Nashua River Watershed Investigations for Grades K-8

Lesson # K-2

Title: K-2 Sunlight Rocks!
Grade Level & Standard: Grade K
K-PS3-1. Make observations to determine that sunlight warms materials on Earth's surface.

Objective: Students will experience "warm and cool" observing and feeling two river rocks.Students will create a drawing of a rock that has been warmed by the "sun" and one that has not been warmed by the "sun".

Vocabulary:

- **Warm -** has heat
- **Cool -** has less heat
- **Sunlight -** light from the sun
- **River rock -** smooth rock that has been in a river and is rounded by scraping and rolling in the water movement.

Discussion Points:
How does the sun warm the earth? What happens to a rock that has the sun shining on it? What if a rock is in the shade?

Materials:

- 50 (2 per student) river or ocean rocks from Lowes, Home Depot or natural area
- desk lamp with incandescent bulb
- snack size zip bags with two rocks for each student
- red and blue permanent markers
- ruler
- "Sunlight Rocks" Data Sheet
- pencils

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Procedure (40 minutes to 60 minutes):

1. Explain the importance of safety when working with rocks.
2. Give each student two rocks in a bag. Observe rocks. What color are they? What do they feel like? Why are they smooth?
3. Write the word “warm” & “cool” with permanent marker (red for warm & blue for cool) on two rocks.
4. Get a lamp with an incandescent light bulb and set up in a safe location (if there is a sunny window or sunny location outdoors, this would be ideal). Establish an area for stones without light. Be sure the rocks under the light are a few inches from the light. Leave for several minutes.
5. Explain that the lamp is a “model” representing the sun.
6. Feel both rocks. What does warm mean? What does cool mean?
7. Draw both rocks on data sheet. Draw the sun and show heat with “waves” in the warm rock drawing. Draw an ice cube or icicles on the cold rock.

Extension:

- Put an icecube on the warm rock to observe solid changing to a liquid from heat.

Data Sheet:

- Sunlight Rocks data sheet.

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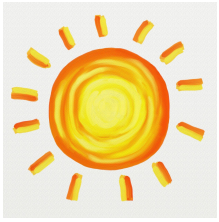
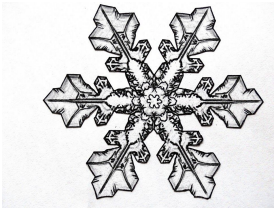
Sunlight Rocks DATA SHEET **NRWI Lesson K-2**

Name_____

My warm rock.	My cool rock.
	

Write these words.

1. Warm_____

2. Cool _____

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