

**Day 20**  
**Making Connections**

**Reading Strategy:** Presentation Day

**Science Concept:** Scientists merge research with data from investigations and experiments to find answers to science questions.

**Reading TEKS:** 3.13 H

**ELPS:** Speaking K-12, 19 TAC  
74.4(c)(4)D

**Science TEKS:** 3b9A, 3b9B,  
3b9C

**Materials for Culminating Activity:** Inquiry Circle Group Menu of Choices; materials to support group projects will vary based on choice

**Materials for Science Whole Group Lesson:** See lesson.

**Content Vocabulary:**

**Data-** details, information, or facts that come from research and investigations; EX: images, measurements, or words

**Authentic data-** data that comes from real-life investigations

**Graphs-** A chart that shows the mathematical relationships between data

\*Teacher Note: A graph is a chart, but a chart is not necessarily a graph

**Chart -** A visual way to represent data. (EX: diagrams, tables, or graphs)

**Science and Literacy Connection:** Scientists make connections between research, investigations and the natural world around them.

For an expanded version of the Standards listed above, see page \_\_\_\_.

**Culminating Activity — 30–45 minutes**

**OVERVIEW**

Students have worked in inquiry circle groups to research various ecosystems. During this time, students have practiced becoming a scientist by speaking, reading, and writing like one. Today they will share the product they have created.

**PROCEDURE**

- During this time, inquiry circle groups can complete their product if needed.
- Today groups will present their culminating product to the class.

**Science Whole Group Lesson — 30 -45 minutes**

**OVERVIEW**

Students present the multimedia projects they have developed from their research on ecosystems, explaining new knowledge and how it connects to the science content and investigations they have conducted.

## GUIDING QUESTIONS

What have I learned through my research about food chains and ecosystems? How has my work in science helped me to understand food chains and ecosystems better? What new questions do I have?

## BACKGROUND INFORMATION

Throughout this unit, students engaged in lessons that introduced science content focused on food chains in ecosystems and participated in authentic science inquiry.

At the same time, they conducted research on food chains in different ecosystems during the literacy inquiry circles.

By the end of the unit students should be able to make connections between their classroom experiences and the real world around them. Connections may be expressed by communicating the needs of living things, the importance of producers in a food chain, or how food chains and ecosystems can be impacted by human activity or natural events. Students may also offer other insights based on newly constructed knowledge.

Moreover, new questions arising from their work gives students a better understanding of the process of real-life scientific inquiry.

## SAFETY

There are no safety issues.

## MATERIALS

- Research project
- Access to computer/projector if needed for display of projects
- Timer or clock
- Science notebooks

## SET UP

- Ideally desks or tables should be arranged in a semi-circle for presentations
- Teacher should ask students ahead of time if a computer/projection system will be needed to allow for setting up before class.
- Decide on the order of presentations

## DAILY OBSERVATIONS

Observations have ended.

## PROCEDURE

### Engage

1. Announce to the class that today they will add the final piece to their study – the research project. Read the order of presentations aloud so that they can prepare.
2. If anyone needs to use a computer/projector, they should have project already loaded or on a thumb drive.

3. Let the students know that each group has 5 minutes to present their project, which includes reading their answers to the reflection questions they were given during literacy time.
4. Presentations will be followed by 2-3 minutes for questions from the class/teacher.

### Explore

5. Begin the presentations! *As before, depending on the number of groups you have presenting, you may need to add extra time.*

### Explain

6. As students present their literacy projects, listen for how they connect their research with what they have learned in science.

### Elaborate

7. After the last project presentation, congratulate the class on their work!
8. Point out good connections that groups made between their literacy projects and the science.
9. Explain that the new questions they raised during their studies indicate that they are now thinking like scientists! All new discoveries and ideas come from raising questions and wondering about the world around us!

### Evaluate

10. Did students communicate new or improved understanding about food chains and ecosystems?
11. Did students make reasonable connections between their science and research studies and the real world?
12. Were new questions raised, indicating progress in their scientific thinking?
13. Did students use scientific language and writing in their projects and presentations

## Expanded Standards

**ELAR TEKS:** 3.13 E&H Inquiry and research: listening, speaking, reading, writing, and thinking using multiple texts. The student engages in both short-term and sustained recursive inquiry processes for a variety of purposes. The student is expected to: (H) use an appropriate mode of delivery, whether written, oral, or multimodal, to present results.

**ELPS:** Student Expectations for Speaking K-12, 19 TAC 74.4(c)(4) The student is expected to: (D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency; (E) share information in cooperative learning interactions.

**Science TEKS:** 3b9A: The student is expected to observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem. 3b9B: The student is expected to identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field. 3b9C: The student is expected to describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations.