

# Curriculum Connection:

## Probability with Pennies

**Learning Objectives:**

- To explore the concept of probability

**McREL Standards:**

Mathematics, Standard 7: Understands and applies basic and advanced concepts of probability

**Lesson Time:**

30-40 minutes

**Grade Level:**

4-8

**Materials:**

Containers

20 pennies (for each group)

Paper/pen

**Procedure:**

- Divide students into small groups.
- Give each group a container with 10 pennies. Instruct one member of the group to dump the pennies on a desk and then record the number of pennies landing on heads or tails. Do this three times with 10 pennies and repeat the same exercise, this time using 20 pennies.
- Ask each group to record three things they noticed about their experiment. As a class, share these findings.
- Questions for discussion:
  - ✓ As a class, how many times were ten pennies tossed?
  - ✓ How many times did the pennies land on heads and on tails?
  - ✓ As a class, how many times were twenty pennies tossed?
  - ✓ How many times did the pennies land on heads and on tails?
  - ✓ Predict what would happen if forty pennies were tossed.