

Astronomy Grade 5 Evaluation

Teacher Section

Overview: Kids will demonstrate how well they understand important key concepts from this section.

Suggested Time: 45-60 minutes

Objectives: Students will be tested on the key concepts of solar astronomy:

- The Earth is one of several planets that orbit the Sun, and the Moon orbits the Earth.
- The solar system consists of planets and other bodies that orbit the Sun in predictable paths.
- The appearance, general composition, relative position and size, and motion of objects in the solar system, including planets, planetary satellites, comets, and asteroids.
- How to use astronomical units and light years as measures of distance between the Sun, stars, and Earth.
- The path of a planet around the Sun is due to the gravitational attraction between the Sun and the planet.
- The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.
- The sun is a star that appears larger and brighter than other stars because it is closer. Stars range greatly in their distance from Earth.
- The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.
- Know how to demonstrate the different kinds of atmospheres on various planets.
- Know the celestial objects in the solar system and how they relate and interact with each other.
- Understand how to determine the structure and composition of celestial objects.

Lab Preparation

1. Print out copies of the student worksheets, lab practical, and quiz.

Lesson

The students are taking two tests today: the quiz and the lab practical. The quiz takes about 20 minutes, and you'll find the answer key to make it easy to grade.

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Student Worksheet

Overview: Today, you're going to take two different tests: the quiz and the lab practical. You're going to take the written quiz first, and the lab practical at the end of this lab. The lab practical isn't a paper test – it's where you get to show your teacher that you know how to do something.

Lab Test & Homework

1. Your teacher will ask you to share how much you understand about astronomy. Since science is so much more than just reading a book or circling the right answer, this is an important part of the test to find out what you really understand.
2. While you are waiting for your turn to show your teacher how much of this stuff you already know, you get to choose which homework assignment you want to complete. The assignment is due tomorrow, and half the credit is for creativity and the other half is for content, so really let your imagination fly as you work through it. Choose one:
 - a. Write a short story or skit about astronomy from the perspective of the Sun or a light particle itself. You'll read this aloud to your class.
 - b. Make a poster that teaches a main concept of either the Sun, a moon, a planet, or a particular spacecraft. When you're finished, you'll use it to teach to a class of younger students and demonstrate the principles that you've learned.
 - c. Write and perform a poem or song about the Sun, a moon, a planet, or a particular spacecraft. This will be performed to your class.