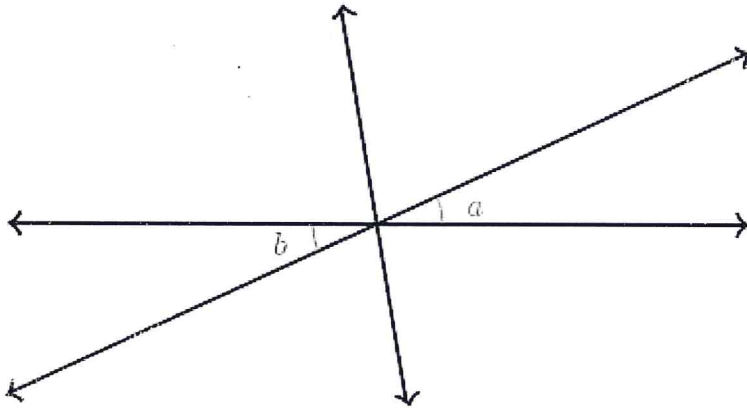


Monday, March 30th

Complete the practice to review angle relationships. Refer to class notes, if needed.

#1.

What is the relationship between  $\angle a$  and  $\angle b$ ?



#2.

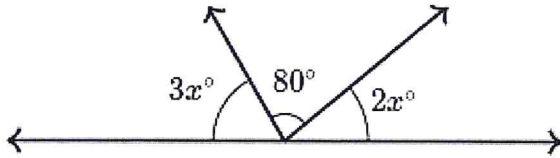
$\angle x$  and  $\angle y$  are supplementary angles.  $\angle y$  measures  $139^\circ$ .

What is the measure of  $\angle x$ ?

°

#3.

Which equation can be used to solve for  $x$  in the following diagram?



Choose 1 answer:

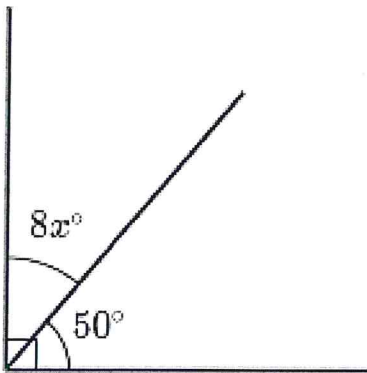
(A)  $3x + 80 + 2x = 90$

(B)  $80 - 3x - 2x = 90$

(C)  $3x + 80 + 2x = 180$

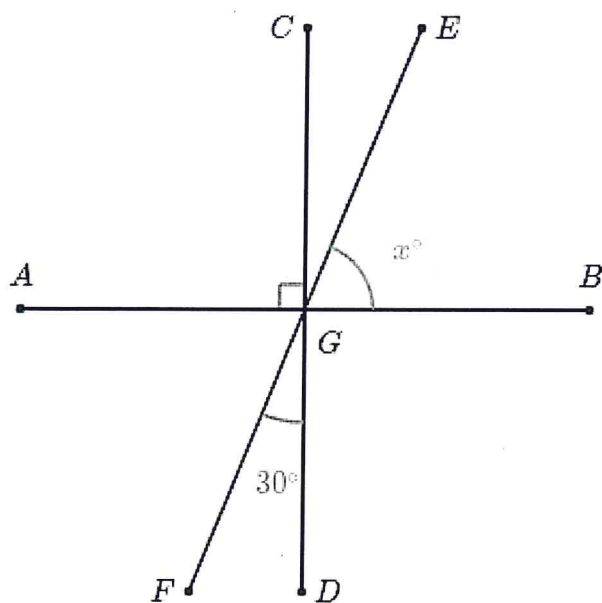
#4.

Solve for  $x$  in the diagram below.



$x =$    $^\circ$

#5.

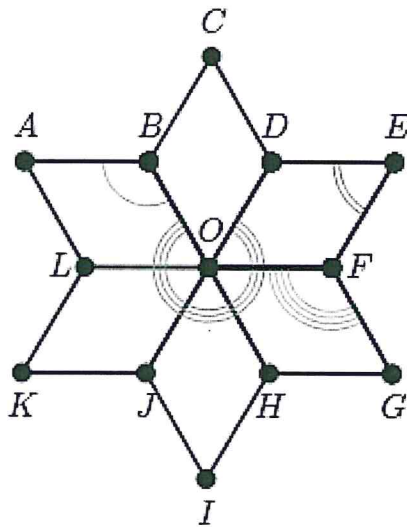


NOTE: Angles not necessarily drawn to scale.

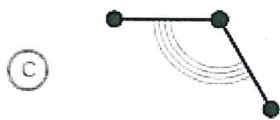
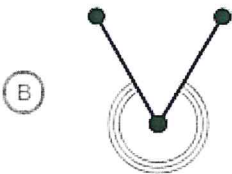
$$x = \boxed{\phantom{000}}^\circ$$

#6.

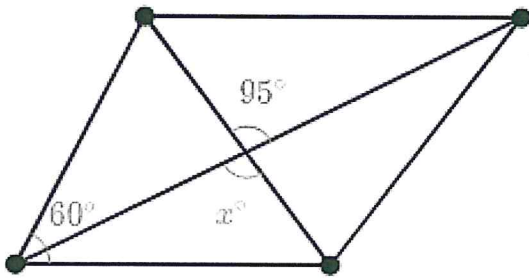
Which angle refers to the same angle as  $\angle DEF$ ?



Choose 1 answer:



#7.



$x =$

Tuesday, March 31st

Complete the practice exercise to review rules for constructing triangles.

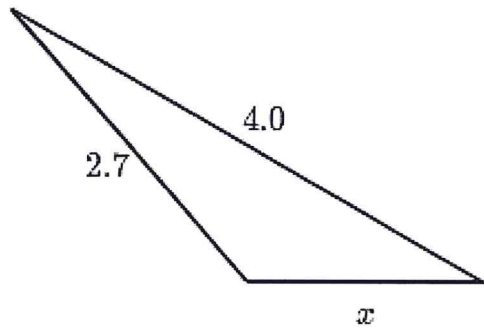
#1.

Could 10.5 cm, 8.0 cm, and 4.0 cm be the side lengths of a triangle?

Explain how you know.

#2.

What is the range of possible sizes for side  $x$ ?



$$\boxed{\phantom{00}} < x < \boxed{\phantom{00}}$$

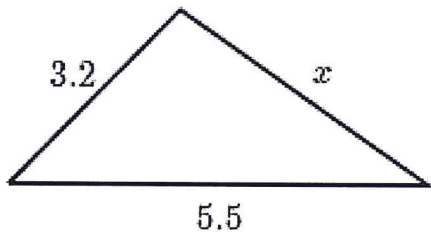
#3.

Could 10.6 cm, 5.6 cm, and 4.0 cm be the side lengths of a triangle?

Explain how you know.

#4.

What is the range of possible sizes for side  $x$ ?



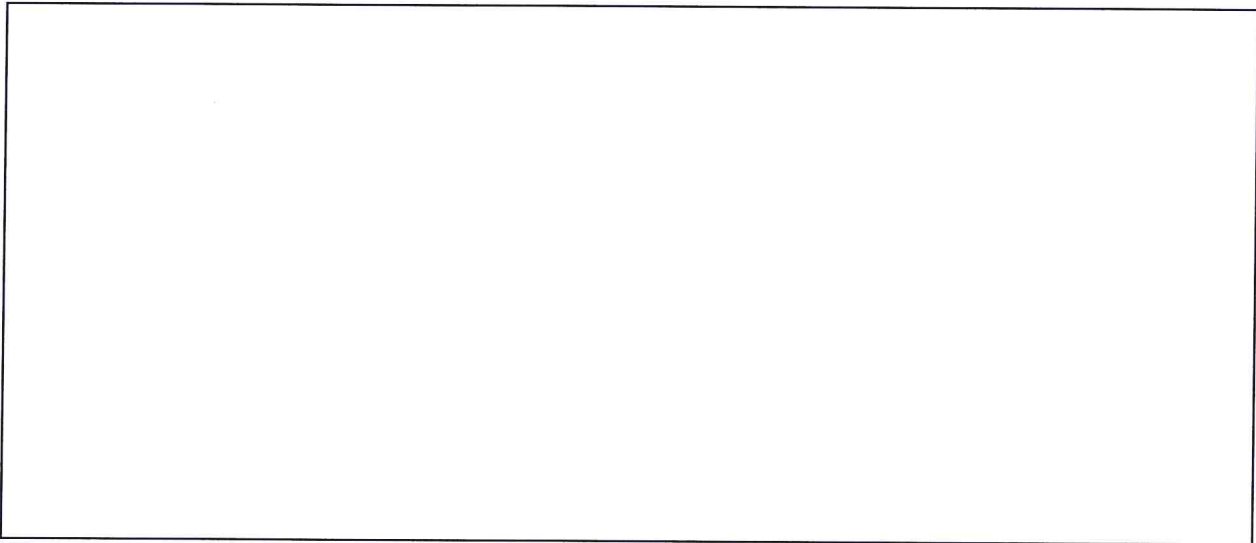
$$\square < x < \square$$

#5.

Draw a right triangle that is also an isosceles triangle and has two sides of length 3.

Is there a unique triangle that satisfies the given conditions?

Explain your reasoning.

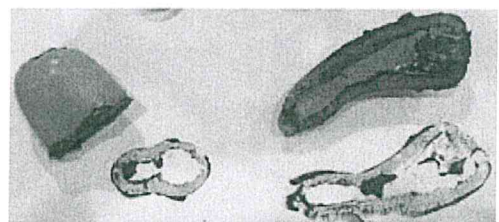
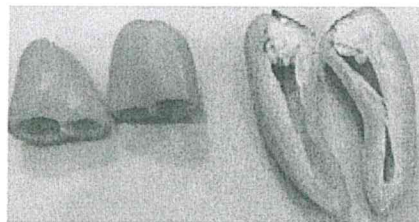
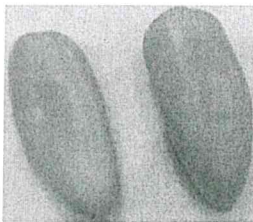


\*\*\*Notes: Copy the following information and images into your math binder.\*\*\*

## Summary

When we slice a three-dimensional object, we expose new faces that are two dimensional. The two-dimensional face is a **cross section**. Many different cross sections are possible when slicing the same three-dimensional object.

Here are two peppers. One is sliced horizontally, and the other is sliced vertically, producing different cross sections.



 Expand Image

The imprints of the slices represent the two-dimensional faces created by each slice.

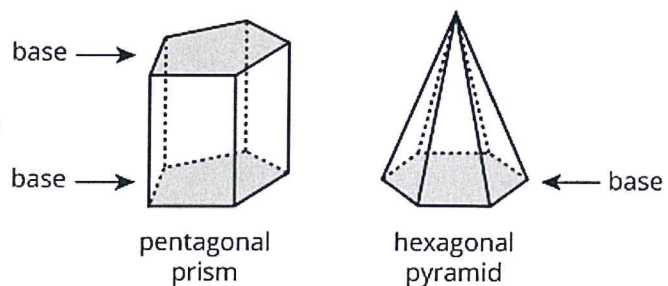
It takes practice imagining what the cross section of a three-dimensional object will be for different slices. It helps to experiment and see for yourself what happens!

## Glossary Entries

- **base (of a prism or pyramid)**  
The word *base* can also refer to a face of a polyhedron.

A prism has two identical bases that are parallel. A pyramid has one base.

A prism or pyramid is named for the shape of its base.



 Expand Image

- **cross section**  
A cross section is the new face you see when you slice through a three-dimensional figure.

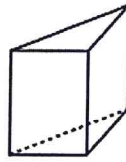
For example, if you slice a rectangular pyramid parallel to the base, you get a smaller rectangle as the cross section.



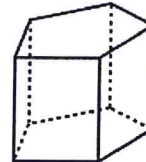
- **prism**

A prism is a type of polyhedron that has two bases that are identical copies of each other. The bases are connected by rectangles or parallelograms.

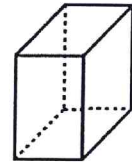
Here are some drawings of prisms.



triangular prism



pentagonal prism



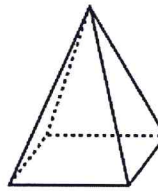
rectangular prism

 Expand Image

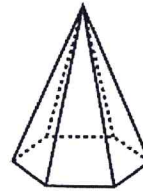
- **pyramid**

A pyramid is a type of polyhedron that has one base. All the other faces are triangles, and they all meet at a single vertex.

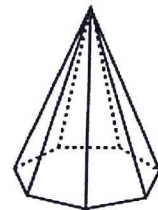
Here are some drawings of pyramids.



rectangular pyramid



hexagonal pyramid



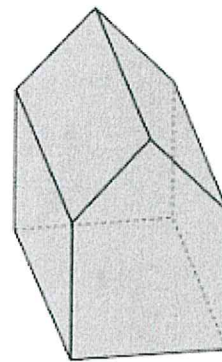
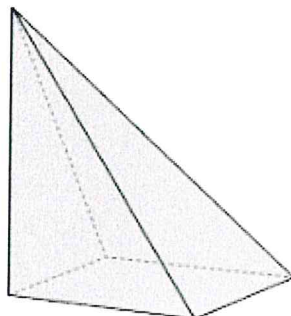
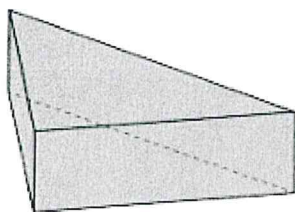
heptagonal pyramid

Wednesday, April 1st

*Complete Unit 7, Lesson 11: Activity 1*

## Activity 1: Prisms, Pyramids, and Polyhedra

Describe each shape as precisely as you can.

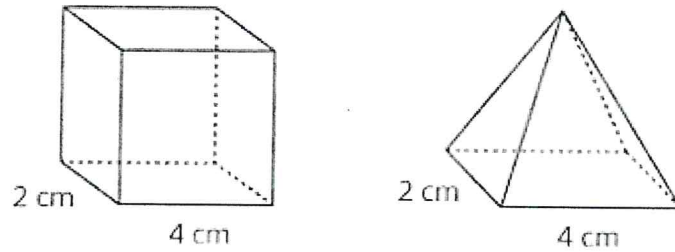


Thursday, April 2nd

Complete Unit 7, Lesson 11: Activity 2

## Activity 2: What's the Cross Section?

Here is a rectangular prism and a pyramid with the same base and same height.



1. Think about slicing each solid parallel to its base, halfway up. What shape would each cross section be? What is the same about the two cross sections? What is different?

2. Think about slicing each solid parallel to its base, near the top. What shape would each cross section be? What is the same about the two cross sections? What is different?

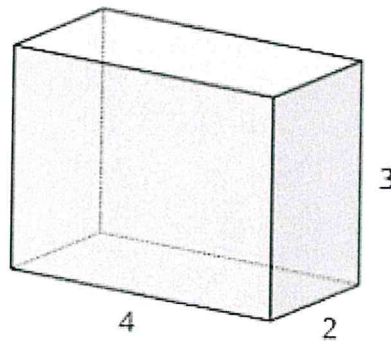
Friday, April 3rd

Complete Unit 7, Lesson 11: Activity 4

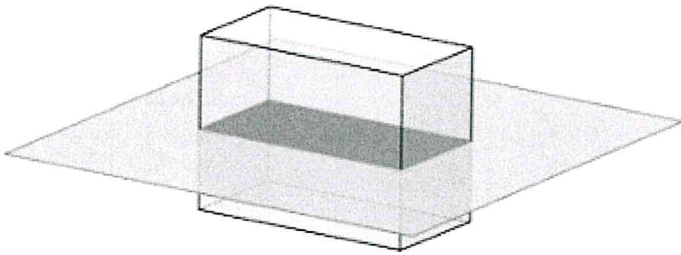
## Activity 4: Drawing Cross Sections

Draw and label each cross section on notebook paper. (i.e. your first drawing will be labeled 1A, etc.) Describe each cross section below.

1. Here is a picture of a rectangular prism, 4 units by 2 units by 3 units.

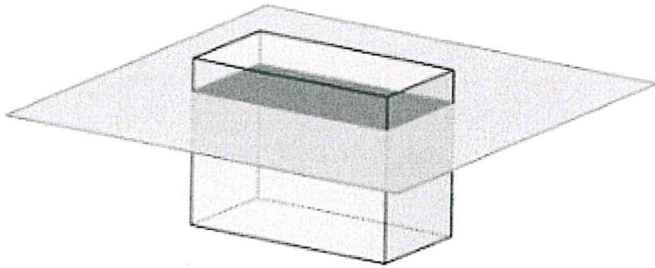


- A. A plane cuts the prism parallel to the bottom and top faces.



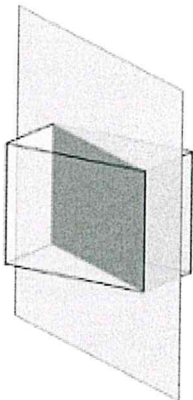
1A:

B. The plane moves up and cuts the prism at a different height.



1B:

C. A vertical plane cuts the prism diagonally.



1C:

## 7<sup>th</sup> Geography

Enclosed is the AMI packet for Wednesday (April 1) - Friday (April 3) if you have internet access, you can complete the work on summit. If you **DO NOT** have internet access, you can complete this AMI Packet.

### Directions:

- The first two pages are talking about how and what causes seasons to change. This should be a refresher as we covered this in the last project. Read and highlight things as needed.
- The next two pages will discuss how the oceans impact the climate and weather on land.
- The last two pages will deal with the rain shadow. Read and highlight as needed.
- The last page is the actual checkpoint related to the above readings.
- If you have any questions, email me at [austin.canady@crossettschools.org](mailto:austin.canady@crossettschools.org)



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## The Four Seasons: Change Marks the Passing of a Year

By Nola Taylor Redd - Live Science Contributor   March 22, 2016



The four seasons vary significantly in characteristics, and can prompt changes in the world around them. (Image: © Shelli Jensen | Shutterstock)

south brings in the autumn harvest.

## Earth and the sun

The cycle of seasons is caused by Earth's tilt toward the sun. The planet rotates around an (invisible) axis. At different times during the year, the northern or southern axis is closer to the sun. During these times, the hemisphere tipped toward the star experiences summer, while the hemisphere tilted away from the sun experiences winter, according to the National Oceanic and Atmospheric Administration (NOAA).

At other locations in Earth's annual journey, the axis is not tilted toward or away from the sun. During these times of the year, the hemispheres experience spring and autumn.

The astronomical definition of the seasons relates to specific points in Earth's trip around the sun. The summer and winter solstice, the longest and shortest day of the year, occur when Earth's axis is either closest or farthest from the sun. The summer solstice in the Northern Hemisphere occurs around June 21, the same day as the winter solstice in the Southern Hemisphere, according to NOAA. The south's summer solstice occurs around December 21, the winter solstice for the north. In both hemispheres, the summer solstice marks the first day of astronomical summer, while the winter solstice is considered the first day of astronomical winter.

Equinoxes are another significant day during Earth's journey around the Sun. On these days, the planet's axis is pointed parallel to the Sun, rather than toward or away from it. Day and night during the equinoxes are supposed to be close to equal. The spring, or vernal, equinox for the northern hemisphere takes place around March 20, the same day as the south's autumnal equinox. The vernal equinox in the southern hemisphere occurs around September 20, when people in the north celebrate the autumnal equinox. The vernal equinox marks the first day of astronomical spring for a hemisphere, while the autumnal equinox ushers in the first day of fall. [Infographic: Earth's Solstices & Equinoxes Explained]

But changes in the weather often precede these significant points. The meteorological seasons focus on these changes, fitting the seasons to the three months that best usher them in. December to February marks meteorological winter in the Northern Hemisphere and meteorological summer in the southern. March, April, and May are lauded as spring or autumn, depending on the location, while June through August are the months of summer for the north and winter for the south. September, October, and November conclude the cycle, ushering in fall in northern regions and spring in southern, according to NOAA.

The seasons can bring a wide variety to the year for those locations that experience them in full. The weather in each one may allow people to engage in activities that they cannot perform in others — skiing in the winter, swimming in the summer. Each season brings with it its own potential dangers, but also its own particular brand of beauty.

*Additional reporting by Alina Bradford, Live Science Contributor.*

### Additional resources

- SUNY College of Environmental Science and Forestry: Why Leaves Change Color
- NOAA: Annual Fatal Tornado Summaries
- Encyclopedia Britannica: Little Ice Age

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LATEST

[What is epidemiology? ▶](#)

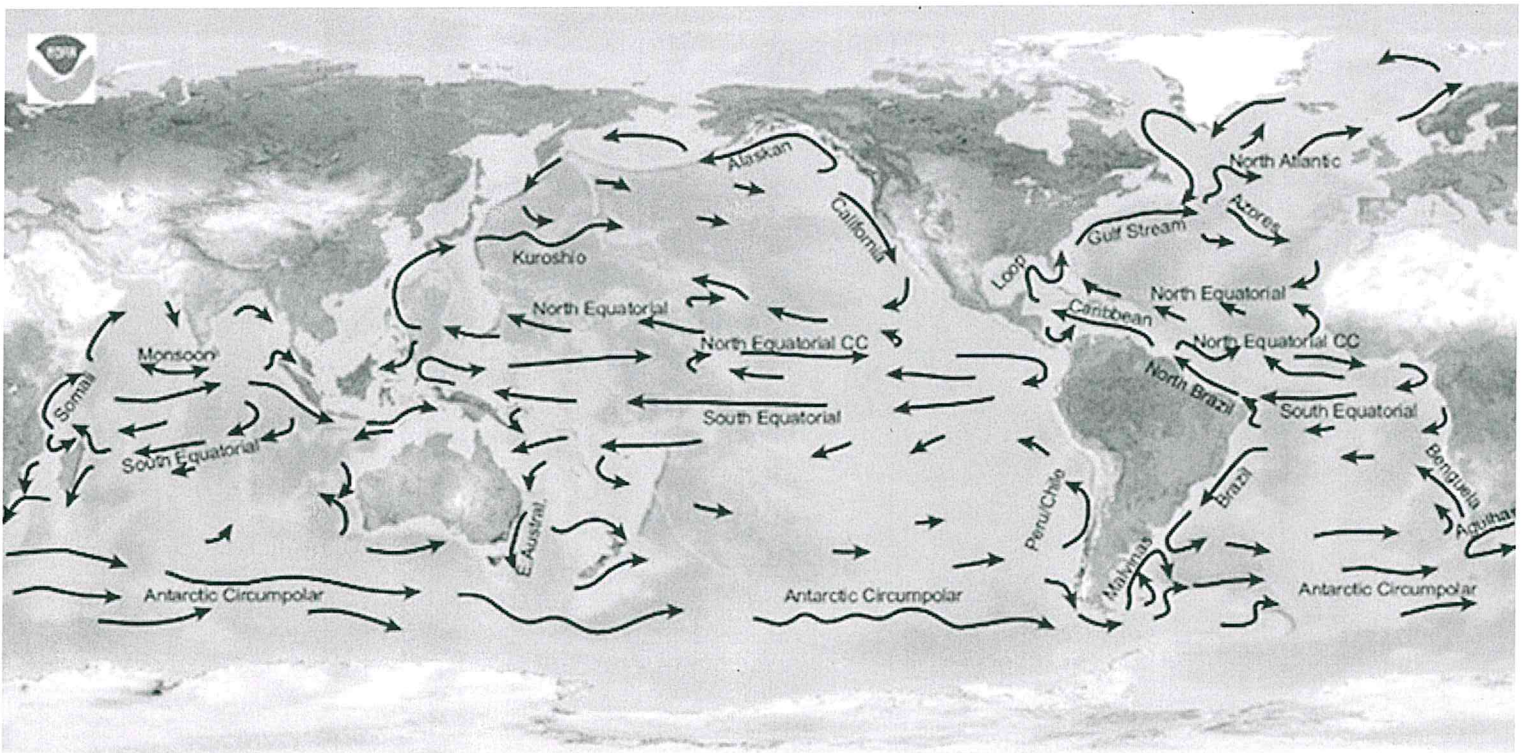
[Coronavirus outbreak: Live updates ▶](#)

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# How does the ocean affect climate and weather on land?

The ocean influences weather and climate by storing solar radiation, distributing heat and moisture around the globe, and driving weather systems.



This illustration shows the major ocean currents throughout the globe. Ocean currents act as conveyor belts of warm and cold water, sending heat toward the polar regions and helping tropical areas cool off, thus influencing both weather and climate. [Download image \(jpg, 105 KB\)](#)

One way that the world's ocean affects weather and climate is by playing an important role in keeping our planet warm. The majority of radiation from the sun is absorbed by the ocean, particularly in tropical waters around the equator, where the ocean acts like a massive, heat-retaining solar panel. Land areas also absorb some sunlight, and the atmosphere helps to retain heat that would otherwise quickly radiate into space after sunset.

The ocean doesn't just store solar radiation; it also helps to distribute heat around the globe. When water molecules are heated, they exchange freely with the air in a process called evaporation. Ocean water is constantly evaporating, increasing the temperature and humidity of the surrounding air to form rain and storms that are then carried by trade winds. In fact, almost all rain that falls on land starts off in the ocean. The tropics are particularly rainy because heat absorption, and thus ocean evaporation, is highest in this area.



Outside of Earth's equatorial areas, weather patterns are driven largely by ocean currents. Currents are movements of ocean water in a continuous flow, created largely by surface winds but also partly by temperature and salinity gradients, Earth's rotation, and tides. Major current systems typically flow clockwise in the northern hemisphere and counterclockwise in the southern hemisphere, in circular patterns that often trace the coastlines.

Ocean currents act much like a conveyor belt, transporting warm water and precipitation from the equator toward the poles and cold water from the poles back to the tropics. Thus, ocean currents regulate global climate, helping to counteract the uneven distribution of solar radiation reaching Earth's surface. Without currents in the ocean, regional temperatures would be more extreme—super hot at the equator and frigid toward the poles—and much less of Earth's land would be habitable.

## *Rain Shadow*

A rain shadow is a dry region of land on the side of a mountain range that is protected from the prevailing winds. Prevailing winds are the winds that occur most of the time in a particular location on the Earth. The protected side of a mountain range is also called the lee side or the down-wind side.

Prevailing winds carry air toward the mountain range. As the air rises up over a mountain range, the air cools, water vapor condenses, and clouds form. On this side of the mountains, called the windward side, precipitation falls in the form of rain or snow. The windward side of a mountain range is moist and lush because of this precipitation.

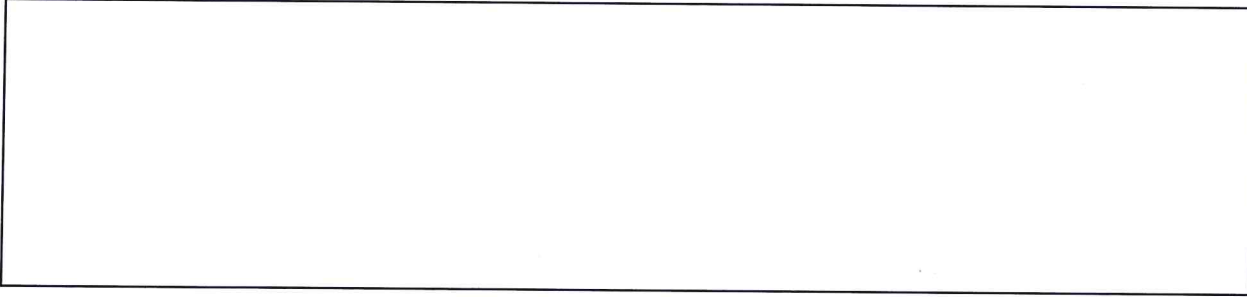
Once the air passes over the mountain range, it moves down the other side, warms, and dries out. This dry air produces a rain shadow. Land in a rain shadow is typically very dry and receives much less precipitation and cloud cover than land on the windward side of the mountain range.

Some examples of rain shadow deserts in North America include:

- The dry basins east of the Cascade Range in Washington and Oregon
- The Great Basin of Nevada and Utah, east of the Sierra Nevada mountain range
- The Colorado Front Range, east of the Rocky Mountains

## Checkpoint 1: Weather and Climate

Robert Heinlein, from *Time Enough for Love*, said, "Climate is what you expect, weather is what you get." Create a graphic organizer to compare and contrast weather and climate. A Venn diagram would be an example. *(your diagram can done digitally or on paper then photographed and inserted)*



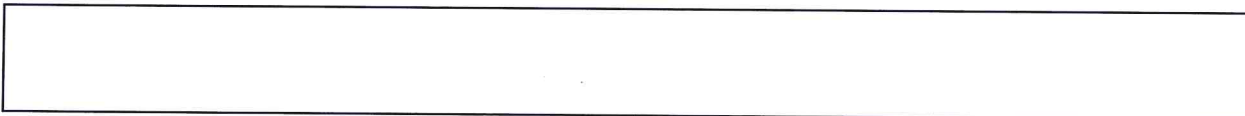
The amount of sun at a given location is affected by Earth's tilt, movement, and shape. What areas of Earth tend to have more seasonal change? Describe why the hottest areas on Earth are near the equator?



Wind and water move heat around the Earth, affecting how warm or wet a place is. In which direction do the prevailing winds blow in the middle latitudes?



How do ocean currents and large bodies of water affect climate?



Describe the Rain Shadow Effect.



# Seventh Grade Literacy

**Mrs. Hale**

**AMI Packet**

**March 30-April 3**

If you want to complete work online, go to [classroom.google.com](https://classroom.google.com). Click on the + at the top right side of the screen. Click 'Join Class' and type in the code 3xkvc3i

**Need help? Attend a Zoom video conference.**

Thursdays at 1:00 for A-Day students.

Fridays at 1:00 for B-Day students.

---

## **“What AMI packets ARE:**

A good way to keep minds nimble.

A way to stay connected to your school family.

A great way to learn about your learner.

---

## **What AMI packets are NOT:**

Something to stress over.

A punishment for kids.

Busy work.”

---

**Complete the following during the week of March 30-April 3:**

- 1. Use “Structure Workshop” to complete one page of Cornell Notes**
- 2. Study over “Poetic Devices” and complete “Poetic Devices: A Review”**
- 3. “Experimenting with Structure in Poetry”**
- 4. Acrostic Poem**

# Structure Workshop

## WHAT IS STRUCTURE?

*From the Cognitive Skill Rubric:*

Identifying the **features** and **elements** that together create a text's **structure**, and **analyzing** the **underlying meanings** and **effects conveyed** through the **author's structural choices**.

### Glossary of Terms

Identifying the **features** and **elements** that together create a text's **structure**, and **analyzing** the **underlying meanings** and **effects conveyed** through the **author's structural choices**.

**features:** the tools the author uses to create meaning, for example metaphors and similes

**elements:** the parts of a text, for example its chapters, stanzas, and scenes; also, its characters, setting, or plot.

**structure:** the way that a text is built and organized

**analyzing:** breaking a text down into parts and identifying their meaning

### Glossary of Terms

Identifying the **features** and **elements** that together create a text's **structure**, and **analyzing** the **underlying meanings** and **effects conveyed** through the **author's structural choices**.

**Underlying meanings:** a meaning in a text that is beneath the surface. You must infer or figure out this meaning based on the evidence given.

**effects:** the impact that something has on a reader or on the meaning or style of the text.

**Conveyed:** expressed or shared, often indirectly through evidence that you must figure out.

**structural writing choices:** the various parts the author includes or the types of writing an author uses in each part of a text.

In stories and novels, structural writing choices are called *features, elements, or literary devices*.

They include...

- Characters
- Plot (storyline)
- Setting
- Imagery
- Dialogue
- Narration
- Chapters

In poetry, *structural writing choices* are also called **POETIC DEVICES**.

These are the features of the writing that really stand out and add meaning to the poem. They include...

- Stanzas
- Lines
- Rhyme
- Figurative Language (Metaphors, Similes, Personification)
- Sound (Onomatopoeia)
- Repetition

And many more!

## HOW DO WE ANALYZE STRUCTURE IN POEMS?

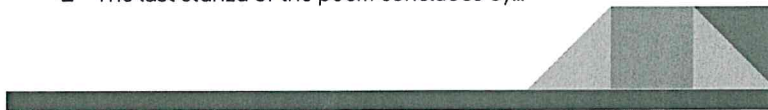
Step 1: Read and annotate the poem. Use reading strategies to understand what is happening.



## HOW DO WE ANALYZE STRUCTURE IN POEMS?

Step 2: Identify how the poem is organized: how does it begin, develop, and end? Write about it in your reading journal.

- The poem begins by...
- In the second stanza, the poet expresses...
- Then, the poem...
- The last stanza of the poem concludes by...



## HOW DO WE ANALYZE STRUCTURE IN POEMS?

Step 3: Circle some of the poetic devices (the structural writing choices) you notice in the writing.



## HOW DO WE ANALYZE STRUCTURE IN POEMS?

Step 4: How do the poetic devices (structural writing choices) add meaning to the poem? What do they emphasize? How could they be adding to a theme? Write your ideas in the margins.

## HOW DO WE ANALYZE STRUCTURE IN POEMS?

Step 5: Look at all your annotations. All together, what big theme or message is revealed? Write down your theme in your annotations. Underline the parts of the poem that show the idea.

*Sentence Frames to Use:*

- This poetic device suggests...
- This creates a feeling of \_\_\_\_\_ because...
- The use of \_\_\_\_\_ allows readers to understand that...
- The \_\_\_\_\_ creates a feeling of \_\_\_\_\_ in the reader because...
- The \_\_\_\_\_ expresses a \_\_\_\_\_ attitude.
- This writing choice suggests \_\_\_\_\_

## HOW DO WE ANALYZE STRUCTURE IN POEMS?

Final Step: Look at all your annotations about poetic devices. Which device adds to the theme best? Choose one. In your reading journal, answer the questions to explain how this poetic device adds to the overall theme.

*Sentence Frames to Use*

- This poetic device reveals the following meaning: \_\_\_\_\_ This poetic device adds to the creates this meaning by \_\_\_\_\_. This supports the meaning because...



**Cornell Notes for "Structure Workshop"**







Name:	
Objective:	Learn how to analyze the structures in poetry.



# Poetic Devices

In the Structure Cognitive Skill, we focus on analyzing how a text is built and organized. Well, a poem is organized and built with poetic devices. These are just the tools, or devices, writers use to create different effects or add meanings to their work. This resource provides examples and definitions of some of the most common ones.


“Author’s Structural Writing Choices” = Tools Writers Use to Create Effects

“Author’s Structural Writing Choices” = Tools Writers Use to Create Effects

LITERAL LANGUAGE			FIGURATIVE LANGUAGE		
IMAGERY	ALLUSIONS	DIALOGUE	SIMILE	METAPHOR	PERSONIFICATION
					
<p>Description of the setting. Usually includes the 5 senses: Sight, hearing, taste, touch, and smell.</p> <p><b>Example:</b>  <i>“The winter evening settles down with smell of steaks in passageways.”</i></p>	<p>When a poem refers to a famous person, place, text, or idea.</p> <p><b>Example:</b>  <i>“One day we were listening to a CD of a musician named Horace Silver...”</i> (Alexander 6).</p>	<p>when the spoken word of different characters is included in the text</p> <p><b>Example:</b>  <i>“Dad would jump up Smilin’ and screamin,’ That’s my boy out there. Keep it funky, Filthy!”</i> (Alexander 9).</p>	<p>Comparing one thing to another using “like” or “as.”</p> <p><b>Example:</b>  <i>“When the air in your lungs feels like lead.”</i></p>	<p>Comparing one thing to another WITHOUT using “like” or “as.”</p> <p><b>Example:</b>  <i>“See, when I play ball, I’m on fire”</i> (Alexander 5).</p>	<p>When a non-human thing is treated as if it has human characteristics.</p> <p><b>Example:</b>  <i>The wind whistled through the trees.</i></p>

STANZAS	LINES	PUNCTUATION & CAPITALIZATION	ENJAMBMENT	SHAPE
	<p><b>Lines and Stanzas</b></p> <ul style="list-style-type: none"> <li>Most poems are written in stanzas.</li> <li>A group of lines in a poem is called a stanza.</li> <li>Stanzas separate lines in a poem. They are like paragraphs.</li> <li>The poem has two stanzas.</li> </ul> <p><i>Much</i> A variety A variety And give together</p> <p><i>Divides</i> Marking new Stanzas within the poem</p>		<p>“Hope is a thing with feathers That perches in the soul And sings the tune without the words And never stops at all” -Emily Dickinson</p>	<p>and my dipping will leave you S L I P P I N G on the floor</p> <p>(Alexander 3).</p>

<p>Stanzas are like the “paragraphs” of a poem.</p> <p>Pay attention to <u>what</u> the author includes in each verse and/or stanza.</p> <p>Does he include dialogue?</p> <p>Does he group similar ideas together?</p> <p>Does he tell the story in a particular order?</p>	<p>Lines are single rows of words in a poem. Authors make choices about whether or not the poem should have <b>short lines</b> or <b>long lines</b>. They also think about <b>which words</b> should go on each line.</p> <p>Separating a group of words on one line can emphasize those words.</p>	<p>Punctuation and capitalization matters.</p> <p>“See you later?” “See you later...” “See you later!” and “SEE YOU LATER!”</p> <p>all have very different meanings.</p> <p>How does your author’s use of punctuation or capitalization affect the way you understand the poem? The way you feel when you read it?</p>	<p>Enjambment is when a complete sentence flows over multiple lines.</p> <p>Enjambment emphasizes specific words or phrases. Also, notice how the enjambment changes your reading. Are you reading more quickly or more slowly? How does that add to the meaning of the poem?</p> <p>Example: “Mom tells dad that he has to sit in the top row during the game” (Alexander 16).</p>	<p>Shape or Visual Poetry is when the words of the poem are arranged to form an interesting shape, as opposed to their normal shape on a page.</p> <p>Why did the author choose that shape? How does it emphasize something or add meaning?</p> <p>Example: “FILTHY MCNASTY” (Alexander 7).</p>
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RHYME	SOUND (ONOMATOPOEIA)	REPETITION
<p>I wandered lonely as a cloud That floats on high o'er vales and hills, When all at once I saw a crowd, A host of golden daffodils, Beside the lake, beneath the trees, Fluttering and dancing in the breeze.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p>■ A ■ B ■ C</p> </div>		<p>REPETITION REPETITION REPETITION REPETITION REPETITION REPETITION REPETITION REPETITION REPETITION REPETITION</p>
<p><b>Rhyme:</b> When two words have the same vowel sounds.</p> <p>The Rhyme Scheme is a pattern of rhyming. For example, an ABAB Rhyme Scheme is when every other line rhymes.</p> <p><b>Structures:</b></p> <ul style="list-style-type: none"> <li>▪ Consecutive lines rhyme (AA, BB)</li> <li>▪ Every other line rhymes (ABAB)</li> </ul> <p>Is there a pattern and how does the rhyme scheme change the rhythm of the poem or the way we read it? What is the effect of this?</p>	<p>Some words are meant to represent the sounds we hear, for example, “Swish,” “Pow,” “Bang,” and “Whoosh.”</p> <p>This is called onomatopoeia, pronounced, “on - ah - mon - ah - pee - a”.</p> <p>How do these types of words add to the poem? What do they make you imagine or feel? How could this add meaning?</p> <p><b>Example:</b> “Straight in the hole: Swooooooooooooooooosh” (Alexander 3).</p>	<p>What key words, phrases, or sentences does the author repeat?</p> <p>How does this repetition affect the message of the poem?</p> <p><b>Example:</b> “Only the best song, The funkiest song On Silver’s Paris Blues album: FILTHY MCNASTY” (Aleander 7).</p>

## Poetic Devices: A Review

*In the Structure Cognitive Skill, we focus on analyzing how a text is built and organized. Well, a poem is built and organized with **poetic devices**. These are just the tools writers use to create different effects or add meanings to their work.*

1. A group of lines, like a paragraph but in a poem, is called a/an \_\_\_\_\_.
2. Which of the following is NOT an example of figurative language?
  - a. Metaphor
  - b. Simile
  - c. Imagery
  - d. It's raining cats and dogs!
  - e. I am so hungry I could eat a horse!
3. Imagery is...
4. When lines in a poem **follow a pattern** of having the same vowel sound, this is called a \_\_\_\_\_.
5. When a poem refers to a famous person, place, or thing, it is called a/an \_\_\_\_\_.
6. The line below is an example of \_\_\_\_\_.

**"Mom says,**

***Your dad's old school,***

***Lik an ol' Chevette***

***You're fresh and new,***

***Like a red Corvette"* (Alexander 4).**

7. The lines below includes an example of \_\_\_\_\_.

**"walking home from school      alone**

**playing Madden      alone**

**listening to Lil Wayne      alone**

going to the library \_\_\_\_\_ alone” (Alexander 213).

8. How does the device used in #7 add meaning to the lines?
9. The lines below include an example of \_\_\_\_\_.

“When JB’s soft jumper sails

tick

Through the air.

tock

The crowd stills,

tick

Mouths drop,

tock...” (Alexander 36).

10. How does the device used in #9 add meaning to the lines?
11. What two devices are used in the lines below?

“IF. I. LOSE.

THE. BET.

YOU. WANT. TO.

WHAT?” (Alexander 34).

12. How do the two devices used in #11 add meaning to the lines?
13. The lines below include an example of a/an \_\_\_\_\_.

“I’m a fly caught in a web.

What do I do?” (Alexander 81).

14. How does the device in #13 add meaning to the lines?
15. In a poem, a line is \_\_\_\_\_.

# Experimenting with Structures in Poetry

*To practice your narrative writing skills, and to help you remember the structures in poetry, work independently to create your own examples of each structure.*

***CHALLENGE: Write examples about your own life that could go into your own story-poems.***

Device	My Example	Device	My Example
Imagery		Stanza	
Allusion		Line	
Dialogue		Punctuation & Capitalization	
Simile		Enjambment	
Metaphor		Shape	
Personification		Rhyme	
Onomatopoeia		Repetition	



# ACROSTIC POEM

## HOW DO YOU WRITE AN ACROSTIC POEM FOR THE WORD "BALL"?

*Bouncing up and down  
All sizes and shapes  
Lively play and exercise  
Let loose, toss, and throw*

## LET ME SHOW YOU SOME MORE ACROSTIC POEM EXAMPLES:

### Example #1

*Summers off  
Cool  
Happy  
On time  
Outdoor fun  
Love learning*

### Example #2

*Curled up and watching  
Acting cool and calm  
Thinking of mice and milk  
Staying away from the dog*

## Basketball Acrostic Poem

An acrostic poem is a type of poetry where the first, last or other letters in a line spell out a particular word or phrase. The most common and simple form of an acrostic poem is where the first letters of each line spell out the word.

1. Write an Acrostic Poem for the word "Basketball"

**B  
A  
S  
K  
E  
T  
B  
A  
L  
L**



**IT'S YOUR TURN! YOU ARE A POET ... JUST MIGHT NOT KNOW IT!**

**WRITE AN ACROSTIC POEM**

- 1. One of your final products will be a Poetry Journal. Write an acrostic poem of your thoughts and feelings about the Coronavirus.**

**C  
O  
R  
O  
N  
A  
V  
I  
R  
U  
S**

**7<sup>th</sup> Grade Science AMI Packet**  
**Mrs. McFarland**  
**March 30-April 3**

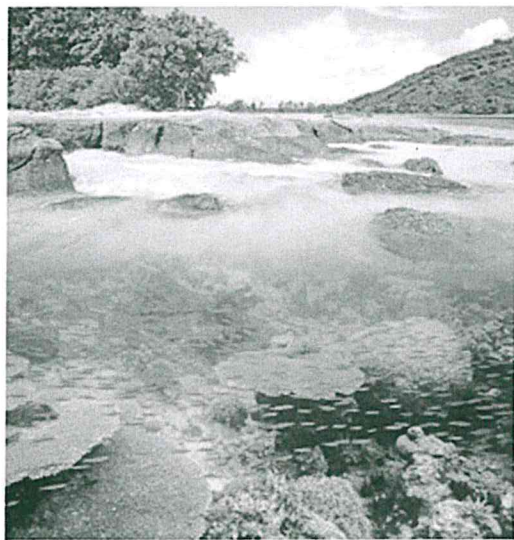


## Describing Biodiversity

Forests, salt marshes, deserts, and lakes are all examples of ecosystems. An ecosystem can be a small pond or extend across a vast grassland. Although there are many different types of ecosystems, they all have some common features. An **ecosystem** is a system made up of all the living and nonliving things in a given area. The living parts of an ecosystem interact with each other and with nonliving parts. Because of these interactions, ecosystems are dynamic—they are always changing. For example, the living components shown in the photos constantly interact with the nonliving and other living components. The macaques, a type of monkey, take in oxygen by breathing air and eat mostly plants and insects. The sea stars take in oxygen from the water through their feet and eat mostly mollusks.



This land ecosystem in Morocco contains several populations of organisms, including the endangered Barbary macaque. Macaques live alongside humans in certain parts of Morocco.



This marine ecosystem also contains several populations of organisms, including sea stars and mollusks. They live alongside many types of fish and coral in this ecosystem.

3. Fill in the table by listing the components in the word bank as living or nonliving parts of the ecosystems in the photos.

Living	Nonliving
	water

### WORD BANK

- ~~water~~
- plants
- sand
- air
- fish
- rocks
- macaques
- algae

# Tuesday, March 31

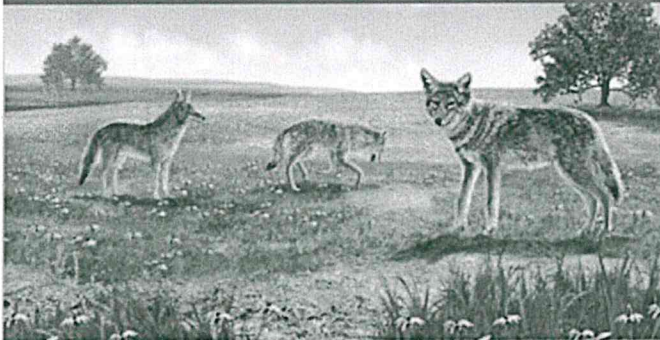
## Biodiversity

One way to evaluate the health of an ecosystem is to consider its biodiversity.

**Biodiversity** refers to the variety of life in Earth's land, freshwater, and marine ecosystems. Biodiversity can be studied at different scales. Scales can range from a small area, such as a drop of water, to a large area, such as a forest. An area's biodiversity may be made up of a few species or thousands of species. High biodiversity exists when there are many species and individuals of those species living in an ecosystem.

Low biodiversity exists when there is a low number of species in an ecosystem. The biodiversity of an area can be described as the combination of genetic diversity, species diversity, and ecosystem diversity.

### Levels of Biodiversity



**Genetic diversity** refers to the variation of genes within a species or population in a given area. For example, the coyotes living in this prairie may vary in body size, leg length, fur color, or other characteristics. These characteristics are passed, through genes, from generation to generation. All the possible genetic variations of the coyotes in this prairie make up the population's genetic diversity.



**Species diversity** refers to both the number of different species that are in a given area as well as the number of individuals of each species that are there. In this prairie, you can see a variety of plants and animals. If you could see more of this ecosystem, you would most likely see more species. These species interact with each other and with the nonliving parts of the prairie ecosystem.



**Ecosystem diversity** refers to the variety of ecosystems in a given area. Ecosystem diversity refers to both land and aquatic ecosystems. For example, the area shown here contains several types of ecosystems, including a stream, a prairie, and a riverbank. Ecosystems may be large or very small.

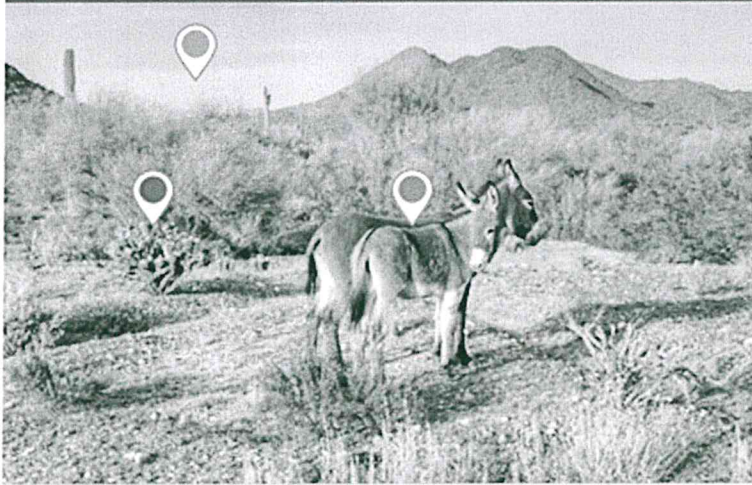
4. Which statement best describes an example of low species diversity?
- A. A population of chorus frogs has a wide variety of skin colors.
  - B. A marsh ecosystem is covered by a single species of cattail bulrushes.
  - C. A state park includes multiple forest, wetland, and freshwater ecosystems.

Wednesday, April 1

## Evaluating Ecosystem Health

Changes to an ecosystem can affect how the parts of an ecosystem interact. Within a healthy ecosystem, however, factors stay more or less within a certain range and in a mostly stable condition, even as individual parts change. Ecologists call this phenomenon *ecosystem stability*. Recall that matter and energy flow among the living and nonliving parts of an ecosystem. A change to any part of an ecosystem may disrupt the flow of energy and matter.

### Ecosystem Interactions Include the Flow of Energy and Matter



- 1 Sunlight is the original source of energy in this desert ecosystem.
- 2 Plants use energy from sunlight to transform water and carbon dioxide into sugars and oxygen during photosynthesis. The plants take in water from the soil and carbon dioxide from the air. They use the sugars they make as food.
- 3 These burros eat plants in the Sonoran desert. Energy and matter move from the plants into the burros.

6. Suppose a new animal is introduced into this desert ecosystem. The animal has no natural predators. It eats the same plants the wild burros do. Which parts of the ecosystem might be affected by this change? Choose all that apply.
- A. other animals
  - B. plants
  - C. flow of energy
  - D. cycling of matter

## Disturbances in Ecosystems

An *ecosystem disturbance* is a change in environmental conditions that causes a change in an ecosystem. Both living and nonliving parts of an ecosystem can be affected by a disturbance. Natural disturbances include wildfires, storms, flooding, tsunamis, and volcanic eruptions. Sudden increases in animal populations, such as insect swarms, can also cause a disturbance. Humans can create ecosystem disturbances too. These changes include oil spills, fires, and the clearing of land to harvest trees. Humans also clear land to make space for agriculture, housing, roads, or industry. The removal or introduction of a species in an area also creates a disturbance. Ecosystems can recover from disturbances. How quickly an ecosystem recovers depends on the type and severity of the disturbance.

### An Ecosystem Disturbance



A landslide greatly affected this ecosystem in the Philippines. The land was covered by mud and rocks that removed plants and displaced people and other animals.

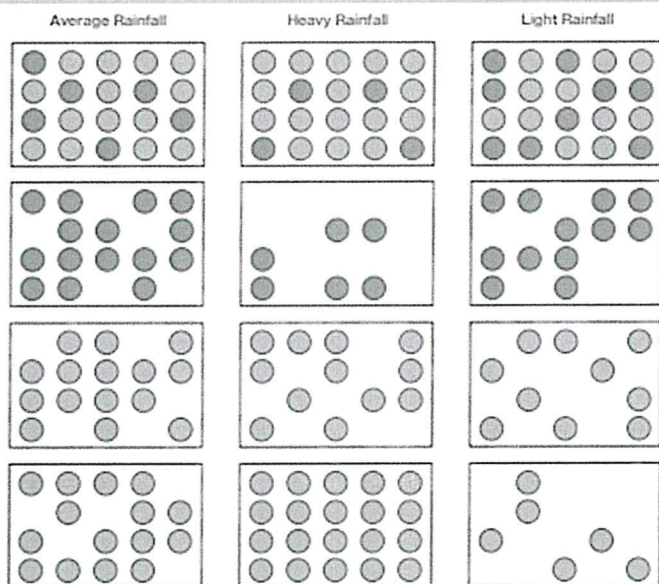
This photo shows the same ecosystem just one year after the landslide. Plants are growing on the landslide mud. Animals and people have returned to live in the area.

The biodiversity of an ecosystem that experiences a disturbance can influence how well the ecosystem recovers. Ecosystems with high biodiversity have many species fulfilling certain roles, such as pollinator, decomposer, and predator. The graphic below shows how ecosystems with high and low biodiversity can be affected by disturbances.



## Biodiversity Impacts Ecosystem Stability

This graphic models the stability of four different ecosystems during years with different amounts of rainfall. The different-colored dots represent different species of insect pollinators. Some of these insects do better in high-rainfall years. Others do better in low-rainfall years.



**Diverse community** Some species do better in wetter years. Others do better in drier years. The total number of pollinators remains stable.

**Community made up mostly of red species** This pollinator species is negatively affected by high rainfall.

**Community made up of mostly green species** This pollinator species survives dry and wet years equally well.

**Community made up of mostly blue species** This pollinator species is negatively affected by low rainfall.

7. In your own words, explain how rainfall could influence the species abundance over time in the different communities. In which ecosystem is the least amount of change observed in the abundance of pollinators?

Thursday, April 2

## Biodiversity and Ecosystem Health

The health of an ecosystem includes its ability to recover from a disturbance. Ecological diversity, species diversity, and genetic diversity all contribute to ecosystem stability. A diverse ecosystem has more ways to recover from a disturbance. If one species dies or leaves a diverse ecosystem, another species can take its place. As a result, the ecosystem can stabilize more quickly.

An ecosystem with lowered biodiversity is less able to recover from a disturbance. Some ecosystems, such as those in polar regions, can maintain stability while naturally having lower biodiversity than warmer regions. Ecosystems generally become less stable when their biodiversity levels are lowered from their baseline levels.



### EVIDENCE NOTEBOOK

8. How would biodiversity levels affect the recovery of ecosystems along the Vltava River after the floodwaters recede? Record your evidence.



### Do the Math

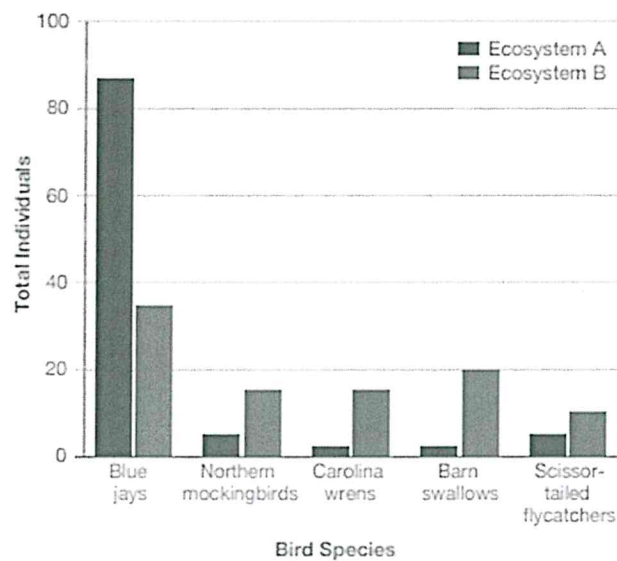
## Assess Ecosystem Health

Having many different species in an ecosystem is a sign of high-species diversity. But the size of each population of species is also important. A population can be too small. Fewer individuals means there is less genetic diversity in a population. The graph shows the biodiversity of birds in two ecosystems. Both ecosystems have an equal amount of species diversity. However, they are different in some significant ways.

9. What are the main differences in species abundance between the populations of birds in the two ecosystems?

10. Given the data in the graph, what can you predict about how each ecosystem might recover from a disturbance?

Biodiversity of Bird Species in Two City Park Ecosystems



Humans have designed structures and developed processes that help them survive in their environments. Ecosystems provide the energy and raw materials that humans need to live and survive. For example, we use wood from trees to build homes. We burn wood and fossil fuels to provide energy. Humans rely on ecosystems to grow crops and raise livestock. Humans also depend on the nonliving parts of ecosystems for clean air, fresh water, and living space. In this way, humans can also affect the health and biodiversity of ecosystems.



Explore  
ONLINE!

Humans introduced the European honeybee (*Apis mellifera*) to the United States. These bees make honey and beeswax.

11. Humans rely on certain services that ecosystems provide. Which ecosystem processes below do humans benefit from? Circle all that apply.
- A. decomposition of wastes
  - B. pollination of crops
  - C. filtering of fresh water
  - D. growth of trees and plants

## Humans Are Part of Earth's Ecosystems

We depend on healthy ecosystems for survival and for a good quality of life. For example, every time you breathe or drink a glass of water, you depend on ecosystem processes to provide oxygen and fresh, clean water. Healthy ecosystems buffer the impact of storms, limit the spread of disease, and recycle nutrients. Humans rely on ecosystems to reduce the effects of droughts and floods, provide fertile soils, pollinate crops and plants, disperse seeds, and control pests by natural predators. For these reasons and more, high biodiversity in ecosystems is important to all humans. Humans benefit from ecosystems with high biodiversity because ecosystem health and ecosystem services are related to biodiversity.

Friday, April 3

## Negative Impacts on Biodiversity

Human activities affect the biodiversity of ecosystems. Although we rely on healthy ecosystems, many human activities negatively affect biodiversity. Some activities cause direct negative effects, such as overharvesting of plants or animals. Other activities cause indirect negative effects. For example, constructing new buildings can destroy habitats and reduce biodiversity. Releasing garbage and pollution into the environment can harm or poison organisms and reduce biodiversity.

### Habitat Destruction

Activities such as the construction of roads, buildings, towns, and cities cause habitat destruction. Mining and harvesting resources also remove habitats. Less habitat means less biodiversity on all scales—ecosystem, species, and genetic. Human activity can also break large habitats into smaller pieces. When a habitat is broken into smaller pieces, animals that need a large area of habitat can no longer live there.



Habitat destruction occurs when land is cleared for development.

### Introduced Species

Tulips, orange trees, and many other highly valued plants are now grown in the United States. However, they are not native to the country. People introduced them to a new environment when they brought them from other countries. These non-native species are called *introduced species*. Introduced species can have negative impacts on ecosystems. For example, buckthorn, lionfish, emerald ash borers, and Burmese pythons are invasive organisms that threaten native species in several United States ecosystems. These species do not have predators or other natural factors in their new environments that limit their populations' growth.



Pet Burmese pythons that were released into the wild threaten biodiversity in areas of South Florida.

## Overharvested Species

Many fish species are harvested for food. The overharvesting of certain fish species threatens marine biodiversity. For example, decades of overfishing led to an extreme drop in populations of Atlantic cod in the early 1990s. This almost caused the collapse of the cod fishing industry. The fishing of Atlantic cod in the north Atlantic was banned in 1992. Overharvesting of plants such as coneflowers and American ginseng has greatly reduced their wild population sizes. Land animal species such as tigers have also been hunted, sometimes to extinction. When a population is reduced to a very small size due to overharvesting, genetic diversity is lost.

threaten biodiversity in areas of South Florida.



Atlantic cod populations are closely monitored and are slowly recovering from near extinction in the early 1990s.

## Lack of Biodiversity in Food Crops

Many of today's food crops have very little genetic diversity. Some crops, such as bananas, are all genetically identical. Recall that genetic diversity in a population increases the likelihood that some members of a population will survive a disturbance such as a disease. Genetically identical food crops are more likely to be destroyed by a disturbance because every plant reacts in the same way. In the case of bananas, a fungal disease, called *Panama disease*, is destroying banana plants. This disease is threatening banana crops and the livelihood of the people who grow and sell them.

Scientists are working on reintroducing into crops some of the wild-type genes that were lost during domestication. The intention of this bioengineering is to make hardier crops. The wild cousins of crop plants tend to be better able to survive disturbances. Scientists hope that reintroducing wild genes into crop plants will create crops that are more pest and drought resistant and better able to take in nutrients from the soil.



### EVIDENCE NOTEBOOK

12. Look at the image of the ecosystem before the flood. How have humans changed the area and how might this affect recovery after the flood? Record your evidence.

## Efforts to Protect Biodiversity

Not all human activities negatively affect biodiversity. Around the globe, people are working to limit the negative impact of human activity and preserve biodiversity. In many locations, nature preserves have been created to protect habitats. Wildlife corridors have been created to connect areas of natural habitat divided by roads or development. Awareness of overharvesting has also become more common. This awareness promotes policies to prevent additional overharvesting and guide the recovery of populations. One way plant biodiversity has been supported is by creating seed banks around the world. These banks help preserve biodiversity by storing different types of plant seeds. Seed banks are a resource for plant breeders.



This forest is managed in a way that provides a sustainable source of wood for industry.



**13. Language SmArts** Write an argument about why people should work toward having positive influences on biodiversity. Support your claims with clear reasons and relevant evidence. Present your argument to the class.