

GRADE 6

ALIEN INVADERS!

PRE-VISIT • SUPPORT MATERIALS

Water Characteristics

Student Worksheet: RESOURCES FOR WATER QUALITY RESEARCH

Online Resources

AskJeeves for Kids

Search for Internet sites with information about water and water characteristics:

www.askforkids.com

U.S. Geological Survey

Check out the U.S. Geological Survey for short explanations of general water quality tests:

<http://ga.water.usgs.gov/edu/characteristics.html>

Read short descriptions of ground water quality and tests:

<http://ga.water.usgs.gov/edu/earthgwquality.html>

GREEN – Global Rivers Environmental Education Network

Learn about water quality conditions and potential causes of change in conditions:

www.green.org/files.cgi/212_Making_Water_Quality_Connections.pdf

Specific Water Quality Tests

Calcium

<http://kywater.org/ww/ramp/rmcalc.htm>

www.amdareef.com/ho_chem2.htm

www.ianrpubs.unl.edu/epublic/pages/publicationD.jsp?publicationId=175

www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/doc_sup-appui/calcium/index_e.html

Dissolved Oxygen

<http://waterontheweb.org/under/waterquality/oxygen.html>

www.state.ky.us/nrepc/water/wcpdo.htm

pH

<http://waterontheweb.org/under/waterquality/pH.html>

Temperature

<http://waterontheweb.org/under/waterquality/temperature.html>

Turbidity

<http://waterontheweb.org/under/waterquality/turbidity.html>

Student Worksheet: WATER CHARACTERISTICS

Work in teams of 5 to find the answers to the following. Assign one of the characteristics to each team member. Once each student has researched his/her topic, join together to share and discuss.

DRINKING? • BATHING? • FISHING? • SWIMMING?	
<p>What is pH?</p> <p>What is a normal pH for drinking water?</p> <p>How does the pH of water affect living things?</p> <p>Identify 3 things that could cause the pH of water in a lake or ocean to change.</p>	<p>What is TEMPERATURE?</p> <p>How does water temperature affect living things?</p> <p>Identify 3 things that could cause the temperature of water in a lake or ocean to change.</p>
<p>What is TURBIDITY?</p> <p>What is an acceptable turbidity value for drinking water?</p> <p>How does water turbidity affect living things?</p> <p>Identify 3 things that could cause the turbidity of water in a lake or ocean to change.</p>	<p>What is DISSOLVED OXYGEN?</p> <p>What is an acceptable dissolved oxygen value for a fresh water lake?</p> <p>How does dissolved oxygen in the water affect living things?</p> <p>Identify 3 things that could cause the amount of dissolved oxygen in a lake or ocean to change.</p>
<p>What is CALCIUM?</p> <p>What is an acceptable calcium concentration for drinking water?</p> <p>How does the concentration of calcium in water affect living things?</p> <p>Identify 3 things that could cause the calcium concentration of water in a lake or ocean to change.</p>	<p>Which one of the 5 characteristics is most important to our group, and why?</p>

LAB ACTIVITY—WATER QUALITY TESTING

Work in groups of 3 to complete this activity. Use the tools and the procedures demonstrated by your teacher to measure 5 characteristics of 5 different water samples. Each test must be completed by you and your two partners. Record results of all three of your tests; then average the results. Put the average values in the shaded boxes.

WATER SAMPLE	PH	TURBIDITY (NTU)	DISSOLVED OXYGEN (PPM)	TEMPERATURE (° CELSIUS)	CALCIUM (PPT)
Sample A	Test #1:	Test #1:	Test #1:	Test #1:	Test #1:
	Test #2:	Test #2:	Test #2:	Test #2:	Test #2:
	Test #3:	Test #3:	Test #3:	Test #3:	Test #3:
	Average:	Average:	Average:	Average:	Average:
Sample B	Test #1:	Test #1:	Test #1:	Test #1:	Test #1:
	Test #2:	Test #2:	Test #2:	Test #2:	Test #2:
	Test #3:	Test #3:	Test #3:	Test #3:	Test #3:
	Average:	Average:	Average:	Average:	Average:
Sample C	Test #1:	Test #1:	Test #1:	Test #1:	Test #1:
	Test #2:	Test #2:	Test #2:	Test #2:	Test #2:
	Test #3:	Test #3:	Test #3:	Test #3:	Test #3:
	Average:	Average:	Average:	Average:	Average:

