

Earth Science 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 weather as expressed in this Earth Science Unit. The concepts are listed below:

- Most of the Earth's water is present as salt water in the oceans, which cover most of the Earth's surface.
- When liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled, or as a solid if cooled below the freezing point of water.
- Water moves in the air from one place to another in the form of clouds or fog, which are tiny droplets of water or ice, and falls to the Earth as rain, hail, sleet, or snow.
- The amount of fresh water, located in rivers, lakes, underground sources, and glaciers, is limited, and its availability can be extended through recycling and decreased use.
- Uneven heating of the Earth causes air movements (convection currents).
- The influence of the ocean on weather, and the role of the water cycle in weather.
- Causes and effects of different types of severe weather.
- How to use weather maps and weather forecasts to predict local weather, and that prediction depends on many changing variables. *Video and experiment coming soon*
- The Earth's atmosphere exerts a pressure that decreases with distance above the Earth's surface, and is the same in all directions.
- Earth's major systems are the geosphere (solid and molten rock, soil, and sediments), the hydrosphere (water and ice), the atmosphere (air), and the biosphere (living things, including humans). These systems interact in multiple ways to affect Earth's surface materials and processes. The ocean supports a variety of ecosystems and organisms, shapes landforms, and influences climate. Winds and clouds in the atmosphere interact with the landforms to determine patterns of weather.

Materials (one set for entire class)

- Two balloons, each with a string attached

Lab Preparation

1. Print out copies of the student worksheets, lab practical, and quiz.
2. Have the materials in front of you at your desk. Kids will come up when called and demonstrate their knowledge using these materials.

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 call you up so you can share how much you understand about Earth Science and how it works. 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 weather from the perspective of the air or water vapor. You'll read this aloud to your class.
 - b. Make a poster that teaches the main concepts of weather. When you're finished, you'll use it to teach to a class in the younger grades and demonstrate each of the principles that you've learned.
 - c. Write and perform a poem or song about sub-cooling. This will be performed for your class.