# The Inside Scoop On Insects

## Bugs & Butterflies

### Grades Pre-K-3 (3 book set w/Bug Playground)

Attend "Bug Camp" where every day is an adventure, discover a whole new world of bugs and butterflies up close through a camera lens, and uncover the inner workings of a butterfly as you build a 3D model of the world's most beautiful insect! Are you ready to raise and keep some real bugs in a "Bug Playground"? Come on bug scientists… Grab your cameras, nets, and pooters!

**Books in this set**: Build a Butterfly, Bug Camp, Bug Playground

**Learning Objectives:** Students will develop a curiosity of, interest in, and respect for insects. Students will identify and name Insect body parts, key structure of insects and their functions, and behaviors of insects.

**Essential Questions in This Unit:**

- How are different insects alike or different?
- How do insects change as they become older?
- What do insects need to survive?
- How do insects defend themselves?
- What do insects look like?

### Read to find out:

1. What are the characteristics of insects?
2. What type of scientist studies insects?
3. What are the different needs of butterflies and other bugs? Choose a few to discuss.
4. What are interesting characteristics of each insect?
5. What are the life cycles for each insect?
6. How do these insects help humans?
7. What are the differences between the life cycle of a mosquito and a butterfly?

**Describe**

- Characteristic and unique structures of different insects.
- Similarities & differences in the way insects look & the things they do.
- Features of insects and butterflies that help them live in different environments.
- How insects change during their lifetime.

1. How is photography used to learn about bugs and butterflies? Find examples from the text.
2. How is photography used to identify patterns?
3. Why do photographers love to photograph hornets?
4. How have bugs inspired scientists?
5. How are insects important to life on Earth?
6. How are insects helpful to people?
7. How do insects affect farmers? Back up each fact with examples from the books

- Insects pollinate flowers and trees, enabling plants to reproduce.
- Many insects are garbage eaters, changing natural wastes into fertilizers.
- Insects play a vital role in the food chain.
- They provide food for birds, fish, and many other animals.
- Many insects, like ladybugs, control populations of insect pests, like aphids, that destroy crops.
- The praying mantis, like many beneficial insects, eats insects that may harm food crops or spread diseases. These plant diseases cost farmers millions of dollars in lost crops each year.

8. How are insects harmful to people?
9. Explain how insects use plants and other animals for food, shelter, and nesting.
10. Compare different bugs and butterflies that live in different environments of the world.
11. Explain that parts of living things are so small we can only see them using magnifiers or lenses.
12. Identify structures/adaptations that help insects and butterflies do things to stay alive.
13. Give examples of how organisms are like their parents and not like them.
14. Describe features of some insects that allow the organisms to live in places others cannot.
15. Explain how some kinds of insects that once lived on Earth have completely disappeared, although they were similar to some that are alive today.
16. How do insects depend on their environment?

## Activities

Research an invention that has been inspired by bugs.

**Conduct a scientific investigation in small groups:**

- Ask questions about bugs, their behavior, and their habitats.
- Observe and record information about bugs to answer the questions.
- Classify the bugs by identifying major structures common to them.
- Understand how bugs interact with or cause changes to their environment.
- Write about your findings in a journal. Draw pictures.

Create a PowerPoint presentation on an insect that is extinct or endangered

Find as many insects as you can for each category**- Prominent wings, wingless, modified wings.**

Plan and design a bug trivia card game. Name it and write the directions.

Take a camera into the field. Take shots of interesting insects to find Symmetry.

**For more information on this topic, please refer to the books below:**

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| 9781633221161 | Bug Camp: Where Every Day's an Adventure |
| 9781603800686 | Bug Playground |
| 9781847809223 | Build a... Butterfly |

*Created by Marla Conn, Read-Ability, Inc.*