Invasive Species Unit

Literacy activities to help adults master reading and writing.
Let’s Talk

WE WILL LEARN TO ASK AND ANSWER QUESTIONS AND LISTEN CAREFULLY TO OTHERS’ ANSWERS.

INSTRUCTIONS:

1. Discuss each of the questions with a partner. Listen carefully to your partner and ask questions if you don’t understand something they say.

2. Tell the class what your partner said.

The natural environment includes all living things (plants, animals, insects) and nonliving things that are not made by people (mountains, soil, rivers).

1: In the place where you grew up, what does the natural environment look like? Include details about living and nonliving things.

2: How is the natural environment there different from where you live now?
WE WILL LEARN TO READ FOR DETAILS IN A TEXT.

INSTRUCTIONS:
1. Read the story.
2. On the next page, work with a partner to list things in the natural environment described in the text.

Nature Memories of Iowa

Before I turned 10, we lived a few miles outside of a small town in central Iowa. Most of the flat land around our house was used for farm fields. However, there were still some natural areas near my house. I liked to play in those woods and fields in the summer.

A small, cold creek came from a natural spring nearby. It ran back and forth through the grassy fields. My friends and I would stand in it until our feet went numb. The creek bottom was mostly clear and rocky, but in the muddy areas, you had to be careful because there were leeches. Leeches look like large flat worms. They live in muddy water and will attach to your feet and suck your blood. They are not dangerous, but as a child, I was scared of them.

As we walked back home, grasshoppers would jump out in front of us from the tall grasses on either side of the path. Sometimes, if we were lucky, we would see a white-tailed deer. In the springtime, yellow flowers called dandelions covered the field.

There were large oak trees throughout the pasture that were home to many birds and squirrels. There were plenty of opossums and raccoons, too. We rarely saw them, though, because they only came out at night.
**Personal Perspective (Continued)**

**WE WILL LEARN TO READ FOR DETAILS IN A TEXT.**

**INSTRUCTIONS:**

1. Read the story from the previous page.
2. Work with a partner to list things in the natural environment described in the text.

List things in the natural environment described in the article on the previous page, “Nature Memories of Iowa.”

<table>
<thead>
<tr>
<th>Plants</th>
<th>Animals/Insects</th>
<th>Nonliving things</th>
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<tbody>
<tr>
<td>tall grasses</td>
<td>grasshoppers</td>
<td>natural spring</td>
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Your Experience

WE WILL LEARN TO WRITE COMPLETE PARAGRAPHS.

INSTRUCTIONS:

1. Think of a specific place where you have lived. Make a list of the living and nonliving things in the natural environment there.

2. Write one to two paragraphs about the natural environment in that place. Include at least two things from each list. Include at least three adjectives.

3. Share your completed writing with a partner. Compare the environments you wrote about.

My place: __________________________________________________________

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## Vocabulary List 1

**WE WILL LEARN DIFFERENT WAYS TO FIND THE MEANING OF NEW WORDS.**

**INSTRUCTIONS:**

1. *Together,* practice the pronunciation of all the words.

2. *With a partner,* talk about the example sentences. Guess the meaning of the word *in that sentence.*

3. Use two different strategies to learn about each new word. Circle the strategies you use for each word.

4. Write notes about the word meanings using English, your first language and/or pictures.

5. Listen to your teacher ask questions and answer with complete sentences.

<table>
<thead>
<tr>
<th>Word</th>
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<td>When animals</td>
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<td><em>interact</em> with</td>
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<td>plants, they often</td>
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<td>help the plant</td>
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<td>carry its seeds</td>
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<tr>
<td>to a new area.</td>
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| **species**        |       | [ ] English dictionary                 |
| (noun)             |       | [ ] First language translation         |
|                    |       | [ ] Image search                       |
|                    |       | [ ] Student or teacher                 |
| All dogs are part  |       |                                        |
| of the same *species* |       |                                        |
| because they have  |       |                                        |
| similar traits and |       |                                        |
| can have babies   |       |                                        |
| together.          |       |                                        |

| **predator**       |       | [ ] English dictionary                 |
| (noun)             |       | [ ] First language translation         |
|                    |       | [ ] Image search                       |
|                    |       | [ ] Student or teacher                 |
| Many animals will  |       |                                        |
| eat a rabbit. Its  |       |                                        |
| natural *predators*|       |                                        |
| include owls and   |       |                                        |
| snakes.            |       |                                        |

| **crowd out**      |       | [ ] English dictionary                 |
| (verb)             |       | [ ] First language translation         |
|                    |       | [ ] Image search                       |
|                    |       | [ ] Student or teacher                 |
| In my garden,      |       |                                        |
| smaller plants    |       |                                        |
| can't live        |       |                                        |
| because they are  |       |                                        |
| *crowded out* by   |       |                                        |
| bigger plants.    |       |                                        |
WE WILL LEARN HOW TO BE GOOD READERS BY THINKING ABOUT THE TEXT BEFORE WE READ.

INSTRUCTIONS:
1. Look at the article on the next page.
2. Use a pencil to label the parts of the text.
3. Read ONLY the first and last sentence in each paragraph.
4. Write answers to the prediction questions.
5. Complete the skimming and scanning questions by moving your eyes quickly over the words. DON’T read the whole article yet.

Parts of the Text
- Underline the title of the article.
- Number the paragraphs.
- Label the illustration.

Predictions
1. What do you think we will read about?
   
   \[I \text{ think we will read about } \underline{\text{ }} \text{.}\]

2. Why do you think that?
   
   \[Because I see \underline{\text{ }} \text{.}\]

Skimming and Scanning
3. In which paragraph do you think you will read about the definition of ecosystem?
   \[\underline{\text{ }} \text{.}\]

4. Scan the passage for the word ecosystem. How many times did you find it?
   \[\underline{\text{ }} \text{.}\]
Read

Understanding Ecosystems

Our Earth includes an amazing variety of natural environments. In one region, you might find a dry desert full of plants and animals that are able to live with very little water. And if you travel to another region, you might find a hot, humid jungle that is home to different plants and animals that live well in that place. Each of these different places is an ecosystem. Ecosystems can be as small as a tiny pond or they can be big areas of land or ocean.

An ecosystem is a geographic area where living things like plants, animals and bacteria interact with each other and with nonliving things such as rocks, water and weather. For example, in the place where you live, the soil and weather are very good for specific types of plants. Different small insects and animals eat those plants. Larger animals, called predators, might eat those smaller animals. This is called a food chain. A food chain explains which species eat other species. When one species eats another, it helps to keep a balance in the ecosystem.

Sometimes, ecosystems are not in balance. If you remove a plant species from an ecosystem, the insects and animals that eat that plant might all starve. If you remove an animal species that is higher up the food chain, nothing will eat those plants and small animals and they might become too numerous, crowding out other species.
Main Ideas

WE WILL LEARN HOW TO TALK AND WRITE ABOUT THE MAIN IDEA OF A TEXT.

INSTRUCTIONS:

1. Read the article, “Understanding Ecosystems” again.
2. Write about the main idea of the article.
3. Answer the multiple-choice questions.
4. Talk about your answers with a partner.

STEP 1: Who or what is this article about?

STEP 2: What is the most important information about that person or thing?

STEP 3: Write a main idea sentence of about 10 words, using your ideas above.

____________________________________________________________________________________
____________________________________________________________________________________

Multiple-choice questions:

1. Which sentence from the article best supports the author’s point that living things in an ecosystem depend on each other?
   A. If you remove a plant species from an ecosystem, the insects and animals that eat that plant might all starve.
   B. Our Earth includes an amazing variety of natural environments.
   C. For example, in the place where you live, the soil and weather are very good for specific types of plants.
   D. Ecosystems can be as small as a tiny pond or they can be big areas of land or ocean.

2. Which main idea is supported by the detail that ecosystems can be as small as a tiny pond or they can be big areas of land or ocean?
   A. Ecosystems are a balanced system of interactions between living and nonliving things in a specific place.
   B. When one part of an ecosystem changes, it can affect other parts.
   C. There are many different types of ecosystems on Earth.
   D. Food chains explain which species eat other species.
Good Question!

WE WILL LEARN TO WRITE QUESTIONS AND ANSWERS ABOUT A TEXT.

“RIGHT THERE” QUESTION INSTRUCTIONS:
1. Write three information questions about information in the text.
2. Write the answers to your three questions using information in the text.
3. Ask a partner your three questions (don’t show them the answers).

“I WONDER” QUESTION INSTRUCTIONS:
4. Write two questions about information that is not in the text but that you would like to know.
5. Share your questions with the class.

“Right There” Questions

Example: QUESTION: What is a food chain?
          ANSWER: A food chain explains which species eat other species.

1. QUESTION: __________________________________________
   ANSWER: __________________________________________

2. QUESTION: __________________________________________
   ANSWER: __________________________________________

3. QUESTION: __________________________________________
   ANSWER: __________________________________________

“I Wonder” Questions

Example: QUESTION: What types of plants grow well in the ecosystem where I live?

1. QUESTION: __________________________________________

2. QUESTION: __________________________________________
Read for Details

“If you remove an animal species that is higher up the food chain, nothing will eat those plants and small animals and they might become too numerous, crowding out other species.”

1. Which of these is the best replacement for remove as used in the sentence above?
   A: add
   B: feed
   C: take care of
   D: take away

2. Which of these means about the same as too numerous as used in the sentence above?
   A: too hungry
   B: too many
   C: too few
   D: too sick

3. According to the article, what might happen if a large predator species leaves an ecosystem?
   A: The predator might starve.
   B: The plants might stop growing.
   C: There might be too many of the small animals the predator usually eats.
   D: The predator might start to crowd out other predators.

4. Which question does the passage answer?
   A: How many different ecosystems are there in the world?
   B: What types of predators are found in jungle ecosystems?
   C: How do healthy ecosystems stay in balance?
   D: Where are desert ecosystems located?

5. Based on the illustration, which of these is true?
   A: Insects and snakes eat corn.
   B: Lizards eat snakes.
   C: Snakes eat lizards and insects.
   D: Insects eat corn and lizards eat insects.
Read for Purpose and Structure

WE WILL LEARN TO NOTICE HOW AND WHY AN AUTHOR Writes A TEXT.

INSTRUCTIONS:
1. Read the questions.
2. Find the “Understanding Ecosystems” text.
3. Look for the answers in the text.
4. Answer each question.
5. Compare your answers with a partner.
   - What did you choose for number _____?
   - Why did you choose that?
   - What evidence in the text supports your answer?

1: Write the correct paragraph number in each sentence.
   - Paragraph ____ explains what an ecosystem is and how it stays in balance.
   - Paragraph ____ shows that ecosystems can be very different from each other.
   - Paragraph ____ explains how a change to one species can affect other species.

2: What is the purpose of the illustration in the article?
   A: to demonstrate all the species that eat corn.
   B: to demonstrate that lizards eat snakes.
   C: to demonstrate how one species eats another in a food chain.
   D: to demonstrate how to protect corn from insects.

“...in the place where you live, the soil and weather are very good for specific types of plants.”

3: Why does the author include this sentence?
   A: to demonstrate that plants are adapted to specific ecosystems.
   B: to show that plants are part of a food chain.
   C: to convince the reader that they live in a good location.
   D: to convince the reader that they should grow certain types of plants.
Vocabulary Review

WE WILL LEARN TO USE WORDS IN VOCABULARY LIST 1.

INSTRUCTIONS:
1. Together, pronounce each of the vocabulary words.
2. Complete all the sentences by yourself.
3. Compare your answers with a partner.

Vocabulary List 1
interact   species   predator   crowd out

Write each word from the word list next to the correct definition.

1. ________________: a group of plants or animals that are similar and can reproduce
2. ________________: an animal that kills and eats other animals
3. ________________: to come together and affect each other
4. ________________: to fill something so that there is no room for anything else

Complete the sentences with words from the word list above.

5. When bees ________________ with some flower ________________, they help the flowers reproduce.

6. Adult lions have no natural ________________. In other words, no animal hunts them, except for humans.

7. Scientists worry that fish brought to U.S. lakes from Asia might eat too much and ________________ other fish in the lakes.

Complete these sentences with your own ideas.

8. ________________ and ________________ are predators.

9. ________________ and ________________ are not predators.

10. I don’t like to interact with ________________ because ________________.
WE WILL LEARN TO USE WORDS IN VOCABULARY LIST 1.

INSTRUCTIONS:
1. Together, pronounce each of the vocabulary words.
2. Answer the questions by yourself.
3. Compare your answers with a partner.

<table>
<thead>
<tr>
<th>Vocabulary List 1</th>
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<tbody>
<tr>
<td>interact</td>
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</table>

1. Would you rather interact with people your own age or people of a different age? Why?

_________________________________________________________________________

2. As cities grow, they often crowd out species in the natural environment. Talk about an example of how cities or farms might crowd out other species.

_________________________________________________________________________

3. Guess which number is correct in each sentence.

| 2 | 70 | 2,000 | 12,000 | 60,000 |

There are _________________ different species of elephants in the world.

There are _________________ different species of ants in the world.

There are about _________________ different species of whales in the world.

There are about _________________ different species of trees in the world.

There are about _________________ different species of cactus in the world.
Grammar: Unreal Conditional

Unreal conditional is the verb tense we use to talk about something that could happen but is very unlikely to happen.

Example sentences:

1. If all the grass *dried up*, all the animals *would die*.

2. If all the frogs *died*, the eagles *might eat* more snakes.

3. If all the lizards *left*, the snakes *could eat* more frogs.

Fill in the blanks:

1: If all the eagles *left*, the snakes and frogs ________________.

2: If the number of snakes *increased*, the number of mice ________________.

3: If all the insects *died*, ________________.

4: If the number of snakes and frogs *decreased*, ________________.

5: ________________.

Word bank:

- increase
- multiply
- decrease
- eat
- die
- starve
WE WILL LEARN TO SAY AND WRITE GRAMMATICALLY CORRECT SENTENCES.

INSTRUCTIONS:

1. Talk about the food web using unreal conditional sentences.

2. Write four sentences about the food web using unreal conditional.

3. Label the verbs in your sentences: past tense, modal, base form.

Grammar: Unreal Conditional

If __________________________, __________________________

would -or- might -or- could __________________________.

1. __________________________
   __________________________
   __________________________

2. __________________________
   __________________________
   __________________________

3. __________________________
   __________________________
   __________________________

4. __________________________
   __________________________
Discussion

WE WILL LEARN TO LISTEN CAREFULLY AND COMMUNICATE CLEARLY.

1: Would you rather visit a desert, forest or ocean ecosystem? Why?

2: Do you think it is true that every part of an ecosystem is equally important? Why or why not?

3: How do you think pollution might affect an ecosystem?

4: How do you think hunting animals might affect an ecosystem?

5: How do you think growing cities might affect an ecosystem?

6: Do you think plants or animals from one specific ecosystem can survive in a different ecosystem? Why or why not?
# Vocabulary List 2

**WE WILL LEARN DIFFERENT WAYS TO FIND THE MEANING OF NEW WORDS.**

**INSTRUCTIONS:**

1. *Together*, practice the pronunciation of all the words.

2. *With a partner*, talk about the example sentences. Guess the word meanings.

3. Use two different strategies to learn about each new word. Circle which strategies you use for each word.

4. Write notes about the word meanings using English, your first language and/or pictures.

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<td><strong>region</strong></td>
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*She moved to a different region of the country because she liked the weather in that area better.*

*Many people immigrate to this country every year.*

*The earthquake was the worst disaster in 10 years.*

*Flooding can be disastrous for anyone living near a river.*

*Get rid of old food in your refrigerator or it will start to smell bad.*
Before We Read

WE WILL LEARN HOW TO BE GOOD READERS BY THINKING ABOUT THE TEXT BEFORE WE READ.

PARTS OF THE TEXT INSTRUCTIONS:
1. Look at the article on the next two pages.
2. Use a pencil to label the parts of the text.
3. Read only the first sentence of each paragraph.
4. Write answers to the prediction questions.
6. Talk about your answers with a partner.

PLACE NAME INSTRUCTIONS:
7. With a partner, use a world map to find these place names that appear in the text.

Parts of the Text

1: Underline the title of the article.
2: Number the paragraphs.
3: Label the captions.

Predictions

1. What do you think we will read about?
   I think we will read about ____________________________.

2. Why do you think that?
   Because I see ____________________________.

Place Names:
- Ethiopia
- South America
- Pacific Ocean
- Indian Ocean
- Atlantic Ocean
- Florida
- Caribbean
People move all over the world, traveling and immigrating from one part of the world to another. But what happens when plants and animals find a new home on a different continent or in an unfamiliar ocean? When those plant and animal “immigrants” arrive somewhere new, the results can be terrible for the other plants and animals in the area. The unwelcome plants and animals, called *invasive species*, sometimes spread too quickly. They eat other species or take up too much space and create big problems.

For example, in Ethiopia, there is an invasive shrub from Central and South America. It has caused so many problems that people call it “the devil tree.” This thorny bush, called *Prosopis*, came to Ethiopia in the 1970s. Since then it has spread across more than 1.7 million acres of land. The native plants that cattle like to eat don’t have space to grow any more. And *Prosopis* is both thorny and poisonous so cattle can’t eat it. As a result, people in the Afar region of Ethiopia are struggling to keep their animals alive. They are forced to move or go hungry.

So why are these plant and animal species okay in one part of the world but extremely harmful in other places? Invasive species are plants and animals that have moved from one ecosystem to another. If their new home doesn’t have any natural predators to eat them, they multiply very quickly. The lionfish,
Invasive Species Harm New Homes

CONTINUED FROM PREVIOUS PAGE

for example, is originally from the South Pacific and Indian Oceans. In those oceans, sharks and eels eat the lionfish. In the mid-1980s, however, lionfish were found far away from home in the Atlantic Ocean near Florida. Researchers think that people who collected them in indoor fish tanks may have dumped them in the ocean.

Lionfish eat many of the native species that live in the Caribbean, but none of the larger fish there will eat the lionfish. They are afraid of its poisonous spines. Without predators, the lionfish has been multiplying and moving into many areas of the Atlantic Ocean. In each new place, it gobbles up the native species.

In many cases, it is impossible to get rid of an invasive species completely. Instead, people are trying to control invasive species and stop them from spreading to new areas. You might see signs in parks or nature areas asking you to help control invasive species. Simple things like not bringing firewood from

Many state and national parks in the U.S. do not allow visitors to bring their own firewood because of invasive insects that might be inside the wood.

other places or checking the bottom of your boat for invasive species can help a lot.
Main Ideas

WE WILL LEARN HOW TO TALK AND WRITE ABOUT THE MAIN IDEA OF A TEXT.

INSTRUCTIONS:
1. Read the article, “Invasive Species Harm New Homes” again.
2. Write about the main idea of the article.
3. Answer the multiple-choice questions.
4. Talk about your answers with a partner.

STEP 1: Who or what is this article about?

STEP 2: What is the most important information about that person or thing?

STEP 3: Write a main idea sentence of about 10 words, using your ideas above.

____________________________________________________________________________________
____________________________________________________________________________________

Multiple-choice questions:
1: Circle ALL the statements that explain why invasive species can be a problem.
   A. Invasive species eat too many of the other species.
   B. Invasive species are larger than other species.
   C. Invasive species cannot leave their own ecosystem.
   D. Invasive species multiply quickly if they don’t have any predators.
   E. Invasive species use too many resources and crowd out other species.

“The native plants that cattle like to eat don’t have space to grow anymore.”

2: Which key idea in the article does this sentence mostly support?
   A. Cattle can help control invasive species.
   B. Invasive species are plants and animals that end up in a different ecosystem and spread quickly.
   C. Invasive species can crowd out other plant and animal species.
   D. Cattle are a problem for native plant species.
Good Question!

**“Right There” Questions**

Example: **QUESTION:** When did *Prosopis* come to Ethiopia?
**ANSWER:** It came to Ethiopia in the 1970s.

1. **QUESTION:** __________________________________________

   **ANSWER:** __________________________________________

2. **QUESTION:** __________________________________________

   **ANSWER:** __________________________________________

3. **QUESTION:** __________________________________________

   **ANSWER:** __________________________________________

**“I Wonder” Questions**

Example: **QUESTION:** How did *Prosopis* move from Central and South America to Ethiopia?

1. **QUESTION:** __________________________________________

**“I Wonder” Questions**

4. Write two questions about information that is *not* in the text but you would like to know.

5. Share your questions with the class.

   **QUESTION:** __________________________________________

   **QUESTION:** __________________________________________
WE WILL LEARN TO FIND AND WRITE ABOUT CAUSE AND EFFECT.

INSTRUCTIONS:
1. Find the “Invasive Species Harm New Homes” text.
2. Fill in the missing causes and effects using information from the text.

<table>
<thead>
<tr>
<th>CAUSE</th>
<th>EFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>People bring plants or animals to a new ecosystem.</td>
<td>Those plants or animals can damage the ecosystem.</td>
</tr>
<tr>
<td>The <em>Prosopis</em> bush spread across more than 1.7 acres of land in Ethiopia.</td>
<td>Some people in the Afar region of Ethiopia had to move.</td>
</tr>
<tr>
<td>People may have dumped lionfish from their indoor tanks into water near the Atlantic Ocean.</td>
<td>Invasive species multiply very quickly.</td>
</tr>
<tr>
<td>Many state and national parks are trying to control the spread of invasive species.</td>
<td>The lionfish doesn’t have any predators in the Caribbean.</td>
</tr>
</tbody>
</table>
Read for Purpose and Structure

WE WILL LEARN TO NOTICE HOW AND WHY AN AUTHOR WRITES A TEXT.

INSTRUCTIONS:
1. Read the questions.
2. Find the text “Invasive Species Harm New Homes.”
3. Look for the answers in the text.
4. Circle one answer for each question.
5. Compare your answers with a partner.

What did you choose for number _____?

Why did you choose that?

1: Which of these statements would the author of this article most likely agree with?
   A: People need to avoid moving plant and animal species to different ecosystems.
   B: Many ecosystems benefit from invasive species.
   C: Invasive species are a problem, but it is possible to fix this problem.
   D: An ecosystem is usually in balance when invasive species are present.

2: Why does the author include the detail that people in the Afar region are forced to move or go hungry because their cattle don’t have enough food.
   A: to demonstrate that food is important for animals.
   B: to demonstrate that the Afar region is a difficult place to live.
   C: to demonstrate that invasive species can affect people’s lives.
   D: to demonstrate that invasive species mostly affect other plants and animals.

3: How does the photo and caption on the second page help the reader understand the article?
   A: It shows an example of how people are trying to control invasive species.
   B: It shows where people can buy firewood.
   C: It explains which invasive species are found in firewood.
   D: It explains why people need to control invasive species.

“You might see signs in parks or nature areas asking you to help control invasive species.”

4: Why does the author include this sentence?
   A: to show that invasive species are a big problem in parks.
   B: to show that everyone can help reduce the spread of invasive species.
   C: to show that invasive species and hurt people.
   D: to show that there are no invasive species in parks or nature areas.
Vocabulary Review

WE WILL LEARN TO USE WORDS IN VOCABULARY LISTS 1 AND 2

PART 1
INSTRUCTIONS:
1. Find two words in the box that have similar meanings (synonyms).
2. Write the synonyms next to each other on the lines below. Use your class notes or a dictionary when needed.

<table>
<thead>
<tr>
<th>region</th>
<th>eliminate</th>
<th>move to</th>
<th>invasive</th>
</tr>
</thead>
<tbody>
<tr>
<td>get rid of</td>
<td>area</td>
<td>overpowering</td>
<td>disastrous</td>
</tr>
<tr>
<td>immigrate</td>
<td>terrible</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


PART 2
INSTRUCTIONS:
1. Circle the word or phrase that best explains the meaning of each underlined word as it is used in the sentence.
2. Compare your answers with a partner.

1: Her dog likes to interact with other dogs at the dog park.
   A: do things together
   B: cause a chemical reaction
   C: act crazy
   D: avoid

2: In many areas of the U.S., there are too many deer because they don’t have enough predators.
   A: food
   B: animals that hunt them
   C: space to live
   D: species

3: Animals and plants of the same species can reproduce.
   A: area
   B: environment
   C: type
   D: size

4: They used to have a beautiful garden, but weeds have crowded out all of the flowers.
   A: grown next to
   B: taken care of
   C: reproduced
   D: pushed out
More Vocabulary Review

WE WILL LEARN TO USE WORDS IN VOCABULARY LISTS 1 AND 2.

INSTRUCTIONS:

1. With a partner, mark each sentence as true or false.

2. Talk about why you think the sentence is true or false.

3. By yourself, write a complete sentence to explain why each sentence is true or false.

1. Invasive species never immigrate to a different ecosystem.

2. When one species is crowded out of an ecosystem it can create a disaster for other species.

3. It is easy to get rid of invasive species.

4. Predators are an important part of an ecosystem.

5. Invasive species do not affect people.
Grammar: Noun Phrases

A noun phrase is a group of words that functions like a noun in a sentence. It is a noun with more information. A noun phrase can be a subject or object in a sentence.

**EXAMPLE:**

- *The invasive Prosopis bush causes tremendous problems for some communities in Ethiopia.*

---

1. The thorny branches that grow low to the ground often cut/cuts the legs of the villagers.

2. A wound from the poisonous Prosopis bush often result/results in bruising and swelling.

3. Sometimes villagers from areas affected by Prosopis try/tries to move to another area with their animals.

4. The villagers displaced by Prosopis is/are often rejected by other villagers.

5. No one in a “clean” area want/wants animals from an affected area.

6. The animals who have eaten Prosopis often carry/carries the seeds in their feces.

---

**INSTRUCTIONS:**

1. Underline the noun phrase that is the subject in each sentence.

2. Circle the main noun in the noun phrase.

3. Circle the verb form that matches the main noun.

4. Listen to your teacher and read each sentence aloud.

---

**WE WILL LEARN TO READ NOUN PHRASES AND CHOOSE CORRECT VERB FORMS.**
Speaking: One-minute presentation

WE WILL LEARN TO SPEAK CLEARLY AND ORGANIZE OUR IDEAS.

INSTRUCTIONS:
1. Read the assignment.
2. Talk about the assignment with a partner.
3. Plan what you will say. Write notes.
4. Practice your presentation with a partner.
5. Give your presentation in front of the class.

Presentation Assignment:
Your friend just returned from a vacation in Thailand. They wanted to bring a plant from Thailand back to the U.S. to put in their garden. At the airport, the customs official searched their suitcase and took away their plant. The official said travelers are not allowed to bring live plants and animals into the country because they could cause problems for the ecosystems and farms here.

Your friend is angry and doesn’t understand why the plant was taken away. Explain to your friend why plants and animals should not be moved from one country to another without permission. Use three of these vocabulary words in your presentation:

- ecosystem
- invasive species
- get rid of
- disastrous
- region
- species
- crowd out
Talk About Tests

**WE WILL LEARN STRATEGIES FOR TAKING READING TESTS.**

**INSTRUCTIONS:**

1. **Together** read the paragraph about test taking strategies.

2. **With a partner,** put the strategies in order from first to last.

3. **Together** talk about the order you chose.

4. **In small groups,** talk about the discussion questions.

**Test-Taking Strategies**

Most reading tests have time limits. Many students find it difficult to answer all the questions in time. The way we read for a test might be different from the way we read at other times. Here are some steps that you might use when you take a test. What is the best sequence for these steps? Put them in order from 1-6.

- Read the parts of the text that you think will help you answer the questions.
- Read the title, headings and photo.
- Read all the answers to a question and think about which is best.
- Read the questions about the text.
- Ask yourself: **What is this text about?**
- Circle the best answer.

**Discussion**

1. How do you usually feel when you take a test?

2. What do you tell yourself before and during the test?

3. What strategies can students use to save time during a reading test?

4. What things in your life affect your test scores (stress, sleep, study time, work, health)?

5. Are reading tests important to you? Why or why not?

6. Are reading tests difficult for you? Why or why not?

7. What skills do reading tests measure? What skills are not measured by reading tests?

8. What strategies help you when you are taking a reading test?
## Wipe Your Feet

Help us prevent the spread of invasive species. Wipe your shoes or boots before and after entering this natural area. Keep your pet on trails and inspect them for burs and seeds before leaving the park. If you find seeds, dispose of them in a garbage bag.

---

### Tiny Hitchhikers

Very small seeds that you can’t even see may end up on the bottom of your boots or shoes without you knowing about them. When you visit another place, you may unwittingly transport the seeds of invasive species just by walking around!

---

### Plant Invaders

- **Garlic mustard** came from Europe and is rapidly spreading throughout the American Midwest and Northeast as well as Canada. It crowds out native plants and makes habitats unsuitable for some native insects, birds and mammals.

- **Wild parsnip** was grown on farms for the root vegetable but has now escaped cultivation. Do not touch or pick this invasive species as it can cause a blistering rash.

- **Common buckthorn** is a shrub that grows rapidly, creating dense shade on the forest floor that prevents native plants from growing there.
WE WILL LEARN TO NOTICE HOW AND WHY AN AUTHOR WRITES A TEXT.

INSTRUCTIONS:

1. Read the questions.
2. Find the text “Wipe Your Feet.”
3. Look for the answers in the text.
4. Circle one answer for each question.
5. Compare your answers with a partner.
   - What did you choose for number ____?
   - Why did you choose that?

1: According to the sign, which invasive plant can cause health problems for humans?
   A: blisters
   B: garlic mustard
   C: wild parsnip
   D: common buckthorn

2: Why does the sign ask visitors to wipe their shoes or boots?
   A: to stop invasive species seeds from moving to other areas.
   B: to keep the trails clean.
   C: to transport seeds to new locations.
   D: to avoid wild parsnip.

3: According to the sign, what should visitors do before they enter the natural area?
   A: inspect their pet.
   B: keep their pet on the trail.
   C: throw away seeds.
   D: wipe their boots or shoes.

4: How does the photo support the central idea of the sign?
   A: It reminds visitors that the trails can be muddy.
   B: It shows how pets can transport invasive species.
   C: It reminds visitors that there may be unwanted things on the bottom of their shoes.
   D: It demonstrates the correct way to walk on the trails.

5: Which of these best matches the meaning of *unwittingly* as used in the section “Tiny Hitchhikers”?
   A: without knowing
   B: to transport
   C: purposefully
   D: to avoid

6: The author most likely included the section “Plant Invaders” to ________
   A: explain how invasive species seeds are spread.
   B: help visitors identify these plants.
   C: provide examples of invasive species that are a problem in the area.
   D: suggest how visitors can remove these plants.
WE WILL LEARN DIFFERENT WAYS TO FIND THE MEANING OF NEW WORDS.

INSTRUCTIONS:
1. *Together,* practice the pronunciation of all the words.
2. *With a partner,* talk about the example sentences. Guess the word meaning of the word in that sentence.
3. Use two different strategies to learn about each new word. Circle which strategies you use for each word.
4. Write notes about the word meanings using English, your first language and/or pictures.

<table>
<thead>
<tr>
<th>Word</th>
<th>Notes</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>creative</strong></td>
<td><em>(adjective)</em> She has a <em>creative</em> mind. She’s always thinking of new ideas.</td>
<td><img src="chart" alt="English dictionary" /> <img src="chart" alt="First language translation" /> <img src="chart" alt="Image search" /> <img src="chart" alt="Student or teacher" /></td>
</tr>
<tr>
<td><strong>traditional</strong></td>
<td><em>(adjective)</em> Sometimes I wear <em>traditional</em> clothes like the ones my family members have worn for hundreds of years.</td>
<td><img src="chart" alt="English dictionary" /> <img src="chart" alt="First language translation" /> <img src="chart" alt="Image search" /> <img src="chart" alt="Student or teacher" /></td>
</tr>
<tr>
<td><strong>eliminate</strong></td>
<td><em>(verb)</em> Doctors and researchers hope that someday they can <em>eliminate</em> diseases like malaria.</td>
<td><img src="chart" alt="English dictionary" /> <img src="chart" alt="First language translation" /> <img src="chart" alt="Image search" /> <img src="chart" alt="Student or teacher" /></td>
</tr>
<tr>
<td><strong>territory</strong></td>
<td><em>(noun)</em> Some animals will fight with other animals that enter their <em>territory</em> because they don’t like other animals in their area.</td>
<td><img src="chart" alt="English dictionary" /> <img src="chart" alt="First language translation" /> <img src="chart" alt="Image search" /> <img src="chart" alt="Student or teacher" /></td>
</tr>
<tr>
<td><strong>reproduce</strong></td>
<td><em>(verb)</em> Some animals have many babies in a year because they <em>reproduce</em> quickly.</td>
<td><img src="chart" alt="English dictionary" /> <img src="chart" alt="First language translation" /> <img src="chart" alt="Image search" /> <img src="chart" alt="Student or teacher" /></td>
</tr>
</tbody>
</table>
Before We Read

WE WILL LEARN HOW TO BE GOOD READERS BY THINKING ABOUT THE TEXT BEFORE WE READ.

INSTRUCTIONS:
1. Look at the article on the next page.
2. Use a pencil to label the parts of the text.
3. Read ONLY the first and last sentence in each paragraph.
4. Write answers to the prediction questions.
5. Complete the skimming and scanning questions by moving your eyes quickly over the words. DON’T read the whole article yet.

Parts of the Text
1. Underline the title of the article.
2. Number the paragraphs.
3. Label the captions.
4. Circle the heading.

Predictions
1. What do you think we will read about?
I think we will read about ________________________________.
2. Why do you think that?
Because I see ________________________________.

Skimming and Scanning
3. In which paragraph do you think we will read about difficulties catching lionfish? ________________________________.
4. Scan the passage for the word lionfish. How many times did you find it? ________________________________.
Read

Restaurants to the Rescue

The lionfish doesn’t belong in the Mediterranean Sea. It doesn’t belong in the Caribbean either, but it moved in and now it is taking over. This invasive species reproduces quickly and eats up lots of smaller fish. Larger fish don’t eat the lionfish because of its poisonous spines. Many people want to make sure the lionfish doesn’t completely destroy the ecosystems it has moved into. They’ve thought of a creative solution: Put lionfish on the menu!

Environmental groups are telling chefs and fishermen about the delicious white meat of the lionfish. It can be grilled, fried or baked. It can be added to soup or made into sushi. They think restaurants should buy it and people should order it. Then, fishermen will catch more of them and help control the number of lionfish in nearby waters. In Greece, one environmental group wrote a book of lionfish recipes that included traditional Greek ingredients. In New York, a chef added several lionfish recipes to the menu. He also teaches customers about the lionfish problem.

Fishing Challenges

But catching and eating the lionfish isn’t easy. Fisherman have to catch it using spears so they don’t hurt other fish. That takes more time than other types of fishing. In addition, the lionfish has spines that are poisonous, so many fishermen and cooks avoid them.

CONTINUED ON NEXT PAGE
But with a pair of gloves, a knife and a little training, cooks and fisherman can learn to safely remove the spines.

Eating lionfish may reduce the damage from this invasive species. However, scientists say it probably won’t be possible to completely eliminate lionfish from its new territory.

Chefs are helping reduce the number of lionfish by adding dishes like lionfish ceviche to their menus.
Main Ideas

**INSTRUCTIONS:**

1. Read the article “Restaurants to the Rescue” again.
2. Write about the main idea of the article.
3. Answer the multiple-choice question.
4. Talk about your answer with a partner.

**Multiple-choice question:**

1. Which of these best states the central idea of the passage?
   
   A. Lionfish are an invasive species that is causing many problems in the Caribbean and Mediterranean.
   
   B. It might be possible to eliminate invasive lionfish if people eat enough of them, according to environmentalists.
   
   C. Fisherman don’t like to catch lionfish because of their poisonous spines.
   
   D. Environmentalists and restaurants are working together to get people to eat more lionfish even though there are challenges to catching and serving it.

**STEP 3:** Write a main-idea sentence of about 10 words, using your ideas above.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________
Good Question!

**“Right There” Questions**

Example:  **QUESTION:** Why must fishermen use spears to catch lionfish?  
            **ANSWER:** They must use spears so they don’t hurt other fish.

1. **QUESTION:** __________________________________________________________________________

   **ANSWER:** __________________________________________________________________________

2. **QUESTION:** __________________________________________________________________________

   **ANSWER:** __________________________________________________________________________

3. **QUESTION:** __________________________________________________________________________

   **ANSWER:** __________________________________________________________________________

**“I Wonder” Questions**

Example:  Is lionfish expensive to buy?

1. **QUESTION:** _________________________________________________________________________

2. **QUESTION:** _________________________________________________________________________
Read for Details

WE WILL LEARN TO ANSWER MULTIPLE-CHOICE TEST QUESTIONS.

INSTRUCTIONS:
1. Read the questions.
2. Find the article “Restaurants to the Rescue.”
3. Look for the answers in the text.
4. Circle one answer for each question.
5. Compare your answers with a partner.
   - What did you choose for number _____?
   - Why did you choose that?
   - What information in the text supports your answer?

1: According to the passage, who is responsible for convincing restaurants to buy and serve lionfish?
   A: fishermen
   B: chefs
   C: environmental groups
   D: Greeks

2: If people eat more lionfish, what will most likely happen?
   A: The lionfish will become an invasive species.
   B: The lionfish will be eliminated from its new territory.
   C: There will be damage to the ecosystem in the Caribbean.
   D: The number of lionfish in the Caribbean will be under control.

3: Why do cooks usually avoid lionfish?
   A: because they are difficult to catch.
   B: because they are difficult to prepare.
   C: because people won’t eat them.
   D: because they have white meat.

4: Write two reasons why it is difficult to control the number of lionfish.

____________________________________________________________________________________

DISCUSSION QUESTION: Why did environmental groups talk to chefs rather than fishermen to solve this problem?
Discussion Questions:

- Why do you think the author wrote about this topic? What did they want the reader to learn or think?
- Do you think the author supports the idea of eating more lionfish? Why do you think so? Use evidence in the text to support your answer.
- Do you think the author would agree with this statement: “It is mostly the job of scientists to solve the problem of invasive species”? Why or why not?

“The lionfish doesn’t belong in the Mediterranean Sea. It doesn’t belong in the Caribbean either, but it moved in and now it is taking over. This invasive species reproduces quickly and eats up lots of smaller fish. Larger fish don’t eat the lionfish because of its poisonous spines. Many people want to make sure the lionfish doesn’t completely destroy the ecosystems it has moved into. They’ve thought of a creative solution: Put lionfish on the menu!”

**PROBLEM:**

**SOLUTION:**

“Environmental groups are telling chefs and fishermen about the delicious white meat of the lionfish. It can be grilled, fried or baked. It can be added to soup or made into sushi. They think restaurants should buy it and people should order it. Then, fishermen will catch more of them and help control the number of lionfish in nearby waters. In Greece, one environmental group wrote a book of lionfish recipes that included traditional Greek ingredients. In New York, a chef added several lionfish recipes to the menu. He also teaches customers about the lionfish problem.”

**OPINION:**

**REASONS:**

“But catching and eating the lionfish isn’t easy. Fishermen have to catch it using spears so they don’t hurt other fish. That takes more time than other types of fishing. In addition, the lionfish has spines that are poisonous, so many fisherman and cooks avoid them. But with a pair of gloves, a knife and a little training, cooks and fisherman can learn to safely remove the spines.”

**OPINION:**

**REASONS:**

**PROBLEM:**

**SOLUTION:**
Vocabulary Review

WE WILL LEARN TO USE WORDS IN VOCABULARY LIST 1, 2 AND 3

UNIT VOCABULARY:

LIST 1
INTERACT
SPECIES
PREDATOR
CROWD OUT

LIST 2
REGION
IMMIGRATE,
DISASTROUS
GET RID OF

LIST 3
CREATIVE
TRADITIONAL
ELIMINATE
TERRITORY
REPRODUCE

Match each word with the correct definition.

1. creative
2. traditional
3. eliminate
4. territory
5. reproduce

a. (verb) to create babies, young animals or new plants
b. (verb) to take something away permanently
c. (noun) an area that is controlled by a group of animals or people
d. (adjective) thought about in a new way
e. (adjective) done in the way that a cultural group has done for a long time

Complete the sentences with words from the unit vocabulary.

6. The artist used ____________ designs that her grandmother taught her to make ____________ new products.

7. The strong storms were ____________ for the entire southeast ____________ of the U.S.

8. In order to ____________, most animal ____________ need a male and female. However, this is not true of some fish and lizards.

9. You must be careful if you ____________ with a large ____________ because they are skilled at hunting and attacking.

Talk about these questions with a partner. Use the unit vocabulary words in your answers.

10. Would it be disastrous if parks in your city were crowded out by new buildings and roads? Why or why not?
11. What are some reasons that people immigrate to the United States?
12. Have you ever tried to get rid of a household pest, like mice or bugs? Were you successful? What did you try?
13. Fighting for territory is the cause of many wars. Talk about an example of people fighting over territory.
Grammar: Future Real Conditional

Unreal conditional is the verb tense we use to talk about something that could happen but is very unlikely to happen.

Example sentences:

If invasive species **eat** all the smaller species, other animals **will starve**.

If we **hunt** invasive species, they **will not eat** as many smaller species.

If people **eat** lionfish, there **will be** fewer of them in the ocean.

Fill in the blanks:

1. If environmentalists **encourage** chefs to try lionfish, maybe they **will** **put** lionfish on the menu.

2. If restaurants **put** lionfish on the menu, then maybe people **will** **eat** it.

3. If enough people **encourage** lionfish, restaurants **will** **put** more from fisherman.

4. If fishermen **put** more lionfish, they **will** **encourage** the number of lionfish in the area.

5. If there **will be** fewer lionfish in the ocean, they **will** **encourage** less damage to the ecosystem.
Write About It

WE WILL LEARN TO WRITE ABOUT THE UNIT TOPIC AND SHOW WHAT WE HAVE LEARNED.

INSTRUCTIONS:

1. Choose one of the writing assignments.

2. Decide which vocabulary words you will include.

3. Write a first draft in your notebook.

4. Use the editing checklist to check your work.

5. Ask a classmate or teacher to read your work.

6. Rewrite or type your final copy.

Writing Assignments

1: Imagine you work in a restaurant. Write one to two paragraphs for the menu to teach customers about the problem of the lionfish. Your text should explain the problem and how ordering lionfish can help.

2: Research and write one paragraph about an invasive species in your area. Include details about how the invasive species has affected the area.

Unit Vocabulary
Include at least three of the new vocabulary words in your writing.

1: interact  
2: species  
3: predator  
4: crowd out  
5: region  
6: immigrate  
7: disastrous  
8: get rid of  
9: creative  
10: traditional  
11: eliminate  
12: territory

Editing Checklist

☐ I read my writing aloud to listen for problems.
☐ I have capital letters at the beginning of all my sentences.
☐ I have periods (or other end punctuation) at the end of all my sentences.
☐ Every sentence has a subject and a verb.
☐ I used a dictionary to check my spelling.

With a partner

Read your partner’s writing. Can you understand every sentence? Which sentences are not clear? Do you think your partner needs to add any more details?