

Name _____

Digging into Taxonomy



You and your friends are digging in the dirt and you come across some insects you have never seen before. How do you know what they are? You would probably try to compare it to other insects that look alike. When scientists find a new insect, they organize their findings to try to learn more about the insect. We call this type of science taxonomy. **Taxonomy** is the science of naming, describing, and classifying organisms (such as plants and animals).

Use the clues below to help you figure out what type of arthropod you have. Write the name below.

Arthropoda Clues

Clue 1: a. Does it have six legs? If so, you have a **hexapod!**

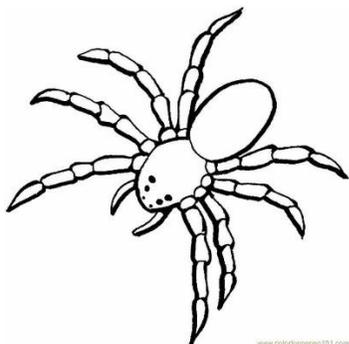
b. Does it have more than six legs? If so, go to **Clue 2.**

Clue 2: a. Does it have eight legs? If so, it is an **arachnid!**

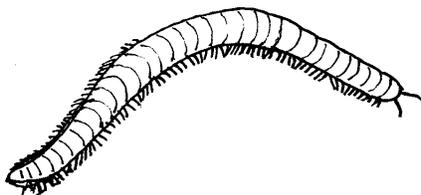
b. Does it have more than eight legs? If so, go to **Clue 3.**

Clue 3: a. Does it have a flat body with two legs attached to each body segment? If so, it's a **centipede!**

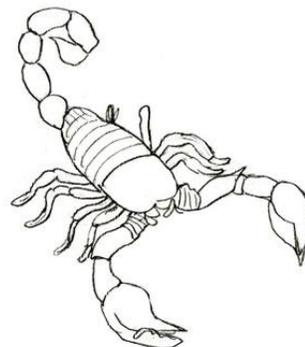
b. Does it have a round body with four legs attached to each body segment? If so, it's a **millipede!**



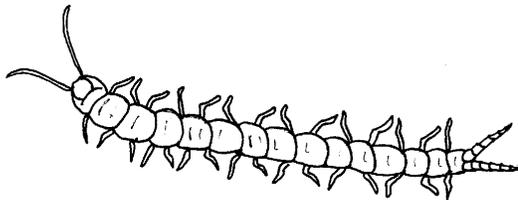
1. _____



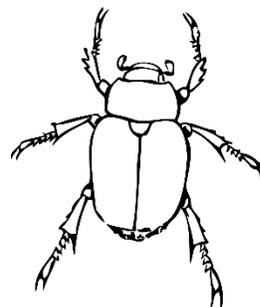
2. _____



3. _____



4. _____



5. _____

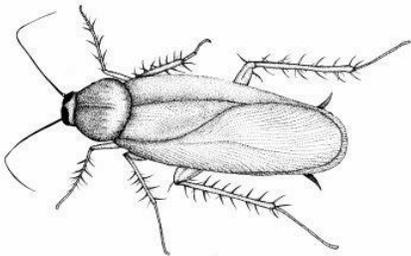
Name _____



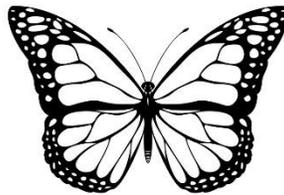
Use these clues to label the following kinds of Hexapods.

Hexapoda Clues

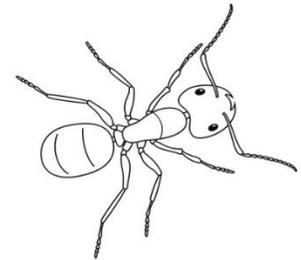
- Clue 1: a. It does not have wings. Go to **Clue 2**.
b. It does have wings. Go to **Clue 3**.
- Clue 2: a. It is larger, slow-moving, and resembles a twig. It belongs in **Phasmatodea!**
b. It has a rounder body with a narrow waist and bent antennae. It belongs to **Hymenoptera!**
- Clue 3: a. It has one pair of wings. It belongs to **Diptera!**
b. It has two pairs of wings. Go to **Clue 4**.
- Clue 4: a. Its front and hind wings have a similar texture. Go to **Clue 5**.
b. Its front and hind wings look different in size, shape, and texture. Go to **Clue 6**.
- Clue 5: a. Its wings have powdery scales, and its mouthpart has a coiling proboscis. It belongs to **Lepidoptera!**
b. Its wings do not fold over its body, but they are flat, and they have big eyes. It belongs to **Odonata!**
- Clue 6: a. It has sucking mouthparts that form a tube-like beak called a rostrum. It belongs to **Hemiptera!**
b. It has chewing mouthparts that help it to chew and swallow their food. Go to **Clue 7**.
- Clue 7: a. It has rigid front wings (elytra) that meet in a straight line down its back. It belongs to **Coleoptera!**
b. It has softer front wings that overlap across its abdomen. Go to **Clue 8**.
- Clue 8: a. Its head is hidden from above by a shield-like structure (pronotum). It belongs to **Blattodea!**
b. Its head is visible from above. Go to **Clue 9**.
- Clue 9: a. Its front legs have spines to grasp prey. It has long, slender hind legs. It belongs to **Mantodea!**
b. Its front legs do not grasp prey, but its hind legs are enlarged for jumping. It belongs to **Orthoptera!**



1. _____

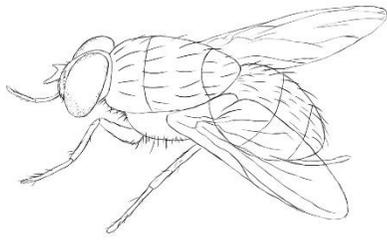


2. _____

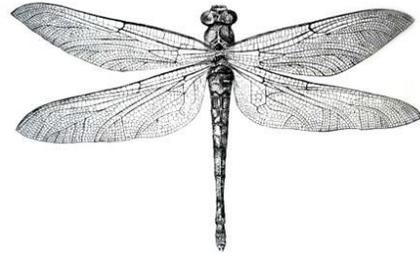


3. _____

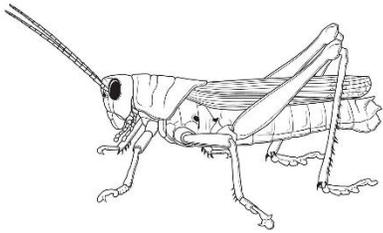
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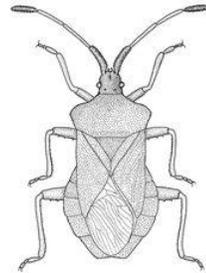
4. _____



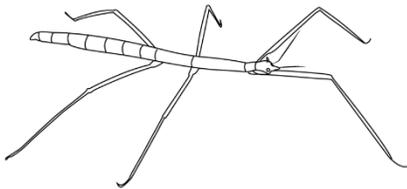
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6. _____

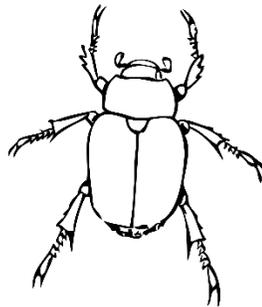


7. _____

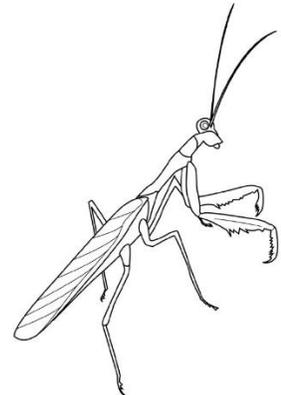


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8. _____



9. _____



10. _____

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Digging into Taxonomy - Answer Key



You and your friends are digging in the dirt, and you come across some insects you've never seen before. How do you know what they are? You would probably try to compare it to other insects that look like it, right? When scientists find a new insect, they like to organize their findings to try to learn more about the insect. We call this type of science taxonomy. **Taxonomy** is the science of naming, describing, and classifying organisms (such as plants and animals).

Answers - Arthropoda Clues

1. 1b, 2a - [Arachnid](#)
2. 1b, 2b, 3b - [Millipede](#)
3. 1b, 2a - [Arachnid](#)
4. 1b, 2b, 3a - [Centipede](#)
5. 1a - [Hexapod](#)

Answers - Hexapoda Clues

1. 1b, 3b, 4b, 6b, 7b, 8a - [Blattodea](#)
2. 1b, 3b, 4a, 5a - [Lepidoptera](#)
3. 1a, 2b - [Hymenoptera](#)
4. 1b, 3a - [Diptera](#)
5. 1b, 3b, 4a, 5b - [Odonata](#)
6. 1b, 3b, 4b, 6b, 7b, 8b, 9b - [Orthoptera](#)
7. 1b, 3b, 4b, 6a - [Hemiptera](#)
8. 1a, 2a - [Phasmatodea](#)
9. 1b, 3b, 4b, 6b, 7a - [Coleoptera](#)
10. 1b, 3b, 4b, 6b, 7b, 8b, 9a - [Mantodea](#)