



## Stream Scene

Classroom Program for Grades 6-8



Discover ways to determine the health of a stream by its inhabitants. See unique adaptations of animals that live their life in cold mountain streams when you become stream creatures as we conduct a simulation to find out how events in and around the stream can change its ability to support life.

**Lesson:** Learn about factors that promote or threaten animal survival in freshwater streams and the role of indicator organisms in assessing water quality.

**Conservation Message:** An impact on any element of an ecosystem has ramifications throughout the ecosystem.

### **Curriculum Objectives:**

**Tennessee** students will apply the following **Science Curriculum Performance Indicators:**

- Identify the environmental conditions and interdependencies among organisms found in the major biomes.
- Explain how materials move through simple diffusion.
- Distinguish between the intended benefits and the unintended consequences of a new technology.
- Analyze structural, behavioral and physiological adaptations to predict which populations are likely to survive in a particular environment.
- Identify several reasons for the importance of maintaining the earth's biodiversity.

**Georgia** students will apply the following **Science Performance Standards:**

- Students will recognize the significant role of water in earth processes.
- Students will identify renewable and nonrenewable resources.
- Students will use the ideas of system, model, change and scale in exploring scientific and technological matters.
- Students will recognize that changes in environmental conditions can affect the survival of both individuals and entire species.

**Alabama** students will apply the following **Science Course of Study Content Standards:**

- Identify geographic factors that cause diversity in flora and fauna, including elevation, location and climate.
- Recognize genus and species as components of a scientific name.
- Describe evidence of species variation due to climate, changing landforms, interspecies interaction and genetic mutation.
- Define solution in terms of solute and solvent, defining diffusion and osmosis.

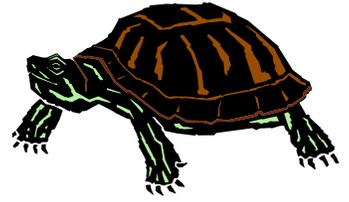
**Common Core Connection:** Extend the learning experience by adding any of the following non-fiction literature to your lesson.

- *Pollution (Planet Under Pressure)*, Clive Gifford, ISBN — 1403477422
- *Not a Drop to Drink: Water for a Thirsty World*, Michael Burgan, ISBN — 1426303602
- *Saving our Wetlands and Their Wildlife*, Karen Liptak, ISBN — 0531156486
- *The Colorado River*, Carol B. Rawlins, ISBN — 0531117383



## Stream Scene

### Activity Sheet



Complete the following sentences by decoding the underlined mystery words using the code provided below.

1. Fish and other aquatic species need oxygen to live. The oxygen in water is 4-9-19-19-15-12-22-5-4 oxygen.
2. An animal's 8-1-2-9-20-1-20 is where it lives - finds food, water, shelter and space.
3. 18-5-14-5-23-1-2-12-5 resources are those that can replenish through natural processes with the passage of time.
4. A 12-1-18-22-1 is an immature form of an organism that is unable to reproduce, lacks wings and appears totally different from the adult.
5. An aquatic animal that does not have a backbone yet is large enough to be seen without the aid of a microscope is a 13-1-3-18-15-9-14-22-5-18-20-5-2-18-1-20-5.
6. When the source of pollution is not easily identified as coming from a particular place or point, it is considered 14-15-14-16-15-9-14-20 source pollution.
7. 14-25-13-16-8-19 are the immature wingless stage of aquatic insects.
8. Animals require specific conditions in which they live. For example, the environment may contain too much acid. To determine the amount of acidity in the water, measure the 16-8 on a scale of zero to fourteen with zero being the most acidic and fourteen being the most alkaline or basic. A reading of seven is considered neutral.
9. Anything that harms the environment is known as 16-15-12-12 21-20-9-15-14 and can be biological, chemical or thermal.
10. 16-15-9-14-20 source pollution can be traced back a particular point such as a drainage pipe or a ship wreck.
11. 14-15-14-18-5-14-5-23-1-2-12-5 resources are those that have stocks or reserves that are limited or fixed. Once they're gone, they're gone.

### Code

<b>1-A</b>	<b>2-B</b>	<b>3-C</b>	<b>4-D</b>	<b>5-E</b>	<b>6-F</b>
<b>7-G</b>	<b>8-H</b>	<b>9-I</b>	<b>10-J</b>	<b>11-K</b>	<b>12-L</b>
<b>13-M</b>	<b>14 - N</b>	<b>15-0</b>	<b>16-P</b>	<b>17 - Q</b>	<b>18 - R</b>
<b>19-S</b>	<b>20-T</b>	<b>21 -U</b>	<b>22-V</b>	<b>23-W</b>	<b>24-X</b>
<b>25-Y</b>	<b>26-Z</b>				

