



#PerkinsPerfectAtHome

Sunrise In A Jar



1. MAKE AN OBSERVATION ASK A QUESTION

Why is the color of the sky blue? Why does the sky become gold, pink and red at sunrise or sunset?

White light from the sun includes a rainbow of colors. Passing light through a prism allows us to see colors distinctly.



2. PREPARE AND RESEARCH

Gather:

A clear glass or plastic cup or jar

Milk

Water

Flashlight

Measuring cup and teaspoon

3. CONDUCT THE EXPERIMENT

Add 2 teaspoons of milk to jar.

Add 2 cups of water to jar. Mix!

Take jar and flashlight into a dark room.

Shine light through one side of the jar.
Move flashlight behind jar. Point light through the jar and liquid, directly at you.

4. ANALYZE

Observe what happens when you shine light through side of jar.

Observe what happens when you shine light through back of jar.

What color do you see from the side? From the back?

5. REVISE HYPOTHESIS IF NECESSARY

What happens if you add more milk? Or more water?

Take the jar to a well lit room and repeat the experiment. What colors do you see?

Discuss with others.

6. MAKE CONCLUSIONS

Sun's white light is made up of all colors. Blue light has short wave lengths so it is scattered in many directions by all the gasses in the air. That's why we see so much blue in daylight.

Red light's wavelength's are long and get scattered the least. When the sun is lowest, at sunrise or sunset, it passes through dense layers of atmosphere. The denser the atmosphere the more red, gold and orange your eyes will see because those low-frequency, long wave lengths are more visible.

