



GRADES 2-3

Telescopes: Through the Looking Glass

Uncover the extraordinary beauty and technology of some of the world's most important telescopes, which enable us to discover information about the Universe.

Guide Overview

This guide includes suggestions for how to engage your students and facilitate an age-appropriate learning experience in the **Telescopes** exhibit.

Highlights & Related Questions



FIND Have the students find the central interactive Galilean telescope by the marble railing.

DO Instruct the students to take turns holding down the red button and looking through the eyepiece.

ASK Describe what you see. **A model of a planet with moons circling it.** What planet could it represent? **Jupiter.**



FIND There are lots of real antique telescopes on display in cases around the Galilean telescope. Have students find one they like!

DO Encourage students to imagine what it would be like to look at stars and planets using the telescope they chose. Have them make observations about the telescope.

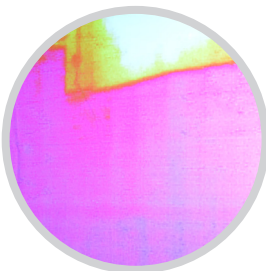
ASK What shape is the telescope? **A cylinder.** What color is it? Can you identify any specific parts? **Answers can include tube, lenses, eyepiece.** Would it be easy or hard to look through this telescope? Why do you think it would be easy or hard?



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- FIND** Instruct the students to find the Grand Orrery directly in front of the interactive Galilean telescope.
- DO** Encourage the students to climb the stairs to be able to see the top of the orrery. Tell them that an orrery is a model of the Solar System that people used hundreds of years ago to be able to understand the motions of planets.
- ASK** What is in the middle of the model? **The Sun.** In what shape do the planets orbit around the Sun? **Roughly a circle.** Can you identify any planets in the model?
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- FIND** Have students find the interactive table with mirrors, lenses and light.
- DO** Encourage students to play with the light using mirrors and lenses.
- ASK** How does the light bend as you shine it? How does the light move differently when you use different shapes or materials? Why do you think the light moves that way?
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- FIND** Have students find the infrared camera near the end of the exhibit.
- DO** Instruct them to stand in front of it and find themselves in the screen. They can also experiment with the props in the bin under the camera: a clear plastic square and an opaque tarp square.
- ASK** Is this like a normal camera? **No.** Describe how it is similar and how it is different. **It shows different colors than a normal camera, but still outlines the shape of the person in the camera's view.** Why do you think the colors are different than a normal camera? **The color represents infrared light, or body heat.** What happens to the image when you hold up the clear plastic? **It blocks the heat.** How about the square or tarp? **Some heat can go through.** How are these materials similar or different from each other?
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