

**Answers to the Benthic Macroinvertebrate Lesson:**

1. Define “Benthic”-

*Living on the bottom*

2. Define “Macro”-

*Large; big*

3. Define “invertebrate”-

*Without a backbone (vertebral column)*

4. How can identifying benthic macroinvertebrates present in a stream indicate the health of the stream?

*The presence and abundance of macroinvertebrates which are very sensitive to pollution indicates a healthy non-polluted stream. As the sensitive organisms die off, the stream is left with only very resistant macroinvertebrates, indicating an increasing pollution level.*

5. List 3 common sources of polluted runoff to our rivers and streams.

*(Sewage treatment plants were mentioned as ‘point source’ pollution; one can easily identify exactly where this pollution comes from. Polluted runoff is a mixture of almost invisible pollution, and an exact point of pollution cannot be identified.)*

a. *Farms*

b. *Cities and towns*

c. *Roads*

6. List 5 pollutants.

a. *Chlorine*

b. *Dirt; soil*

c. *Manure*

d. *Fertilizer*

e. *Oil and petroleum from automobiles*

7. Explain what is meant by the ‘food chain’.

*The interdependence of organisms in a food hierarchy, as each organism depends on the availability of another as a food source.*

8. How do macroinvertebrates fit in the food chain, and what happens to other animals when the macroinvertebrates die off?

*Macroinvertebrates eat bacteria, fungi, and debris in a stream. They are then eaten by frogs, turtles, and fish. When macroinvertebrates die off, the animals which depend on them for food will starve.*

9. Complete this food chain.

