

Science - Oceans - 5th grade, 2nd quarter

Strand(s): Science, Technology, Information Literacy		SOL objectives: Science 5.6 <i>Technology: 5.1.4, 5.3.3, 5.4.1, 5.5.5</i> Information Literacy: Research & Citations
1. DESIRED RESULTS		
<u>Enduring Understandings (BIG ideas)</u>		
Science: The Earth's oceans are complex environments. <i>Technology: Databases are a tool to organize and find information.</i> Information Literacy: Researchers give credit to their sources		
<u>Essential Questions</u>		<u>Knowledge and Skills</u>
<ul style="list-style-type: none"> • How have organisms adapted to the Earth's ocean environments? • What characteristics change in the Earth's oceans? • How do changes in the Earth's oceans affect the ocean's ecosystems? • <i>How can a database help me to organize information and draw conclusions?</i> • Why do researchers need to give credit to their sources? Is information the property of the researcher or the author? 		<ul style="list-style-type: none"> • As the depth of the ocean varies, temperature, salinity, and pressure fluctuate. Marine organisms adapt to these conditions • Analyze how the physical characteristics (depth, salinity, temperature, pressure) of the ocean affect where marine organisms live • A diversity of animals and plants live in the ocean environment and share limited resources • Animals have life needs and specific physical characteristics. • <i>Create a database, collect information, draw conclusions</i> • Complete a bibliography using proper citation format
		<p>Vocabulary Science: ocean layers/environments, depth, temperature, salinity, pressure, prey, predators, adaptations, physical characteristics Technology: database, field, record, organize, sort, find Information Literacy: Citation</p>
2. ASSESSMENT EVIDENCE		
Prior knowledge Discuss/review	Ongoing throughout lesson Observe and assist students with research, entering information into the database, and citing their sources. Students will be given a checklist to help monitor progress.	By the end of the lesson Rubric to be made to assess work – accuracy of information, database, and citations Scavenger Hunt distributed for students to explore merged / complete database
<ul style="list-style-type: none"> • Ocean layers • Ocean animals • Database use 		
3. LEARNING ACTIVITIES/INSTRUCTION		
Introduction (hook)	What students are doing	Conclusion
<ul style="list-style-type: none"> • Introduction to ocean unit by homeroom teacher 	<ol style="list-style-type: none"> 1. Students will research ocean animals via on-line encyclopedias, books, and websites. 2. Students will enter information into a created database 3. Students will support and justify their findings 4. Students will cite their resources 	<p>Each student will have a database on ocean animals and be able to explain how their animals adapt to the ocean's conditions.</p>

--	--	--

<i>Accommodations</i>	<i>Materials and Resources</i>
<p>Extra support: Database template printed-out to record notes while researching; tiered websites</p> <p>Enrichment or early finishers: Determine if there is competing information or if the sources disagree on a particular fact.</p> <p>Various learning styles: Audio, visual, kinesthetic</p> <p>Limited English proficiency: Simplified English format, support in native language where possible</p>	<p>On-line encyclopedias (or CDs)</p> <p>Selected Websites: http://www.arlington.k12.va.us/schools/barcroft/oceanresearch.html</p> <p>Selected Books</p>

Related Technology	<i>Literature Connections</i>
<p>Database – create, enter, sort, find</p> <p>On-line research</p>	<p>Selected books on oceans, ocean animals, etc.</p>

4. WRAP-UP

Assessment	<i>Homework</i>
<p>Evidence of student learning/understanding</p> <p>Complete individual database on ocean animals compiled into one class database judged on accuracy of information and proper citations</p>	<p>Study science notes from class.</p>

5. TEACHER REFLECTION

- Were my students talking about the science, or was I doing all of the talking and students were just listening to me?
- Were my students engaged at the beginning of the lesson?
- How much time did I spend reviewing homework, and how much time did I spend on new material?
- Did the students respond to “How” and “Why” questions?
- Did my students have an opportunity to discuss and/or write about science?
- What changes would I make next time the lesson is taught?
- What steps do I need to take next in this topic?