



## Riparian Forest Buffer Questionnaire Answer Key

Complete this table based on the demonstrations:

	<b>Pounds of pollutants</b>
<b>Stream with buffer</b>	<b>(calculate the number of marbles that entered the stream and multiply it by 100 pounds.)</b>
<b>Stream without buffer</b>	<b>(calculate the number of marbles that entered the stream and multiply it by 100 pounds.)</b>

**1. Which stream collected more pollutants?**

The stream without a forest buffer should have collected more pollutants. This is reflective of what happens when there is not a riparian forest buffer along a stream.

**2. What does the data tell you about riparian forest buffers?**

The data should tell the students that riparian forest buffers play a direct role in preventing pollutants from entering streams and rivers.

**3. Which stream is probably healthier, and why?**

The stream with a buffer is much healthier because there is less pollution and soil erosion that enters the stream. Also, the buffer helps to provide a well-balanced ecosystem for the aquatic and land animals that also help to keep the water clean and healthy.

**4. How does a riparian forest buffer keep pollutants out of a stream?**

The trees and other vegetation along a stream or river absorb nutrients such as phosphorous and nitrogen that may otherwise pollute the water. Additionally, riparian forest buffers slow down and trap sedimentation and other runoff from entering the stream by absorbing into the forest floor rather than quickly entering the stream and carrying additional pollutants with it.

**5. What do you think would happen to the water temperature in a stream that lost its riparian forest buffer, and how might this affect fish and other organisms?**

The water temperature would rise which sensitive aquatic animals may not be able to tolerate, making the stream inhabitable for certain animals.

**6. What water quality effects would you expect downstream of a riparian forest buffer?**

Possible answers include: the water quality should be cleaner; the velocity of the stream should be slower than if there was not a forest buffer; the visibility should be good due to lack of sedimentation; there should be evidence of sensitive animals in the stream; and the water temperature should be cool.

**7. Name a riparian forest buffer in your community and guess how wide it is.**

The answer will depend on the community.