

What Students Need to Learn

For this unit, the Core Knowledge Science Sequence specifies the following content and skills. Specific learning objectives are provided in each lesson throughout the unit. NGSS References, including Performance Expectations, Disciplinary Core Ideas, and Crosscutting Concepts, are included at the start of each lesson as appropriate.

A. Spheres of the Earth

LESSONS 1-6

- Describe what makes up the hydrosphere.
- Describe what makes up the atmosphere.
- Describe what makes up the geosphere.
- Describe what makes up the biosphere.
- Describe the characteristics of a green ecosystem, including its relative size, habitat, and organisms that inhabit there.
- Create a simple model that illustrates Earth's four spheres.
- Develop a graph to show the relative amounts of salt and fresh water in each of the following:
 - Oceans
 - Rivers
 - Lakes
 - Atmosphere
 - All of Earth

B. Modeling Earth's Systems

LESSONS 7-12

- Describe how the hydrosphere interacts with other spheres.
- Describe how the geosphere interacts with other spheres.
- Describe how the atmosphere interacts with other spheres.
- Describe how the biosphere interacts with other spheres.
- Extend the model illustrating Earth's four spheres to represent their interactions.

What Teachers Need to Know

Supportive information on the content standards and the science they address is provided throughout the lessons at points of relevance.

Know the Standards: Three sections, found later in this Teacher Guide, explain what to teach and why, with reference to NGSS and Core Knowledge expectations.

Know the Science: Three sections provide supporting, adult-level, background information or explanations related to specific examples or Disciplinary Core Ideas.