



# Shadow Shapes

## Procedure

- 1. Collaborate** Work with a partner. Push a table or desk against a wall. Tape a sheet of white paper to the wall above the table.
- 2. Measure** Have your partner hold the end of a tape measure at the wall. Stretch the tape measure out along the table past 80 cm. Use transparent tape to mark *5 cm*, *40 cm*, and *80 cm* on the table. Label each piece of tape.
- 3.** Hold a flashlight above the 80-cm mark so it points toward the paper. Have your partner hold a pencil above the 40-cm mark.
- 4. Observe** Turn on the flashlight. Observe the size, shape, and edge of the pencil's shadow on the paper. Draw the shadow.

- 5.** Turn off the flashlight. Have your partner move the pencil so it is above the 5-cm mark. Repeat Step 4.

Name \_\_\_\_\_ Date \_\_\_\_\_

## Conclusion

1. **Compare** How did the shadow look different when the pencil was held at the 40-cm and 5-cm marks?

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2. **Infer** How does the distance an object is from the light affect how its shadow looks?

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**Design an Experiment** Repeat these steps with paper cutouts of a square and a circle. Compare the shapes of the cutouts with the shapes of their shadows. Are their shadows sharp or fuzzy?

Guided Inquiry

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