



Activity #1: Sky Colors

1. **Summary:** Children will be able to identify why the sky looks blue in the day and red at sunset
2. **Learning Foundation or Common Core :**
2-ESS1 Earths Place in the Universe
Use information from several sources to provide evidence that Earth events can occur quickly.
ESS1.C: The History of Planet Earth
Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)
Stability and Change Things may change slowly or rapidly. (2-ESS1-1)
3. **Materials Used.**
 - Empty Water bottle without cap
 - Water
 - Milk
 - Flashlight
 - A darkened room
4. **Your role.**

Engage the child by asking an open ended question “Do you ever wonder why the sky changes colors?”

The caregiver will research with the child how sunsets occur and the importance of dust particles, air molecules and the direction of sunlight.

 1. Fill the bottle about two-thirds full of water
 2. Add 1 teaspoon of milk to the water and stir
 3. Take the bottle and the flashlight into the darkened room
 4. Put the bottle on the floor and shine the flashlight straight down into it. The mixture should have a slight blue tint.
(ask the child what he sees and refer to the research you and your child discovered)
 5. Shine the flashlight toward the side of the bottle. The mixture should now have a slight red tint.
(ask the child what he sees and refer to the research you and your child discovered)
 6. Shine the flashlight under the bottle while looking straight down into the bottle. The mixture should have a deeper red tint
(ask the child what he sees and refer to the research you and your child discovered)
7. **Child’s Interaction.**

The child will develop new vocabulary such as dust particles, air molecules and the direction of sunlight.

The child will make inferences/ observations about the color when the light is shined in different directions.

The child will also identify the time in which it takes the sun to rise and the sun to set as well as identifying whether it is a slow or fast speed.

Reference:

Brunelle, L., & Meisel, P. (2004). *Pop Bottle Science: 79 amazing experiments and science projects*. New York: Workman Publishing.