BUG WORLD

A THINKING TOUR

Grades 4-8

***Note to teacher or chaperone**: This activity is designed for an adult to do with small groups of students. Many of these questions can be answered by observing the arthropods or by reading the notebook pages posted by the exhibits. Before you begin, discuss the word arthropod with you students, including its meaning (animals with a hard exoskeleton and jointed appendages) and the different types of arthropods (insects, spiders, millipedes, centipedes and crustaceans).*

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1. In temperate forests of the Pacific Northwest, these species of arthropods are major decomposers of dead leaves.

2. Termites live in colonies with well-defined roles for each caste of termites. Which termites build the nest and feed their nest mates? Which caste defends the nest? Observe the termites in the exhibit; can you see those two castes?

3. Find an exhibit with at least two different species of arthropods living together. List the species. How can they coexist in human care?

4. Many bugs become food for other animals, such as fish. In which “Bug World” exhibit can you see an insect that is capable of eating fish? Write the name of the insect.

5. List three predatory arthropods found in “Bug World”.

6. List at least three scavenging arthropods found in “Bug World”.

7. List one species of herbivorous arthropod found in “Bug World”.

8. Which insects in “Bug World” feed on nectar?

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KEY

1. In temperate forests of the Pacific Northwest, these species of arthropods are major decomposers of dead leaves.

   Sowbugs
   Yellow-spotted millipedes

2. Termites live in colonies with well-defined roles for each caste of termites. Which termites build the nest and feed their nest mates? Which caste defends the nest? Observe the termites in the exhibit; can you see those two castes?

   Larvae and nymphs build the nest and feed their nestmates. Soldiers defend the nest.

3. Find an exhibit with at least two different species of arthropods living together. List the species. How can they coexist in human care?

   *Note: Species in "Bug World" Exhibits often change; the following is a list of possible answers
   Your Own Backyard: sowbug, yellow-spotted millipede, cross orbweaver
   Desert by Day: Western horse lubber, darkling beetle
   Desert by Night: green lynx spider, giant vinegaroon
   Desert wetland: giant water bug, sunburst diving beetle
   Tropical Forest: flamboyant flower beetle, polyphemus flower beetle

   Species can coexist in the same habitats in the wild by avoiding competition. Often this means different feeding strategies – eating different foods, finding food in different places, and/or feeding at different times of day. Many arthropods in "Bug World" that are housed together eat different types of food. If species that do eat similar foods are housed together, they are provided with enough food to avoid competition. If predators are together with other arthropods, the predators receive enough preferable food so that they do not prey on the other species in their exhibit.

4. Many bugs become food for other animals, such as fish. In which "Bug World" exhibit can you see an insect that is capable of eating fish? Write the name of the insect.

   Desert wetland – giant water bug

5. List three predatory arthropods found in "Bug World".

   Cross orbweaver
   Western horse lubber
   Green lynx spider
   Giant vinegaroon
   Giant water bug
   Sunburst diving beetle
   White-eyed assassin bug
   Peruvian orange-striped bird eater
   Golden orbweaver
   Red swamp crayfish

6. List at least three scavenging arthropods found in “Bug World”.

    Sowbugs
    Yellow-spotted millipede
    American cockroach
    Western horse lubber
    Darkling beetle
    Flamboyant flower beetle (larva)
    Polyphemus flower beetle (larva)
    Pacific dampwood termite
    Red swamp crayfish

7. List one species of herbivorous arthropods found in “Bug World”.

    Leaf insect

8. Which insects in “Bug World” feed on nectar?

    Flamboyant flower beetle (adult)
    Polyphemus flower beetle (adult)

The species listed are current as of March 2017. The zoo’s collection is subject to change.