Water Canaries
Assessing Benthic Macroinvertebrates

Bridging the Watershed
An Outreach Program of the Alice Ferguson Foundation in Partnership with the National Park Service and Area Schools
Macroinvertebrate Identification Worksheet

Specimen # _____

Characteristics
Body shape_____________________
Legs _________________________
Tail _________________________
Other features __________________

Sketch
Consider the following when trying to identify an organism.
Macroinvertebrate Body Characteristics

Segments
- Large and plump
- Tiny

Wormlike
- Is the abdomen fleshy or have armored plates?
- Does it look easily squishable?

Not Wormlike

Tiny
- Tiny—in nature, tiny generally means less than a centimeter—test to tell: do you have a hard time seeing anything more than a squiggly line?
Legs

Six segmented legs

More than six legs

true legs

Lateral filaments (fake legs)

Prolegs
Tails

Two tails  Featherlike tails  Tiny tails  Tail-like projection
Details to notice: gills

- Abdominal gills
- Abdominal filamentous gills
- Internal gills
Practice ID

- Visible Gills?
- Legs? Number? Length?
  Placement?
- Details? Antennae?
  Eyes? Wings? Tail?
Directions

❖ You will be shown pictures/drawings of 15 different types of organisms.

❖ Each slide will be visible for 2 minutes.

❖ Use your worksheet to draw each specimen.

❖ Begin with basic body shape and most important details.

❖ If there is more than one image on a slide, choose one to draw.

Each organism or set of organisms represents one category that corresponds to the data sheet you will use in your field study.
Specimen 1
Specimen 2
Specimen 4
Specimen 6
Specimen 7
Specimen 9
Specimen 11
Specimen 12
Specimen 13
End of Drawing Activity

Use your drawings and reference material to identify your organisms.
Benthic macroinvertebrates can be classified according to their sensitivity to pollutants.
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<tr>
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<th>![Image]</th>
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<tbody>
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<td>Mayfly larvae</td>
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<td>Stonefly larvae</td>
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<td>Most Caddisflies</td>
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<td>Beetles (adults and larvae)</td>
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<td>Dragonfly and Damselfly larvae</td>
<td>Netspinner caddisfly larvae</td>
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<td>Gilled snail</td>
<td>Crayfish</td>
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<td>Aquatic sowbug</td>
<td>Scud</td>
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<td>Clams</td>
<td>Cranefly larvae</td>
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<td>Hellgrammite</td>
<td>Damselfly larvae</td>
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<td>Tolerant</td>
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<td><strong>Lunged snails</strong></td>
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<td><strong>Blackfly larvae</strong></td>
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<td><strong>Midge larvae</strong></td>
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<td><strong>Aquatic worms</strong></td>
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<td><strong>Flatworms</strong></td>
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<td><strong>Leeches</strong></td>
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