Grade 5—Reflection and Refraction
RM 2: Media Testing

Materials:
- One window in your house or classroom with clear glass
- One ceramic coffee mug
- One empty plastic milk jug
- 20cm x 20cm square pieces of the following materials:
  - clear plastic wrap
  - wax paper
  - notebook paper
  - aluminum foil
- One flashlight
- One dark-colored piece of construction paper or cloth

Procedures:
1. Find a partner to help you with your investigation.
2. Locate a room that can be darkened completely and has a window with clear glass.
3. Have one person go outside with the flashlight. The other person should stay in the room, stand against the wall directly across from the window, and hold up the dark-colored material.
4. The person inside should turn off all the lights and completely darken the room.
5. The person outside the window should hold the flashlight up to the glass so that the lit end of the flashlight touches the glass and is pointing in the direction of the person holding the dark-colored material.
6. Make observations.
7. Turn the lights on.
8. Record how much light is able to travel through the glass.
9. The person with the flashlight should come back inside.
10. The two partners should stand on opposite sides of the room. One should hold the flashlight and ceramic coffee mug, and the other should hold up the dark-colored material.
11. Turn off all the lights and completely darken the room.
12. Have one person hold the flashlight up to the bottom of the ceramic coffee mug so the lit end of the flashlight touches the mug and is pointed in the direction of the other person holding the dark-colored material.
13. Make observations.
14. Turn the lights on.
15. Record how much light is able to travel through the ceramic coffee mug.
16. Repeat steps 10–15 for the milk jug and the four squares of material. Don't forget to record your data!
17. Sort these media into three groups based on your observations and record these groups in the cylinders on the following page.