

Earth & Space Science (Tides)

Grade 7 Science Grade 7 Science

Start Date: January 27, 2014

End Date : February 14, 2014

<p>Unit Overview Tides</p>	<p>Content Elaborations</p> <p>Gravitational force between the Earth and the moon causes daily oceanic tides. When the gravitational forces from the sun and moon align (at new and full moons) spring tides occur. When the gravitational forces of the sun and moon are perpendicular (at first and last quarter moons), neap tides occur.</p> <p>The role of gravitational forces and tides are introduced in relation to the Earth and the moon. Models and simulations (can be 3-D or virtual) must be used to demonstrate the forces that cause the tides to occur. (orbit the sun), daily tides, and neap and spring tides.</p>	<p>Unit Resources</p> <ul style="list-style-type: none"> - Textbook Ch.14 Section 4 - Discovery Learning Video: Multiple Video Segments showing/explaining tides - Gizmo: Tides - Gizmo: Ocean Tides - Tides Project: Bay of Fundy
<p>Unit Vocabulary</p> <p>Neap Tide Spring Tide Alignment Perpendicular Gravitational Pull High Tide Low Tide Tidal Range Bulge</p>	<p>Enduring Understandings (Big Ideas)</p> <p>Gravitational force between the Earth and the moon causes daily oceanic tides.</p>	<p>Connections</p> <p>Planetarium Visit??</p>

Standards

OH_Academic_Content_Standards - Science (2011) - Grade 7

Strand ESS Earth and Space Science

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Topic ESS.1 This topic focuses on Earth's hydrologic cycle, patterns that exist in atmospheric and oceanic currents, the relationship between thermal energy and the currents, and the relative position and movement of the Earth, sun and moon.

Content Statement ESS.1.4 The relative patterns of motion and positions of the Earth, moon and sun cause solar and lunar eclipses, tides and phases of the moon.

ESS.1.4.c Gravitational force between the Earth and the moon causes daily oceanic tides. When the gravitational forces from the sun and moon align (at new and full moons) spring tides occur. When the gravitational forces of the sun and moon are perpendicular (at first and last quarter moons), neap tides occur.

Student Assessment	Unit Reflection
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Tides

Content	Skills	Assessment
A. Tides	A. Tides <ol style="list-style-type: none">1. Explain how the gravitational pull of the moon effects the water on earth.2. Describe/illustrate a neap tide.3. Describe/illustrate a spring tide.	