شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية

مراجعة عامة للصفحات المهمة وفق الهيكل الوزاري انسباير

تاريخ نشر الملف على موقع المناهج: 2023-11-26 04:51:55 | اسم المدرس: Christy

التواصل الاجتماعي بحسب الصف الرابع

روابط مواد الصف الرابع على تلغرام

التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الرابع والمادة علوم في الفصل الأول

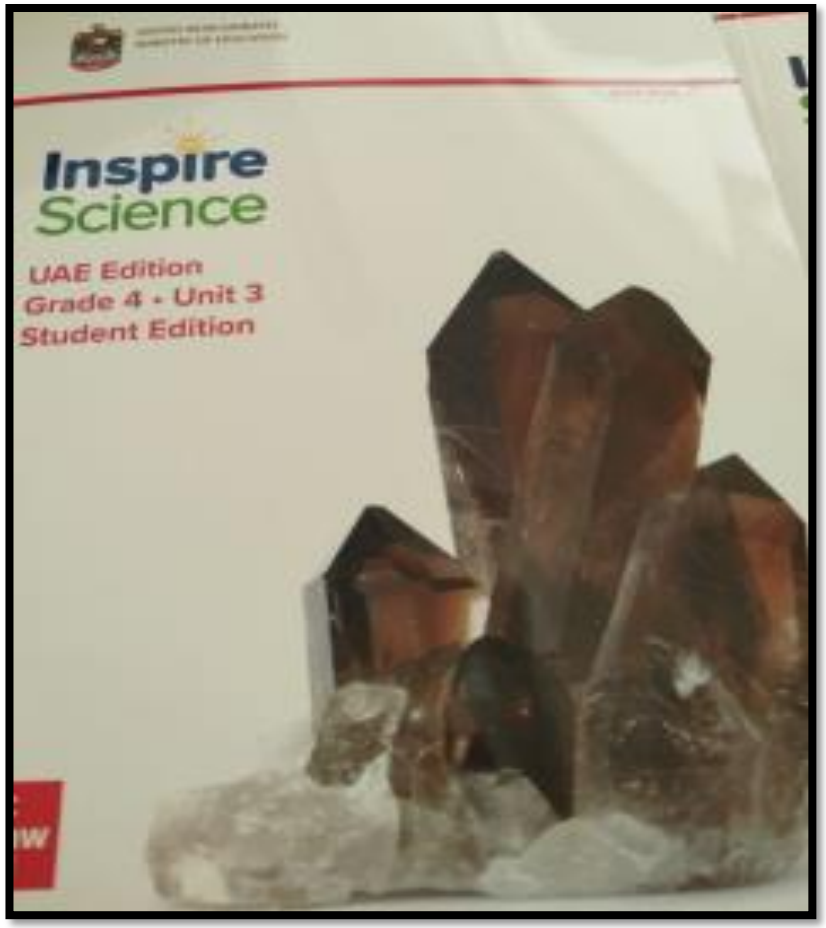
1	حل مراجعة امتحانية وفق الهيكل الوزاري
2	حل تجميعة أسئلة القسم الكتابي وفق الهيكل الوزاري انسباير
3	مراجعة شاملة وفق الهيكل الوزاري
4	نموذج الهيكل الوزاري الجديد بريدج
5	أوراق عمل درس الأنظمة في الحيوانات متنوعة بنموذج الحل

SCIENCE REVISION

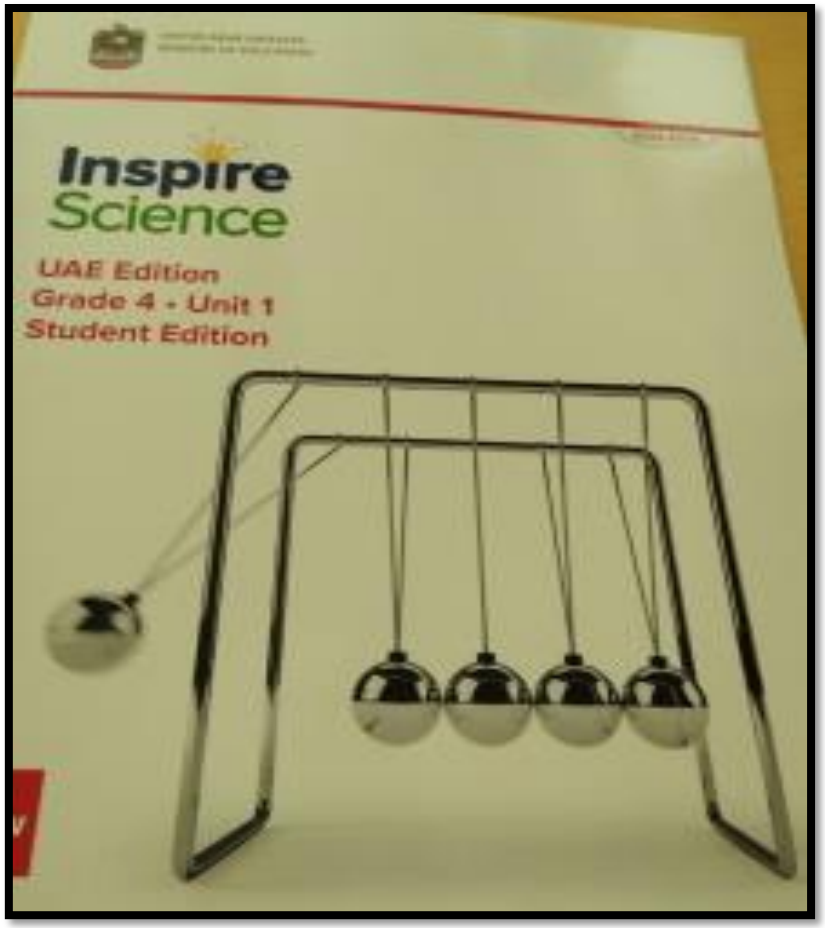
Ms. Christy

TERM 1 (2023-2024)

TERM1- BOOKS



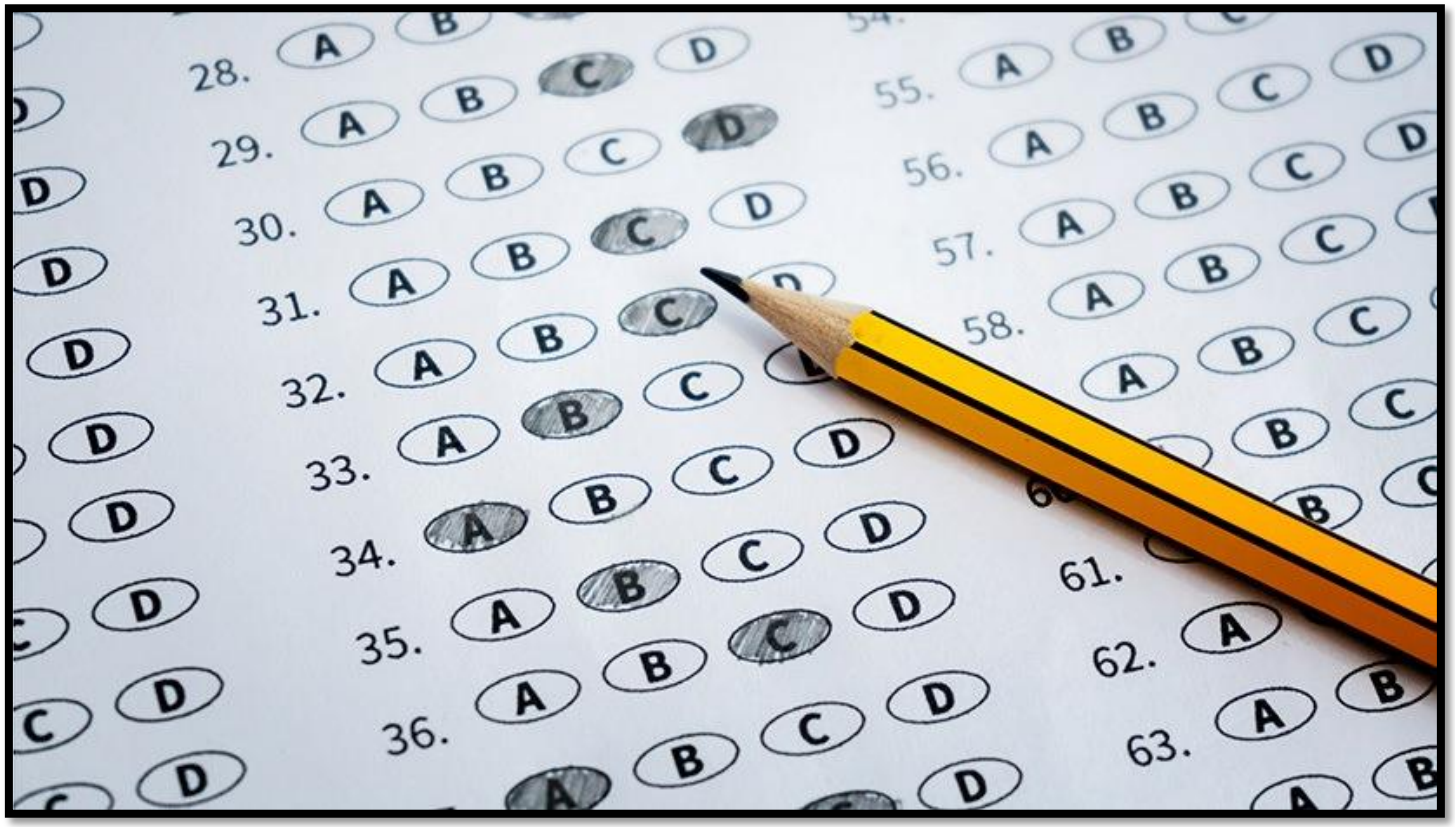
UNIT-3



UNIT-1

Question* / السؤال*	Learning Outcome/Performance Criteria** / نتاج التعلم/ معايير الأداء**	Reference(s) in the Student Book (English Version) / المرجع في كتاب الطالب (النسخة الانجليزية)	
		Example/Exercise / مثال/تمرين	Page / الصفحة
1	4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.	Figure page 12	U3M1L1 page 12
2	4-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.		U3M1L1 page 17
3	4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.	Figure page 17	U3M1L1 page 17
4	4-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.		U3M1L2 page 34
5	4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.		U3M1L3 page 49
6	4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.		U3M1L3 page 50
7	4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.	Figure page 85	U3M2L1 page 85
8	4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.	tabel page 101	U3M2L2 page 101
9	4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.		U3M2L2 page 97
10	4-ESS3-2: Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.		U3M2L2 page 97
11	4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.	Figure page 10	U1M1L1 page10
12	4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.		U1M1L1 page21
13	4-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide.		U1M1L1 page12
14	4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.		U1M1L1 page11
15	4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.		U1M1L1 page14
16	4-ESS2-2: Analyze and interpret data from maps to describe patterns of Earth's features.		U3M1L1 page 19
17	4-PS4-1: Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.	Figure page 96	U3M2L2 page 96
18	4-PS3-1: Use evidence to construct an explanation relating the speed of an object to the energy of that object.	Figure page 12	U1M1L1 page12
19	4-ESS2-1: Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	Figure page 32	U1M1L1 page32
20	4-PS3-3: Ask questions and predict outcomes about the changes in energy that occur when objects collide.		U3M1L3 page 59

MULTIPLE CHOICE QUESTIONS Q1-Q15



UNIT 3- MODULE 1-LESSON 1 (PAGE 12) MCQ

VOCABULARY

Look for these words as you read:

- continent
- earthquake
- landform
- latitude
- longitude
- plate
- topographic map
- volcano

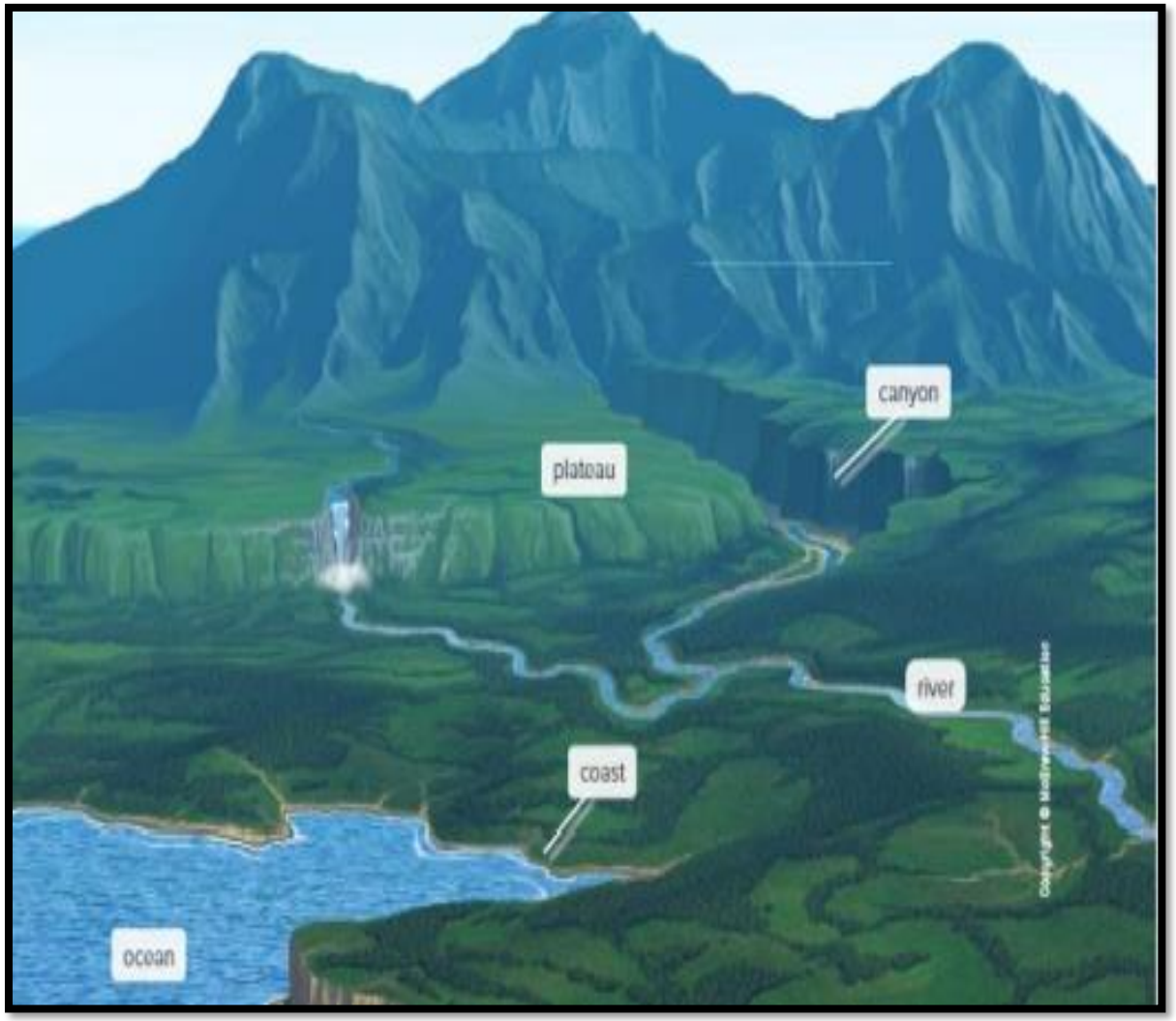
Landforms

In the Inquiry Activity, *Map California's Features*, you represented different landforms on a three-dimensional map. A **landform** is a physical feature on Earth's surface. Landforms vary greatly in shape and size. They include features such as level plains, rounded hills, and jagged mountains. Each landform has specific characteristics and is formed in a specific way.

Label a Diagram: Earth's Land and Water Features

Use the labels on the image below and descriptions on the next page to learn more about common landforms. Fill in the missing labels using the descriptions.

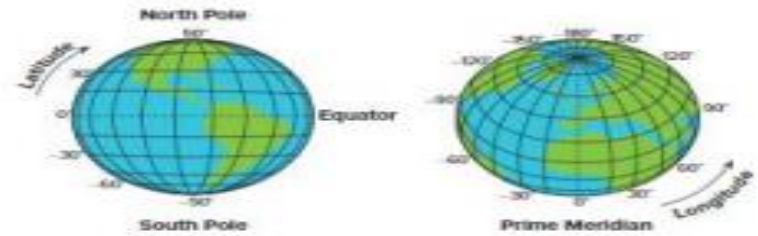
GO ONLINE Watch the video *Landforms* to see various landforms around the world.



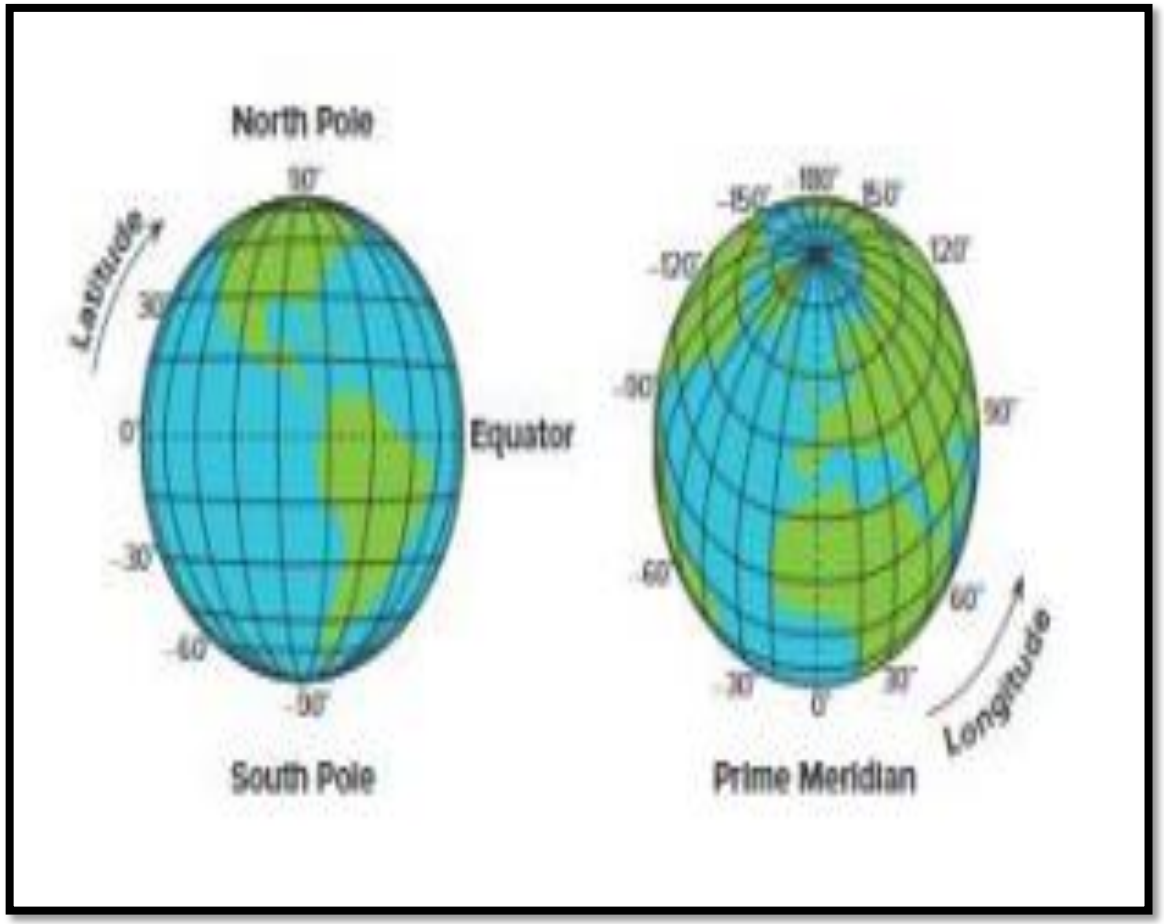
UNIT 3- MODULE 1-LESSON 1 (PAGE 17) MCQ

A **topographic map** shows the elevation of an area using lines. Each line is labeled with a number. Contour lines that are close together represent a rapid change in elevation. Contour lines that are far apart represent a gradual change in elevation.

Scientists can use maps to identify patterns in the locations of landforms and other features. The locations of certain features can be described using a coordinate system such as latitude and longitude. **Latitude** is used to describe how far north or south a place is from the equator. **Longitude** is used to describe how far east or west a place is from the Prime Meridian. Latitude and longitude lines form a grid across the globe.



UNIT 3- MODULE 1-LESSON 1 (PAGE 17) MCQ



UNIT 3- MODULE 1-LESSON 2 (PAGE 34) MCQ

Earth's Forces

Earth forces can affect the formation and patterns found in rock layers. Some of these forces include volcano eruptions, earthquakes, and the flow of rivers.

When a volcano erupts, it releases rocks, gases, and hot liquid rock called lava. Lava flows onto the surface, it cools, and hardens into new rock. A new layer of rock forms on top of the old layer each time a volcano erupts, like a stack of pancakes. This happens on continents and under oceans. An island can slowly form when enough underwater rock builds up to reach above the ocean surface. The Island of Hawaii formed this way.

Like volcanoes, earthquakes can change Earth's surface. During an earthquake, the sudden slip of two plates can cause cracks or can cause huge rocks to slide up over another layer. These changes can sometimes look like s-shaped folds in the rock layer.

UNIT 3- MODULE 1-LESSON 3 (PAGE 49)

Many animals, like gophers, worms, and ants, can loosen and move soil and break apart rocks as they burrow in the ground. Plant roots can grow inside cracks in a rock and, over time, split the rock into pieces.

GO ONLINE Watch the video *Landscapes Change Over Time* to learn more about these processes.

The actions of living things, such as burrowing animals or growing plant roots, can cause weathering.

What type of force can cause abrasion?

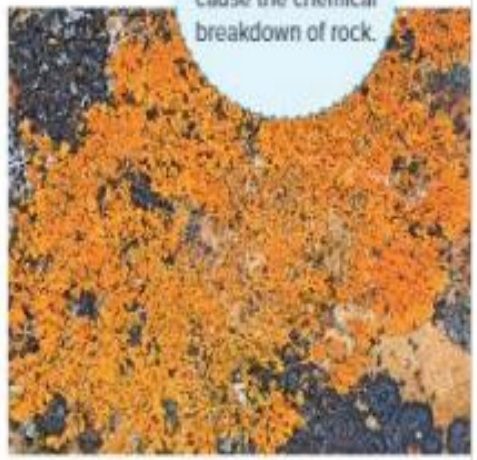
Chemical Weathering

Chemical weathering changes the minerals that make up rocks. Water, living things, and oxygen can cause chemical weathering.

Acids from natural sources, such as volcanoes, can make water more acidic. These acids can speed the breakdown and weathering of rocks.

Iron combines with oxygen in the presence of water to form rust. Rocks that contain iron can rust. Rust makes rock soft and crumbly.

Plant roots give off a weak acid as they grow. Lichens, plant-like organisms that grow on rocks, also produce weak acids. Lichens are important to soil formation in cold climates.



Lichens produce acids that help cause the chemical breakdown of rock.

UNIT 3- MODULE 1-LESSON 3 (PAGE 50) MCQ

Erosion and Deposition

Erosion is the movement of weathered material from one place to another. The process of eroded soil and bits of rock being dropped off in another place is **deposition**. Erosion and deposition are two processes that change the shape of land.

Erosion and Deposition by Gravity

Gravity causes material to move. The sudden movement of large amounts of material down a slope can take the form of mudslides, landslides, and rockslides. Strategies such as building away from steep slopes, redirecting surface water away from landslide-prone areas, and planting ground cover to reduce water filtering into the ground can reduce hazardous events such as landslides.

Erosion and Deposition by Running Water

As water runs downhill, it can wash away soil and erode rock. The steeper the land, the faster the water moves. Fast-moving water has more energy. It can wash away larger amounts of heavier sediment. Rivers eventually flow into a larger body of water, such as a lake or an ocean. The sediment carried by the river is deposited on the bottom of the larger body of water. Over time, this sediment builds up into a landform called a delta.

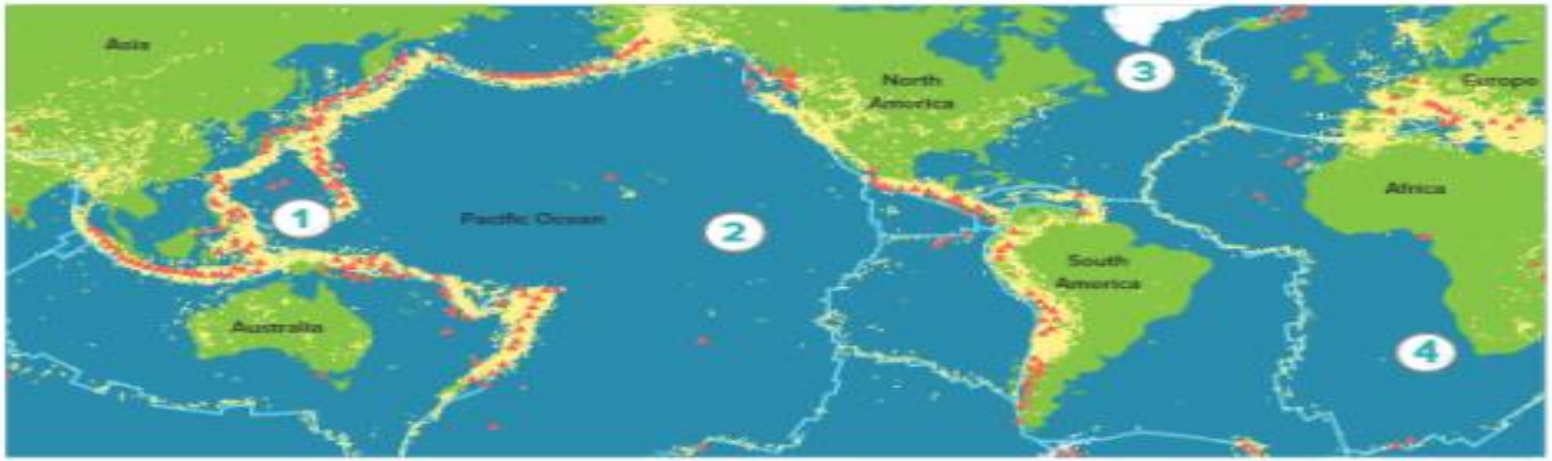
Erosion and Deposition by Wind

Wind can move sand from one place to another. The stronger the wind blows, the larger the particles it can pick up. Deposition occurs when a clump of grass or rock traps the sediment. A sand dune is a deposit of wind-blown sand. Dunes move over time.

UNIT 3- MODULE 2-LESSON 1 (PAGE 85) MCQ

Three-Dimensional Thinking

1. The map below shows Earth's crust broken into 12 major plates. These plates are in constant motion, and Earth experiences earthquakes every day.



Think about patterns of earthquakes. Which number on the map shows where earthquakes are most likely to occur?

A. 1

B. 2

C. 3

D. 4

2. Looking at the map above, explain what you know about the pattern of where earthquakes occur.

UNIT 3- MODULE 2-LESSON 2 (PAGE 101) MCQ

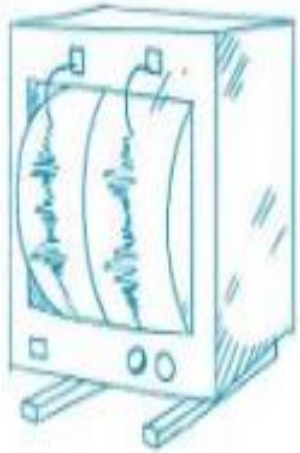
California Earthquake Data					
Year	Location	Magnitude	Year	Location	Magnitude
1906	San Francisco	7.8	1980	Eureka	7.2
1911	Calaveras Fault	6.5	1984	Morgan Hill	6.2
1920	Los Angeles	4.9	1989	Loma Prieta	6.9
1923	Cape Mendocino	7.2	1992	Landers	7.3
1933	Long Beach	6.4	1994	Northridge	6.7
1940	Imperial Valley	7.1	2004	Parkfield	6.0
1954	Arcata	6.6	2010	Baja	7.2

1. According to the data, which decade experienced the most earthquakes?

2. What patterns can you identify in the intensity of past earthquakes?

UNIT 3- MODULE 2-LESSON 2 (PAGE 97) MCQ

Record and Measure Earthquakes

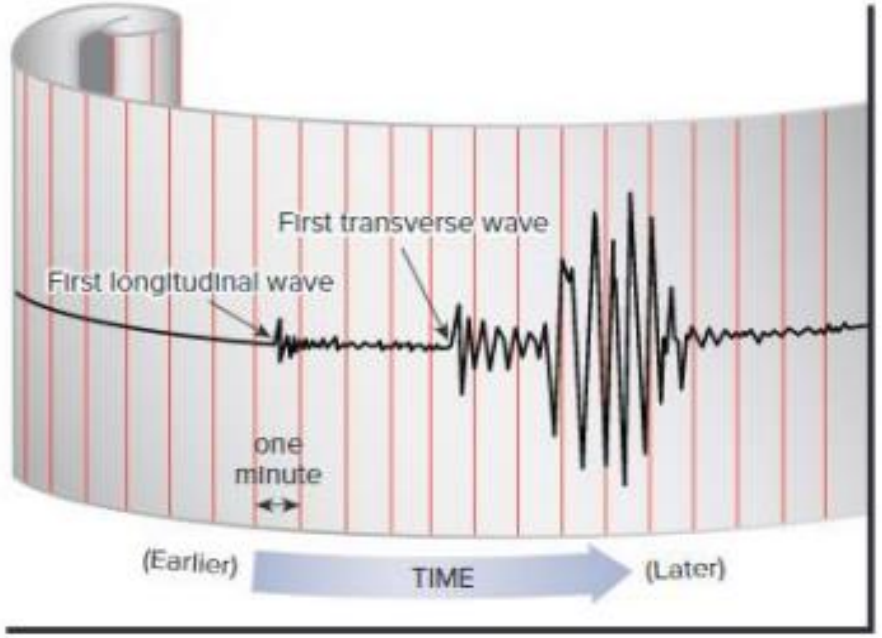


Scientists measure seismic waves with a seismograph.

A **seismograph** is an instrument used to detect and record earthquakes. The device shows the waves as curvy lines. The stronger the quake, the steeper the lines.

The amount of energy released by an earthquake is its **magnitude**. The Richter scale measures magnitude, the largest ground movement, when an earthquake occurs. It rates earthquakes from weakest to strongest starting at 1. Each larger whole number indicates that an earthquake has released 32 times more energy.

The Mercalli scale measures what people felt and what happened during an earthquake. It uses Roman numerals from I to XII.



3. What do you think happens to the amplitude of an earthquake wave when its magnitude increases?

UNIT 1- LESSON 1 (PAGE 10)

VOCABULARY

Look for these words as you read:

- acceleration
- force
- friction
- inertia
- motion
- speed
- velocity

Position and Motion

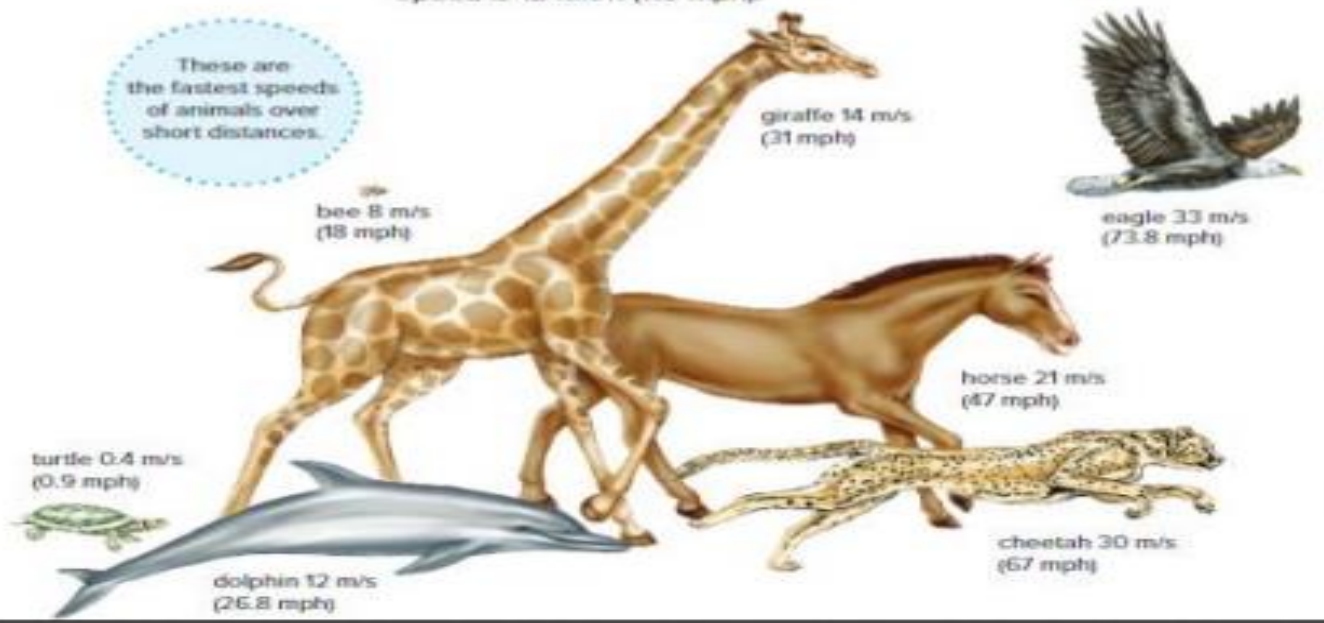
The position of an object is its location. Certain words give us clues about location, like *left* and *right*, *above* and *below*, and *north*, *south*, *east*, and *west*. When we describe an object's position, we compare it to surrounding objects.

Motion

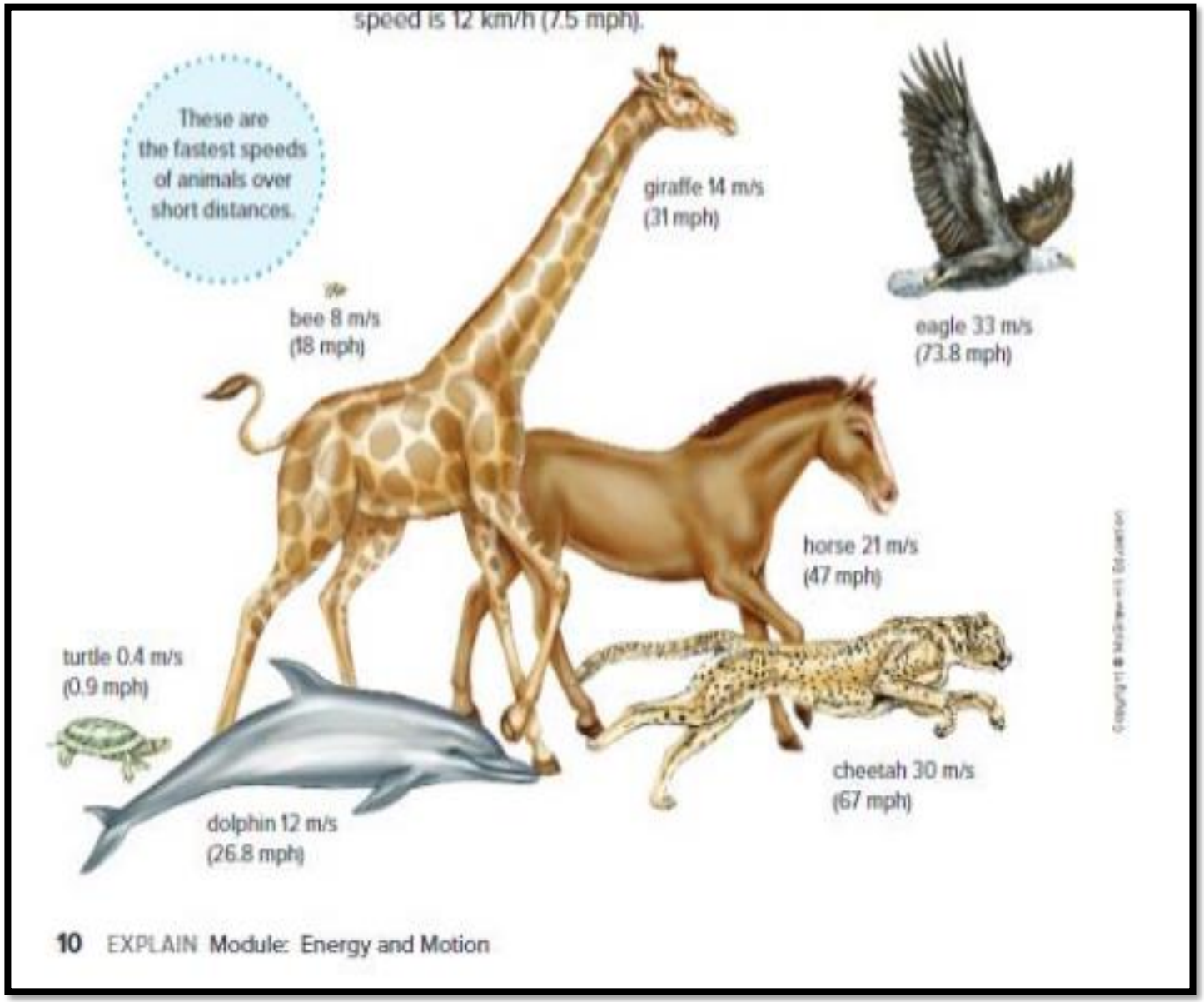
Motion is a change in an object's position. To describe motion more completely, you also need to find the amount of time it takes an object to move a certain distance. With measures of distance, direction, and time, you can describe motion and how it changes.

Speed

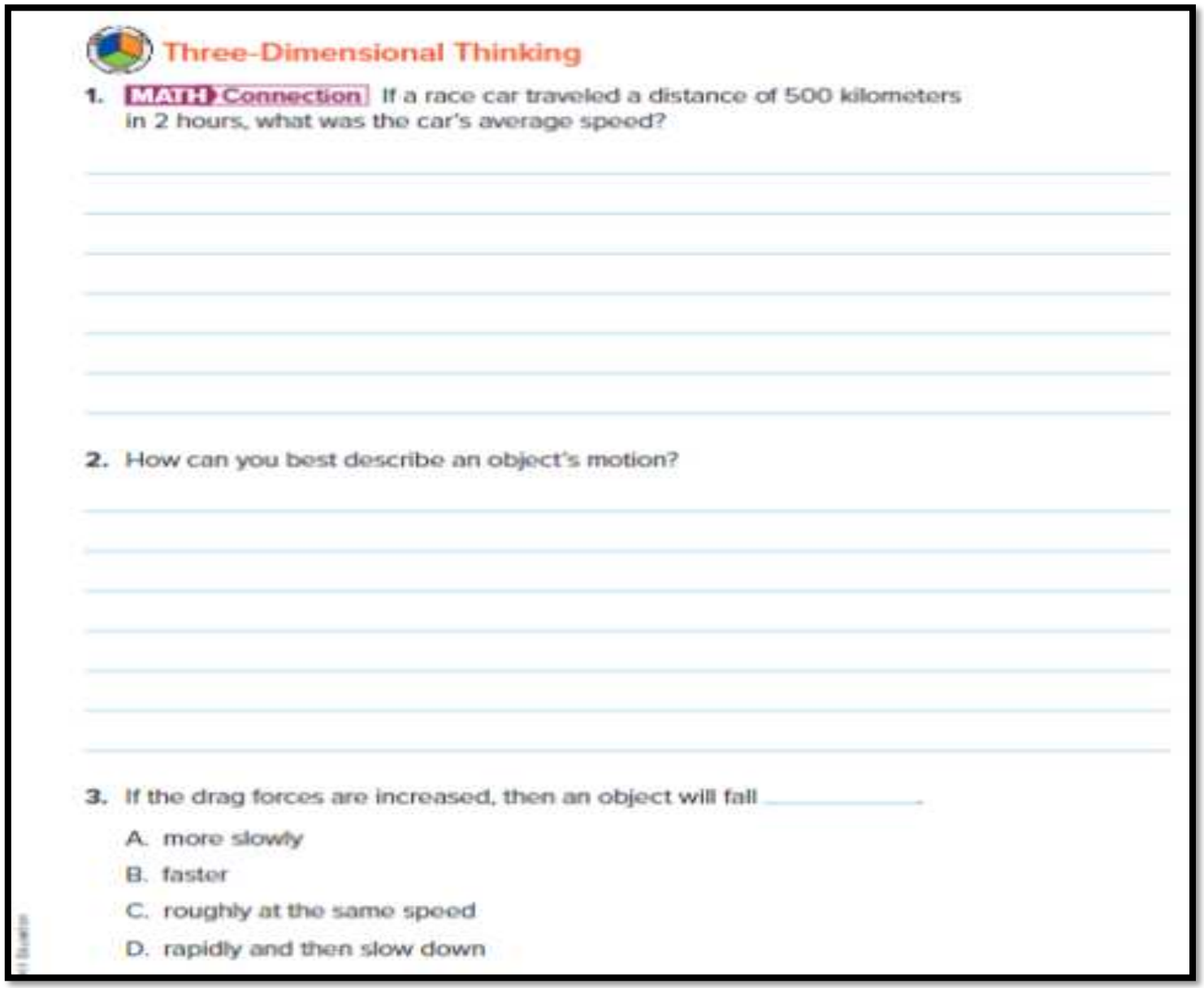
The **speed** of an object is how fast an object's position changes over time. Units of speed are units of distance per unit of time, such as meters per second (m/s), kilometers per hour (km/h), or miles per hour (mph). Suppose that in one hour, you pedal your bike 12 km (7.5 mi). Your speed is 12 km/h (7.5 mph).



UNIT 1- LESSON 1 (PAGE 10) MCQ



UNIT 1- LESSON 1 (PAGE 21) MCQ



Three-Dimensional Thinking

1. **MATH Connection** If a race car traveled a distance of 500 kilometers in 2 hours, what was the car's average speed?

2. How can you best describe an object's motion?

3. If the drag forces are increased, then an object will fall _____.

   A. more slowly
   B. faster
   C. roughly at the same speed
   D. rapidly and then slow down

UNIT 1- LESSON 1 (PAGE 12) MCQ

Forces Change Motion

A **force** is any push or pull. A force can cause an object to start moving or change direction. It can also cause an object to speed up, slow down, or stop.

The acceleration of an object depends on the amount of force that acts upon the object. A greater force gives an object a greater acceleration. Acceleration also depends on the weight of the object. If you apply the same force to two objects of different weights, the greater weight accelerates more slowly.

Many forces occur as one object touches another. These are called contact forces. For example, when you hit a baseball, you apply a contact force. Other forces can occur without objects touching. These are called noncontact forces. Gravity is a noncontact force.

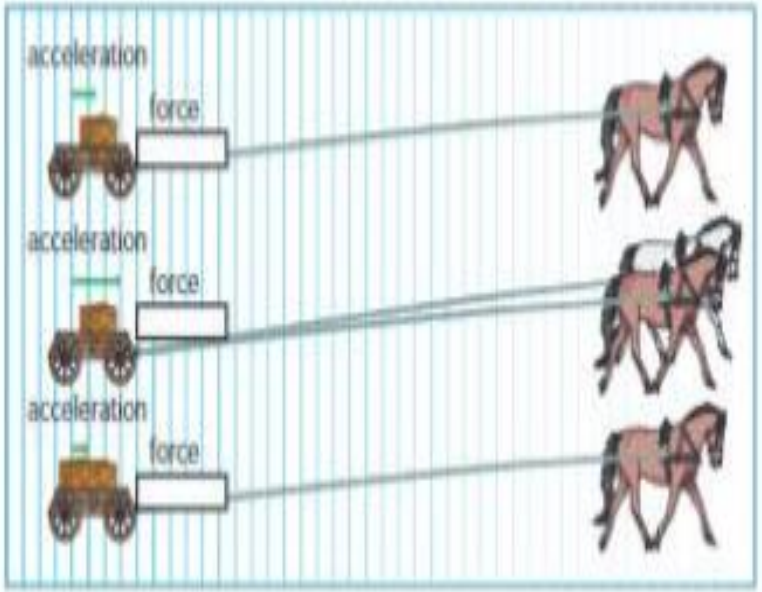
The contact force from the baseball bat accelerates the ball.

1. What two factors affect the acceleration of an object?

2. How could you increase the speed of a toy car?

Label a Diagram: Force and Acceleration

Use what you learned in the paragraph above to draw arrows that show the acceleration of each cart. Draw a longer arrow to represent greater force and a shorter arrow to represent lesser force.



UNIT 1- LESSON 1 (PAGE 11) MCQ

Velocity

Velocity is the speed and direction of an object. The units of velocity are the same as the units of speed: distance per unit of time. Velocity, however, must also include a direction. If a plane flies 640 kilometers south in 2 hours, its average velocity is 320 km/h south.

GO ONLINE Watch *Acceleration* to learn about how objects move.

Talk About It

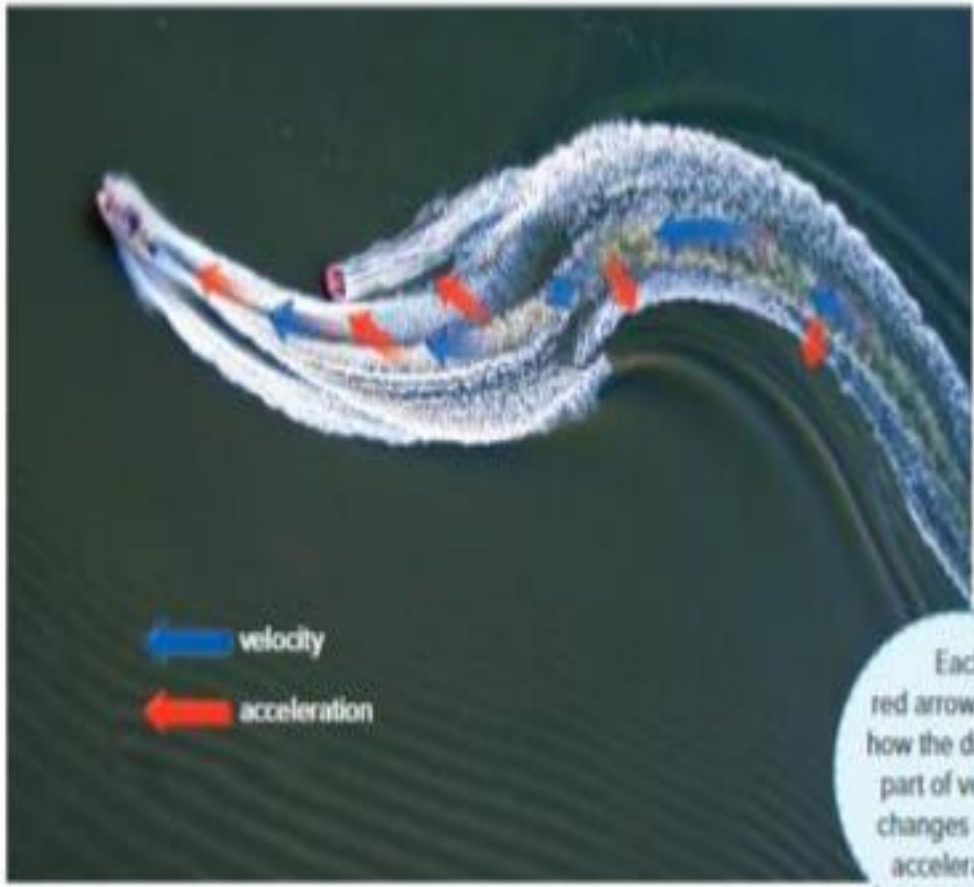
How is velocity different than speed?

Acceleration

When a moving object speeds up, slows down, or changes direction, it accelerates. A change in velocity over time is called **acceleration**.

You also accelerate by changing only direction. When you travel around a curve, the direction of your motion changes. It doesn't matter whether your speed is constant or changing. As long as your direction of motion is changing, you are still accelerating.

Label a Diagram Velocity and acceleration can both be represented by arrows. Look at the diagram below. Circle the pair of arrows that show when the boat's velocity and acceleration have the same direction.



UNIT 1- LESSON 1 (PAGE 14) MCQ

Balanced and Unbalanced Forces

The forces that act upon an object combine in different ways. Forces that act in the same direction add up to produce a stronger force. Forces that act in opposite directions produce a weaker force. The total force on an object is the sum of all of the forces acting on the object.

When forces act on an object without changing its motion, they are called balanced forces. If an object is at rest, the forces on it are balanced. Forces on a moving object can be balanced too. When ice skating, your feet push against the ice, moving you forward. That force can be balanced with forces from air against your body. When you skate in a straight line at the same speed, the forces are balanced. If the total force acting on an object equals zero, the object will not accelerate.

Talk About It

What other sports or activities can you think of that involve balanced forces? Discuss in a small group.

Forces that do not add up to zero are unbalanced. Unbalanced forces change the motion of an object. Unbalanced forces can also affect an object's speed, direction, or both. For example, a skier will not start skiing until an unbalanced force acts on her. Unbalanced forces cause the skier's speed and direction to change.

All objects have a property called inertia. **Inertia** is the tendency of an object in motion to stay in motion or of an object at rest to stay at rest.

Eventually, the skier's motion will come to a stop because of opposite forces acting against the skis.


FREE RESPONSE QUESTIONS
OR WRITTEN RESPONSE
QUESTIONS
Q16, 17,18,19 and 20

UNIT 3-MODULE 1- LESSON 1 (PAGE 19) FRQ- WRITTEN RESPONSE QUESTION

Tension, or forces that pull things apart, moves Earth's plates. Plates can also be moved by pushing forces. Mountains form when plates push together or past each other along plate boundaries. Many earthquakes and volcanoes also happen at plate boundaries.

A **volcano** is an opening on Earth's surface where melted rock or gases are forced out. Volcanoes can form on land or on the ocean floor, but they are located only in certain places on Earth's surface. Most volcanoes form at plate boundaries. For example, a ring of volcanoes called the *Ring of Fire* surrounds the Pacific Ocean. The Ring of Fire follows the boundaries of the plates that meet around the Pacific Ocean.

An **earthquake** is a sudden movement of Earth's crust. Like volcanoes, most earthquakes occur because of moving plates. Also, like volcanoes, earthquakes are most likely to occur near plate boundaries. You will learn more about earthquakes in the next module.

2. Describe the global patterns of volcanoes and earthquakes that are shown on the world map.

Think about the ocean floor features from page 14. Some of these features, like ocean trenches, occur where two plates push together. Mid-ocean ridges occur where two plates spread apart. As the two plates move apart, new crust forms. The mid-ocean ridges are all connected and form the most extensive underwater mountain sytem on Earth.

3. Use the graphic organizer to classify the location of the following features: abyssal plains, earthquakes, mountains, volcanoes.

Near Plate Boundaries	Not Near Plate Boundaries

UNIT 3- MODULE 2-LESSON 2 (PAGE 96) FRQ

All waves transfer energy without permanently moving the material through which they travel. This means that after a wave has passed, particles end up in about the same position they started in.

2. Draw waves with the characteristics indicated below.

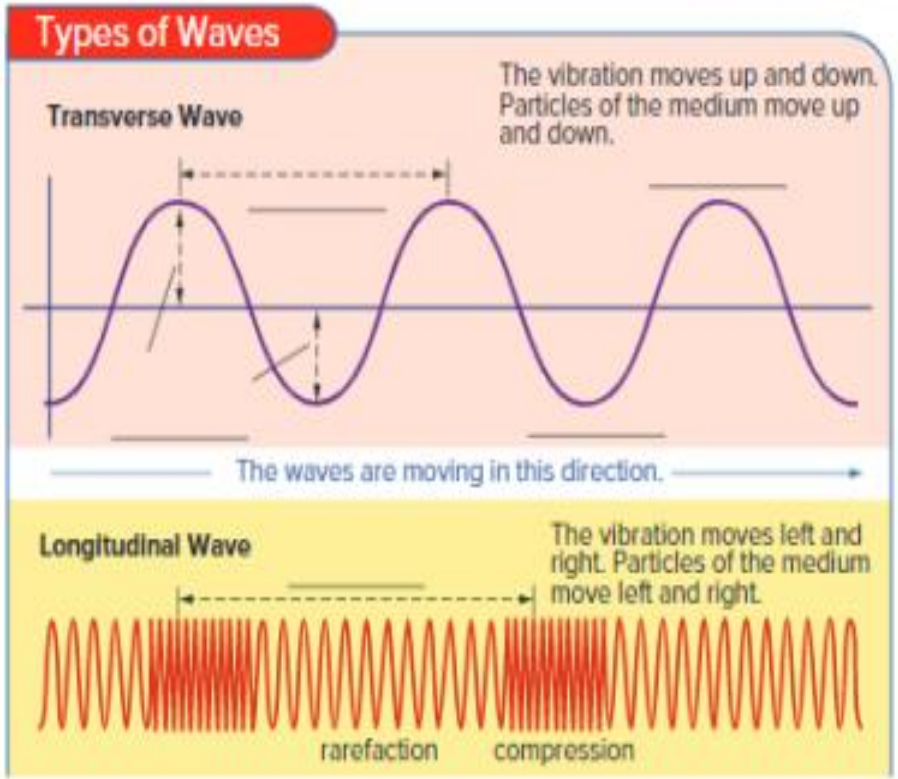
Long wavelength, low frequency:

Short wavelength, high frequency:

Label a Diagram: Parts of Waves

Use what you learned to label the wavelength, amplitude, crest, and trough of each wave.

GO ONLINE Watch the video *Earthquake Movement* to see how earthquake waves move.



UNIT 1- LESSON 1 (PAGE 12)

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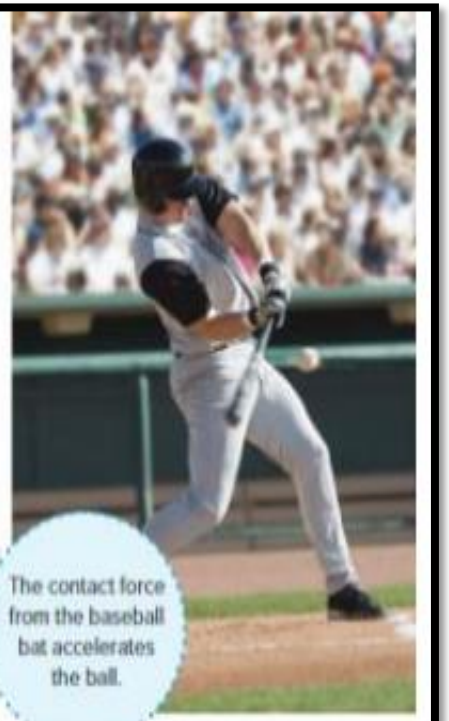

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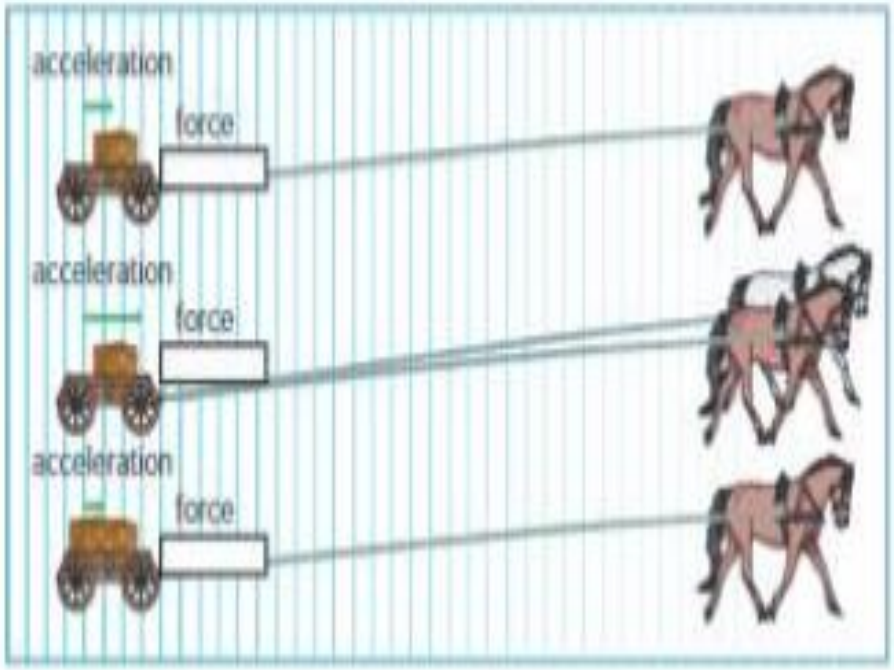

UNIT 1- LESSON 2 (PAGE 32) FRQ

Energy and Speed

Label a Diagram: Speed and Energy of a Roller Coaster

Write captions for each number on the diagram. Describe the speed, potential energy, and kinetic energy at each point on the roller coaster track.

1.

2.

3.

UNIT 3- LESSON 3 (PAGE 59) FRQ

Three-Dimensional Thinking

1. Changes in the landscape can be caused by _____.

   A. physical weathering

   B. chemical weathering

   C. living things

   D. All of the above

2. _____ is the process that breaks down material.

3. Explain how heavy rainfall can affect the land and living things in an area.

4. What can affect how fast land erodes?

Good Luck

with your Exams