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| **Day 1**  **Lesson:** Surface and Groundwater  Essential Question: How does fresh water flow on Earth? | **Day 2**  **Lesson:** Surface and Groundwater | **Day 3**  **Lesson:** Surface and Groundwater | **Day 4**  **Lesson:** Surface and Groundwater | **Day 5**  **Lesson:** Surface and Groundwater |
| **Clarifying Objective:**  **8.E.1.1** Explain the structure of the hydrosphere including:  Water distribution on earth  Local river basin and water availability  **Academic Vocabulary:**  Surface water, groundwater, water table, watershed, aquifer, tributary, divide, channel, eutrophication, turbidity | **Clarifying Objective:**  **8.E.1.1** Explain the structure of the hydrosphere including:  Water distribution on earth  Local river basin and water availability  **Academic Vocabulary:**  Surface water, groundwater, water table, watershed, aquifer, tributary, divide, channel | **Clarifying Objective:**  **8.E.1.1** Explain the structure of the hydrosphere including:  Water distribution on earth  Local river basin and water availability  **Academic Vocabulary:**  Surface water, groundwater, water table, watershed, aquifer, tributary, divide, channel | **Clarifying Objective:**  **8.E.1.1** Explain the structure of the hydrosphere including:  Water distribution on earth  Local river basin and water availability  **Academic Vocabulary:**  Surface water, groundwater, water table, watershed, aquifer, tributary, divide, channel | **Clarifying Objective:**  **8.E.1.1** Explain the structure of the hydrosphere including:  Water distribution on earth  Local river basin and water availability  **Academic Vocabulary:**  Surface water, groundwater, water table, watershed, aquifer, tributary, divide, channel |
| **Bell Ringer:**  **Uncovering Student Ideas in Science Vol 2 (Keeley) pg 65 What’s in the bubbles?**  **Instructional Tasks:**  **\*\*\*The powerpoint covers**  **Use Science Fusion (Module F- Water’s Earth and Atmosphere)**  **Pg. 45- 57 teacher pages**  **Student pages 30-41**  **Options:**  **-Read Unit 1 Lesson 3 pg. 30-41**  **-Powerpoint with skeletal notes**  **-Digital Lesson with skeletal notes**  **Summarizer:**  **3-2-1 on powerpoint notes or digital lesson**  **-3 things you liked, 2 new ideas you learned, 1 question you have.** | **Bell Ringer:**  Probing Question: Not a Drop to Drink pg 46. This will create a class discussion on groundwater and conservation measures.  **Instructional Tasks:**  **-Continue/finish day 1 lesson**  **-Vocabulary activity on Surface Water and Groundwater**  **Card Sort- Found in teacher resources- vocabulary strategies.**  **Word Splash- Found in teacher resources- vocabulary strategies.**  **(use any strategy you like: ex- Frayer model, word triangle, Four Square, etc.)**  **Summarizer:**  **Create an Acrostic Poem using one of your vocabulary words. Make sure the words or sentences match the definition of the vocabulary word.**  **Card Sort and Word Splash can be used as summarizer.** | **Bell Ringer:**  How can you reach water in an aquifer? (digging a well) Should the well reach several feet above or several feet below the water table? Explain your answer. (It should reach several feet below the water table so that it can access water in the aquifer.)  **Instructional Tasks:**  **Options:**  **-Students can take a “book walk” through the lesson. Each page of the student book has questions they will answer after reading each section. If using laptops, the program will read to the student. If laptops are not available, you can make a class set of the lesson for students to use.**  **-Activity- Map River Systems pg 46**  **Summarizer:**  Think-pair-Share will work for all activities listed. | **Bell Ringer:**  How does permeability relate to the usefulness of an aquifer? I (High permeability means that the pores in an aquifer are connected, allowing water to flow easily.)  **Instructional Tasks:**  **Options-**  **1 day to complete-**  **Exploration Lab- Aquifers and Development pg. 47**  **Daily Demo- Rock Spaces pg 47**  **Quick Lab- Modeling Groundwater pg 47**  **Activity- Surface Water and Ground Water pg 50**  **Or choose an option from the previous three days that has not been completed.**  **Summarizer:**  **Review KWL chart from previous activity. Students should be able to fill in the learned column.** | **Bell Ringer:**  What can happen to rainwater that enters a storm drain on your street? (It drains into local rivers, streams, and lakes.)  **Instructional Tasks:**  **One Day Options-**  **-Lesson Review pg 90 Module E- Student Edition**  **-Traditional Quiz/ Test**  **~Complete the previous activity from the previous day.**  **Option 2- Two day activities-**  **Alternative Assessment- Surface Water pg 51**  **Build an Aquifer website found** [**here**](http://www.epa.gov/safewater/kids/flash/flash_aquifer.html)**.**  **Virtual Tour of a drinking** [**water plant**](http://water.epa.gov/learn/kids/drinkingwater/gamesandactivies.cfm)**.**  **Aquifer in a** [**cup Lesson**](http://www.epa.gov/safewater/kids/pdfs/activity_grades_k-3_aquiferinacup.pdf)  **Summarizer:**  **Students could present their alternative assessment.**  **You can review the Lesson review as a class.** |
| **Assessment:** Observation/ Summarizer | **Assessment:**  Observation | **Assessment:** summarizer, observation | **Assessment:** summarizer, observation/ | **Assessment:** Observation |

\*\*\*Great summarizer website: <http://www.cobbk12.org/CheathamHill/LFS%20Update/summarizing_strategies.htm> and <http://www.christina.k12.de.us/LiteracyLinks/elemresources/lfs_resources/summarizing_strategies.pdf> Allows you to pick many different summarizers depending on your activity. \*\*\*

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| **Day 6**  **Lesson:** Aquatic Ecosystem  Essential Question: What are aquatic ecosystems? | **Day 7**  **Lesson:** Aquatic Ecosystem | **Day 8**  **Lesson:** Aquatic Ecosystem | **Day 9**  **Lesson:** Aquatic Ecosystem | **Day 10**  **Lesson:** Aquatic Ecosystem |
| **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite |
| **Bell Ringer:**  **Accessing prior knowledge pg 100 Unit D Lesson 2- Ecology and the Environment. Students will create a trifold. This has online resources.**  **Instructional Tasks:**  **Use Science Fusion (Module D- Ecology and the environment)**  **Pg. 100- 114 teacher pages**  **Student pages 74-85**  **Options:**  **-Read Unit 1 Lesson 3 pg. 30-41**  **-Powerpoint with skeletal notes**  **-Digital Lesson with skeletal notes**  **Summarizer:**  **3-2-1 on powerpoint notes or digital lesson**  **-3 things you liked, 2 new ideas you learned, 1 question you have.** | **Bell Ringer:**  Probing Question: Aquatic “Problems” pg 102  **Instructional Tasks:**  **-Continue/finish day 1 lesson**  **-Vocabulary activity on Surface Water and Groundwater**  **Card Sort- Found in teacher resources- vocabulary strategies.**  **Word Splash- Found in teacher resources- vocabulary strategies.**  **(use any strategy you like: ex- Frayer model, word triangle, Four Square, etc.)**  **Summarizer:**  **Create an Acrostic Poem using one of your vocabulary words. Make sure the words or sentences match the definition of the vocabulary word.**  **Card Sort and Word Splash can be used as summarizer.** | **Bell Ringer:**  Probing Question: Marine Adaptation pg 102  **Instructional Tasks:**  **Options:**  **-Students can take a “book walk” through the lesson. Each page of the student book has questions they will answer after reading each section. If using laptops, the program will read to the student. If laptops are not available, you can make a class set of the lesson for students to use.**  **-Activity- Bottling an ecosystem pg 102**  **-Activity- Visit an Aquatic Ecosystem pg 102**  **-River Basin packet found at** [**www.ee.enr.state.nc.us/**](http://www.ee.enr.state.nc.us/)  **Summarizer:**  Think-pair-Share will work for all activities listed. | **Bell Ringer:**  Which abiotic factors do you think are the most important in a river ecosystem? Which abiotic factors are important to an estuary? Explain your answer. (Answer on page109)  **Instructional Tasks:**  **Options-**  **1 day to complete-**  **Daily Demo- How does the ocean water become so salty? Pg 103**  **Quick Lab- Life in Moving Water pg 103**  **Activity- Light penetration and water clarity pg 103**  **Or choose an option from the previous three days that has not been completed.**  **Summarizer:**  **Review KWL chart from previous activity. Students should be able to fill in the learned column.** | **Bell Ringer:**  What can happen to rainwater that enters a storm drain on your street? (It drains into local rivers, streams, and lakes.)  **Instructional Tasks:**  **One Day Options-**  **-Lesson Review pg 90 Module E- Student Edition**  **-Traditional Quiz/ Test**  **~Complete the previous activity from the previous day.**  **Option 2- Two day activities-**  **Alternative Assessment- Restoring an Aquatic Ecosystem pg 107**  **Summarizer:**  **Students could present their alternative assessment.**  **You can review the Lesson review as a class.** |
| **Assessment:** Observation/ Summarizer | **Assessment:**  Observation | **Assessment:** summarizer, observation | **Assessment:** summarizer, observation/ | **Assessment:** Observation |

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| **Day 11**  **Lesson:** Aquatic Ecosystem  Essential Question: What are aquatic ecosystems? | **Day 12**  **Lesson:** Aquatic Ecosystem | **Day 13**  **Lesson:** Aquatic Ecosystem | | **Day 14**  **Lesson:** Aquatic Ecosystem | | **Day 15**  **Lesson:** Aquatic Ecosystem | | |
| **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  8.E.1.3 Predict the safety and potability of water supplies in North Carolina based on physical and biological factors, including:  • Temperature  • Dissolved oxygen  • pH  • Nitrates and phosphates  • Turbidity  • Bio-indicators  **Academic Vocabulary:**  Wetland, estuary, marine ecosystem, dissolved gases, upwelling, sustainability, submarine, sonar, remote satellite | | |
| **Bell Ringer:**  **(Depends on what needs to be reviewed)**  **Instructional Tasks:**  **\*\*\*Aquatic ecosystems my take you more than one week to cover. I have added extra time into the curriculum guide to offset the time you may take to cover this topic. \*\*\*\***  **Teachers can take this week to re-teach a concept students did not understand, or pick an instructional task they were unable to get to at the time. This will help solidify student’s knowledge and prepare for benchmarks and/or end of unit test.**  **Summarizer:** | **Bell Ringer:**  **(Depends on what needs to be reviewed)**  **Instructional Tasks:**  **Teachers can take this week to re-teach a concept students did not understand, or pick an instructional task they were unable to get to at the time. This will help solidify student’s knowledge and prepare for benchmarks and/or end of unit test.**  **Summarizer:** | **Bell Ringer:**  **(Depends on what needs to be reviewed)**  **Instructional Tasks:**  **Teachers can take this week to re-teach a concept students did not understand, or pick an instructional task they were unable to get to at the time. This will help solidify student’s knowledge and prepare for benchmarks and/or end of unit test.**  **Summarizer:** | | **Bell Ringer:**  **(Depends on what needs to be reviewed)**  **Instructional Tasks:**  **Teachers can take this week to re-teach a concept students did not understand, or pick an instructional task they were unable to get to at the time. This will help solidify student’s knowledge and prepare for benchmarks and/or end of unit test.**  **Summarizer:** | | **Bell Ringer:**  **(Depends on what needs to be reviewed)**  **Instructional Tasks:**  **Teachers can take this week to re-teach a concept students did not understand, or pick an instructional task they were unable to get to at the time. This will help solidify student’s knowledge and prepare for benchmarks and/or end of unit test.**  **Summarizer:** | | |
| **Assessment:** summarizer, observation/ | **Assessment:** Observation | **Assessment:** summarizer, observation/ | | **Assessment:** summarizer, observation/ | | **Assessment:** Observation | | |
| **Day 16**  **Lesson:** Earth’s Oceans and the Ocean Floor  Essential Question: What are aquatic ecosystems? | | **Day 17**  **Lesson:** Earth’s Oceans and the Ocean Floor | | **Day 18**  **Lesson:** Earth’s Oceans and the Ocean Floor | | **Day 19**  **Lesson:** Earth’s Oceans and the Ocean Floor | | **Day 20**  **Lesson:** Earth’s Oceans and the Ocean Floor | |
| **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  **Academic Vocabulary:**  marine ecosystem, salinity, ocean trench, deep-ocean basin, mid-ocean ridge, intertidal zone, neritic zone, oceanic zone, hydrothermal vents | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  **Academic Vocabulary:**  marine ecosystem, salinity, ocean trench, deep-ocean basin, mid-ocean ridge, intertidal zone, neritic zone, oceanic zone | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  **Academic Vocabulary:**  marine ecosystem, salinity, ocean trench, deep-ocean basin, mid-ocean ridge, intertidal zone, neritic zone, oceanic zone | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  **Academic Vocabulary:**  marine ecosystem, salinity, ocean trench, deep-ocean basin, mid-ocean ridge, intertidal zone, neritic zone, oceanic zone | | **Clarifying Objective:**  **8.E.1.2** Summarize evidence that Earth’s oceans are a reservoir of nutrients, minerals, dissolved gases, and life forms:  • Estuaries  • Marine ecosystems  • Upwelling  • Behavior of gases in the marine environment  • Value and sustainability of marine resources  • Deep ocean technology and understandings gained  **Academic Vocabulary:**  marine ecosystem, salinity, ocean trench, deep-ocean basin, mid-ocean ridge, intertidal zone, neritic zone, oceanic zone | |
| **Bell Ringer:**  Create a Venn diagram and compare and contrast the similarities and differences between estuaries and a marine ecosystem.  **Instructional Tasks:**  **Use Science Fusion (Module F- Earth’s Oceans and the Ocean Floor)**  **Pg. 72- 85 teacher pages**  **Student pages 52-63**  **Options:**  **-Read Unit 2 Lesson 1 pg. 52-63**  **-Powerpoint with skeletal notes**  **-Digital Lesson with skeletal notes**  **Summarizer:**  **3-2-1 on powerpoint notes or digital lesson**  **-3 things you liked, 2 new ideas you learned, 1 question you have.** | | **Bell Ringer:**  The ocean is divided into three zones based on temperature difference. Which of these ones is the densest ocean water located? Why? (The densest ocean water will be in the deep zone because this zone contains the coldest ocean water and cold water is denser than warm water)  **Instructional Tasks:**  **-Continue/finish day 1 lesson**  **-Vocabulary activity on Earth’s Oceans and the Ocean Floor**  **Card Sort- Found in teacher resources- vocabulary strategies.**  **Word Splash- Found in teacher resources- vocabulary strategies.**  **(Use any strategy you like: ex- Frayer model, word triangle, Four Square, etc.)**  **Summarizer:**  **Create an Acrostic Poem using one of your vocabulary words. Make sure the words or sentences match the definition of the vocabulary word.**  **Card Sort and Word Splash can be used as summarizer.** | | **Bell Ringer:**  What is buoyancy? Give an example.  **Instructional Tasks:**  **Options:**  **-Students can take a “book walk” through the lesson. Each page of the student book has questions they will answer after reading each section. If using laptops, the program will read to the student. If laptops are not available, you can make a class set of the lesson for students to use.**  **-Activity- Submersible Role Play pg 74**  **Quick Lab- Ocean Density pg 75**  **Summarizer:**  Think-pair-Share will work for all activities listed. | **Bell Ringer:**  What are some ways that scientists study the ocean floor and what kind of information does each method provide? (answer is on pg 89)  **Instructional Tasks:**  **Options-**  **1 day to complete-**  **Daily Demo- Modeling Density pg 74**  **Quick Lab- Evaporation Rates pg 75**  **Option 2- More than 2 days to complete-**  **Exploration Lap- Measuring Salinity pg 75**  **Or choose an option from the previous three days that has not been completed.**  **Summarizer:**  **Review KWL chart from previous activity. Students should be able to fill in the learned column.** | | **Bell Ringer:**  Imagine the ocean as a giant swimming pool. Which region would be the shallow end, and which region would be the deep end?  **Instructional Tasks:**  **One Day Options-**  **-Lesson Review pg 90 Module E- Student Edition**  **-Traditional Quiz/ Test**  **~Complete the previous activity from the previous day.**  **Option 2- Two day activities-**  **Alternative Assessment- Describing Earth’s Oceans pg 79**  **Summarizer:**  **Students could present their alternative assessment.**  **You can review the Lesson review as a class.** | |
| **Assessment:** Observation/ Summarizer | | **Assessment:** Observation | | **Assessment:** summarizer, observation | **Assessment:** summarizer, observation/ | | **Assessment:** Observation | |