

Insects and Spiders Discovery Kit Lesson Plan

Context (InTASC 1,2,3)**Lesson Plan Created By:** Rachel Strand**Created:** May 5, 2016**Lesson Topic:** Introduction to insect and spider names and characteristics**Grade Level:** Preschool**Duration:** Five lessons each 25-30 minutes**Kit Contents:** http://odin-primo.hosted.exlibrisgroup.com/nmy:NMY_ALEPH:ODIN_ALEPH007679382**Desired Results** (InTASC 4)

Purpose: The purpose of this lesson is to provide an introduction to the characteristics of insects and spiders and what makes them different from other animal groups. Students will learn about the life cycle of a butterfly and explore the things that insects and spiders do such as using smells to communicate and spinning webs.

North Dakota English Language Arts & Literacy Content Standards:

- Writing Standards: Text Types and Purposes
 - W.1 (Kindergarten) Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

North Dakota Science Content and Achievement Standards

- Standard 1: Students understand the unifying concepts and processes of science.
 - K.1.2 Constancy and Change: Identify things that can change (e.g., weather, people, water)

Objectives:

1. Students will label parts of an insect including the head, abdomen, thorax, wings, and six legs or label the parts of a spider including the two body parts and eight legs.
2. Students will draw and sequence three to four stages of a butterfly life cycle.

Assessment Evidence (InTASC 6)

Evidence of meeting desired results: After students have completed the life cycle of a butterfly lesson, they will draw the stages and put them in the correct order. If 3-4 of the stages are in the correct order, students are meeting expectations. At the conclusion of the unit, students will draw either an insect or a spider and label its body parts. If the body parts are labeled and there is evidence of understanding of the characteristics of their insect or spider, they are meeting expectations. Also use observation and partner sharing to assess general knowledge, such as during the scavenger hunt at the beginning of the unit.

Learning Plan (InTASC 4,5,7,8)**Instructional Strategy: (Check all that apply)**

Direct Indirect Independent Experiential Interactive

Technology Use(s): (Check all that apply)

STEM Collaborative Cataloging Project

Student Interaction Align Goals Differentiate Instruction Enhance Lesson

Collect Data N/A

Hook and Hold:

1. Scientists observe to learn more about things, so to start the insects and spiders unit have students be scientists on the search for them outside. Give each student an I Spy sheet (Discovery Guide page 12) , a white board for a hard surface, and a marker.
2. Talk about the places kids are likely to see insects or spiders and go for a walk. As kids find the insects and spiders, have them color in the box on their I Spy sheet.
3. When they get back to the classroom, discuss which kinds of insects and spiders they found and what they noticed about them.

Materials:

- Insects and Spiders Discovery Guide
- Inflatable insect and spider
- Insect Cards
- Insect Graph
- I Spy Insect & Spider Sheet
- Markers
- Matching containers of cotton balls dipped in something with a strong scent such as peanut butter or lemon juice, enough for each student to get a container
- Insect models
- "A Very Hungry Caterpillar"
- White ovals-one per student
- Butterfly life cycle pictures/Document Camera
- Paper plate-1 per student
- 4 index cards per student
- Scissors
- Triangles with matching numerals and dots
- Clothespins
- "A Very Busy Spider"
- Black construction paper-1 per student
- Runny glue
- White construction paper-1 per student

Procedures:**Day 1: Insect Characteristics**

1. Use Is It an Insect? On page 13 to recognize what makes an insect.
 - a. Use the inflatable insects to show body parts on a large scale. Name the head, thorax, and abdomen. Have students touch their head, belly, and feet to give a reference. Point out the legs and count them, emphasizing that insects have six legs. Point out the wings.
 - b. Show the insect cards and have students stand up if it is an insect and sit still if it is not an insect. Ask how students knew if it was or wasn't an insect.
 - c. Discuss similarities and differences between insects and children, and make an insect characteristics anchor chart to display.
2. Use Insect Survey on page 19 to discuss the different types of insects and graph student

favorites.

- a. Use a large piece of paper with the title My Favorite Insect. Have students come up with categories for the choices or have ant, butterfly, bee, dragonfly, ladybug, and grasshopper already listed at the bottom. Have students vote for their favorite insect and discuss the data when the graph is complete.

Day 2: What Insects Do

1. Use Secret Smells on page 14 to talk about how insects use smell to recognize things. Insects give off a special chemical odor that only other insects can smell, called pheromones.
 - a. Use the insect models to demonstrate how ants, bees, moths, and other insects can recognize each other using smells, by using their antennas.
 - b. Tell students that they are going to try it out by finding a secret smell partner using only their sense of smell. Give each child a container with a cotton ball dipped in something with a distinct scent (lemon juice, peppermint, pickle juice, peanut butter, vanilla). Students must find their partner by smelling other containers until they find one that matches their own.

Day 3: Butterflies

1. Use Our Very Hungry Caterpillar on page 21 to talk about what caterpillars need to grow.
 - a. Read “A Very Hungry Caterpillar” by Eric Carle and have students pretend they are very hungry caterpillars. Have each student write what they need to get big on an oval that will be used to create a class caterpillar in the classroom.
2. Use Life Cycle Mobile on page 14 to discuss the life cycle of a butterfly.
 - a. Talk about the idea of a life cycle, using children. Ask how they are different now from when they were babies. How will they be different when they are grown-ups?
 - b. Show a picture of the life cycle of a butterfly or read a butterfly life cycle story. Show students the stages including beginning as an egg, hatching into a caterpillar, forming a cocoon, and emerging as a butterfly.
 - c. Give each child a paper plate and help them cut out a wide spiral, or have these pre-cut into spirals. Give each student four index cards and have students draw, color, and cut out the four stages of the butterfly life cycle and attach the stages to the plate with tape.
 - d. Assess to see if students can put the stages in order for the life cycle.
3. When students complete the project, they can move to a math station called It’s a Match from page 20.
 - a. Write numbers and spots on separate triangles and have students find and match the triangles with a clothespin in the middle. When both sides are attached it resembles a butterfly.

Day 4: Spiders

1. Read “A Very Busy Spider” by Eric Carle to discuss the construction of a spider web. Use the large inflatable spider to demonstrate how spiders have small openings at the back of their bodies called spinnerets. Strong, thin strings come out of the spinnerets and spiders use those strings to build webs, line nests, or make egg sacs to hold eggs.
 - a. Also point out the differences between a spider body and an insect body. A spider has two body parts and eight legs while an insect has three body parts and six legs.
 - b. Give each student a black piece of paper and show how to drizzle paint onto the paper in a spider web design. Use spider confetti to add spiders to the web.
2. Use “The Eensie Weensie Spider” from page 26 of the discovery book or the “Itsy Bitsy Spider”

STEM Collaborative Cataloging Project

- a. Teach students the song and finger play that goes:
- b. The eensie weensie (itsy bitsy) spider crawled up the water spout. *Walk fingers of one hand up the other hand.*
- c. Down came the rain and washed the spider out. *Flutter fingers to make rain.*
- d. Out came the sun and dried up all the rain. *Form sun with arms in circle over head.*
- e. And the eensie weensie (itsy bitsy) spider went up the spout again. *Walk fingers up again.*

Day 5: Insect Book and Spider Book

1. Split the class into two groups, one group that will make a book about insects and one that will make a book about spiders. Use Insect Books on page 22 for this activity.

Give each student a white piece of paper and set out insect and spider books with good pictures. Have each student in the group draw and label their insect or spider including body parts and what it looks like. Put the pages together to make a class book.

Summary: Have students from each group share the class book that they made with the whole group. Students can be experts on either insects or spiders depending on which group they were in, and the other group can ask them questions about the insects and spiders they chose to include in their books.

Reflection (InTASC 9)**Reflect On:**

- *Preparation*
- *Planning*
- *Teaching*
- *Student Engagement and Participation*

Evidence of Student Learning

Standards

Council of Chief School Officers. (2011, April) *Interstate Teacher Assessment and Support Consortium (InTASC) model core teaching standards: a resource for state dialogue*. Washington DC. Retrieved from http://www.ccsso.org/documents/2011/intasc_model_core_teaching_standards_2011.pdf

North Dakota Department of Public Instruction. (2006) *North Dakota science content and achievement standards*. Bismarck, ND. Retrieved from <https://www.nd.gov/dpi/uploads/87/science.pdf>

North Dakota Department of Public Instruction. (2011) *North Dakota English language arts & literacy content standards*. Bismarck, ND. Retrieved from https://www.nd.gov/dpi/uploads/87/ELA_JUN0811.pdf

This project was made possible in part by the Institute of Museum and Library Services. [SP-02-15-0044-15]