

Supplementary Session (Group 2)

Barnyard Backfire



REVIEW LEARNING OBJECTIVES:



Science Concepts & Practices:

- Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem
- Use mathematical and computational thinking



Language Skills & Knowledge:

- Use text evidence to clarify or explain ideas in the texts
- Determine (figure out) the main ideas or conclusions of science texts
- Integrate (combine or put together) information presented in words with information presented in visuals to understand science texts

ACTIVITY 1: SET THE CONTEXT

Directions: Listen as your teacher sets the context for the session—by introducing the word “backfire” and phrase “unintended consequences.” Backfires means something happens that was not planned, usually something you did not want to happen. Then, talk with your partner about a time in your life when you tried to make something better but it backfired.

In this session, we’re going to read a comic about what can happen when a **predator** is *removed* (*taken out*) of an **ecosystem**. You’ll learn that when humans *intervene* (*get involved*) in an **ecosystem** problem, things do not always work out as planned.

The comic we are going to read is called Barnyard Backfire: A Tale of Unintended Consequences. A *tale* is another word for *story*. The word “Backfire” and phrase “unintended consequences” are used when things happen that are not planned or expected.

→ **ecosystem:** a community (group) of living things together with their surroundings (the things around them)

→ **predator:** an animal that hunts and eats other animals for food

What does “backfire” mean?

When people use the word “backfire,” it means something happens that was not planned. Usually, what happens is not what the person *wants* to happen.

What does “unintended consequences” mean?

When people use the phrase “unintended consequences,” it means the *consequences* (*results*) of something were not planned. Unintended consequences might be good or bad.

For example: Laura stayed up all night studying so she would do well on her math test. The next day, Laura fell asleep while taking her math test!

Laura’s plan to study all night backfired because the result was not what she wanted to happen—she fell asleep during the test.

The unintended consequence of Laura studying all night was doing badly on the test instead of doing well.

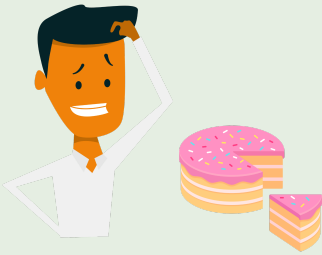


Partner Talk

Share a time in your life when you tried to make something better but it backfired or there were unintended consequences.

ACTIVITY 2: PREVIEW IDIOMATIC EXPRESSIONS

Directions: Listen and follow along as your teacher reads the text about idiomatic expressions. Idiomatic expressions are phrases that you cannot understand by understanding each word in the phrase. Then, work with a partner to write what you think the three idioms under the pictures mean. After that, your class will discuss the idioms coming up in the cartoon on the next page. You will also share idioms you know.



In the comic you will be reading soon there are many idiomatic expressions. Idiomatic expressions are phrases that cannot be understood by understanding the meaning of each of the words.

For example, in English the idiom “to be a piece of cake” means that something is very easy to do. In Spanish, the idiom “ser pan comido” means the same thing. But you cannot understand the meaning of the phrase by putting the meanings of each word together. So even if you understand the meaning of each word—It’s, piece, of, and cake—putting them together does not make sense.

Sometimes you can figure out what idiomatic expressions mean by looking at the context (*other words or actions*) or the situation (*what’s happening*). Try it!



If this girl said that she is ready to “hit the sack,”

What do you think “hit the sack” means?



This man might say that the shirt “costs an arm and a leg.”

What do you think “costs an arm and a leg” means?



This boy stayed home from school because he was “under the weather.”

What do you think “under the weather” means?



Discussion Questions

The idioms in the *Barnyard Backfire* cartoon are listed below. They are very unusual. Do you have any idea what these idioms might mean? It’s hard to know without context!

- “This must not stand!”
- “Don’t count your chickens before they’re hatched.”
- “Got lost, you sky-pirates!”
- “We’ve got clear skies!”

Have you heard any other idiomatic expressions in English or another language? If you have, share them with your classmates.

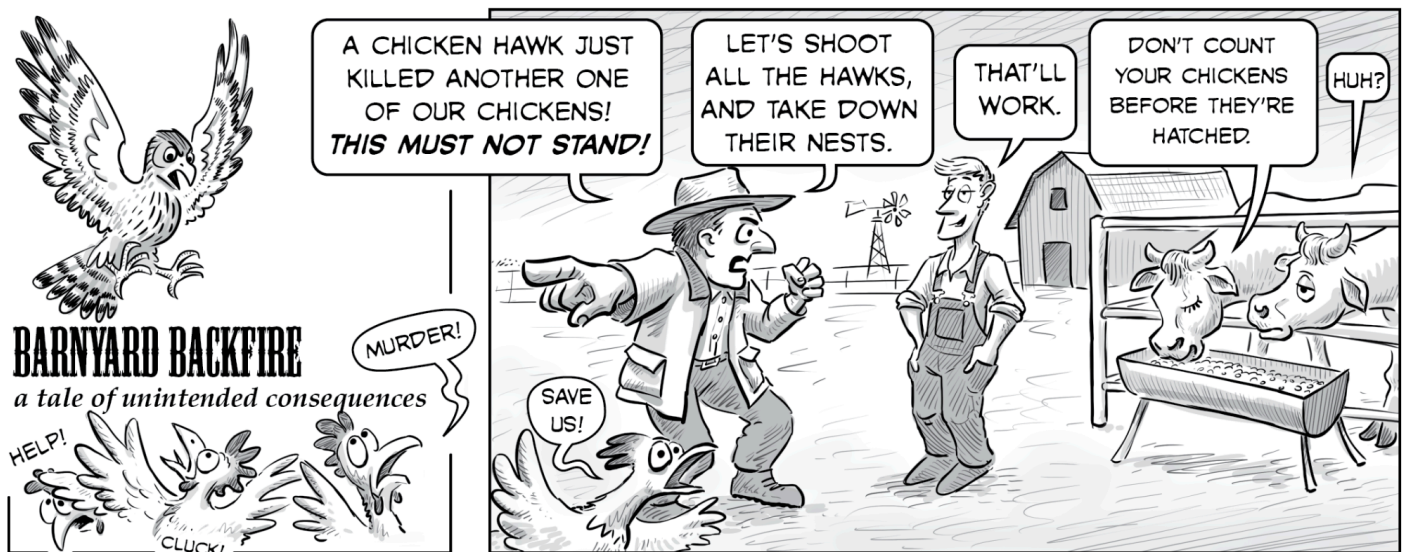
ACTIVITY 3: READ THE COMIC

PART 1 - Directions: Listen and follow along as your teacher reads the first section of the comic or work individually or with a partner to read the first section of the comic. Answer the questions in writing. Then, debrief as a class.

→ Idiomatic expressions are in bold text. Use the *context* (other words in the comic) to try to figure out what each idiomatic expression means.

Based on a True Story Somewhere in the United States

(...except for the talking cow part.)



1. What just killed one of the chickens?

2. "This must not stand" means...

- ☐ this must not happen again
- ☐ this must sit down
- ☐ this must have feathers

3. What does the farmer want to do?

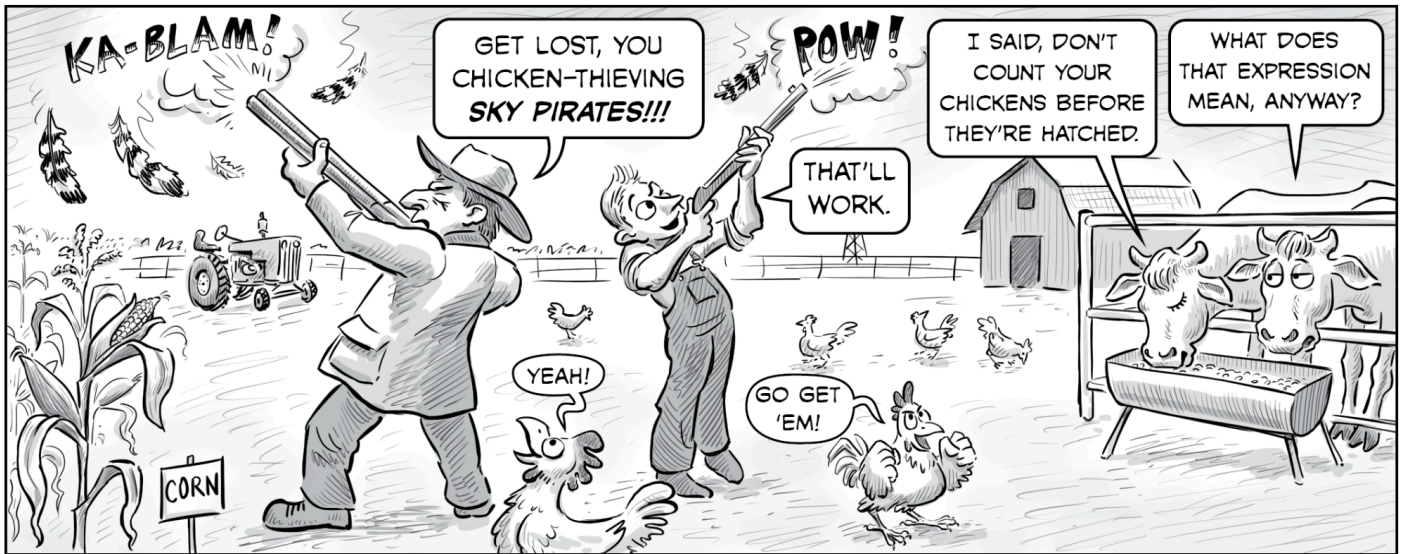
4. Does the other farmer think it is a good idea?

What is a hawk?

A hawk is a large bird that hunts and eats small animals, like birds, rabbits, and mice.



PART 2 - Directions: Listen and follow along as your teacher reads the second section of the comic or work individually or with a partner to read the second section of the comic. Answer the questions in writing. Then, debrief as a class.



1. *Pirates are robbers that travel on boats. In this cartoon what are sky pirates?*

☐ eagles

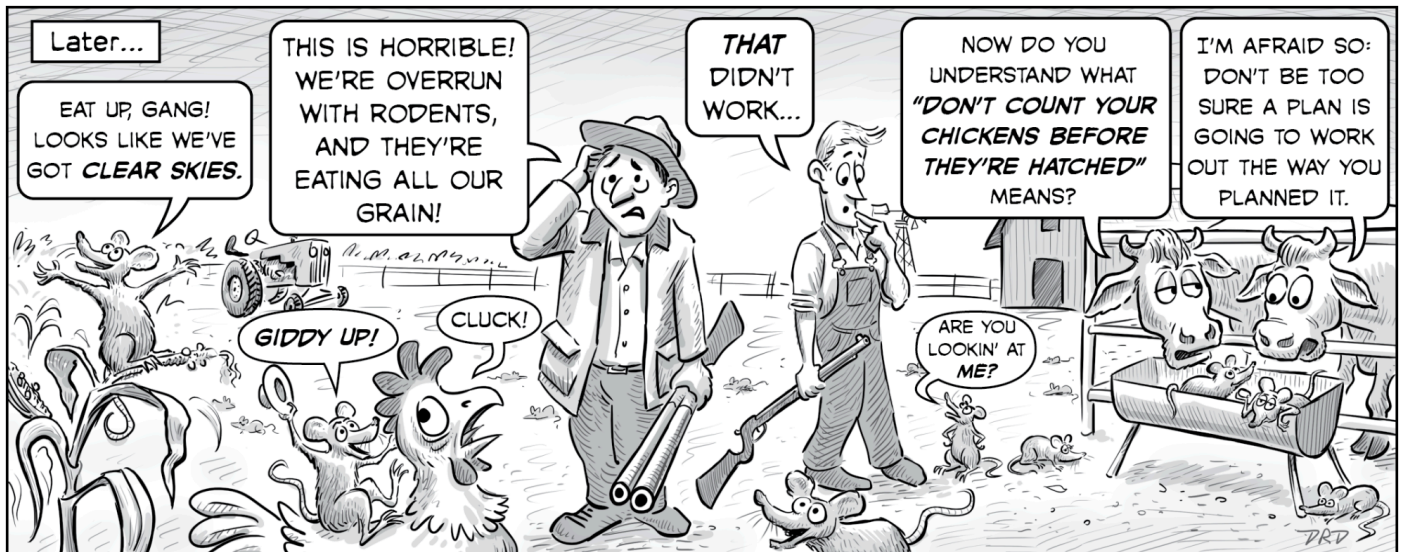
☐ chickens

☐ hawks

2. *What do the farmers do to the hawks?*

The story continues...

PART 3 - Directions: Listen and follow along as your teacher reads the third section of the comic or work individually or with a partner to read the third section of the comic. Answer the questions in writing. Then, debrief as a class.



1. Why does the mouse say "We've got clear skies"?

- ☐ There are no clouds in the sky
- ☐ There are no hawks in the sky
- ☐ There is no rain in the sky

2. What are the mice, or rodents, eating?

3. The cows use an idiom. What is it?

4. What does the idiom mean?

→ Hint: Look at what one of the cows says.

5. What was the unintended consequence in Barnyard Backfire?

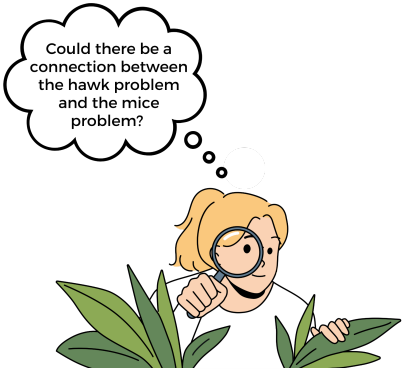
ACTIVITY 4: EXPLORE HUMAN IMPACT

PART 1 - Directions: Listen and follow along as your teacher reads each section of the text and reviews the data in the data table that shows hawk and mice sightings. Work individually or with a partner to answer the questions in writing. Then, debrief as a class.

The farmers shot the hawks and then there were more mice. *Could there be a connection between the hawk problem and the mice problem?*

The farmer’s daughter, Maria, decided to *investigate* (*try to find out*). She knew that when her father killed the hawks, she saw a lot fewer hawks around. But, she wasn’t sure about the mice.

For one year, Maria spent two hours each month *observing* (*watching*) for hawks and two hours *observing* (*watching*) for mice.



1. *What was Maria doing?*

2. *How long did Maria spend each month observing hawks and mice?*

Maria recorded her observations in a data table.
She wrote down how many hawks and how many mice she saw each month.

- Each column in her data table represents a certain month. For example, the first column is labeled January.
- The first row of her data table shows how many hawks Maria saw each month. So for example, in the row labeled hawk sightings, you can see Maria saw 12 hawks in January.
- The second row of the table shows how many mice Maria saw in each month. In the row labeled mice sightings, you can see Maria saw 4 mice in January.

TABLE

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Hawk Sightings	12	4	2	0	0	0	3	14	10	2	1	2
Mice Sightings	4	19	33	40	58	60	49	12	15	40	48	45

ROWS go across

COLUMNS go up and down

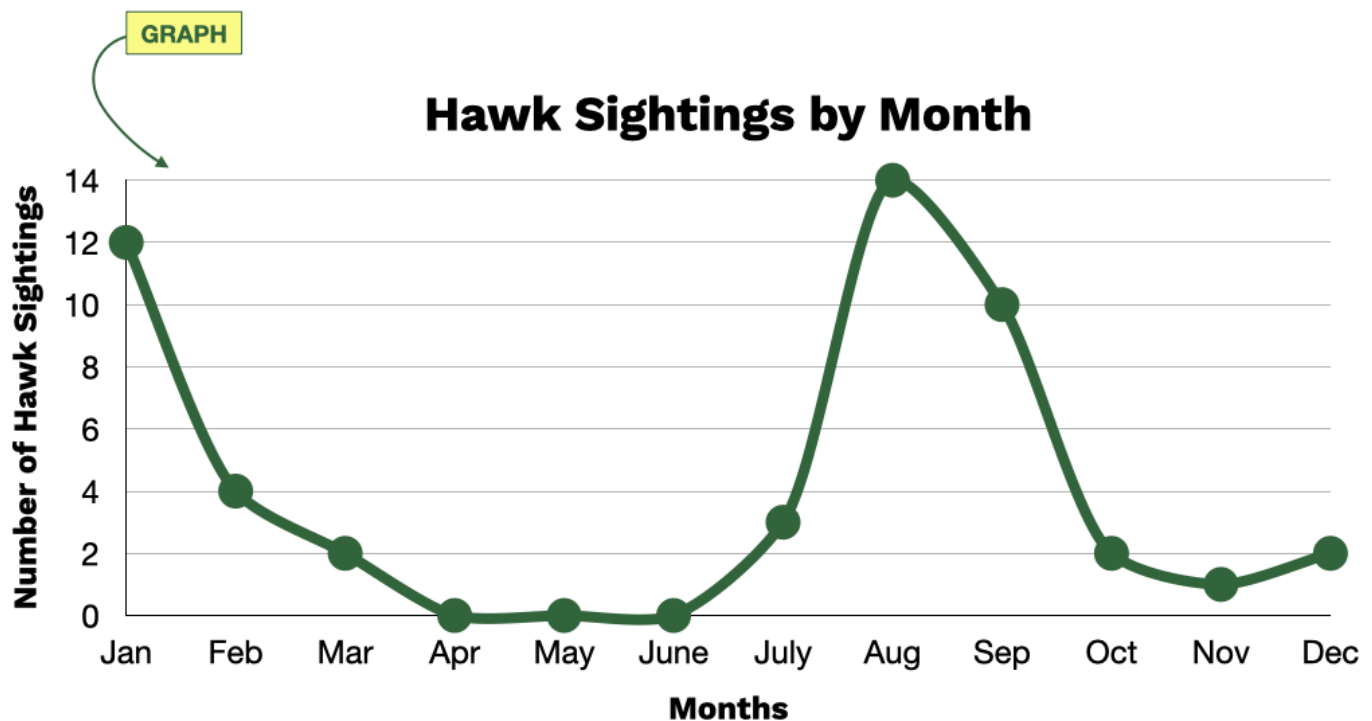
PART 2 - Directions: Listen and follow along as your teacher reads the text and reviews the graph about hawk sightings by month. Work individually or with a partner to answer the questions in writing. Then, debrief as a class.

Looking at her data table, Maria was still having trouble making sense of her data. Maria decided to create graphs using her data table.

You can see Maria's graph for the number of hawks she saw each month below.

- The vertical axis (*along the left side*) of the graph shows how many hawks she saw.
- The horizontal axis (*along the bottom*) of the graph shows the month of her observations.

For example, in February Maria saw four hawks. In May, she saw zero hawks.



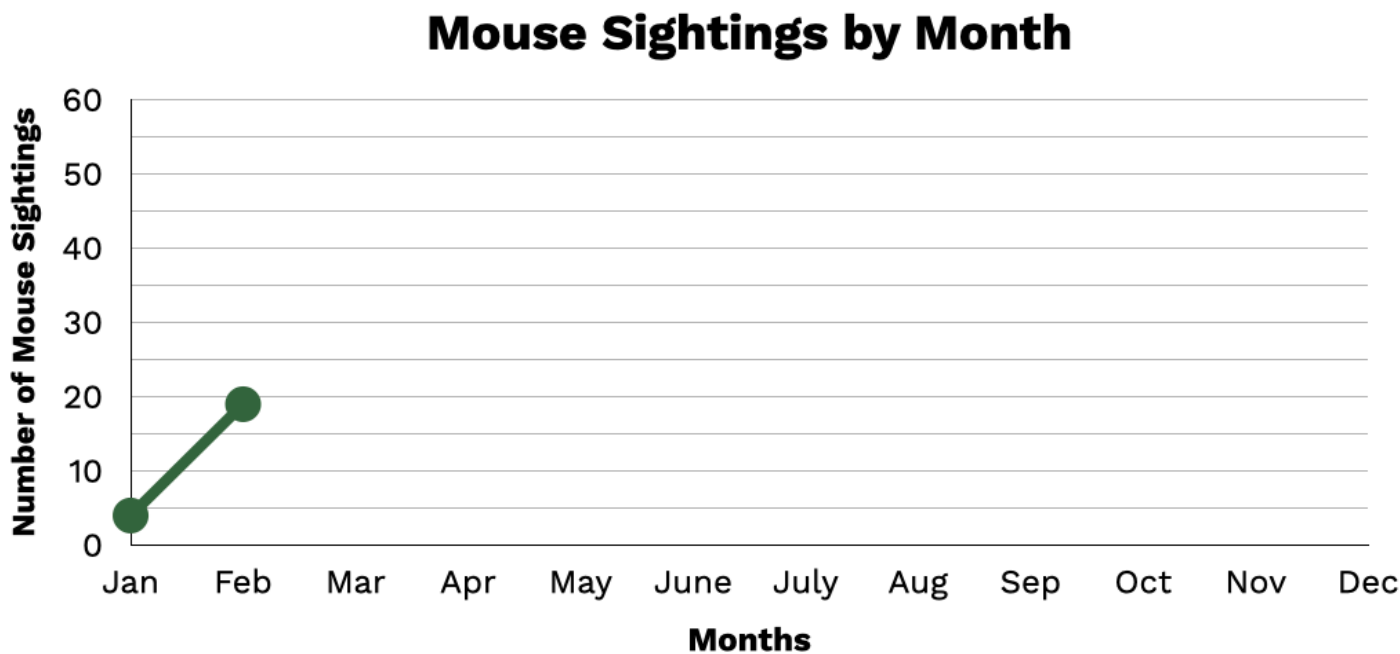
1. In what month did Maria see the most hawks?

2. In what months did Maria see the fewest hawks?

PART 3 - Directions: Work individually or with a partner to finish adding Maria’s data about mouse observations to complete the graph. Your teacher will explain how to complete the graph. Use your graph to answer the questions below. Then, debrief as a class.

Help Maria by graphing her mouse data.

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Hawk sightings	12	4	2	0	0	0	3	14	10	2	1	2
Mice sightings	4	19	33	40	58	60	49	12	15	40	48	45



1. In what month did Maria see the most mice?

2. In what month did Maria see the fewest (smallest number of) mice?

3. What can you conclude or figure out from Maria’s data?

ACTIVITY 5: SUMMARIZE THE COMIC STRIP

Directions: Work individually or with a partner to write a conclusion to the comic strip. Use the frame below to write your answer. Then, debrief as a class.

1. *What animals did the farmers shoot? Why?*

2. *What happened when the farmers shot all of the hawks.*

3. *Did shooting the hawks solve (help) the farmers' problem? Why or why not?*