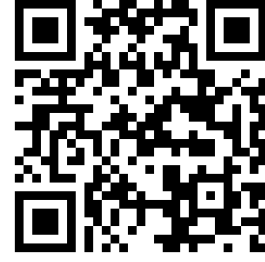


شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



إجابات المراجعة النهائية قبل الامتحان

[موقع المناهج](#) ⇨ [المناهج الإماراتية](#) ⇨ [الصف الثامن](#) ⇨ [علوم](#) ⇨ [الفصل الأول](#) ⇨ [الملف](#)

التواصل الاجتماعي بحسب الصف الثامن

روابط مواد الصف الثامن على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف الثامن والمادة علوم في الفصل الأول

[ملخص وشرح الدرس الأول Lesson1 how travels light مع امتحانات السنوات السابقة](#)

1

[ملخص وشرح الدرس الأول Properties Wave خصائص الموجه](#)

2

[أسئلة الامتحان النهائي بريدج](#)

3

[حل أسئلة الامتحان النهائي - انسابير](#)

4

[حل مراجعة الدروس المطلوبة وفق الهيكل الوزاري انسابير](#)

5



وزارة التربية والتعليم
MINISTRY OF EDUCATION



مؤسسة الإمارات للتعليم المدرسي
EMIRATES SCHOOLS ESTABLISHMENT

ALSALAMAT SCHOOL

(TRIMESTE I) (2022-2023)

GRADE (8) SCIENCE

**FINAL REVISION
ANSWERS**

MR. ISSA WASWAS



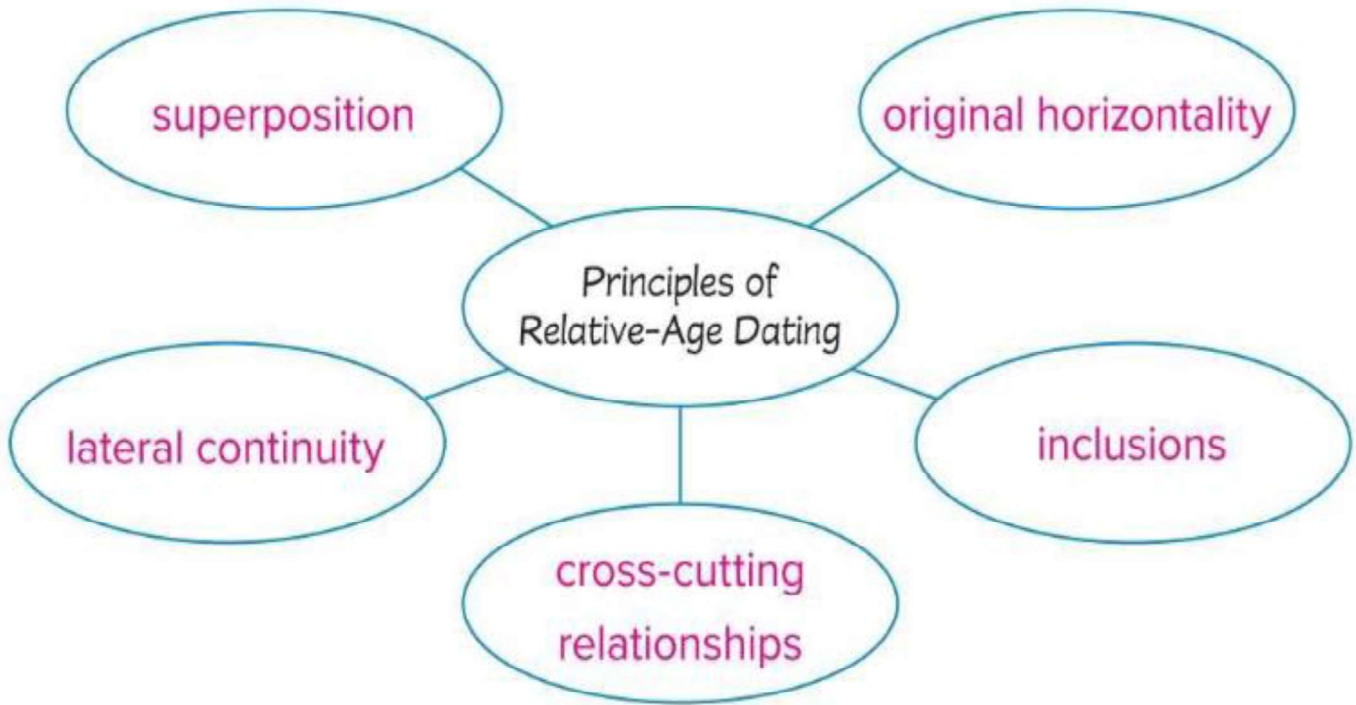
SCIENCE FINAL REVISION

المراجعة النهائية لمادة العلوم

أعزائي الطلاب يرجى الانتباه للملاحظات التالية:

- 1- موعد امتحان العلوم النهائي يوم الإثنين الموافق **05/12/2022**
- 2- يحتوي الامتحان على **25** سؤال جميعها (اختيار من متعدد).
- 3- سوف يتم احتساب أفضل **20** إجابة في الدرجة النهائية أي أن الطالب إذا أخطأ بإجابة **5** أسئلة فقط وأجاب **20** سؤال إجابة صحيحة فإنه سوف يحصل على علامة كاملة **100/100**
- 4- أرفق اليكم في هذه المراجعة أسئلة على أهم الأفكار التي وردت من الوزارة في هيكله الامتحانات.
- 5- تمنياتي بالتوفيق للجميع.

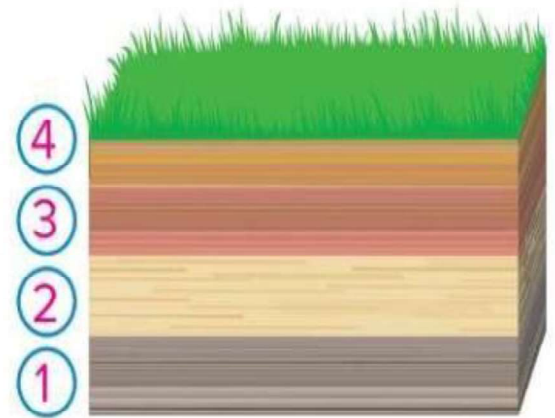
7. What are the principles of relative-age dating?



8. Which principle did you apply in Step 2 of the investigation?

superposition

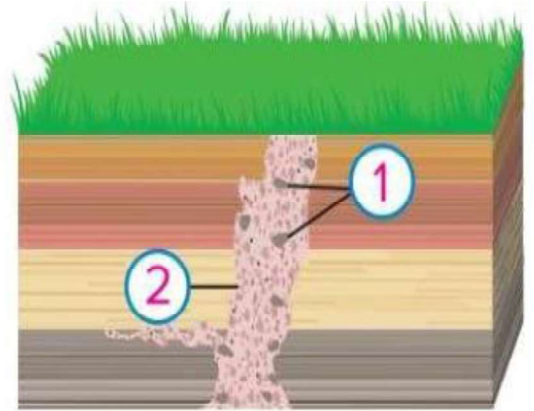
Using this principle, assign the rock layers in the diagram to the right their relative ages from oldest (1) to youngest (4).



9. Which principle did you apply in Step 4 of the investigation?

inclusions

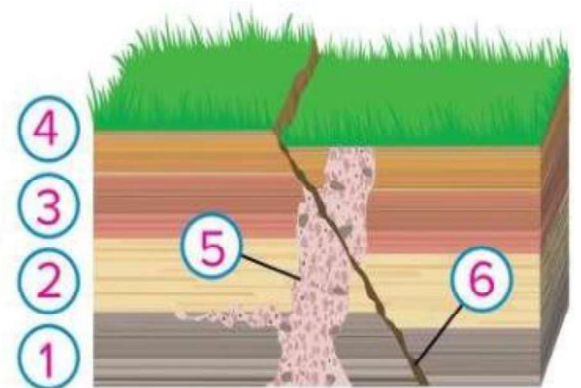
Using this principle, label the older feature 1, and the younger feature 2 on the diagram to the right.



10. Which principle did you use in Step 6 of the investigation?

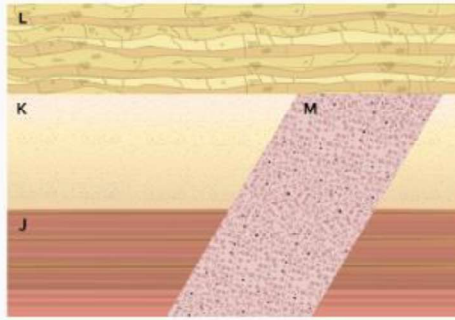
cross-cutting relationships

Using this principle, label the rock layers and features from oldest (1) to youngest (6).



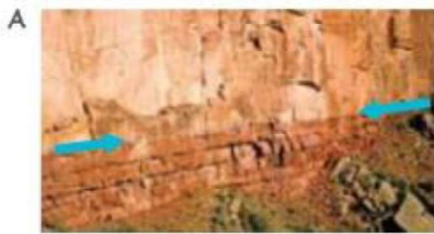
2. Order the features in the illustration from oldest to youngest.

- A JKLM
- B MJKL
- C JKML
- D MLKJ



3. Which geologic principle must be assumed to determine the relative age of M?

- A cross-cutting relationships
- B superposition
- C original horizontality
- D inclusions



horizontal sedimentary layer
overlies horizontal sedimentary
layer

Disconformity



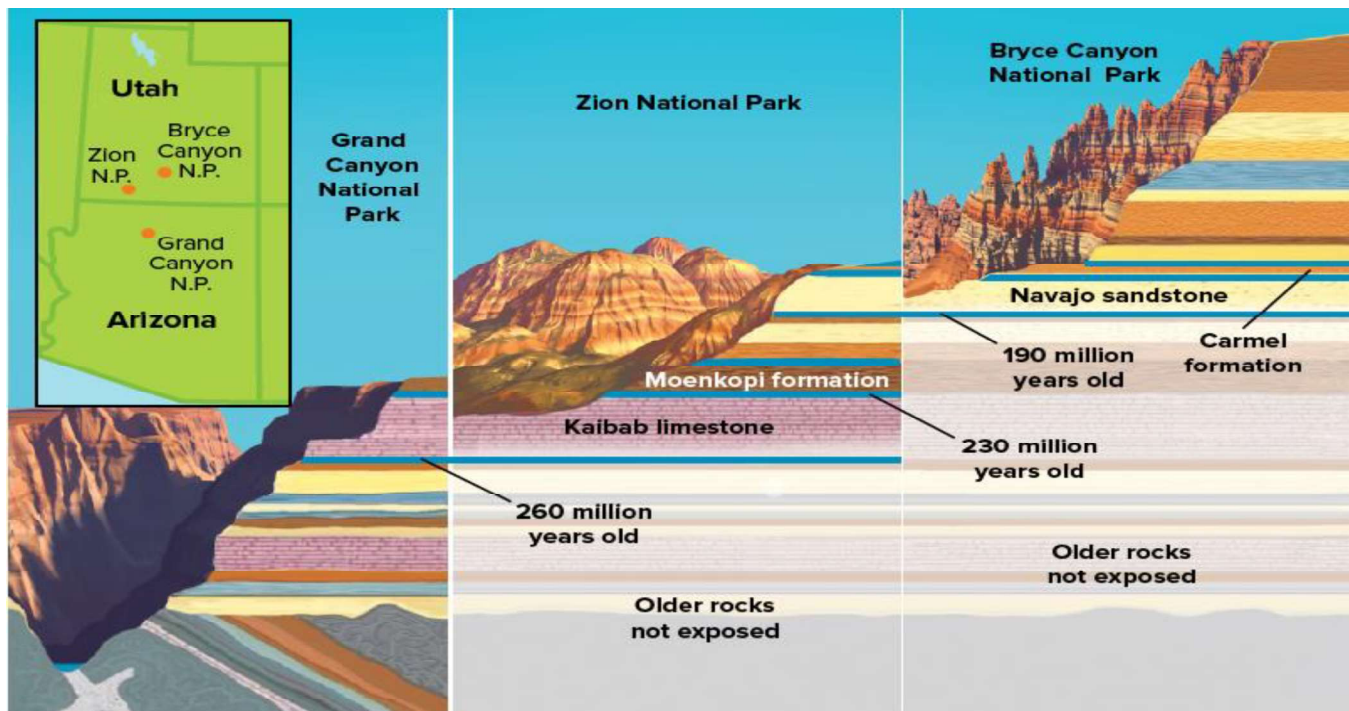
horizontal sedimentary layer
overlies tilted sedimentary layer

Angular



horizontal sedimentary layer
overlies nonsedimentary layer

Nonconformity



2. Infer the makeup of the buried layer below Zion's Kaibab layer.

- A The layer below the Kaibab layer at Zion National Park would likely be the same layer that is immediately above the Kaibab layer at Bryce Canyon National Park.
- B The layer below the Kaibab layer at Zion National Park would likely be the same layer that is immediately below the Kaibab layer at Grand Canyon National Park.
- C The layer below the Kaibab layer at Zion National Park would likely be the same layer that is immediately above the Navajo layer at Bryce Canyon National Park.
- D The layer below the Kaibab layer at Zion National Park would likely be the same layer that is immediately below the Navajo layer at Grand Canyon National Park.

The oldest rock layer in an undisturbed rock sequence occurs _____.

- A) at the bottom of the sequence**
- B) below the sedimentary rock layer**
- C) below the unconformity**
- D) at the top of the sequence**

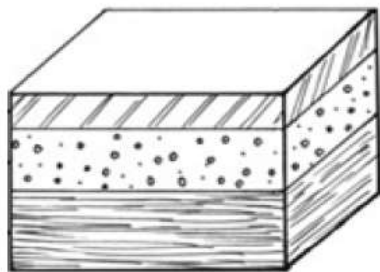
The principle of _____ states that, in an undisturbed sequence, the oldest rocks are at the bottom of the sequence and successive layers are younger than those below them.

- A) Superposition** **B) cross-cutting** **C- original horizontally**

Determining the order of events and the relative age of rocks by examining the position of rocks in a sequence is called _____.

- A) absolute dating**
- B) radiometric dating**
- C) relative dating**
- D) radiocarbon dating**

The principle of superposition can be used to determine.



- A) the actual age of these rock layers**
- B) the relative densities of these rock layers**
- C) the actual temperatures of these rock layers**
- D) the relative age of these rock layers**

The gap in the rock record that occurs between folded or uplifted rock layers and a sedimentary rock layer on top of them is called a(n) _____.

A) Nonconformity

B) Disconformity

~~C) Angular unconformity~~

What classification of unconformity occurs when sedimentary rock overlies igneous rock?

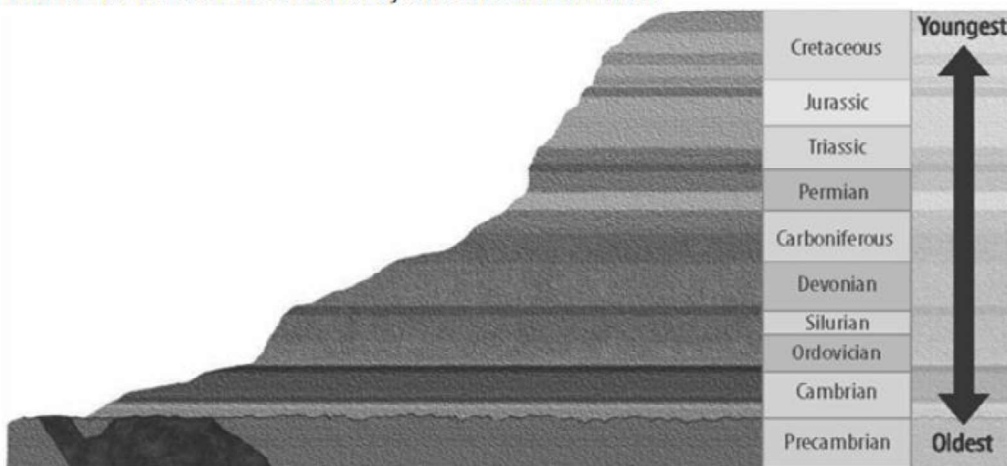
A) disconformity

B) nonconformity

C) angular unconformity

D) conformity

7) Which is true of the rock layers shown below?

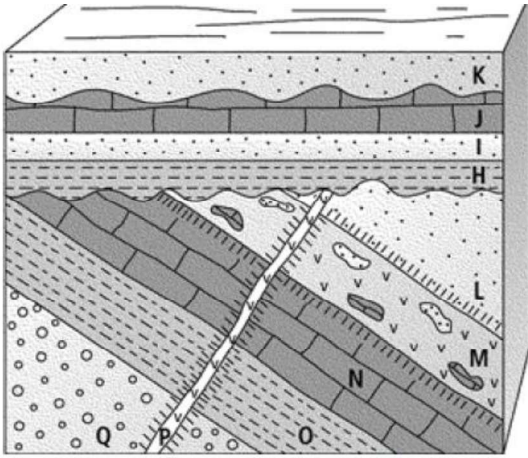


A) Only older rock contains fossils of complex life forms.

B) Only younger rock contains fossils of simple life forms.

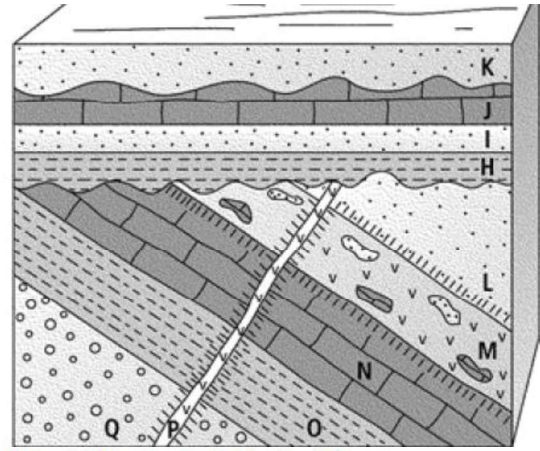
C) Both older and younger rocks contain fossils of the most complex life forms.

D) Only younger rock contains fossils of complex life forms.



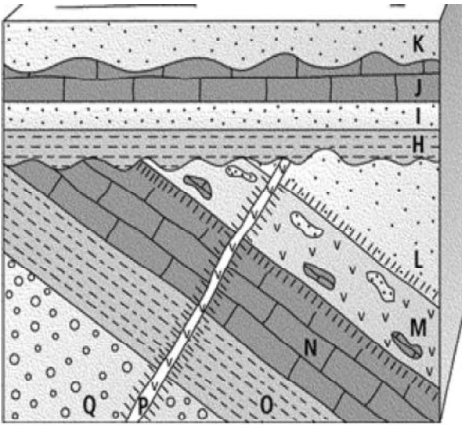
Layer J is _____ Layer N.

- A) older than
- B) the same age as
- C) younger than
- D) denser than



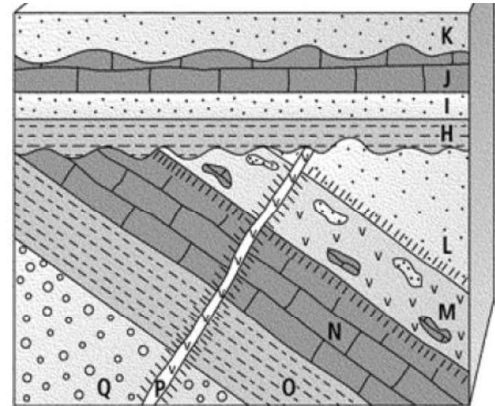
Layer H is deposited on a(n) _____.

- A) angular unconformity
- B) nonconformity
- C) disconformity
- D) fault



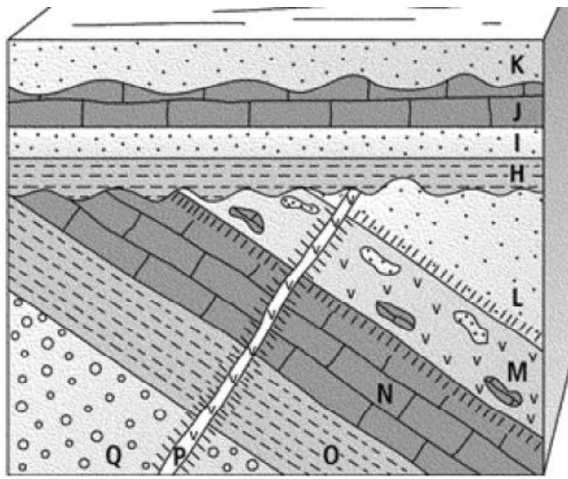
According to the principle of _____, Event P is younger than Event M.

- A) inclusions
- B) cross-cutting relationships
- C) original horizontality
- D) subduction



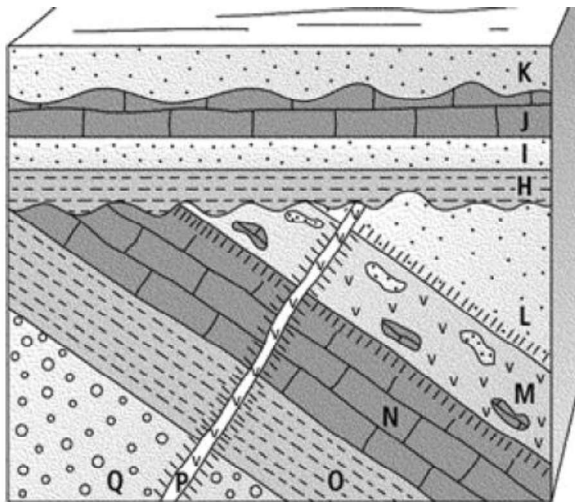
The inclusions in M are _____ the rock itself.

- A) younger than
- B) the same age as
- C) older than
- D) similar to



According to the principle of _____, Layers Q, M, O, N, and L were not deposited at an angle when they first formed.

- A) cross-cutting relationships
- B) superposition
- C) lateral continuity
- D) original horizontality



The relative ages of Layers H, I, J, and K can be determined using the principle of _____.

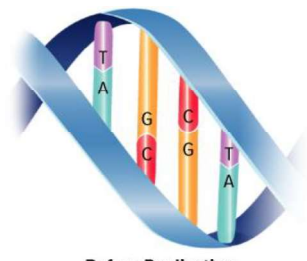
- A) inclusions
- B) lateral continuity
- C) original horizontality
- D) superposition

Mutation	Effects	Positive	Negative	Neutral
Eye color	Genes for brown eyes are mutated and the individual has blue eyes.			×
Lactose tolerance	Due to a mutation, human adults are able to process lactose unlike other mammals.	×		
Color blindness	Due to a mutation on the X chromosome, a person cannot see certain colors.		×	

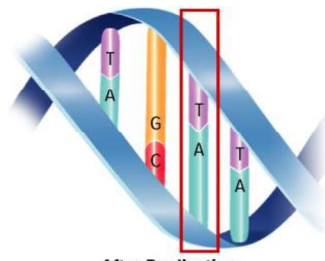


2. The diagram above shows a segment of DNA before and after replication. Which could have occurred as a result of this change in structure?

- A changes to the genotype of the organism
- B changes to the traits of the organism
- C changes in the production of proteins
- D all of the above



Before Replication



After Replication

3. The mutation shown above resulted in muscle degeneration. The effect of this mutation is that muscles become progressively weaker. What type of mutation is this?

- A positive
- B neutral
- C negative
- D none of the above

A ____ is part of the DNA code on a chromosome.

- A) gene
- B) genotype
- C) phenotype
- D) gender

Mutations cause changes in ____.

- A) elements
- B) proteins
- C) compounds
- D) essential nutrients

Which of the following is NOT part of a chromosome?

- A) proteins
- B) cell
- C) deoxyribonucleic acid
- D) DNA

A segment of DNA is a ____.

- A) trait
- B) gene
- C) cell
- D) model

Humans can change a species' _____ by choosing which organisms will reproduce.

- A) food
- B) traits
- C) predators
- D) sex

Small changes in traits that cause variation are frequently caused by _____.

- A) natural selection
- B) competition
- C) mutations
- D) migration

2. No two tigers have the same stripe pattern. Such slight differences in inherited traits among individual members of a species occur through mutations. Which term best identifies these differences?

- | | |
|------------------------------------|-------------------|
| <input type="radio"/> A | mimicry |
| <input type="radio"/> B | natural selection |
| <input type="radio"/> C | adaptation |
| <input checked="" type="radio"/> D | variation |

3. A bat's heart rate can fall dramatically during hibernation. Its breathing rate is also affected, and it may not breathe for an entire hour. Hibernation supports the bat's survival in its environment. What type of adaptation is hibernation?

- | |
|---|
| <input checked="" type="radio"/> A functional |
| <input type="radio"/> B structural |
| <input type="radio"/> C behavioral |
| <input type="radio"/> D none of the above |

4. Which structural genetic change in the finches can be identified as the one most influenced by feeding habits, as proposed by Charles Darwin?

- | |
|---|
| <input type="radio"/> A ability to fly from island to island to find the food they prefer |
| <input checked="" type="radio"/> B beak size and shape to take advantage of the food they had |
| <input type="radio"/> C claw shapes for perching on limbs while catching insects in their beaks |
| <input type="radio"/> D cooperative behavior so they could share limited seeds and nectar |



THREE-DIMENSIONAL THINKING

Can traits of organisms always be predicted with selective breeding? **Explain** how multiple **causes** can influence the traits of an organism.

Students should identify that traits are not always predictable due to mutations. Students may list environmental and genetic factors as multiple causes that influence an organism's traits.

Analyze and Conclude

8. How do the puppies differ from their parents?

Answers may vary. Students should note that the puppies all inherited a trait from each parent, but not all puppies got the exact same combination of traits.

9. How were you able to produce a desired trait in your puppies? Were you always able to produce the desired trait? Could the traits be predicted in terms of probability?

Students should identify that by choosing the trait they found most important and selecting a partner who chose the same trait, they were able to ensure all puppies had this desired trait.

10. How are natural selection and selective breeding related?

Students should identify that the same mechanisms are behind each (variation in traits), but that each have different forces acting on them. In natural selection the environment forces changes while in selective breeding, traits are selected by humans.

A student prepared this chart comparing examples of natural selection with artificial selection.

Natural Selection Traits That Benefit the Species	Artificial Selection Traits That Directly Benefit Humans
<ul style="list-style-type: none">• Ability to escape predators• Ability to resist droughts	<ul style="list-style-type: none">••

2. Which can the student add in the column under artificial selection to complete the chart?

1. ability to grow large kernels of corn
2. ability to grow fruit that can be stored for long periods
3. ability to catch larger prey
4. ability to produce milk for offspring

A 1 and 3

B 1 and 2

C 2 and 3

D 3 and 4

3. Golden rice is a type of rice that has been altered to contain vitamin A. This yellow rice is beneficial to populations that typically do not receive enough vitamin A from other sources. How is golden rice classified?

A genetically engineered

B genetically modified organism

C altered through gene therapy

D A and B

5) Footprints formed in mud that later turned to rock are called _____ fossils.

- | | | | |
|---|-------------------------------|--|---|
| <input checked="" type="radio"/> A- Trace fossils | <input type="radio"/> B- Cast | <input type="radio"/> C- Carbonization | <input type="radio"/> D- Mineralization |
|---|-------------------------------|--|---|

6) Which of the following is NOT a fossil?

- A) outline of a fern found in a rock
- B) petrified wood in the desert
- C) baby mammoth found in a glacier
- D) old stone tools found in a cave

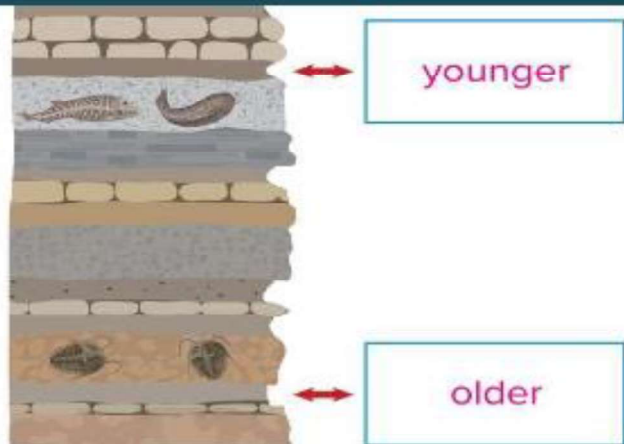
When the last individual of a species dies, that species is considered _____.

- A) adapted
- B) rare
- C) extinct
- D) evolved

Analyze the Age

In the image you can see fossils buried in rock layers. Examine the image and answer the questions below.

1. If the topmost rock layer of the image is present day, then what is the relative age of the areas that are indicated by the arrows to each other? Infer the age of the areas by writing *older* or *younger* in the boxes provided.
2. Why did you place the words *older* or *younger* in those locations?



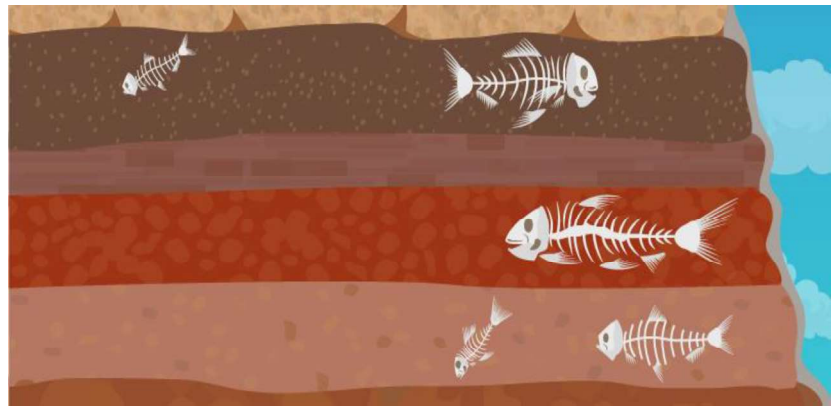
Sample answer: I inferred that the top-most fossils existed more recently than those towards the bottom.

3. What do you think the placement of fossils in the rock layers above can tell us about time?

Sample answer: I think that the placement of fossils in the rock layers can tell us when they lived. They may also help tell us when other fossils lived, relative to their position.

2. What method can scientists use to analyze and interpret when the fossils in the bottom of the figure appeared on Earth?

- A relative-age dating
- B trace fossils
- C mineralization
- D carbonization

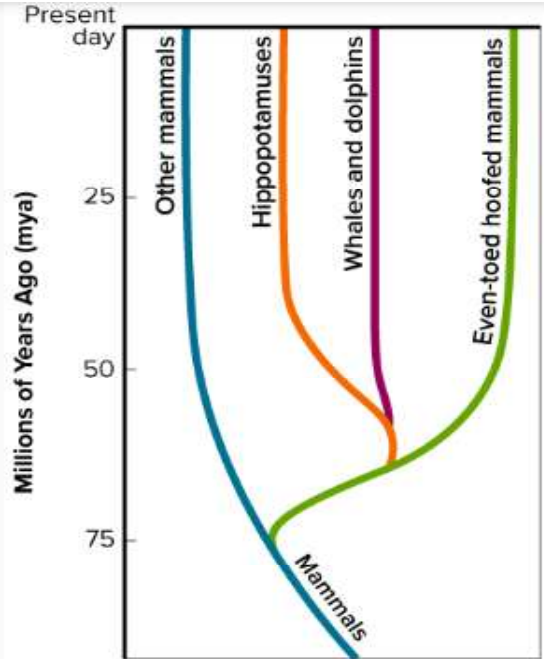


3. What pattern can scientists use to interpret the information about the fossils shown in the rock layers?

- A Rock layers all contain different sets of fossils.
- B Older fossils are located closet to Earth's surface.
- C Fossils are younger the closer they are to the surface.
- D Each fossil is younger than the rock layer in which it is found.

2. Analyze the image to the right that shows even-toed hoofed mammals and other mammals shared a common ancestor. When did this ancestor live?

- A 25 million years ago
- B 50 million years ago
- C 60 million years ago
- D 75 million years ago



3. Which pattern of development among vertebrates is evidence that they share a common ancestor?

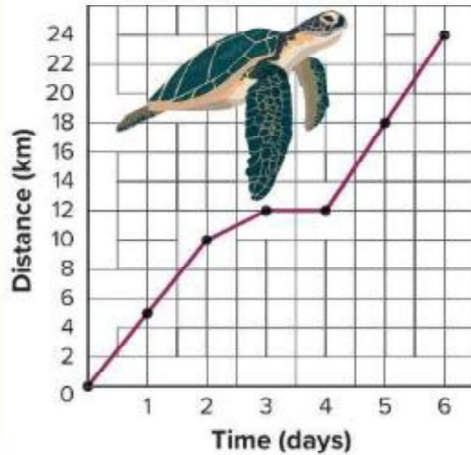
- A All vertebrates have a vestigial structure called gills.
- B All vertebrate embryos have pharyngeal pouches during development.
- C All vertebrates have tails as both embryos and adults.
- D All vertebrates have identical embryos but differences among structures as adults.



THREE-DIMENSIONAL THINKING

Analyze the data on the plot below. Determine the speed of the hawksbill sea turtle during each interval listed below.

Hawksbill Sea Turtle Tracking Data



Day 0 to day 2: 5 km/day

Day 2 to day 3: 2 km/day

Day 3 to day 4: 0 km/day

Day 4 to day 6: 6 km/day

2. The data in the table to the right shows how far a sea turtle travels over several days. What would the line on a plot of this data look like?

- A The line would curve upward and to the right.
- B The line would go up and down.
- C The line would point straight upward to the right.
- D The line would point upward then downward.

Green Sea Turtle's Distance and Time Data

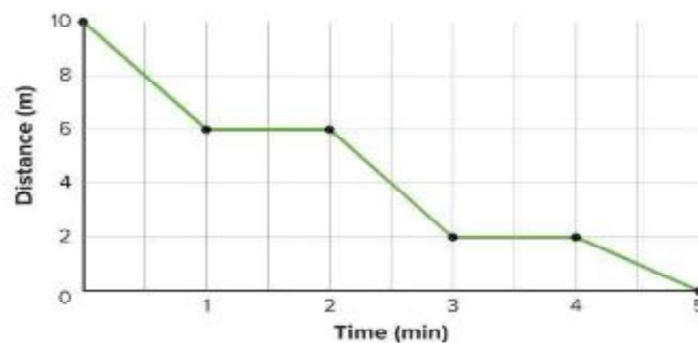
Time (days)	Distance (km)
0	0
1	16
2	32
3	48
4	64
5	80
6	96

3. If the turtle continued his motion, what would his distance be at ten days? Type your answer below.

Time (days)	Distance (km)
0	0
1	16
2	32
3	48
4	64
5	80
6	96
7	?
8	?
9	?
10	160

Real-World Connection

4. **Interpret Data** The plot below shows the motion of an elevator. Explain its motion.



The elevator went down 4 m at a constant speed for 1 min. It then stopped for 1 min. It went down 4 m in 1 min, stopped for 1 min, and went down 2 m in the final minute.

5. **Calculate** A driver travels 55 km in 1 hour. He then drives at a speed of 35 km/h for 2 hours. Next, he drives 175 km in 3 hours. What was his average speed?

50 km/h

MATH Connection In the PhET interactive simulation, a force of 100 N is applied to the wrapped present, giving it an acceleration of 2 m/s^2 . What is the mass of the object?

50 kg

What is the acceleration when a force of 2.0 N is applied to a ball that has a mass of 0.60 kg?

3.3 m/s^2

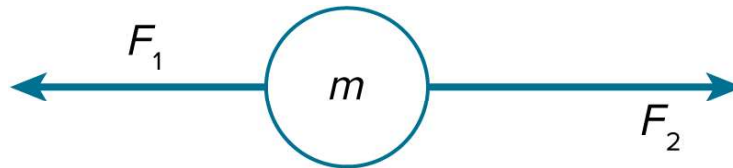


THREE-DIMENSIONAL THINKING

If you **cause** the surfaces between two touching objects to change, how will the friction be affected? Make a claim. Support your **explanation** with evidence and logical connections.

Changing the surface between two touching objects will change the microscopic bumps on the surface. This will make it easier or harder for the objects to slide past each other.

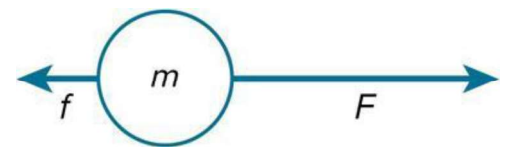
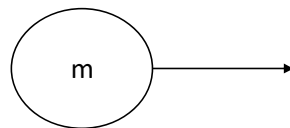
1. Sketch a free-body diagram of an object being pushed to the right.



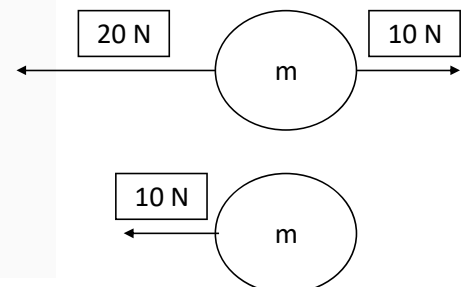
2. In the free-body diagram above, the force to the left (F_1) is less than the force to the right (F_2). Which direction do you think the object will begin to move?

The object will begin to move right because F_2 is greater than F_1

3. Make a free-body diagram for the net force on the object shown below. The object is sliding across a surface with friction.



4. An object is pushed to the right with 10 Newtons of force, and pulled to the left with 20 Newtons. Sketch a free-body diagram of this system, and draw a diagram with the net force. Ignoring friction, identify the direction and motion of the object.



An object has a force acting on it to the right and has a frictional force to the left as shown below. Use the model below to answer questions 2 and 3.



2. What change in motion will result from the forces modeled?

- A There will be no change in motion because the forces are in opposite directions.
- B The object will slow down because of the friction force.
- C The object will accelerate to the right.
- D The object will accelerate to the left.

3. What would a model of the net force look like?

- A The arrow would be to the right at the same length as before, because friction is a different force.
- B The arrow would be to the right but shorter than before to account for the friction force.
- C There would be no net force because the two forces are in opposite directions.
- D The arrow would be to the left because friction is slowing the object down.

4. A train moves at a constant speed down a straight track. Which of the following scientific explanations is true?
- A No forces act on the train as it moves.
 - B The train moves because no forces are acting against it.
 - C The forces of the train's engine balance the force of friction opposing it.
 - D An unbalanced force keeps the train moving.

A person is applying a force to the right on an object as shown. Use the model to answer question 2–3.

2. What forces are acting on the person?

- | | |
|----------------------------------|---|
| <input type="radio"/> | A a slightly smaller force to the left because the object is accelerating |
| <input checked="" type="radio"/> | B a force equal to the force applied going to the left |
| <input type="radio"/> | C a force to the right to apply the force to the object |
| <input type="radio"/> | D a force to the right because the object is accelerating |



3. The person is standing on ice with little to no friction. What will be the motion of the person applying the force to the object?

- | | |
|----------------------------------|--|
| <input type="radio"/> | A begin to move to the right because that is the direction of the push |
| <input type="radio"/> | B no change in motion because the person is pushing the object |
| <input checked="" type="radio"/> | C begin to move to the left because the object pushes on the person |
| <input type="radio"/> | D begin to move to the right with the object |

4. Which of the following systems does NOT represent a force pair?

- | | |
|----------------------------------|--|
| <input checked="" type="radio"/> | A When you push on a bike's brakes, the friction between the tires and the road increases. |
| <input type="radio"/> | B When a diver jumps off a diving board, the board pushes the diver up. |
| <input type="radio"/> | C When an ice skater pushes off a wall, the wall pushes the skater off of the wall. |
| <input type="radio"/> | D When a boy pulls a wagon, the wagon pulls back on the boy. |

2) If you push on a wall with a force of 30 N, the force acting on you from the wall is which of the following?

- A) 0 N
- B) 10 N
- C) 20 N
- D) 30 N

3) The statement "for every action, there is an equal but opposite reaction" is a statement of _____.

- A) the law of conservation of momentum
- B) Newton's first law
- C) Newton's second law
- D) Newton's third law



THREE-DIMENSIONAL THINKING

A force is measured by an object's mass and acceleration. If you slowed down a collision between two objects, what **effect** would that have on the force resulting from Newton's third law?

Answers may vary. Sample answer: If you slowed down a collision, then the acceleration would be less than before. The lower acceleration would mean that the object is applying a smaller force, and the force applied to the object would be less as well.

11) Which of the following is NOT true of gravitational force?

- A) noncontact
- B) depends on mass
- C) depends on speed
- D) distance

4) If the mass of one of two spheres increases, how does it affect the gravity between the two spheres?

- A) The gravity increases.
- B) The gravity decreases.
- C) The gravity fluctuates.
- D) The gravity is not affected.

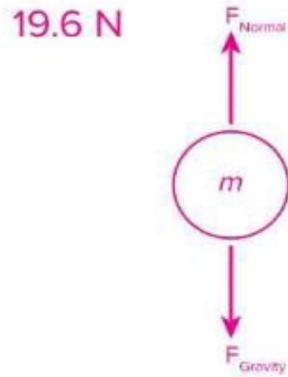
2) Mass and weight are different. Mass depends on _____. Weight depends on _____.

- A) gravitational force, the amount of matter
- B) placement, force
- C) force, placement
- D) the amount of matter, gravitational force

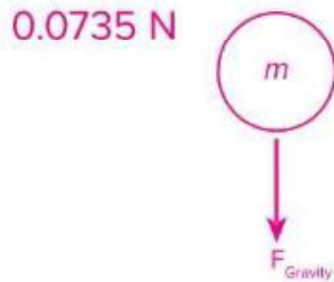
3) Which of the following is most closely related to gravity?

- A) distance
- B) mass
- C) weight
- D) speed

A. A book with a mass of 2 kg is at rest on top of a desk.



A pencil with a mass of 0.0075 kg is falling toward the floor.



3. In the model above, how is the mass of the objects represented?

- A The mass is represented by the size of the objects.
- B The mass is represented by the distance between the objects.
- C The mass is represented by the color of the objects.
- D The mass is not represented.



4. The gravitational force from Planet A on the star is shown in the model. How should the arrow that represents the gravitational force from the star on Planet A be represented?

- A It should point from Planet A toward the star and will be longer because the star has more mass.
- B It should point from Planet A toward the star and will be the same size because it is an equal and opposite force.
- C It should point from Planet A toward the star and will be shorter because Planet A has less mass.
- D There is no arrow to represent because gravitational force is only in one direction.

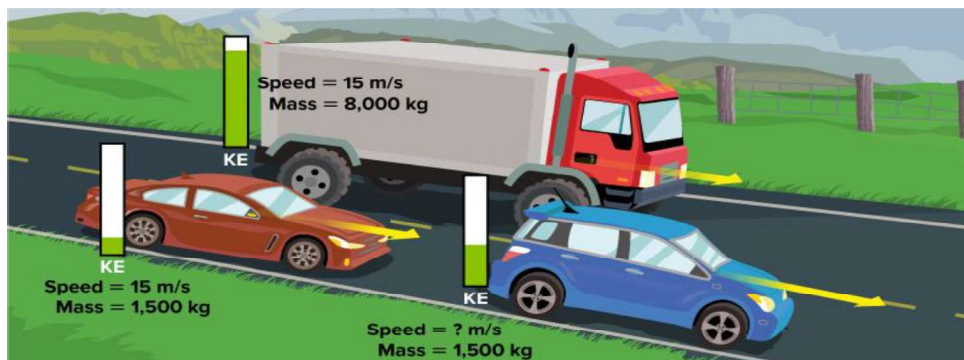


THREE-DIMENSIONAL THINKING

For each system determine how the **quantity** of kinetic energy would increase or decrease.

1. If the mass of an object is increased by a factor of 4, kinetic energy increases by a factor of 4.
2. If the mass of an object is decreased by a factor of $\frac{1}{2}$, kinetic energy decreases by a factor of $\frac{1}{2}$.

- A When the mass tripled, the kinetic energy increased by a factor of 3.
When the speed tripled, the kinetic energy increased by a factor of 3.
- B When the mass tripled, the kinetic energy increased by a factor of 3.
When the speed tripled, the kinetic energy increased by a factor of 9.
-
- C When the mass tripled, the kinetic energy increased by a factor of 9.
When the speed tripled, the kinetic energy increased by a factor of 3.
-
- D When the mass tripled, the kinetic energy increased by a factor of 9.
When the speed tripled, the kinetic energy increased by a factor of 9.



3. What can you determine about the speed of the blue car?

- A The blue car's speed is the same as the red car's speed.
- B The blue car's speed is less than the truck's speed.
- C The blue car's speed is equal to the truck's speed.
- D The blue car's speed is greater than the red car's speed.



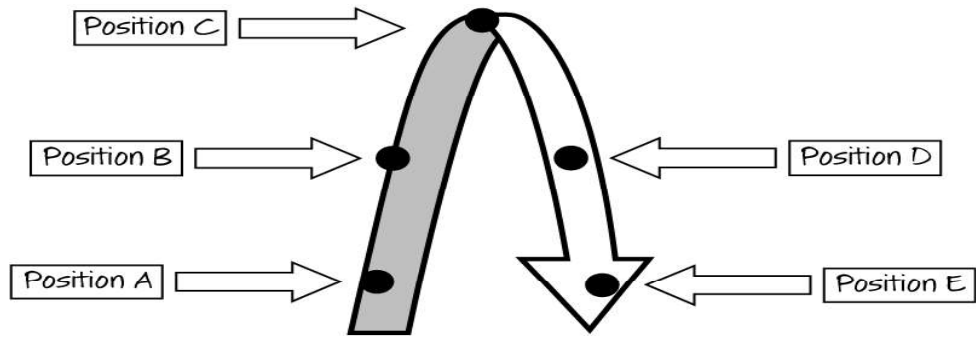
2. In the rack there are two basketballs. Which basketball has more energy?

- A The top basketball has more energy because it is farther away from surface of Earth.
- B The bottom basketball has more energy because it is closer to surface of Earth.
- C Both basketballs have the same amount of energy because they have the same mass.
- D Both basketballs have the same amount of energy because they are not moving.



2. In the rack there are two basketballs. Which basketball has more energy?

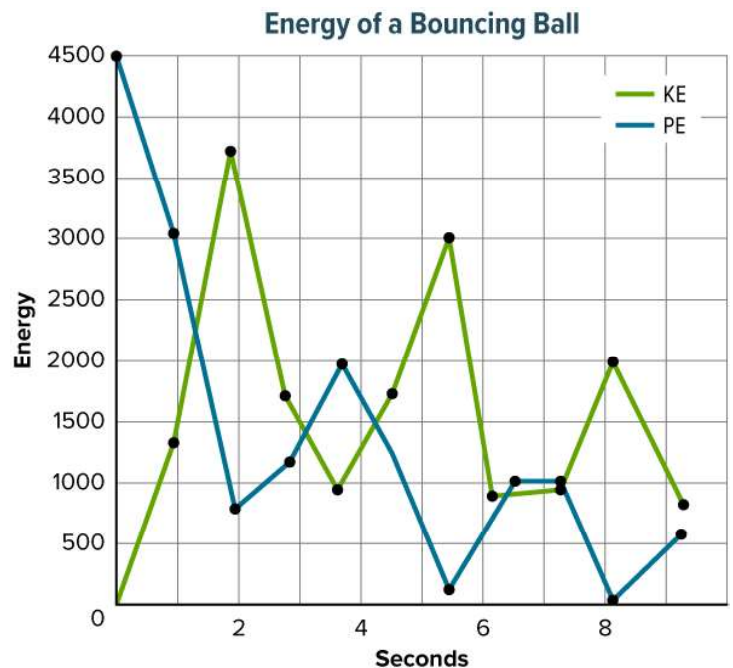
- A The top basketball has more energy because it is farther away from surface of Earth.
- B The bottom basketball has more energy because it is closer to surface of Earth.
- C Both basketballs have the same amount of energy because they have the same mass.
- D Both basketballs have the same amount of energy because they are not moving.



Position	Kinetic Energy	Potential Energy
A	highest	lowest
B	decreasing	increasing
C	lowest	highest
D	increasing	decreasing
E	highest	lowest

2. When does the ball have the most kinetic energy?

- A At the start, because it is the highest off the ground.
- B At the end, because it is moving fastest as it approaches the ground for the final bounce.
- C At second 2, because it is moving fastest as it approaches the ground for the first bounce.
- D At second 4, because it has reached its second highest bounce.





تمنياتي لكم بالتوفيق
والنجاح بإذن الله

THE END
TEACHER
ISSA
WASWAS