

WAYFINDER Understanding Landforms

The following North Carolina State Science Standards are relevant to this Wayfinder:

Grade 5	2.01, 2.02, 2.06
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Introduction

The Earth is constantly changing and has been since it came into existence. One of the greatest observations that came out of the 19th century was that the same forces that can be observed today have always been, and will still be shaping our world for billions of years. Observing and understanding earth-changing forces such as wind and water is a chance to look into the past and forward into the future.

There are many exhibits in the main Museum building that illustrate Earth’s land-changing forces and give ideas on different ways to map the land surface that we live on. In the *ABC News Channel 11 Weather* exhibit, students can see the effects of wind and water on sand. Explore the geology exhibits and discover evidence of how gravity can change rock. On the second floor, check out *Data Earth* to see examples of how we map landforms and to watch simulations of how natural forces change the Earth.

Before your visit

Review the forces of nature that can shape landforms: water, wind, gravity, erosion and material deposition.

Brainstorm a list of landforms that the students are familiar with and try to determine the forces of nature that shaped them. Examples might include: a valley, a canyon, a mountain, a river bed, a beach.

Practice using maps and models to identify landforms and discuss how to represent the surface of the Earth accurately.

During your visit

Use the following Understanding Landforms Scavenger Hunt to help guide your students through the first and second floors of the Museum. Students can work their way through the sheet slowly while they explore the entire Museum.

After your visit

Discuss the answers to the scavenger hunt. You could turn the hunt into a point-based competition, awarding one point for every item found and answered correctly. The answers are listed below.

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|--------------------------------|---|
| 1. wind, water | 8. wind and water |
| 2. sand dunes, (ripples) | 9. sand moves into the water, land grade under water flattens, high berms formed on shore |
| 3. pressure, heat | 10. the largest one, blue and brown |
| 4. heating limestone | 11. it shows height and depth |
| 5. erosion | 12. it distorts the land |
| 6. water / pressure or gravity | |
| 7. wind or waves | |

Understanding Landforms Scavenger Hunt

FIRST FLOOR

ABC News Channel 11 Weather

1. In this area of the Museum find two examples that model forces of nature that can shape landforms. What are the forces modeled?

2. Thinking about one of the forces you listed above, name one model landform that you can experiment with here in the Museum. _____

Geology

3. Metamorphic rock is formed by which two natural forces? _____
4. How is marble made? _____
5. Find the picture of the Grand Canyon. Which natural occurrence formed this great landmark?

6. Find the sediment core. What deposited the sediments that formed this core? _____
How did these layers of sand get turned into rock? _____
7. Find the siltstone. What caused the ripple marks? _____

SECOND FLOOR

Data Earth

Watch the 5-minute video on beach sand movement.

8. In which two ways is sand moved? _____
9. Name two things that happen to the beach when there is a big storm.

10. Find the eight different globes. Describe the globe (color/size) that is the most accurate representation of the surface of the earth. _____

THINK HARDER: What is one advantage to a globe like this? _____
What is one disadvantage? _____

11. Check out the Earth in 3-D stereoscopes. Why might this be a more accurate way of mapping the surface of the Earth? _____
12. Find the *Flattening the Earth* exhibit. What is the problem with mapping a 3-D Earth onto a 2-D surface? _____