



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

Bio Blitz in the Prairie and Oak Savanna

5th Grade

90 Minutes

Spring

Summary

During an investigation, students ask and answer their own questions about tallgrass prairie and oak savanna habitats. Students then search for plants and animals in the prairie and oak savanna. Using nature journals, they record their observations of each habitat and the birds, plants and animals found there. Lastly, they review the animals and plants they found in each habitat. They draw conclusions as to why certain plants and animals prefer one habitat over the other. Students also use their observations of living and non-living things to write in their own words the definition of an oak savanna and prairie, and why a bioblitz of both habitats might be useful for conservation (Preparation step for teachers/leaders: Read background information at the end of this lesson).

Iowa Core and Next Generation Science Standards

Next Generation Science

- **5-LS1-1**
 - Support an argument that plants get the materials they need for growth chiefly from air and water.
- **5-ESS3-1**
 - Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Literacy

Writing

- **W.5.1**



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- Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- **W.5.4**
 - Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

Speaking and Listening

- **SL.5.1**
 - Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.5.4**
 - Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Materials and Resources

- Blank paper or nature journals
- Pencils
- Clip boards
- Native plant ID sheets or field guides
- Hula-Hoops

Presentation

Explain to students that today they will be comparing an oak savanna habitat to a prairie habitat. Ask students what they already know about the habitats. Record their answers on a whiteboard or large paper (see the *whiteboard set-up* found below).

Directions

1. Tell students that today they will be investigating the differences and similarities between Oak Savanna and Prairie habitats further. Instruct students



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to open their nature journals and label the top of their paper “Prairie Habitat”. Have students divide the paper into 4 quadrants, each quadrant should be labeled. Possible quadrant labels could be – plants, animals, non- living items, and/or discoveries. Remind students that non-living can include weather, water, air, soil, etc. Allow students the opportunity to discuss which items they would like to explore in the prairie. Have students label another piece of paper “Oak Savanna Habitat.” Have the students divide their paper and label it the exact same way they labeled the prairie habitat paper.

2. Prepare students by reminding them that they are naturalist conducting a real scientific investigation just like adult naturalists do. Naturalists are explorers, full of wonder, inquisitive, happy, quiet and respectful outdoors. They have a purpose in the field to complete their mission (comparing habitats).
3. Have students and chaperones load their buses and travel to the oak savanna parking lot.
4. Once at the parking area, have half the students go with an adult leader to the prairie and the other half to the oak savanna. Provide students with possible tools including plant and animal i.d. sheets and/or clipboards.
5. After about 30 minutes, have students switch habitats.
6. Once students have investigated both habitats, invite the groups to reconvene in the parking lot of the oak savanna and prepare to travel back to the visitor center (or review in the oak savanna lot).
7. In the visitor center classroom, explain that based on their observations, they will construct a Venn Diagram to compare the oak savanna and prairie habitat. Draw a Venn diagram and have students copy it. Ask students to share discoveries that they made about oak savannas and prairies and record them in the appropriate bubbles.
8. When the Venn diagram is complete, instruct students to write two complete sentences about what they learned. An example could be “Oak savannas and prairies are similar because_____. Oak savannas and prairies are different because_____.”



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9. Challenge them as scientists to ask why this information is important. Why do we want to know the similarities and differences between the habitats? How does knowing help us protect these environments?
10. Thank students for their help with the investigation and the chaperones for their leadership. Invite them to come back again to visit.

Background Information

A **BioBlitz** is an intense period of biological surveying to record all the living species within a designated area. Groups of scientists, naturalists and volunteers conduct an intensive field study over a continuous time period. There is a public component to many BioBlitzes, with the goal of getting the public interested in biodiversity.

To encourage more public participation, these BioBlitzes are often held in urban parks or nature reserves close to cities. Most BioBlitz contain a public component so that adults, kids, teens and anyone interested can join experts and scientists in the field. Participating in these hands-on field studies is a fun and exciting way for people to learn about biodiversity and better understand how to protect it.

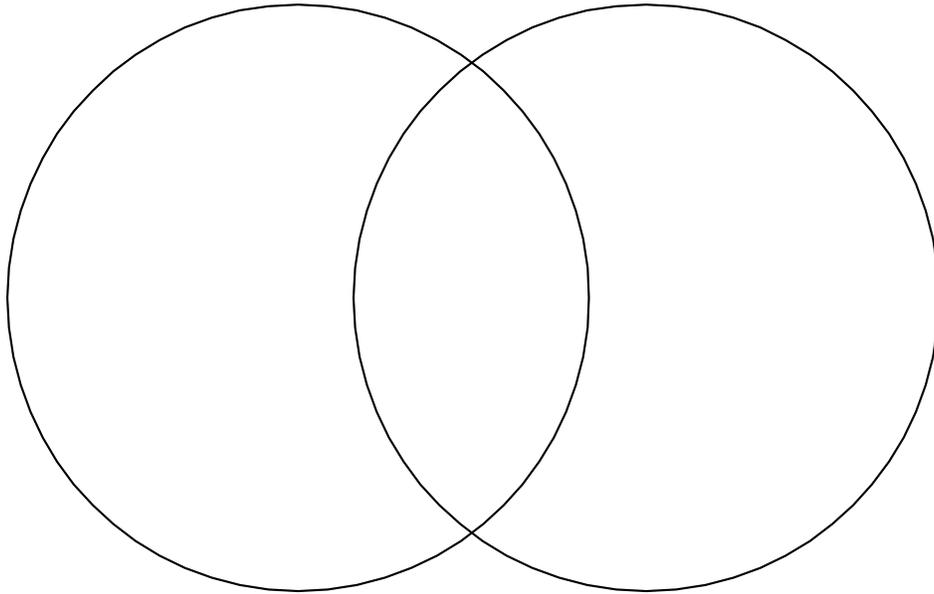
The purpose of this blitz is not to survey down to species level across all taxonomic groups, but rather to raise awareness about biodiversity and provide a general snapshot of diversity (background information adapted from Wikipedia).



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Resources

Whiteboard



Journal Prompt

Location	Name
Weather	Date
Temp	Time
plants	animals
non-living	other discoveries
Oak savannas & prairies are similar because _____ . Oak savannas & prairies are different because _____ .	