## Bee vs Wasp: How Will They Survive?

<table>
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<tr>
<th>Author</th>
<th>Diana Carrillo</th>
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<tr>
<td>Duration</td>
<td>2 class periods</td>
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### National Standards

**GEOGRAPHY**
Element 3: Physical Systems
8. The characteristics and distribution of ecosystems and biomes on Earth’s surface

### Arizona Standards

**ELA**
Writing
Research to Build and Present Knowledge
2.W.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

**SCIENCE**
Life Science
2. L2U1.9 Obtain, analyze, and communicate evidence the organisms need a source of energy, air, water, and certain temperature conditions to survive.

### Arizona Social Science Standards

**GEOGRAPHY**
2.G1.1 Use maps, globes, and other simple geographic models to identify and explain cultural and environmental characteristics of places in the world based on the place or regions being studied.

**Skills and Processes**
2.SP3.1 Use different kinds of sources.

### SIOP Elements

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### Arizona English Language Proficiency Standards

**Grade 2**

**Basic**

**Listening and Reading**
Standard 1 By the end of each language proficiency level, an English learner can construct meaning from oral presentations and literary and informational text through grade appropriate listening, reading, and viewing.
B-3: identify key details that support the main idea or message.

**Speaking and Writing**
Standard 3 By the end of each language proficiency level, an English learner can speak and write about grade appropriate complex literary and informational texts and topics.
B-3 compose informational text that includes details to develop a topic while using appropriate conventions.

**Listening, Speaking, Reading, and Writing**
Standard 7 By the end of each language proficiency level, an English learner can conduct research and evaluate and communicate findings to answer questions or solve problems.
B-1: gather information from multiple provided resources to answer questions.
Overview

Many of us are unaware of the differences between a bee and a wasp. In fact, we might just think of them as both being harmful.

Purpose

In this lesson students will learn about bees and wasps by completing research.

Key Vocabulary

- **physical characteristics**: what something looks like
- **habitat**: the natural home of a living thing
- **social**: an insect or animal that lives in groups
- **solitary**: an insect or animal that lives alone
- **pollination**: insects, birds, and other animals take pollen from flower to flower so that the plant can make new seeds

Materials

- Various resources for research (age appropriate books and internet sites)
- Ipads or computers
- My Research worksheet
- Vocabulary Cards and Vocabulary Test
- Summary Scoring Guide
- Story Map about Bees and Wasps [https://arcg.is/1fDu1i](https://arcg.is/1fDu1i)

Objectives

The student will be able to:

1. Examine collected research from various sources.
2. Compare the physical and environmental differences between a bee and a wasp.

Procedures

**Prerequisites**: Students should have been introduced to types of habitats and life cycles.

**Prior to the lesson**: Gather age-appropriate books from the library. Bookmark several age-appropriate websites for students to use for their research.

**Engage**:

1. Create a KWL chart on chart paper, and ask students to write one fact they may already know about bees on one color of sticky notes. Have students place their sticky notes about bees under the “K” of the chart. Discuss their contributions to the chart.
2. Repeat the process with a different color sticky note and have students document and discuss what they know about wasps.
3. Now have students complete the “W” or what they would like to know about bees and wasps in the same manner as above. (Preparation: Linking to background)
4. As you read the book *Tell Me the Difference Between a Bee and a Wasp*, ask students to listen for what are the physical characteristics of bees and wasps. What is their natural habitat? Do they have any adaptations that help them survive? (Integrated processes: Listening)

**Explore**:

5. Ask students to predict who has the best adaptations, a bee or a wasp? Have students discuss their reasons for picking one insect over another.

**Explain**:

6. Partner students in this manner: one who is researching bees and one who is researching wasps. (Grouping option: Partners)
7. Give each partner group a set of vocabulary cards. Explain the definitions of the words and have the students practice learning the definitions.
8. Distribute the My Research worksheet to each student. Model how you would collect information as you read through a book or other website and write down information. (Scaffolding: Modeling) Distribute books to students.
9. Remind students to complete their research in complete sentences. (Integrating Processes: Reading, Writing)

**Elaborate**:
Bee vs. Wasp: How Will They Survive

10. Distribute a World map to each student. Present the story map to students (Grouping option: whole class). https://arcg.is/1fDu1i

11. Discuss wasps and bees from different countries as you go through the story map. Have students use the world map as a graphic organizer and write some key words or phrases on the map as they learn about the bees or wasps. (Scaffolding: Guided practice)

Evaluate:
12. Have students use the My Research worksheet to write a 15 sentence paper summarizing their research on a bee or a wasp. Partners can work together to get ideas on what to write but their papers will be different because one is about a wasp and one is about a bee. They should use at least 4 of the vocabulary words for this lesson in their summaries. Share the Summary Scoring Guide with the students prior to final drafts of creating the summary so students can evaluate their rough drafts and make edits. (Scaffolding: Comprehensible input) (Assessment: Individual, Written)

Assessment

ELA and Science
Mastery will be considered correctly completing at least 80% of the My Research collection worksheet.

Mastery will be considered scoring 80% or higher on the Summary Scoring Guide.

Geography
Mastery will be considered correctly writing at least one fact for a bee or a wasp on each of the correct locations given in the story map.

Extensions

Have students read about hornets and list similarities and differences between bees, wasps, and hornets.

Sources

About Honey bees
https://askabiologist.asu.edu/explore/honey-bees
https://askabiologist.asu.edu/honey-bee-anatomy

About Wasps