Pass the Sugar

Procedure

Safety: Wear goggles during this activity. Be careful using scissors.

1. Collaborate Work with a partner. Trace the bottom of a paper cup on a paper towel. Repeat twice to make three circles. Cut out the circles.

2. Experiment Use a marker to label three paper cups IN-1, IN-2, and IN-3. Then use a pencil to punch three small holes in the bottom of each cup near the center.

3. Experiment Cover the holes in the IN cups with the paper-towel circles. Add 4 heaping spoonfuls of colored sugar to each IN cup. Label three additional cups OUT-1, OUT-2, and OUT-3.

4. Measure While your partner holds cup IN-1 over cup OUT-1, add 10 mL of water to the IN cup. Allow all of the water to drain.

5. Repeat step 4 with the second pair of cups, this time adding 40 mL of water. With the third cups, add 80 mL of water.

6. Compare Observe and compare all six cups.
Conclusion

1. **Analyze Data** Which of the IN-cups had the most sugar remaining? Which had the least? How do you explain your observations?

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2. **Infer** Why is it important to drink water every day? Use the results of this activity to support your answer. (Hint: Compare the sugar in this activity to body wastes.)

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Experiment

Repeat this experiment using a double or triple layer of paper towels. How does this model the needs of animals with very poor kidneys? In your report, identify variables and draw a conclusion.