

Unit essential questions:

1. What is a lifecycle?
2. Where do insects live?
3. How are insects the same/different?
4. Are spiders insects?
5. Would we be better off without insects?
6. How many insects are there in the world?

Big/Broad Questions:

1. Would we be better off without insects? How do they help us?
2. How are insect life cycles related to the life cycles of other living organisms?
3. What makes an insect an insect? Why is a spider not an insect?

Lesson question: What are the main characteristics of insects?

NYS or other appropriate standard(s) addressed:

Common Core English Language Arts Standards

Reading informational text

Craft and structure

CCSS.ELA-Literacy.RI.2.4 Determine the meaning of words and phrases in a text relevant to a *grade 2 topic or subject area*.

New York State Science Standards

STANDARD 4: The Living Environment

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea 4: The continuity of life is sustained through reproduction and development.

It is essential for organisms to produce offspring so that their species will continue. Patterns of reproduction, growth, and development of an organism are stages in its life cycle. Life cycle stages are sequential and occur throughout the life span of the organism. The characteristics of the cycle of life vary from organism to organism.

Note: Younger students may have difficulty in recognizing the continuity of life. Using organisms with a short life cycle as examples will be important in getting the concept across. It is important for younger students to observe life cycle changes in selected animals.

4.1e Each generation of animals goes through changes in form from young to adult. This completed sequence of changes in form is called a life cycle. Some insects change from egg to larva to pupa to adult.

4.1f Each kind of animal goes through its own stages of growth and development

during its life span.

4.1g The length of time from an animal's birth to its death is called its lifespan. Life spans of different animals vary.

Lesson objective: Students will identify main characteristics of insects.

Assessment: Students will be given a picture of a common insect and will be asked to label the main characteristics of the insect.

- Students who struggle with material will be given a word bank to use.

Opening: Teacher will ask students "Does anybody know another word for "bug?" If students do not know, the teacher will ask students to name of examples of bugs. If this still doesn't remind students of the word insect, the teacher will explain that another word for bug is insect.

Procedure:

1. The teacher will review main characteristics by showing a picture of an ant.
2. The teacher will ask students if anyone can name a part of this insect.
3. The main characteristics of an insect include two compound eyes, six legs, three part segmented body (head, abdomen, thorax).
4. The teacher will ask students each to come up and label these characteristics.
5. The teacher will then ask students to stand up, and show that we too have a head, abdomen, and thorax (Kind of) and have them physically show me where each body part is. We also have two eyes.
6. Teacher will ask students to split up into groups (names are written on the board). They will be working independently, when students are finished they may share what they learned or made with one another.

Tiered by: Student reading level

Student learning type: Blooms Taxonomy Multiple Intelligences

3 different tiers:

Auditory/Visual learners: Students will watch a Brain Pop video that reviews the main characteristics of insects. Students will then complete an iPad activity that reviews insect vocabulary and asks students to use the review to label pictures that are given. Students will each be asked to create a PowerPoint slide on the characteristic they are given.

Interactive/hands on learners: Students will be given multiple pictures of insects and pictures of non-insects. They will categorize these pictures into two columns, one for insects and one for non-insects. After students finished the group will be given a picture of an insect. They will be choose out of a hat a characteristic they will "specialize" in. Each student's part in the skit should be explaining about his or her characteristic.

Students who are expressive through writing: Students will be given a worksheet to read that reviews the main characteristics of insects. Using this information, students will draw and name their own insect that must have at least 3 of the main characteristics. Students will then be asked to write a story or poem about their insect. For example:

- Students can write a story about an insect that had friends that didn't believe he was one, so he/she had to prove he/she was one.
- A student can write a poem about their made up insect and why it is considered an insect.

Closure: The two groups who did a group activity in the end will share what they did, the three students who created and wrote about their own insect will have the choice to present to the class or have it hung up for people to see and read.

Materials:

- 3 iPads
- Multiple pictures of insects and non-insects, 10 given to each student.
- 3 charts to put pictures in.
- Lined Paper
- Pencils
- Microsoft PowerPoint software
- Props for skit (students can use or make items)