

Make a Mobile!

Through mobile making, CCM helps students explore the concepts of balance, counterbalance, weight, and counterweight. Try this fun, hands-on science-learning activity at home with your family today.

Activity Introduction

Encourage your children to investigate balance and motion by making a mobile! A mobile is a hanging sculpture that is a balanced system. Because it is balanced, a breeze might make it move, but it won't tip over. Work with your child or encourage children to work as a group to create a balanced mobile using a variety of materials of varying weights. Key questions to explore include:

- How do we make a stable structure?
- What is a balanced object?
- What is a mobile?

Preparation:

1. Gather materials for mobile:
 - String, wire, fishing line
 - Pipe cleaners
 - Balance rod (can be wooden, PVC pipe, tree branch, coat hanger, etc.)
 - Scale to weigh objects
2. Gather objects to balance (some ideas below):
 - Recycled materials (plastic pop or salad dressing bottles, cardboard tubes, egg cartons, old magazines, etc.)
 - Natural materials (sticks, pinecones, dried flowers, shells, etc.)
 - Art materials (colored paper, yarn, small decorative items like beads, take out containers, trading cards, maps)

Vocabulary (for children ages 7+):

Balance

Stable

Weight

Mobile

Counterweight

Counterbalance

Gravity

Balance Point



Goals

Cognitive Development

- Explore the concepts of balance, counterbalance, weight, and counterweight in constructing a stable sculpture.

Physical Development

- Use fine motor skills to construct the mobile and attach objects.

Literacy/Language Development

- Discuss ideas and explore vocabulary related to balance, weight and motion.

Instructions:

1. Begin the investigation by discussing the history of mobiles, what they are, and who creates them (see background below).
2. Demonstrate how to work with materials (wrapping wire, tying strings).
For children ages 7 and up, review vocabulary words.
3. Prepare children by introducing the materials.
4. Allow children to explore the materials and collaboratively craft a plan for balancing the objects on their mobile.
5. Give children time to build and test their mobiles.
6. While children are constructing, help guide the process by encouraging children to discuss what they are creating using vocabulary words such as weight, counterweight, counterbalance, stable, and balance point. You can also explore cause and effect through questions like, “What happens if more weight is added to the right side?”

Background Information:

Artist Alexander Calder was fascinated with engineering and balance. He used balance to create delicate sculptures that used rods and objects that balanced each other. He named his sculptures “mobiles” because they seemed to be in constant motion from air currents inside and outside. His mobiles would move, but always return to a stable position.

