**Science Unit Organizer**

**Insects**

**2nd Grade-Liberty Common School**

**Previous Unit:**  **Next Unit:**

Water Cycle Human Body: Cells

**Integrated Units:** none

**The Big Idea:** All insects have specific distinguishing characteristics: a segmented body with three divisions (head, thorax, and abdomen), six legs, and an exoskeleton.

**Summary:** Insects comprise the largest group in the animal kingdom. Life cycles of insects can include incomplete or complete metamorphosis. Social insects are those that live together in a group or colony. Some insects may be helpful to people and some might be harmful.

**Core Knowledge Content (Knowledge):**

1. Insects:
   1. Insects can be helpful and harmful to people
      1. Helpful: pollination; products like honey, beeswax, and silk; eat harmful insects
      2. Harmful: destroy crops, trees, wooden buildings, clothes, carry disease, bite or sting
   2. Distinguishing characteristics
      1. Exoskeleton: chitin
      2. Six legs and three body parts: head, thorax and abdomen
      3. Most but not all insects have wings
   3. Life cycles: metamorphosis
      1. Incomplete- Some insects look like miniature adults when born from eggs, and they molt to grow (example: grasshopper and cricket)
      2. Complete- Some insects go through distinct stages of life: egg, larva, pupa, adult (examples: butterflies, ants)

**Prior Knowledge:**

Grade 1- Living Things and Their Environments

* Habitats

**Future Knowledge:**

Grade 3- Ecology

* The Food Chain

Grade 5- Reproduction

**Cross-Curricular Links:**

Language Arts: Bee! I’m Expecting You (poem)

Language Arts: Hurt No Living Thing (poem)

Writing: Insect Project (report)

**Colorado State Standards for Science- 2nd Grade**

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| **Content Area: Science** |
| **Standard: 2. Life Science** |
| **Prepared Graduates:**   * Analyze the relationship between structure and function in living systems at a variety of organizational levels, and recognize living systems’ dependence on natural selection |
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| **Grade Level Expectation: Second Grade** |
| **Concepts and skills students master:** |
| 2. Each plant or animal has different structures or behaviors that serve different functions |

**Additional Resources:**

* For Teachers:
  + Core Knowledge Teacher Handbook, Grade 2, Core Knowledge Foundation, ISBN: 1-890517-74-7
  + An Extraordinary Life: The Life of a Monarch Butterfly ISBN 0531300021
  + What Your Second Grader Needs to Know Edited by E.D. Hirsch, Jr.
  + What is an Insect? By Robert Snedden ISBN: 0-87156-923-x
  + The Insect World by Normal Lobsenz Pp 14-18
  + It’s An Ants Life by Steve Parker ISBN: 1-57584371-4
  + Armies of Ants by Walter Retan ISBN: 0-590-47616-5
  + Bees by Christine Butterworth ISBN: 0-382-09554-5
  + Usborne Mysteries and Marvels: Insect Live by Dr. Jennifer Owen ISBN 0-59020-843-5
* For Students:
  + What Your 2nd Grader Needs to Know; Fundamentals of a Good Second-Grade Education, by E.D. Hirsch, Dell Publishing, ISBN: 0-385-31027-7
  + About Insects: A Guide for Children by Cathryn Sill, ISBN 1561452076
  + Ant Cities by Arthur Dorros, ISBN 0064450791
  + Are You a Bee? by Judy Allen and Tudor Humphries, ISBN 0753453452
  + Beetles by Cheryl Coughlan, ISBN 0516218239
  + Caterpillar by Karen Hartley and others, ISBN 1575727951
  + Creepy, Crawly Baby Bugs by Sandra Markle ISBN 0802776590
  + Ladybugs: Red Fiery, and Bright by Mia Posada ISBN 0876143346