



*Revised 4/17/20
Neal Smith National Wildlife Refuge*

Prairie Insects

3rd Grade

60 Minutes

Spring

Summary

The field leader introduces the term “insects” and how to look for them. Students work in groups and ask investigative questions about prairie insects. Students go outside and search through the soil and plants for invertebrates and observe, collect, and record data related to their discoveries. Students share their data and discuss the importance of these animals for the prairie.

Next Generation Science and Iowa Core Standards

Next Generation Science

- **3-LS1-1**
 - Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- **3-LS2-1**
 - Construct an argument that some animals form groups that help members survive.
- **3-LS4-3**
 - Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

Literacy

Writing

- **W.3.2**



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- Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.
- Develop the topic with facts, definitions, and details.

Speaking and Listening

- **SL.3.1**
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.3.4**
 - Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.
- **SL.3.6**
 - Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

Materials and Resources

- Blank paper or nature journals
- Mounts or other examples of insects
- Pencils
- White board
- Dry erase marker
- Bug boxes
- Insect ID sheets or field guides
- *Under One Rock: Bugs, Slugs, and other Ughs* by Anthony D. Fredericks (Optional)

Presentation

To begin the investigation, start a KWHL chart and ask students what they know about prairie insects. Guide students to more knowledge by asking questions like,



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“What is an insect? What do you know about insects? The adaptations of insects? What kinds live in the prairie? What do you know about the life cycle of prairie insects? Where do insects live in the prairie?” If students need more help, use the book, *Under One Rock: Bugs, Slugs, and other Ughs* by Anthony D. Fredericks, to help show students insects and where they can find them.

Directions

1. Clearly establish with students that all insects have six legs, two antennae, and three body parts. Ensure understanding by asking, “Is a spider an insect?”. NO! Why not? Review the lifecycle of insects.
2. Next, ask students what they wonder about prairie insects. What questions do they have about them? They should think about questions that can be answered by going outside today and exploring. Each question should also be recorded in the column next to what they know. If necessary, suggest questions like: “Is there something you would like to find out today about prairie insects? What do you wonder about prairie insect adaptations?”
3. Have students select one question to investigate. On the white board, demonstrate how to organize their data sheet with a title, date, location, and an example answer for a question. Incorporate their suggestions if possible. **See example included in this lesson.**
4. Prepare students to go outside by reminding them that they are naturalists conducting a real scientific investigation just like adult naturalists do. Naturalists are explorers, full of wonder, inquisitive, quiet and respectful outdoors. They have a purpose in the field to complete their mission (in this case, answering an investigative question about insects).
5. Travel to the area you will collect insects and give space boundaries. In their small groups, students can collect and identify their insects to the Order and record their data. They should release the insects when finished or as needed.



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6. Return indoors to the questions on the board and answer them together as a class. Write them down with the questions or add a last column (the L in KWHL, Learned).



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Resources

Journal Prompt

Ask students to write a one-sentence discovery they made about a prairie insect they found. If needed, prompt them with sentence starters like, “My insect was living in/on ...” or “I think my insect is a ...” Ask a few students to read their sentences to share their discoveries with the class. Ask students to share any new questions they have about prairie insects. Are prairie insects important? Why or why not?

Point out stages of life cycle common to insects. Ask students if they noticed that some insects live in groups? Does living in a group help them survive? Ask, “Do you think some insects are better adapted to this environment? What leads you to think this?”

Challenge them as scientists to go home and find at least one other person they can share today’s discoveries with in person, via email, on the phone, in a letter, etc. They should briefly and quietly share who they will share their discovery with a classmate.

NSNWR	Name	
Weather		Date
Temp	<u>Insect Investigation</u>	Time

**Have students write their wonder question at the top of the page.

I saw ants on a flower. I never knew that ants could pollinate flowers.