



BJU Press - 8th Grade - Earth Science - Quarter 3 Map

Week	Unit/ Lessons	Project/ Activity	Modification	Submit	Objectives
1	Chapter 13: Oceans and Seas Lesson 1: Ocean Basins Lesson 2: Seawater Lab 13A: Too Salty Lab 13B: Low Salt	Days 84, 85, 86, 87			<p>Ocean Basins</p> <ol style="list-style-type: none">1. Explain the reasons the oceans are essential to life and some of the ways we use the oceans.2. Evaluate theories that account for the origin of the oceans.3. List the factors that determine mean sea level and describe how sea level varies around the globe.4. Describe the general ocean basin topography from the shore to the abyssal plains.5. Describe various kinds of coral reefs and atolls, and their origin, geologic significance, and impact on aquatic life. <p>Seawater</p> <ol style="list-style-type: none">1. Evaluate different Flood theories that could account for the saltiness of the oceans.2. Identify the main chemicals that contribute to ocean salinity.3. List the factors affecting salinity.4. Explain how salinity affects important physical properties of seawater. <p>Lab 13A: Too Salty</p> <ol style="list-style-type: none">1. Describe how oceanographers measure salinity.2. Measure the salinity of seawater samples.3. Create a salinity model of the seawater system. <p>Lab 13B: Low Salt</p> <ol style="list-style-type: none">1. Prepare artificial seawater.2. Discuss why we desalinate water.3. Compare freeze desalination to other methods of desalination.
2	Chapter 13: Oceans and Seas Lesson 1: Ocean Environments	Days 88, 89, 90, 91, 92	Review and Test on Day 2.	Submit Chapter 13 Test	<p>Ocean Environments</p> <ol style="list-style-type: none">1. Compare and contrast the different biological zones in the ocean.2. Summarize the marine carbon and nitrogen cycles.

	Chapter 13 Review and Test AND Chapter 14: Ocean Motions Lesson 1: Tides Lesson 2: Currents				<p>Tides</p> <ol style="list-style-type: none"> 1. Compare tides with other ocean motions. 2. Analyze the forces that create and affect tides. 3. Evaluate the best uses of tides for generating electricity. <p>Currents</p> <ol style="list-style-type: none"> 1. Contrast currents with other ocean motions. 2. Analyze the forces that create and effect currents. 3. Evaluate the effect of currents on weather and life.
3	Chapter 14: Ocean Motions Lab 14A: Current Events Lesson 4: Waves Lab 14B: Making Waves. Chapter 14 Review and Test	Days 93, 94, 95, 96, 97	Combine Chapter Review and Test and do them both on day 4.	Submit Chapter 14 Test	<p>Current Events</p> <ol style="list-style-type: none"> 1. Explain how salinity affects deep ocean currents. 2. Demonstrate how density differences create layers in the ocean. <p>Lab 14A:</p> <ol style="list-style-type: none"> 1. Explain how salinity affects deep ocean currents. 2. Demonstrate how density differences create layers in the ocean. <p>Waves</p> <ol style="list-style-type: none"> 1. Define wave terminology. 2. Analyze the forces that create and affect waves. 3. Predict what kind of landforms will be created under specific sets of wave and land conditions. <p>Making Waves</p> <ol style="list-style-type: none"> 1. Graph a tsunami's speed at different ocean depths. 2. Graph a tsunami's wave height at different ocean depths. 3. Explain how depth affects a tsunami's behavior.
4	Chapter 15: Ocean Exploration Lesson 1: the History of Ocean Exploration Lesson 2: Oceanography in Action Lesson 3: Entering an Alien World Lab 15B: dive, Dive	Days 98, 99, 100, 101			<p>The History of Ocean Exploration</p> <ol style="list-style-type: none"> 1. Summarize the history of key advances in our knowledge of the world's oceans. 2. Identify the motivations behind these events in history. <p>Oceanography in Action</p> <ol style="list-style-type: none"> 1. Compare and contrast the methods we use to study the oceans. 2. Evaluate how technology improves ocean exploration. <p>Entering an Alien World</p> <ol style="list-style-type: none"> 1. Summarize the history of deep-sea diving. 2. Evaluate the risks and benefits of ocean exploration. <p>Lab 15B: Dive, Dive</p> <ol style="list-style-type: none"> 1. Explain why objects float or sink. 2. Measure an object's displacement. 3. Calculate the ballast needed to make an object over in water. 4. Apply what you've learned from submarines.

5	Chapter 15 Review and Test Chapter 16: Surface Waters Lesson 1: Streams Lesson 2: Lakes and Ponds Lab 16B Being Too Green.	Days 102, 103, 104, 105, 106	Review and Test on Day 1	Submit Chapter 15 Test	<p>Streams</p> <ol style="list-style-type: none"> 1. Compare and contrast the different kinds of streams. 2. Sketch a stream from source to mouth and label its parts. 3. Analyze ways to wisely use streams. <p>Lakes and Ponds</p> <ol style="list-style-type: none"> 1. Relate a lake's chemical properties and anatomy to its geologic setting and elevation. 2. Categorize lakes by their properties. 3. Analyze different views of the origins of lakes. 4. Summarize the typical life phases of a lake. <p>Lab 16B Being Too Green</p> <ol style="list-style-type: none"> 1. Explain the causes and consequences of eutrophication. 2. Use a water chemistry test kit. 3. Test local water for eutrophication conditions.
6	Chapter 16 Review and Test Chapter 17 : Groundwater Lesson 1 Underground Reservoirs Lab 17A: Perking Down Lesson 3: Groundwater Chemistry	Days 107, 108, 109, 110, 111	Do chapter 16 Review and Test on Day 1	Submit Chapter 16 test	<p>Underground Reservoirs</p> <ol style="list-style-type: none"> 1. Create a chart or graph that compares the major segments of the earth's water inventory. 2. Describe the water cycle. 3. Express the relationships between the terms <i>porous</i>, <i>nonporous</i>, <i>permeable</i>, and <i>impermeable</i> when used to describe rocks. 4. Discuss the geologic features, storage, and movement of groundwater applied to its availability as drinking water. <p>Lab 17A: Perking Down</p> <ol style="list-style-type: none"> 1. Define porosity and permeability. 2. Explain how some porous materials store water. 3. Explain how impermeable materials trap water. 4. Model the groundwater system. <p>Groundwater Chemistry</p> <ol style="list-style-type: none"> 1. Relate the dissolving power of water to its physical and chemical properties. 2. Explain how the amounts and kinds of dissolved minerals in drinking water affect its hardness and usefulness. 3. Describe different methods for softening hard water.
7	Chapter 17: Groundwater Lab 17B Taking the Waters Lesson 4: Water as a Resource Lesson 5: Groundwater	Days 112, 113, 114, 115	Skip Chapter 17 Review and Test.	Submit chapter 17 Activity	<p>Lab 17B Taking the Waters</p> <ol style="list-style-type: none"> 1. Define hard water and soft water. 2. Measure water hardness. 3. List uses of hard and soft water. 4. Describe the effects dissolved minerals have on water's hardness and flavor. <p>Water as a Resource</p> <ol style="list-style-type: none"> 1. Explain how we can use and conserve drinking water.

	Landforms				<ol style="list-style-type: none"> Identify the ways drinking water can become polluted. Relate the importance of drinking water and sewage treatment to modern, healthy living. <p>Groundwater Landforms</p> <ol style="list-style-type: none"> Evaluate old- and young-earth models for the origin of solution caves. Explain where cave features come from. Distinguish between a spelunker, a caver, and a speleologist. Describe some features of karst topography.
8	<p>Chapter 18: Earth's Atmosphere</p> <p>Lesson 1: What is the Atmosphere?</p> <p>Lab 18A: Weighty Matter</p> <p>Lesson 2: Special Zones in the Atmosphere</p> <p>Lesson 3: Energy in the Atmosphere</p>	Days 117, 118, 119, 120, Chapter Review and Test		Chapter 18 Test	<p>What is the Atmosphere?</p> <ol style="list-style-type: none"> Describe how people can affect the atmosphere. Identify evidence of design in the atmosphere. Sketch the atmosphere's composition, temperature, and structure. Trace the flow of carbon and nitrogen in the atmosphere. <p>Weighty Matter</p> <ol style="list-style-type: none"> Explain how a barometer works. Build and calibrate a simple barometer. Relate barometric pressure to weather. <p>Special Zones in the Atmosphere</p> <ol style="list-style-type: none"> Relate special zones of the atmosphere to the other layers. Explain how special zones in the atmosphere are evidence of God's good design. <p>Energy in the Atmosphere</p> <ol style="list-style-type: none"> Sketch the flow of energy in the atmosphere. Compare radiation, conduction, and convection.
9	<p>Chapter 19: Weather</p> <p>Lesson 1: What is Weather?</p> <p>Lesson 2: Winds</p> <p>Lesson 3: Clouds and Precipitation</p>	Days 124, 125, 126, 127, 128, 129, 130	Skip the Labs And Review and Test on Day 4	Submit Chapter 19 test	<p>Energy in the Atmosphere</p> <ol style="list-style-type: none"> Evaluate the risks and benefits of wind power. Describe the weather data that meteorologists collect. Compare and contrast the different aspects of weather to one another. <p>Winds</p> <ol style="list-style-type: none"> Explain what factors affect winds. Locate and anime the major global wind belts. Identify sources of local winds. <p>Clouds and Precipitation</p> <ol style="list-style-type: none"> Explain how clouds form. Relate clouds, air temperature, and humidity to precipitation. Compare and contrast the different forms of precipitation.