

insects & more

BIG IDEA

Each invertebrate's body and behaviors help it live in its environment.

Over 97 percent of the world's animals are invertebrates—animals without a backbone. Invertebrates come in all shapes and sizes—from butterflies, cockroaches, and honey bees to spiders, centipedes, and crabs. Animals that do have a backbone—like birds, fish, bears, cougars, turtles, snakes, and frogs—are called vertebrates.

Before the Trip

Print out photos of various animals.

Be sure to include insects, spiders, worms, birds, mammals, fish, reptiles, and amphibians. Have students choose categories for sorting the animals into groups, and give them time to sort the photos. After students have created and discussed their own categories, explain that scientists often classify animals according to whether or not they have a backbone.

As a class, sort the photos according to these categories and introduce the terms vertebrate and invertebrate. (Have students put insects, spiders, and worms into the invertebrate category and everything else into the vertebrate category.)

Review expectations for field trip behavior. If appropriate, introduce any activities students will complete during their field trip visit (e.g. completing a field trip worksheet) and review any relevant directions and vocabulary.

Enhance your field trip with a workshop! Turn to page 16 for more information.

At the Museum

Observe invertebrates in their environments.

At group check-in, each class will be provided with a custom tour card to assist them on their self-guided visit through the Museum. The custom tour card will call attention to whole exhibits as well as specific exhibit components that best support this field trip.

Attached and included in your e-mailed field trip packet is a worksheet best suited for Pre-K and grade 2 students developed by Nature Museum educators. Please feel free to print this worksheet and have your students bring it on the day of your visit.

After the Trip

Each student will create a card for an invertebrate he/she observed at the museum.

Refer back to the pre-visit activity. Have students develop categories that they will use to sort their invertebrate cards. Sort the cards according to their categories.

Educator note: You may wish to have students include the invertebrate's environment on each card to provide greater variety when sorting. You may also wish to challenge your students to come up with another set of categories for sorting to reinforce the idea that there are many ways to classify living things.

Next Generation Science Standards

NGSS: LS1.A – Structure and function
NGSS: LS1.B – Growth and development of organisms

***insects & more** worksheet*

Most of the world's animals are invertebrates—animals without a backbone. Invertebrates come in all shapes and sizes, from butterflies, cockroaches, and honey bees, to spiders, centipedes, and crabs.

DIRECTIONS

In two different exhibits, choose at least one invertebrate that you see. Look closely to observe the invertebrate and its environment.

Invertebrates _____ Exhibit _____

*Draw and write about the animal **and** its environment*

Invertebrates _____ Exhibit _____

*Draw and write about the animal **and** its environment*

How are these invertebrates different? _____
