



Let Cincinnati Museum Center be your teaching partner! All experiences help develop critical-thinking skills while aligning with Ohio, Kentucky and National Academic Content Standards. See below for a list of standards this virtual experience covers. If you have any questions, please contact Tony Lawson at [tlawson@cincymuseum.org](mailto:tlawson@cincymuseum.org).

## Ohio Learning Standards – Science Grade 4

- 4.ESS.2:** The surface of Earth changes due to weathering. Rocks change shape, size and/or form due to water or glacial movement, freeze and thaw, wind, plant growth, acid rain, pollution and catastrophic events such as earthquakes, flooding, and volcanic activity.
- 4.ESS.3:** The surface of Earth changes due to erosion and deposition.

## Ohio Learning Standards – Science Grade 5

- 5.ESS.1:** The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics.
- 5.ESS.2:** The sun is one of many stars that exist in the universe.
- 5.ESS.3:** Most of the cycles and patterns of motion between the Earth and sun are predictable.

## Ohio Learning Standards – Science Grade 7

- 7.ESS.4:** The relative patterns of motion and positions of Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon.

## Ohio Learning Standards – Science High School

- PS.U.1:** History of the Universe: Technology provides the basis for many new discoveries related to space and the universe. Visual, radio and x-ray telescopes collect information from across the entire electromagnetic spectrum; space probes send back data and materials from remote parts of the solar system.
- ENV.GP.3:** Climate change: Understanding of causes and effects of climate, global climate and changes in climate through Earth's history.
- PG.GG.1:** Glaciers and glaciation: Tracking glacial history and present-day data for Ohio, the United States and globally. New discoveries, mapping projects, research, contemporary science and technological advances are included in the study of glacial geology.
- PW.EW.3:** Waves: Humans can only perceive a very narrow portion of the electromagnetic spectrum.

## Kentucky Learning Standards

- 4-ESS2-1:** Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.
- 4-ESS2-2:** Analyze and interpret data from maps to describe patterns of Earth's features.
- 5-ESS3-1:** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- 5-ESS1-1:** Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.
- 5-ESS1-2:** Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.
- 06-ESS1-1:** Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.
- 06-ESS1-3:** Analyze and interpret data to determine scale properties of objects in the solar system.
- 06-ESS2-2:** Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.
- 07-PS4-3:** Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.
- 08-ESS3-2:** Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.
- 08-ESS3-5:** Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.
- HS-PS4-3:** Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.
- HS-PS4-5:** Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.
- HS-LS4-5:** Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.
- HS-ESS1-4:** Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.

## Kentucky Learning Standards (*continued*)

**HS-ESS3-5:** Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.