

Earth Science Institute II June 29, 2010
Day 7 Correlation of EarthComm Curriculum and HSCE's

EarthComm Curriculum Unit Code	
<p>EDG1 = Earth's Dynamic Geospheres: Chapter 1, Volcanoes</p> <p>EDG2 = Earth's Dynamic Geospheres: Chapter 2, Plate Tectonics</p> <p>EDG2 = Earth's Dynamic Geospheres: Chapter 3, Earthquakes</p> <p>EFS1 = Earth's Fluid Spheres: Chapter 1, Oceans</p> <p>ENR1 = Earth's Natural Resources: Chapter 1, Energy Resources</p>	<p>ENR3 = Earth's Natural Resources: Chapter 3, Water Resources</p> <p>ESE1 = Earth System Evolution: Chapter 1, Astronomy</p> <p>ESE2 = Earth System Evolution: Chapter 2, Climate Change</p> <p>ESE3 = Earth System Evolution: Chapter 3, Changing Life</p>

(WR sct 1 sources) (WR act 4 supply and demand) (WR act 5 pollution) (WR act 6 treatment)

Location: Water Sources: Bottled Water-visit to Ice Mountain	
EarthComm Connections	ENR3 = Earth's Natural Resources: Chapter 3, Water Resources, Activity 1, p. R144, Activity 2, p. R156, Activity 3, p. R169, Activity 4, p. R177
Learning Outcomes:	HSCE
<ul style="list-style-type: none"> ○ Explain why the Earth is essentially a closed system in terms of matter. ○ Analyze the interactions between the major systems (geosphere, atmosphere, hydrosphere, and biosphere) that make up the Earth. ○ Explain, using specific examples, how a change in one system affects other Earth systems. ○ Compare and contrast surface water systems (lakes, rivers, streams, wetlands) and groundwater in regard to their relative sizes as Earth's freshwater reservoirs and the dynamics of water movement (inputs and outputs, residence times, sustainability). ○ Explain the features and processes of groundwater systems and how the sustainability of North American aquifers has changed in recent history (e.g., the past 100 years) qualitatively using the concepts of recharge, residence time, inputs, and outputs. ○ Explain how water quality in both groundwater and surface systems is impacted by land use decisions. 	<p>E2.1A</p> <p>E2.1B</p> <p>E2.1C</p> <p>E4.1A</p> <p>E4.1B</p> <p>E4.1C</p>

Location: Water treatment plant and water supply for GR	
EarthComm Connections	ENR3 = Earth's Natural Resources: Chapter 3, Water Resources, Activity 5, p. R184, Activity 6, p. R196
Learning Outcomes:	HSCE
<ul style="list-style-type: none"> ○ Explain why the Earth is essentially a closed system in terms of matter. ○ Analyze the interactions between the major systems (geosphere, 	<p>E2.1A</p> <p>E2.1B</p>

<p>atmosphere, hydrosphere, and biosphere) that make up the Earth.</p> <ul style="list-style-type: none"> ○ Explain, using specific examples, how a change in one system affects other Earth systems. ○ Compare and contrast surface water systems (lakes, rivers, streams, wetlands) and groundwater in regard to their relative sizes as Earth's freshwater reservoirs and the dynamics of water movement (inputs and outputs, residence times, sustainability). ○ Explain the features and processes of groundwater systems and how the sustainability of North American aquifers has changed in recent history (e.g., the past 100 years) qualitatively using the concepts of recharge, residence time, inputs, and outputs. ○ Explain how water quality in both groundwater and surface systems is impacted by land use decisions. 	<p>E2.1C</p> <p>E4.1A</p> <p>E4.1B</p> <p>E4.1C</p>
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Location: Big Lake, Pumping plant at end of 45	
EarthComm Connections	ENR3 = Earth's Natural Resources: Chapter 3, Water Resources, ENR3 = Earth's Natural Resources: Chapter 3, Water Resources, Activity 1, p. R144, Activity 2, p. R156, Activity 3, p. R169, Activity 4, p. R177
Learning Outcomes:	HSCE
<ul style="list-style-type: none"> ○ Explain why the Earth is essentially a closed system in terms of matter. ○ Analyze the interactions between the major systems (geosphere, atmosphere, hydrosphere, and biosphere) that make up the Earth. ○ Explain, using specific examples, how a change in one system affects other Earth systems. ○ Compare and contrast surface water systems (lakes, rivers, streams, wetlands) and groundwater in regard to their relative sizes as Earth's freshwater reservoirs and the dynamics of water movement (inputs and outputs, residence times, sustainability). ○ Explain the features and processes of groundwater systems and how the sustainability of North American aquifers has changed in recent history (e.g., the past 100 years) qualitatively using the concepts of recharge, residence time, inputs, and outputs. ○ Explain how water quality in both groundwater and surface systems is impacted by land use decisions. 	<p>E2.1A</p> <p>E2.1B</p> <p>E2.1C</p> <p>E4.1A</p> <p>E4.1B</p> <p>E4.1C</p>

Location: GRPS- Water resources on water treatment and conservation Demonstration of water pollution with groundwater model	
EarthComm Connections	ENR3 = Earth's Natural Resources: Chapter 3, Water Resources, Activity 5, p. R184, Activity 2, p. R156, Activity 3, p. R169, Activity 4, p. R177, Activity 5, p. R184, Activity 6, p. R196
Learning Outcomes:	HSCE
<ul style="list-style-type: none"> ○ Explain why the Earth is essentially a closed system in terms of 	E2.1A

<p>matter.</p> <ul style="list-style-type: none"> ○ Analyze the interactions between the major systems (geosphere, atmosphere, hydrosphere, and biosphere) that make up the Earth. ○ Explain, using specific examples, how a change in one system affects other Earth systems. ○ Compare and contrast surface water systems (lakes, rivers, streams, wetlands) and groundwater in regard to their relative sizes as Earth’s freshwater reservoirs and the dynamics of water movement (inputs and outputs, residence times, sustainability). ○ Explain the features and processes of groundwater systems and how the sustainability of North American aquifers has changed in recent history (e.g., the past 100 years) qualitatively using the concepts of recharge, residence time, inputs, and outputs. ○ Explain how water quality in both groundwater and surface systems is impacted by land use decisions. 	<p>E2.1B</p> <p>E2.1C</p> <p>E4.1A</p> <p>E4.1B</p> <p>E4.1C</p>
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