

# Freshwater Monitoring – Bug Food and Stick Races

**Aim:** To look at the stream and the surrounding land and determine the things that are important in making a good ‘home’ for stream life.

Equipment	Method	Things to discuss:
<ul style="list-style-type: none"> <li>collection of sticks from the area (30cm x 1 cm)</li> <li>tape measure</li> </ul>	<ol style="list-style-type: none"> <li>1. Select a safe section of the stream – ideally about 20m or more in length.</li> <li>2. Collect sticks of a suitable size – 30cm x 1cm.</li> <li>3. Observe the availability of sticks and leaves near the stream – sources of organic matter.</li> <li>4. Space yourselves at equal intervals across the stream, forming a starting line.</li> <li>5. Release the sticks and observe their progress. Watch how they move and what they get caught on.</li> <li>6. The winner – from a bug’s perspective – would be the stick that gets trapped first!</li> <li>7. Use observations from this activity to score the level 1 and level 2 factors on the data recording sheet.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss with students the traditional concepts surrounding a race, that the first over the line is the winner and the fastest is the best.</li> <li>2. In this race it is the slowest stick, the one that gets caught on branches and rocks that will win!</li> <li>3. This activity is designed to have students look at the habitat of the stream to see whether it is a ‘good’ place for animals to live. Overhanging branches and grasses that ‘weep’ into the water provide food, shelter and shade from the sun.</li> <li>4. Rocks and logs in the stream create riffles in the water that help to put oxygen into the water.</li> <li>5. Think about whether this is a ‘good’ place for animals to live.</li> <li>6. Think about what things could be changed to improve the stream habitat.</li> </ol>
<p><b>Notes:</b></p> <p>This investigation could be repeated using leaves instead of sticks and/or with twiggy sticks. At least 10 sticks/leaves/twigs should be raced to allow a reasonable conclusion to be reached.</p> <p><b>Reflect</b></p> <ul style="list-style-type: none"> <li>• How did the leaves travel (compared to the sticks)?</li> <li>• Do leaves and sticks falling in the stream stay where they fall or are they washed down stream rapidly?</li> </ul>		<p><b>Reflect, continued</b></p> <ul style="list-style-type: none"> <li>• How did twiggy branches compare to unbranched sticks?</li> <li>• If you wanted your stick to float away quickly where would you put it? Where do you need to put your stick to ‘win’ the race?</li> <li>• Is there a good source of organic matter inputs (trees, shrubs) near the stream?</li> <li>• What other things are helping to make this stream a good habitat for animals?</li> <li>• What is the surrounding land use? How do people use this river?</li> <li>• Is there anything that could be done to improve the habitat?</li> </ul>