

RAFT IDEAS

Topics: Memory Games, Observations, Probability

Materials List

- ✓ Caps, identical
- ✓ Permanent marker and/or a variety of small stickers

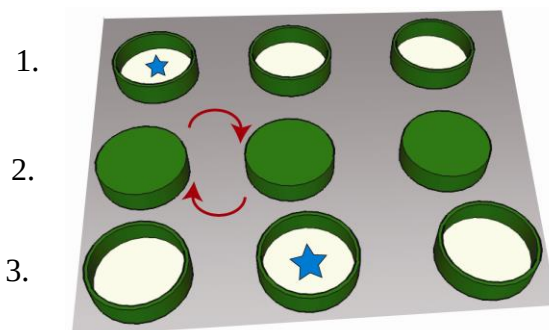
This activity can be used to support the teaching of:

- Science & Engineering Practices (Next Generation Science Standards: Grades K - 8)



Mixing it Up

A Memory Game with Caps



A simple game to improve observation and memory skills.

Assembly

1. On the underside of a cap, write a number, letter, draw a shape, or place a small sticker. For more advanced students, create a number of differently marked caps.

Playing the Game

This game may be played as a class, with student partners, or in small groups.

1. Place a marked cap and 2 unmarked caps on a flat surface. Show the undersides of the caps so that the players can locate the marked cap.
2. The first player turns the caps so the undersides are hidden and slides the caps on the surface; exchanging the positions of the caps several times.
3. The other players indicate the cap they think is marked. Turn over the caps to locate the marked cap. Players who identified the correct location receive a point.
4. Play continues with players taking turns moving the caps.
5. As players' skills increase, additional marked and unmarked caps may be added to the game. Players identify the locations of the marked caps, and optionally, which mark is on each cap. The caps are then turned over and the answers are checked. Each correct answer scores a point.

The Science Behind the Activity

This activity will assist students in developing their focusing, observation, and memory skills, while having fun. Tracking the location of the marked cap takes effort as does recalling its location. As additional caps are added, both effort and difficulty increase. Starting with a simple case helps students to succeed and to develop the skills and techniques that they build on to solve the more complicated problems. In order to remember something one must be paying attention, not everything that is observed is saved as a memory. Memories are encoded chemically into the brain: some are short term memories and others are stored as long term memories. Short-term memory can hold about 7 items for 20-30 seconds. To retain more information for a longer period, a memory technique is needed (e.g., linking, visualizing, or repeating aloud).

Taking it Further

- Use several colors of caps, some marked and some unmarked.
- Create a concentration type game, marking caps with matching or related stickers.

Web Resources (Visit www.raft.net/raft-idea?isid=491 for more resources!)

How human memory works -<http://health.howstuffworks.com/human-memory.htm>