GRADE LEVEL:

PK-2

DURATION:

30 minutes

NGSS STANDARDS:

2-LS4-1

Biodiversity

There are many different kinds of living things in any area, and they exist in different places on land and in water.

NE STANDARDS:

SC2.7.2.C

Make observations of plants and animals to compare the diversity of life in different habitats.

MATERIALS:

- Construction paper
- White paper
- Scissors
- Glue or glue sticks
- Crayons
- Pens and pencils
- Pipe cleaners

VOCABULARY:

- Exoskeleton
- Head
- Thorax
- Abdomen
- Legs
- Antennae
- Wings

ENTOMOLOGY
University of Nebraska

CREATE AN INSECT

BACKGROUND:

Insects have a hard outer shell (or skeleton) that we call an **exoskeleton**. Their bodies are divided into three main sections (the **head**, **thorax**, and **abdomen**). They have 6 **legs** (3 pairs) and 2 **antennae**. Most insects also have two pairs of **wings**.

OBJECTIVES:

- Identify key characteristics of insects (three body sections, exoskeleton, three pairs of legs, antennae, usually wings)
- Describe diversity of insects and their body parts (mouthparts, wings, legs, antennae)
- Explain how anatomy impacts life style of insect (predator vs. plant eater, pollination, dispersion, finding mates, etc.)

METHODS:

Assess students prior insect knowledge

- **"Raise your hand if you can think of a insect."** Ask the students to name a couple of types of insects (ask no more than five students to tell you a type of insect). Examples of insects could include: beetles, ants, flies, mantids, butterflies, and grasshoppers.
- "**Insects are part of a group of animals called arthropods. But some arthropods don't have what it takes to be an insect.** For example, crustaceans (crabs, lobsters and shrimp), arachnids (spiders, scorpions, and mites), millipedes, and centipedes are arthropods but they are NOT insects because they have more legs, body regions, or their number of antennae doesn't add up to two."

Diversity Discussion

- Discuss the variety of antennae, mouthparts, legs, and wings insects have. How do these different parts influence the way that insect live and behave?
- Ask what type of foods insects eat with chewing, sucking, siphoning, lapping mouthparts
- Ask what different types of legs help insects to do (grab, jump, dig, run, pick up pollen, crawl, etc.)
- Ask students "What are the benefits of having wings?" What do insects with wings do compared with those that don't have wings?
- Ask "What do insect antennae do?"

	Hands on examples 1. **Insect collection and laminated photos** • Examples of many orders and variation among them. Point out specific differences in wings, legs, antennae, mouthparts. 2. **Live insects** • Use hissing roaches to demonstrate leg structure, behavior, main body sections, etc. 3. **Plastic insects** • Examples of body parts and insect shapes that students can examine more closely **Activity** • Students should design their own insect using various art supplies. Encourage creativity, combining different legs, wings, etc. that they learned about. Then select a few volunteers to talk about their new insects.