Teacher Lesson 3: Looking at Light

Next Generation Science Standards
Grade 1: Waves: Light and Sound
1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated. [Clarification Statement: Examples of observations could include those made in a completely dark room, a pinhole box, and a video of a cave explorer with a flashlight. Illumination could be from an external light source or by an object giving off its own light.]
1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).]

Flexi-Scope has a built-in light source.

Ask your students why they think Flexi-Scope has a light.

Does it help you see the object you are looking at more clearly?
Can you get better photos when the light is on?

Do any animals make their own light?
Depending on your students, you can help them investigate bioluminescence.
Talk about fireflies and glowworms.
In the ocean, the vampire squid has flashing arm tips to startle predators.
The deep-sea anglerfish dangles a light to lure prey.
Your students would love to learn more about these animals!

Read more about bioluminescent creatures and try some activities from the American Museum of Natural History: www.amnh.org/explore/ology/zoology/make-your-own-creatures-of-light

You can also have students explore how their objects look different when different materials are placed over them when they use Flexi-Scope.

Gather these materials: clear glass or plastic slides, wax paper, and cardboard.

Have students look at their objects when these materials are placed over them.
What are the differences they see?
Have them write down their experiences in the Flexi-Scope Journal.

Finally, have them use a small mirror to reflect the light in a new direction.
Does that change what they are seeing?