

River Explorers - KS2 Lesson Plan



This session is designed for students in Key Stage 2 but could be adapted to suit students in Key Stages 1 or 3.

Overview:

Course/Unit: River Explorers

Topic(s): Biology / Art / Geography

Learning outcomes:

- Identify 3 aquatic invertebrates.
- Describe 3 basic behaviours of aquatic invertebrates.
- Communicate knowledge of the pressures experienced by aquatic invertebrates.

Session duration: 1.5 hours (not including breaks)

Resources/Equipment List:

- A3/A2 paper
- Colouring pencils
- Glue Sticks
- Scissors
- Calculators or mini white boards
- River Explorers Presentation
- River Explorers Invertebrate Identification Quiz (and answer sheet)
- River Explorers Invertebrate Tokens

Time (approx.)	Activity and Resources needed	Teacher activity	Pupil activity
5 – 10 minutes	Introduction to rivers River Explorers Presentation – Slides 1 - 2	<p>Introduce the River Explorers Activity and outline the lesson learning objectives.</p> <p>Think, Pair, Share: Allow pupils to think about the importance of rivers.</p> <p>You could use the following prompt questions: What do you like about your local river? visit https://wrt.org.uk/your-river/</p> <p>How does being near a river make you feel?</p> <p>Why do you think rivers are important?</p>	Pupils to participate in a think, pair, share activity and think about the importance of rivers and feedback thoughts to a partner and then the rest of the group.
15 minutes	Invertebrates in our Rivers Part 1 River Explorers Presentation – Slide 3 River Beasties card game	Introduce key freshwater invertebrate species through the River Beasties card game.	Listen, ask questions. In pairs, play the River Beasties card game.
20 minutes	Invertebrates in our Rivers Part 2 River Explorers Presentation – Slides 4 – 11	Show slides 4 – 11 from the River Explorer Presentation and highlight the key features of each invertebrate.	Listen and ask questions.

	<p>River Explorers Presentation – Slides 12 - 15 River Explorers Invertebrate Tokens – 1 sheet per group Scissors Glue A2/A3 paper Blue pens/paper</p>	<p>Organise pupils into groups of 4 or 5. Hand out invertebrate tokens</p>	<p>In groups pupils are to draw a river on their A3 paper. They can colour in/use blue card to colour in their river. Pupils need to colour, cut and stick the invertebrate tokens onto their river. Each groups' river can be joined up to make a class river.</p>
<p>30 minutes</p>	<p>Invertebrate Identification and Calculating a Biotic Index River Explorers Presentation – Slide 16 Water Quality and Invert tokens – one pack per group (these can be pre-cut) River Explorers Calculating Biotic Index – one sheet per group Calculators or mini white boards</p> <p>To give an indication of the quality of the water, we calculate the Biotic Index. This works by giving each invertebrate a score that tells you how sensitive they are to pollution. Invertebrates with a score of 10 are very sensitive to pollution, those with a score of 1 are more tolerant of pollution.</p>	<p>Provide each group with a sample pack of invertebrate tokens (Good/Average/Poor river health selection packs available) and Biotic Index calculation sheet. Demo how to use the Biotic Index Sheet and ask pupils to follow instructions (visit each group to assist). Circulate to help groups with identification and calculating Biotic index scores.</p>	<p>Identify the invertebrate tokens they have been given in their pack and record on their Biotic Index Sheet. Calculate the Biotic Index using calculators or mini white boards to work out the average sensitivity score of the invertebrates found.</p>

5 minutes	<p>Class Discussion</p> <p>River Explorers Presentation – Slide 17</p>	<p>Lead a class discussion on the biotic indexes of each group and what this tells us about the health of the river.</p> <p>Ask pupils: What can you do to help protect your local river?</p>	<p>Participate in discussion about their biotic index and its meaning.</p> <p>Ask questions.</p>
10 minutes	<p>Invertebrate Quiz</p> <p>River Explorers KS2 Quiz</p>	<p>Give pupils River Explorers KS2 Quiz.</p>	<p>Participate in the multiple-choice quiz.</p>
10 minutes (Optional)	<p>Adding information to the river (This could be done after session).</p> <p>River Explorers Presentation – Slide 15</p>	<p>Ask pupils to cut out question 7 and stick it to the class river (optional).</p> <p>If appropriate, ask the pupils to connect their question 7 to the matching token made previously, using string and pins, or tape.</p>	<p>Cut out question 7 from the quiz and stick it to the river, then connect question 7 to the matching invertebrate token.</p>