Subject: Science

Grade Level: K

Correlations (SG,CAS,CFS): 11A1; 11B3; 12C2

ITBS/TAP:

Atmosphere and weather
Environmental interactions and adaptations
Analyze and interpret data
Infer cause and effect

ISAT:

Know and apply scientific methods and processes

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Identifying how weather affects what we do and what we wear

Materials

The Jacket I Wear in the Snow by Shirley Neitzel (or similar trade book)

Objects used and worn in warm weather (beach ball, sunglasses, skates, sandals, sand toys)

Objects used and worn in cold weather (boots, scarf, mittens, sled, ice skates, hat)

Objects used and worn in rainy weather (umbrella, raincoat, galoshes)

3 boxes or containers

Crayons

Scissors

Glue

Old magazines

Educational Strategies/Instructional Procedures

Before this lesson, find three boxes or containers. Label one box *Warm Weather*, another *Cold Weather*, and the last one *Rainy Weather*.

Create a pile of clothes and objects used or worn in different types of weather. Randomly select and display each item for students to identify. After the objects have been identified, call the students' attention to the three labeled boxes. Have the students read the labels with you. Make sure students understand what each box should contain and call volunteers to take turns grouping the items. The teacher should take the first turn and mistakenly place the snowsuit in the *Warm Weather* box.

Students should recognize the mistake and offer suggestions about where to place the snowsuit giving a reason for their choice.

Call on volunteers to select an object and put it in the correct box. If some objects are used for more than one kind of weather, come to an agreement with the class after discussing the differences of opinions.

Have the students draw an illustration of themselves, dressed appropriately, and participating in their favorite activity for a warm day, a cold day, or a rainy day. Have students show their pictures to the rest of the class and describe what they are doing in the picture.

Explain the homework assignment.

Integration with Core Subject(s)

MA: Classify and sort objects by common function

SS: Identify the seasons, the effects of seasonal change, and ways in which people adapt

Connection(s)

Enrichment: Read the book, *The Jacket I Wear in the Snow* by Shirley Neitzel, to the class. It emphasizes how weather affects what we do and wear. Any trade book on the same subject may be substituted.

Fine Arts:

Home: Have students ask parents to watch the weather forecast with them. Based on the weather report, have each student draw a picture of himself/herself in clothing he/she should wear to school the next day. In addition, have students ask parents to write a child-dictated explanation of how and why the clothing was selected.

Remediation: Repeat the classification (grouping) activity with students who were not successful in determining the appropriate box for each item displayed.

Technology:

Assessment

Students should be able to draw a picture of themselves engaged in activities that are appropriate for each type of weather. The clothing illustrated in the students' pictures should be appropriate for the type of weather indicated by the activity.

Homework

See Home Connection.

Teacher Notes

Suggested source:

Neitzel, S. (1989). *The jacket I wear in the snow*. New York: Greenwillow.

STRUCTURED CURRICULUM LESSON PLAN

Day: 092

Subject: Science

Grade Level: K

Correlation's (SG,CAS,CFS): 12B3

ITBS/TAP:

Atmosphere and weather

ISAT:

Apply fundamental concepts and laws of science to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Comparing the properties of each season

Becoming aware of the climates of the countries from which students originate

Comparing plant adaptations to the changing seasons

Materials

Poetry anthology

Chart paper

Objects used and worn in various weather conditions (from Day 091)

Globe

Paper in the shape of a tree

Index cards

Seasonal pictures

Video, *Ponds: Freshwater Habitats*

Educational Strategies/Instructional Procedures

Ask: *What season is it now? How do you know which season it is? Can you tell me the names of the other seasons?* Have the students discuss what they know about each of the seasons. Ask: *Does the weather change much from one season to another?* As the students list the differences between the seasons, record their responses on chart paper. Ask students to tell what their favorite season is and why. Take out the objects from yesterday's activity and have the children identify the season that is appropriate for each object.

Display pictures of people dressed appropriately for each season. Ask: *Do people all over the world have fall, winter, spring, and summer like the people in Chicago?* Discuss this with the students, remembering to ask them for the reasons that helped them choose their answers.

Make students aware of the climates of the countries in different parts of Earth. Explain that some countries only have *winter-like weather* all year long (near polar caps) and others have *summer-like weather* all year long (near equator). Show students where the polar caps and the equator are located on a globe. Have a volunteer locate Chicago on the globe. Have the students note where the polar caps and the equator are located in relation to Chicago.

Cut a sheet of chart paper into the shape of a large tree. Divide this tree-shaped paper into four sections. Write the name of a different season in each box. Ask the students to describe what a tree in Chicago would like during each of the seasons. Write the appropriate list of descriptive words for each section. Invite two students per section (season) to draw a tree that would illustrate the written descriptions.

Integration with Core Subject(s)

SS: Identify the effects of seasonal change and ways in which people adapt to seasons
Differentiate between climate and weather
Describe how weather affects people's lives and activities

Connection(s)

Enrichment: Have students listen to a poem about a tree that changes for each season.

Fine Arts: Have students listen to, then sing, some simple songs about weather and seasonal changes.

Home: Have students talk with their parents about changes of season and how they affect the environment. Have students ask their parents to help them write a poem about a tree in each of the four seasons and draw an illustration to accompany the poem.

Remediation: Prepare index cards with seasonal pictures glued onto them. Have students sort the cards by seasons individually or in small groups at the Science Center.

Technology: Have the students view the video tape presentation of *Ponds: Freshwater Habitats*. It reinforces and illustrates the concept that the number of seasons on Earth varies between regions.

Assessment

Have students sort objects used or worn in different types of weather into groups for each season. (performance assessment)

Homework

See Home Connection.

Teacher Notes

Suggested sources:

Fowler, A. (1992). *Rookie read-about science: How do you know it's fall?* Chicago: Childrens Press.

Fowler, A. (1992). *Rookie read-about science: How do you know it's winter?* Chicago: Childrens Press.

Fowler, A. (1991). *Rookie read-about science: How do you know it's spring?* Chicago: Childrens Press.

Fowler, A. (1992). *Rookie read-about science: How do you know it's summer?* Chicago: Childrens Press.

Saunders-Smith, G. (1998). *Autumn*. Minnesota: Pebble Books by Capstone Press.

Saunders-Smith, G. (1998). *Winter*. Minnesota: Pebble Books by Capstone Press.

Saunders-Smith, G. (1998). *Spring*. Minnesota: Pebble Books by Capstone Press.

Saunders-Smith, G. (1998). *Summer*. Minnesota: Pebble Books by Capstone Press.

STRUCTURED CURRICULUM LESSON PLAN

Day: 093

Subject: Science

Grade Level: K

Correlation's (SG,CAS,CFS): 12B3

ITBS/TAP:

Atmosphere and weather

ISAT:

Apply fundamental concepts and laws of science to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Expanding students' knowledge of how weather affects their lives
Observing that seasons follow a cycle

Materials

Blackline masters, "Cycle of Seasons"
Photographs of students in outdoor settings
Crayons
Scissors
Glue

Educational Strategies/Instructional Procedures

Ask: *Who has ever helped rake leaves? Where did you put them when you were done raking? Can anyone describe the sounds and smells of autumn leaves? Who can describe some activities you and your family and friends have done with piles of leaves?*

Briefly review what happens to the temperature in each season by asking students to imagine it is one specific season. (Example: *What would you wear if it was winter? Why? What kinds of games do you play during the winter?*) Continue this activity until all four seasons have been discussed.

Distribute copies of the first blackline master, "Cycle of Seasons". Have the students look at the page with the words *Fall* and *Winter*. Ask students what pictures they could draw that would represent fall. List the responses on the chalkboard. Ask the students to point to the section of the page that contains the word *Fall*. Direct the students to select the picture they will draw in that section from the list on the chalkboard. Allow time for students to draw their pictures in the *Fall* section of their papers. When the pictures are completed, repeat the procedure for the second section, *Winter*.

Distribute copies of the second blackline master that contains sections for *Spring* and *Summer*. These are to be completed by repeating the above-mentioned procedures.

When all sections have a picture, direct the students to cut on the dotted lines only. Display a completed cycle so students will know how to complete the cylinder. Distribute scissors and glue. When the two sections have been glued together, it will be easy for the students to bring the strip around and glue the last section to the first section, creating a cylinder. Have students repeat the seasons for at least two rotations.

Integration with Core Subject(s)

SS: Identify the effects of seasonal change and ways in which people adapt to seasons
Differentiate between climate and weather
Describe how weather affects people's lives and activities

Connection(s)

Enrichment:

Fine Arts: Sing a song or read a poem about autumn leaves and encourage students to move their bodies as if they were leaves drifting down.

Home: Have each student ask a parent to help him/her find a photograph of himself/herself taken outdoors, then explain what the weather was like when the photograph was taken and write a few sentences describing what clothing was worn and why.

Remediation: Write the words *rainy*, *sunny*, *snowy*, and *cloudy* on paper and ask students to find pictures in magazines of each type of weather. Pasting those pictures under the appropriate titles will help reinforce students' understanding of each term.

Technology:

Assessment

Have students take turns naming appropriate clothing or items to use in each season.

Homework

See Home Connection.

Teacher Notes

Day: 093

CYCLE OF SEASONS

1. Draw the picture in each box.
2. Cut on the dotted lines.
3. Glue the sections (see next page) to form a cylinder.

WINTER
FALL

Day: 093

CYCLE OF SEASONS (Continued)

4. Draw the picture in each box.
5. Cut on the dotted lines.
6. Glue the sections (see page before) to form a cylinder.

SUMMER
SPRING

STRUCTURED CURRICULUM LESSON PLAN

Day: 094

Subject: Science

Grade Level: K

Correlation's (SG,CAS,CFS): 12D1; 13C1

ITBS/TAP:

Environmental interactions and adaptations
Atmosphere and weather

ISAT:

Apply fundamental concepts and laws of science
to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Inferring how weather affects different careers

Materials

Weather spinner (teacher-made)

Pictures of people from various careers (teacher, plumber, doctor, etc.)

Educational Strategies/Instructional Procedures

Display pictures of people who work in various careers. As each picture is displayed, have the students discuss briefly the type of work that person would do. Ask: *Do you think weather affects peoples' jobs? How?*

Show students the spinner and select a picture of a person at work in one of numerous careers (teacher, plumber, doctor, etc.) to display. Spin the weather spinner and tell how the weather will make a difference in that job. For example, if the spinner falls on *rainy* weather for the *lifeguard* picture, students may then infer that the lifeguard cannot work because no swimming is allowed when it rains. If the spinner falls on *snowy* weather for the *doctor* picture, the doctor's job will not really be affected because he/she performs his/her work indoors. Some students might disagree, saying that accidents caused by bad weather could increase the need for the doctor. Some students might say that the patients might not be able to keep their appointments because of the inclement weather. Encourage this type of sharing. This activity will help students understand how weather affects different careers.

Integration with Core Subject(s)

- LA: Dictate descriptive sentences that express thoughts in clear and appropriate ways
SS: Describe the roles of community workers
Identify and describe information obtained from photographs and pictures

Connection(s)

Enrichment: Place the career pictures in the Science Center and allow students to use them at free play or learning centers time.

Fine Arts:

Home: See Homework.

Remediation: Encourage students having difficulty naming each career shown in the pictures displayed in class to work with the teacher in a small group during learning centers or free play time.

Technology:

Assessment

Students should be able to explain how the weather affects different careers and name some careers that are not affected by the weather.

Homework

Have students interview a parent, a relative, or another adult to ask him/her where they work and how their job is affected by the weather. Instruct students to draw a picture of the person interviewed and the type of weather that exists around that person if he/she works outdoors.

Teacher Notes

A weather spinner can be made with a circle of cardboard that has been divided into fifths. Label and illustrate each section: *Sun, Snow, Clouds, Rain, and Wind*. Small metal arrows can be purchased at craft or teacher stores. A paper fastener, a small washer, or an arrow cut from cardboard can also be used.

STRUCTURED CURRICULUM LESSON PLAN

Day: 095

Subject: Science

Grade Level: K

Correlations (SG,CAS,CFS): 11A1; 11B3; 11C2; 13A1

ITBS/TAP:

Atmosphere and weather
Infer cause and effect

ISAT:

Apply fundamental concepts and laws of science
to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Discovering weather instruments and satellites

Materials

Trade books/textbooks about weather instruments and satellites
Tagboard/index cards
World map or globe

Educational Strategies/Instructional Procedures

Ask: How do the weather forecasters make their decisions about what the weather will be like the next day? Listen to students' responses. Some may know about weather instruments and some may not. Read a trade book that shows pictures of weather instruments as well as simple explanations of how they are used. Try to choose a book that includes weather balloons and weather satellites.

Ask: Have you ever heard about satellites? What kinds of satellites have you heard about? Allow students to give accounts of their own experiences with predicting weather and if they have ever been inappropriately dressed for the weather. Show students pictures of weather satellites and balloons. Ask students to share experiences they have had when the weather caused them to change their plans (e.g., they could not go to the park because it was raining heavily). *Ask: What would you do if the weather forecast called for rain but it was not raining when it was time to leave?* Discuss how important it is to plan ahead.

Integration with Core Subject(s)

- LA: Communicate orally in a manner appropriate to setting and occasion
MA: Write whole numbers
Collect data
SS: Demonstrate the ability to make thoughtful choices to meet individual needs

Connection(s)

Enrichment: Collect pictures of food items including pictures of soups, ice cream, watermelons, hot chocolate, and many more. Make a game about selecting foods that are seasonal. Have the students classify the pictures by season and name the season. Have students explain the reasons for their choices. An appropriate example would be hot chocolate. (Even though hot chocolate can be enjoyed all year long, it is usually associated with cold weather.)

Fine Arts:

Home: Have students tell their parents about weather satellites and other instruments used to measure and predict the weather.

Remediation: Use flashcards to review basic weather words with students having difficulty reading and identifying words.

Technology: Find Internet sites that will show weather forecasts from areas around the globe. Show these to the students or download the information and discuss it with the students. Have students find these locations on a map or globe.

Assessment

Homework

Teacher Notes

Suggested source:

Berger, M. and G. (1993). *How's the weather?* Nashville, Tennessee: Ideal Children's Books.

STRUCTURED CURRICULUM LESSON PLAN

Day: 096

Subject: Science

Grade Level: K

Correlations (SG,CAS,CFS): 11A2; 12B3

ITBS/TAP:

Atmosphere and weather

ISAT:

Know and apply scientific methods and processes

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Identifying the seasons and the effects of seasonal changes

Materials

Drawing paper

Crayons

Pipe cleaners

1" pieces of construction paper (red, green, yellow, and brown)

Scissors

Glue

Large index cards

Educational Strategies/Instructional Procedures

Review with students some facts they have learned about the seasons. Tell students that today they will draw a seasonal scene. Write the names of the seasons on the chalkboard. Ask for volunteers to draw a picture representing each of the seasons and write students' names in the appropriate columns.

Explain to the students that they are to draw a scene for the season they chose. Tell students to draw an outdoor scene showing signs of the season and include people dressed appropriately. Explain that they are to draw one thing in the picture that does not belong to their chosen season. Explain that when all students have completed their scenes, the pictures will be collected.

Have the students watch while the papers are shuffled. Explain that each student will receive a drawing made by someone else. Tell students that they will be asked to find one thing in the scene that does not belong and be ready to explain why.

Integration with Core Subject(s)

SS: Identify the seasons and ways in which people adapt to seasons

Connection(s)

Enrichment: Work with the students to make a large calendar bulletin board of the months of the year. Circle the months in each season with different colors and stress that the seasons always occur in a specific order. To decorate the calendar, ask students to create appropriate drawings for each month.

Fine Arts: Place pipe cleaners, glue, and one inch pieces of red, yellow, green, and brown construction paper at a designated area. Have scissors and pencils available at this area. Invite students to use available materials to make a tree that represents one of the seasons.

Home: Have students ask their parents to walk around their neighborhood with them and look for signs that indicate the current season or the approaching new season. For example, collect multi-color dried leaves in the *fall*, bring in some beach sand when it is *summer*, take a picture of the icicles and snow around the house in *winter*, take a picture of a rainy day or early flowers in *spring*.

Remediation: Write the names of the four seasons on large index cards (one season on each card). On the reverse side of the cards, paste or draw a picture of a tree in that specific season. Play a game with students having difficulty sequencing the seasons correctly by giving them the cards with the words face-up and asking them to put them in order. If necessary, ask students to flip the cards and look at the illustrations for help in ordering the seasons correctly.

Technology:

Assessment

Students should be able to name the four seasons in the order in which they occur starting with any season.

Homework

Have students ask a parent or adult to help collect evidence in the form of photographs or artifacts that show what season it currently is. Encourage students to place the items in a shoebox or container and bring them to school for Show and Tell.

Teacher Notes

STRUCTURED CURRICULUM LESSON PLAN

Day: 097

Subject: Science

Grade Level: K

Correlations (SG,CAS,CFS): 11A1; 11B3; 11C2

ITBS/TAP:

Analyze and interpret data

Infer cause and effect

Atmosphere and weather

ISAT:

Know and apply scientific methods and processes

Apply fundamental concepts and laws of science

to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Observing and interpreting weather forecasts

Comparing and contrasting actual weather to forecasts

Communicating inferences and results

Materials

Student Checklist

Blackline master, "Weather Forecast Cards"

Card stock/tagboard

Duffel bag, shoe box, or large envelope

Clothing items or pictures of clothing for different types of weather (T-shirt, swimsuit, sweatshirt, sandals, jacket, raincoat, boots, mittens, scarf, shorts, sweater, rainhat, socks, pants, etc.)

Camera and film (optional)

Educational Strategies/Instructional Procedures

Make a copy of the blackline master, "Weather Forecast Cards", on card stock. Cut the four cards apart; color and laminate them if possible. Prepare the Science Center with a crate full of clothing items (described above) with a duffel bag next to it. If unable to locate clothing items, cut out pictures from catalogs of clothing worn in various types of weather. Every student should have a turn to visit the Science Center at learning centers time or during free play.

Explain to the students that they will pretend to take a summer vacation. Ask them to examine the weather forecast card they received. (They are not all alike.) Each card has five days of the week listed (Monday through Friday). Next to each day is an illustration of what the weather will be like

when the student takes this imaginary trip. Ask the student to pack the duffle bag with the items he/she will need. (If using pictures of clothing, use a shoe box or large envelope as the suitcase.) Encourage students to think about the forecast before they pack their bag.

When each student completes the packing, direct him/her to explain his/her choices in a one-on-one interview. Use a Student Checklist to assess each student's understanding of weather-related concepts as he/she explains his/her choices of clothing. Instruct each student to unpack the duffle bag and prepare the station for the next student. This assessment does not need to be done at Science time and can continue throughout the day.

Integration with Core Subject(s)

SS: Describe how weather affects people's lives and activities

Connection(s)

Enrichment: Take pictures of students during classroom field trips and display them for students to examine. Ask them to look at the photographs and determine what the weather was like just by the clothing they are wearing in the picture. This activity can be repeated at different seasons during the year. Pictures of students taken from magazines or catalogs can also be used.

Fine Arts:

Home: Have students ask parents to share stories about past or recent vacations making sure to describe the type of weather that occurred during this vacation.

Remediation: Have students who are having difficulty with the performance assessment activity work together in a small group under teacher supervision and assistance.

Technology:

Assessment

Students should correctly infer the weather for the trip from the card, differentiate clothing needed for different types of weather, communicate why certain clothes were packed for the trip, and express why there is a need for predicting the weather. Record students' responses on a Student Checklist.

Homework


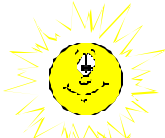


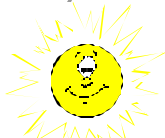


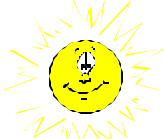


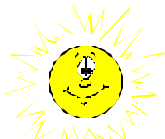






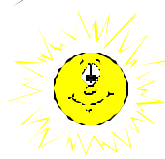


Have the students interview their parents or a relative, asking the interviewee to describe a recent vacation they have taken. Have students ask their parents or another adult family member to help them write or draw a picture about the type of weather they experienced during the trip discussed. Have the students share their work with their classmates the next day.

Teacher Notes

This activity can be done at one to four different stations if there are enough sets of clothing/clothing pictures.

When evaluating the students, keep in mind the students' abilities to connect the forecast to the type of clothing needed, and their ability to communicate why certain clothes were packed.

WEATHER FORECAST CARDS

<p>Monday  75°</p> <p>Tuesday  80°</p> <p>Wednesday  81°</p> <p>Thursday  70°</p> <p>Friday  85°</p>	<p>Monday  80°</p> <p>Tuesday  79°</p> <p>Wednesday  90°</p> <p>Thursday  75°</p> <p>Friday  85°</p>
<p>Monday  80°</p> <p>Tuesday  80°</p> <p>Wednesday  72°</p> <p>Thursday  75°</p> <p>Friday  69°</p>	<p>Monday  75°</p> <p>Tuesday  70°</p> <p>Wednesday  85°</p> <p>Thursday  75°</p> <p>Friday  70°</p>

STRUCTURED CURRICULUM LESSON PLAN

Day: 098

Subject: Science

Grade Level: K

Correlations (SG,CAS,CFS): 11B1

ITBS/TAP:

Atmosphere and weather

ISAT:

Apply fundamental concepts and laws of science to physical and biological systems

Unit Focus/Foci

Weather and Patterns of Change

Instructional Focus/Foci

Assessing students' understanding of weather concepts

Materials

Blackline masters, "Unit Assessment"

Pencils

Tapes or CD-ROMs with classical music

Educational Strategies/Instructional Procedures

Give a pencil to each student. Give each student a copy of the first page of the "Unit Assessment" in which they will be directed to identify and match clothing worn in different types of weather as well as identify seasonal images or illustrations. Explain that there are three questions that will be read aloud and that the first question corresponds with the objects on the section with the number *one*, and so forth. Ask the questions, repeating each question at least once. When the assessment is completed, collect the papers and allow students to relax a minute.

Distribute copies of the second page of the "Unit Assessment" in which students are asked to identify several types of weather. Again, instruct them to listen to each of the questions being posed. If they hear the question number *four* being explained, tell students to look at the section containing the images they need to choose from in the section numbered with the numeral *four*. Read each direction twice. When the students have completed this page, collect the papers.

If time permits, review the answers with the students. Call on volunteers to tell which picture they marked. Ask each volunteer to explain his/her choice.

Integration with Core Subject(s)

SS: Identify the seasons and ways in which people adapt to seasons

Connection(s)

Enrichment: Display student work completed for this unit in the Science Center or on a bulletin board designated for the various weather projects.

Fine Arts: Play classical music selections that have slow and fast melodies. Ask students to tell what type of weather the music reminds them of.

Home: Have students ask an adult family member to continue seasonal and weather observations, and to discuss how weather affects the activities in which people partake.

Remediation:

Technology:

Assessment

Use the “Unit Assessment” in conjunction with all the performance assessments throughout the unit to establish each student’s level of mastery of the concepts taught.

Homework

Teacher Notes

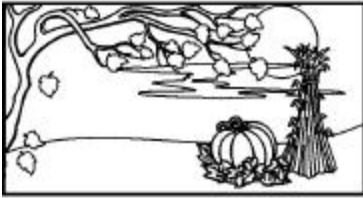
Directions for “Unit Assessment” pages:

1. Draw a line from each set of clothes to the season in which you would use them.
2. Color blue the toy used in the winter.
3. Color green the sport that is played in the spring and summer.
4. Circle the picture that shows it is fall.
5. Color the scene where it is warm all the time.
6. Circle the picture of someone who wants it to snow.

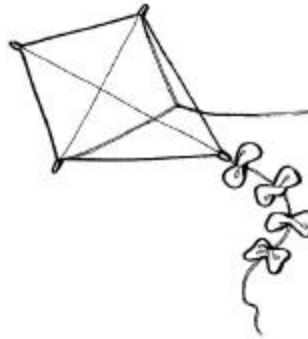
Name _____ Date _____

Unit Assessment

1.



2.



3.



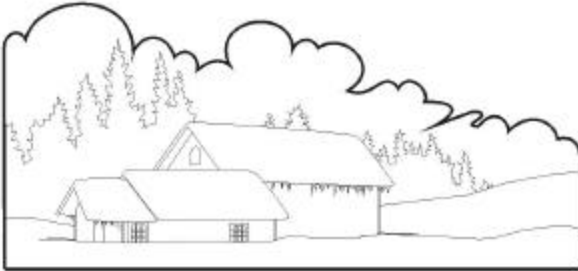
Name _____ Date _____

Unit Assessment (continued)

4.



5.



6.

