

Astronomy Grade 3 Lab Practical

Teacher's Answer Key

This is your chance to see how well your students have picked up on important key concepts, and if there are any holes. Your students also will be working on their homework assignment as you do this test individually with the students.

Materials:

- Two handheld magnifiers
- Sheet of paper
- Ball with a toothpick sticking out of the top and bottom to represent the Earth's north and south poles (or use a globe if you have one)
- Strong flashlight

Lab Practical: Ask the student *Note: Answers given in italics!*

- Design and build an experiment that shows how a refractor telescope works. *Take two magnifiers and hold them a fixed distance apart and look through both. Student may draw something on the paper and hold it up at a distance away from you as you peer through the lenses to magnify as a demonstration, or simply look at an object in the distance. (Do not look at the Sun!)*
- Demonstrate why the Earth has seasons. *The tilt of the Earth and its location in orbit are the reasons for the seasons. When the Earth's North Pole is tilted toward the sun, the northern hemisphere gets more sunlight exposure, which means longer days, and warmer climates. The student can use a flashlight to model the sun and stick a toothpick for the north pole into the ball, pointing the toothpick toward the sun as it rotates around its axis (for daily rotation).*

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Student Worksheet

This is your chance to show how much you have picked up on important key concepts, and if there are any holes. You also will be working on a homework assignment as you do this test individually with a teacher.

Materials:

- Two handheld magnifiers
- Sheet of paper
- Ball with a toothpick sticking out of the top and bottom to represent the Earth's north and south poles (or use a globe if you have one)
- Strong flashlight

Lab Practical:

- Design and build an experiment that shows how a refractor telescope works.

- Demonstrate why the Earth has seasons.