Name: _____   Date: _____

Reflecting

Did you know that the moon does not produce any light of its own? We see the moonlight because the light from the sun reflects, or bounces, off of the moon. The moon is a source of reflected light. In the same way, we see most things because they reflect light. If you step into a dark closet and close the door, you cannot see anything. Once you turn the light on, it bounces off the objects in the closet and you can see them, this is reflection at work. Very few things actually make their own light.

Equipment:

- Index Cards
- Play Clay
- Laser Pointer

- Mirror
- Flashlight
- Aluminum Foil

- White Paper
- Black Paper
- Coloured Paper

Procedure:

Activity 1

1. Look at all of your supplies and predict which ones will be good reflectors, rank them from worst reflector to best reflector.
2. Set up a cue card on a lump of play clay, this will be used as a screen.
3. Place the mirror in another lump of play clay, such that when you shine your flashlight on the mirror, the light is reflected onto the cue card.
4. Look at the light reflected on the card, noting the brightness and the shape of the reflection.
5. Repeat steps 3 and 4, replacing the mirror with the other surfaces, and compare your results to those of the mirror.
6. Re-rank the supplies using your results.
7. Write a few sentences about what you discovered, or what you have learned.
8. Answer the discussion questions.

Activity 2

1. Set up your index card with the target on it
2. Shine a laser pointer at a random location.
3. Use the mirror to try to reflect the laser to hit the target.

Observations:

Look at each of the surfaces and predict how well they will reflect light. Then, test each and record your results.

1 = Best Reflector   7 = Worst Reflector

Surface	Predicted Rank	Actual Rank	Notes

Discussion:

1. What did you discover by doing this experiment?

   _____

   _____

   _____

2. What was the difference between the reflections of flat aluminum foil and wrinkled aluminum foil?

   _____

   _____

3. Why do we paint yellow lines on our black roads?

   _____

   _____

   _____

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