

RAFT IDEAS

Topics: Hand-eye coordination, Problem solving, Physical challenges

Materials List

- ✓ “Cup” shaped container
- ✓ Ball that will fit into “cup”
- ✓ Flat stick (craft stick, ruler, etc.)
- ✓ Glue or tape
- ✓ String
- ✓ Scissors

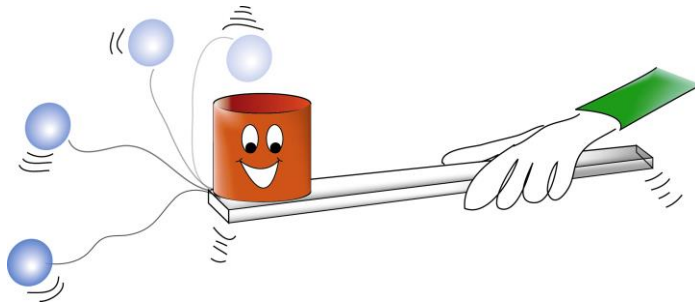
This activity can be used to teach:

- Science & Engineering Practices (Next Generation Science Standards: Grades K-3)
- Hand-eye coordination



Ball in the Cup

Improving the Eye/Hand Connection



Give pre-school and primary-aged children an opportunity to develop their eye-hand coordination with this fun and easily modified toy.

Assembly

1. Attach a piece of string to a ball and to the end of a flat stick. The length of the string will depend on the size of the ball and the height of the “cup.”
2. Attach a “cup” shaped container (small can, margarine tub, etc.) to the flat stick at the end where the string is attached. Attach using glue, tape, or a screw.

To Do and Notice

1. Allow the ball to hang freely from the end of the flat stick.
2. Move the stick upward quickly. The ball will be pulled up, rising above the level of the “cup.”
3. Maneuver the stick so the ball lands into the “cup” as the ball swings/falls downward. Repeat until the ball is in the cup. Persist! Success will come with practice.
4. The degree of challenge can be decreased or increased by changing the size of the ball and/or “cup” container. Putting a piece of foam, or similar material, in the bottom of the “cup” will help keep the ball from bouncing out after it lands.

The Science Behind the Activity

Toys and activities such as *Ball in the Cup* give young learners an opportunity to improve the connection between visual cues and hand movements. This ability is known as eye-hand coordination. Many sports and physical activities require certain visual cues to be processed by the brain and used in directing fast and accurate hand and body movements. Human beings are not born with a developed sense of eye-hand coordination. This skill can be developed with repeated practice. *Ball in the Cup* type games are popular throughout the world and have existed for centuries. In Japan a variation of this toy is called a **Kendama** and it borders on being a national pastime.

Taking it Further

Add more cups to the stick handle. Try to make the ball travel from cup to cup in sequence.

Web Resources (Visit www.raft.net/raft-idea?isid=291 for more resources!)

Information on the techniques and history of the Kendama, the Japanese version, can be found at: <http://web-japan.org/kidsweb/virtual/kendama/index.html>