

8SCI-ILS-SCORING MATERIALS



New York State Testing Program

2026

Intermediate-Level Science (ILS)

Grade 8

Constructed Response

Scoring Materials

Note to Scorers

You may notice that questions in these scoring materials appear with a bracketed credit value showing the respective number of credits. An example of what the bracketed credit value looks like is provided below for your reference.

Example: Stem of the question. [1]

It is recommended that prior to scoring student responses to a specific question, raters should review the entire cluster, including all associated stimuli (e.g., reading passages, data tables, graphs, and diagrams).

Constructed-Response Science Scoring Policies

1. Examples of acceptable responses are provided; however, other scientifically accurate responses that demonstrate adequate knowledge may receive credit. Raters must use their professional judgment to decide if the student's response meets the criteria.
2. If the student provides a response that contains errors in spelling, grammar, capitalization, or punctuation, the student should still receive credit, provided the errors do not affect the scientific accuracy of the response.
3. If the student provides a response that contains a correct answer along with extraneous information, the student should still receive credit, provided the extraneous information does not negate or contradict the correct response.
4. For questions with multiple components (e.g., a technology enhanced portion and a constructed-response portion), students must answer all components correctly to receive credit.
5. Condition Code A is applied whenever a student who is present for a test session leaves an entire constructed-response question completely blank (no response attempted). This is not to be confused with a score of zero wherein the student does respond to part or all of the question, but that work results in a score of zero.

EXEMPLARY RESPONSE

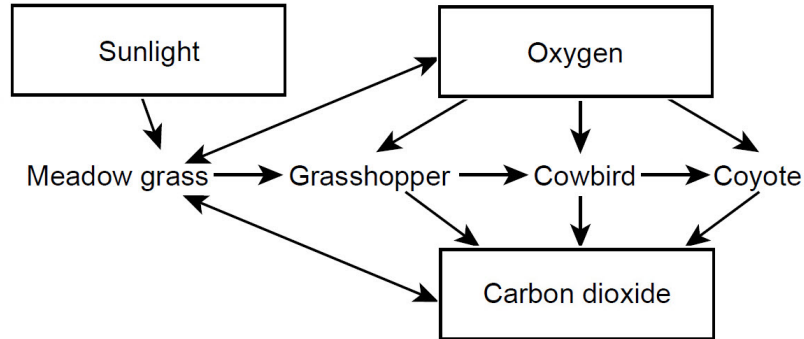
3

Based on the *Food Web* model, place the correct terms from the choices below in the model to describe a possible cycling of matter and flow of energy between the living parts and non-living parts of this ecosystem. Each term may only be used once. [1]

Choices for Terms:



Model for Cycling of Matter and Flow of Energy



EXEMPLARY RESPONSE

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

The increased number of cowbirds would increase the energy available for coyotes because coyotes eat cowbirds.

OR

Since coyotes eat cowbirds, the energy available for coyotes increased due to an increased number of cowbirds.

OR other valid response

ILS Training 1

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

Changes in the population of cowbirds affect the amount of energy available for the coyote because since the population of cowbirds increase the energy available for the coyotes will increase because they would have more cowbirds to eat.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The explanation addresses an increase in the cowbird population, an increase in the energy available to the coyotes, and the fact that coyotes eat cowbirds.

This response is complete and correct.

ILS Training 2

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

It increased the amount of energy for the coyote because the cowbird incrsed slightly which increases more food options for the coyote.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The explanation addresses an increase in the cowbird population and an increase in the energy available to the coyotes. It implies that coyotes eat cowbirds because of the use of the phrase “food options”.

This response is sufficient for credit.

ILS Training 3

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

The population of cowbirds increased, which gives Coyotes more energy. More prey means more food and more energy, so they will have more energy as a result of the Cowbird population increasing. However, with the Prarie snake losing Wood thrush's overall, they will resort to easting more Cowbirds, which might decrease the Coyote's energy and resort to eating Jackrabbits.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The explanation addresses an increase in the cowbird population and an increase in the energy available to the coyotes. It implies that coyotes eat cowbirds because of the use of the word “prey”.

This response is sufficient for credit.

ILS Training 4

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

As the Brown-headed Cowbird population increased Wood thrush population decreased the reason this can affect the amount of energy available for the coyote population is due to coyotes feeding on Wood thrush. The less Wood thrush there is for coyotes to feed on the less energy they will have.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The explanation correctly addresses an increase in the cowbird population; however, it then focuses on the wood thrush and how changes in its population would affect the energy available to the coyotes.

This response is insufficient for credit because it does not address how the change to the cowbird population would affect the energy available for coyotes.

ILS Training 5

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

The cowbird population has had a slight but steady increase from 1973 to 2013. The higher the cowbird population the more available energy for the Coyote population.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The explanation correctly addresses an increase in the cowbird population and an increase in the energy available to the coyotes; however, it does not use the food web model to explain the link between cowbirds and coyotes.

This response is insufficient for credit due to an incomplete explanation.

ILS Training 6

4

Explain, using evidence from the graph *and* the *Food Web* model, how changes in the population of cowbirds affected the amount of energy available for the coyote population between 1973 and 2013. [1]

Changes in the Cowbird population can affect the Coyote energy because Coyotes eat Cowbirds.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The explanation correctly addresses the link between cowbirds and coyotes; however, it does not include how the cowbird population and the energy available to the coyotes changed.

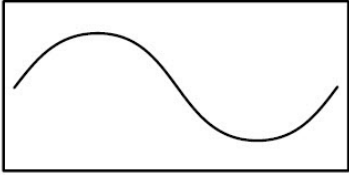
This response is insufficient for credit due to an incomplete explanation.

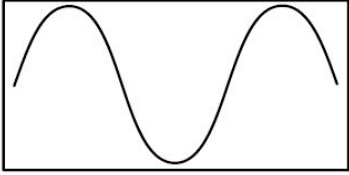
EXEMPLARY RESPONSE

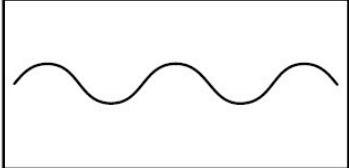
7

Another sound wave was produced using a higher amplification. Complete the flowchart below by placing the letter of the correct choice for *Effect on Wave Pattern* and *Effect on Wave Characteristic* in the appropriate boxes. The choices for *Effect on Wave Pattern* have been drawn to the same scale as the *Low Amplification Wave*. [1]

Choices for Effect on Wave Pattern:

A 

B 

C 

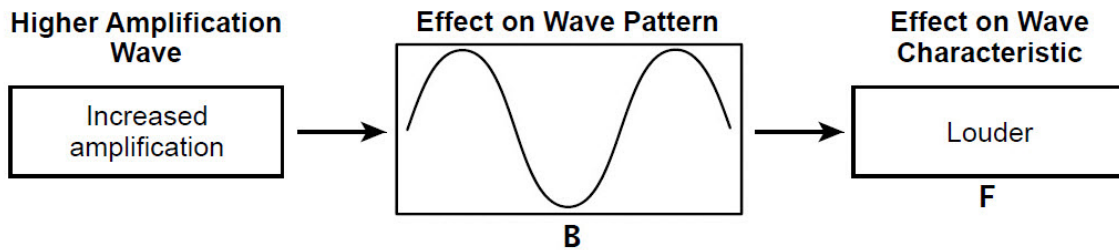
Choices for Effect on Wave Characteristic:

D

E

F

G



EXEMPLARY RESPONSE

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is *not* possible in outer space. [1]

Sound needs a medium to travel, and space is a vacuum.

OR

A sound wave cannot travel in space since a medium is needed for it to move.

OR

Without the air/gas/air pressure/matter present on Earth, sound can not travel.

OR

Sound is a mechanical wave.

OR other valid response

ILS Training 1

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is **not** possible in outer space. [1]

The reason that this is not possible in space is because there is no gases wich is how the vibration travels.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The explanation implies that sound needs a medium through which to travel.

This response is sufficient for credit.

ILS Training 2

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is **not** possible in outer space. [1]

In order for there to be sound air pressure is needed but since space doesn't have air pressure there is no sound.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The explanation implies that sound needs a medium through which to travel.

This response is sufficient for credit.

ILS Training 3

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is *not* possible in outer space. [1]

Sound waves dont travel in space because space is a vaccum.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The explanation implies that sound needs a medium through which to travel.

This response is sufficient for credit.

ILS Training 4

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is *not* possible in outer space. [1]

There is no oxygen on space to allow sound waves to travel there. Due to zero gravity the sound will be all over the place as the gravity usually makes it level and balanced.

Score Credit 0 (out of 1 credit)

This response demonstrates a limited understanding of the concepts in the task.

- The explanation inaccurately specifies the medium needed for sound to travel as oxygen only. It also incorrectly describes the effect of gravity on sound transmission and incorrectly implies the existence of sound in space.

This response is insufficient for credit due to an incorrect explanation.

ILS Training 5

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is *not* possible in outer space. [1]

The use of acoustic levitation is not possible in outer space because in outer space, sound waves cant travel through it and makes it so that you can not hear sound in space.

Score Credit 0 (out of 1 credit)

This response demonstrates no overall understanding of the concepts in the task.

- The explanation does not address why sound cannot travel in space.

This response is insufficient for credit due to an incomplete explanation.

ILS Training 6

9

Although acoustic levitation has many practical applications on Earth, it is not practical in space. Explain why the use of acoustic levitation, such as the one described using speakers, is **not** possible in outer space. [1]

Acoustic levitation is not possible in space because in space you cant hear sounds so the speakers wont be heard.

Score Credit 0 (out of 1 credit)

This response demonstrates no overall understanding of the concepts in the task.

- The explanation does not address why sound cannot travel in space.

This response is insufficient for credit due to an incomplete explanation.

EXEMPLARY RESPONSE

11

Place the letters of the processes, from the choices below, in the correct sequence to describe the formation of sandstone in the Niagara escarpment. [1]

Choices:

Deposition
of
particles

A

Compaction of
particles into
layers

B

Weathering
of land
formations

C

Transport of
particles driven
by gravity

D

Process of Sandstone Formation

Weathering
of land
formations

C



Transport of
particles driven
by gravity

D



Deposition
of
particles

A



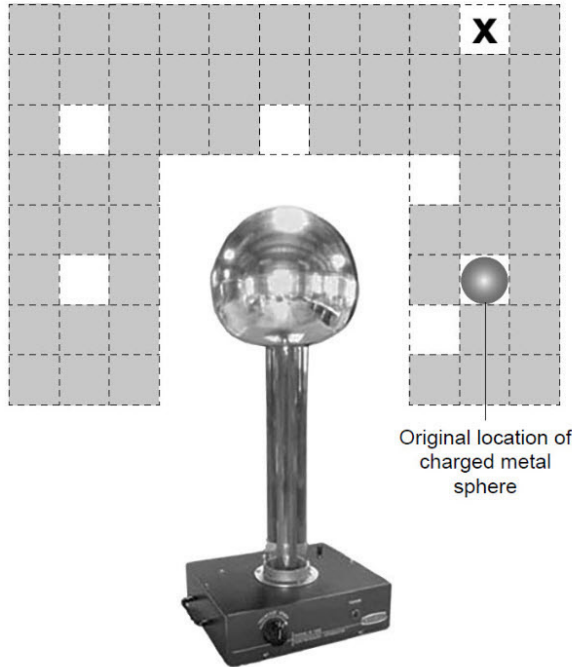
Compaction of
particles into
layers

B

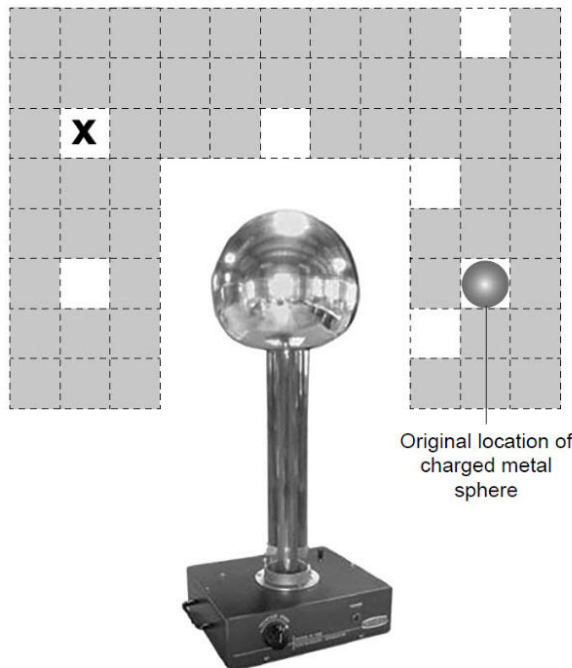
EXEMPLARY RESPONSE

16

The Van de Graaff generator and the metal sphere can be considered a system of objects. When the generator is powered on, electric potential energy is stored in the generator-sphere system. In the model below, place an X in **one** non-shaded box to indicate a new location for the charged sphere that would result in the **decrease** of the electric potential energy of the system. [1]



OR



EXEMPLARY RESPONSE

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

The electric force and gravitational force are unbalanced, and the tins began to move away from the dome in the direction of the larger electric force.

OR

When the generator was powered on, the tins moved upward after being stationary.

OR

The metal tins began moving upward.

OR other valid response

ILS Training 1

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

The gravitational force is weaker than the electric force because the generator was able to push the metal tins off of itself even when gravity was pushing down on it.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The supporting evidence that the generator was able to “push the metal tins off” indicates a change in motion.

This response is complete and correct.

ILS Training 2

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

the electric force was so great it made the metal tins sperated in differnt ways in seconds while the gravitational force was so weak it barely pulled the metal tins in and that lead it to be unbalanced.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The supporting evidence that the tins “sperated in differnt ways” indicates a change in motion.

This response is sufficient for credit.

ILS Training 3

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

I picked this answer because if the gravitational pull was stronger, the metal tins would have fallen downwards, not upwards.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The supporting evidence that the tins “fell” upwards indicates a change in motion.

This response is sufficient for credit.

ILS Training 4

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

When the generator was off nothing happened to the tins until the electric force was used on it

Score Credit 0 (out of 1 credit)

This response demonstrates a limited understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The supporting evidence focuses on the time when the generator was off instead of the time when the generator was turned on, as specified in the claim.

This response is insufficient for credit due to insufficient evidence.

ILS Training 5

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

because the tins stayed in the air rather than dropping because the electrical force was stronger than the gravitational force

Score Credit 0 (out of 1 credit)

This response demonstrates incomplete understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The supporting evidence incorrectly states that the tins “stayed in the air”, which implies that they were still and that there was no change in motion.

This response is insufficient for credit due to incorrect evidence.

ILS Training 6

17

The student makes the claim that the change in the motion of the metal tins at the time the generator was turned on depends on the sum of the gravitational and electric forces acting on the tins.

Support the student's claim by selecting **one** statement from the table that describes the relative amounts of the gravitational and electric forces acting on the tins. Then, provide the evidence from the model that supports your choice. [1]

Gravitational force is stronger than the electric force.	<input type="checkbox"/>
Gravitational force has the same strength as the electric force.	<input type="checkbox"/>
Gravitational force is weaker than the electric force.	<input checked="" type="checkbox"/>

Evidence:

The tins are not longer affected by gravity when the generator was turned on. Showing that it has a stronger force than than the gravitational force.

Score Credit 0 (out of 1 credit)

This response demonstrates incomplete understanding of the concepts in the task.

- Gravitational force is identified as being weaker than the electric force.
- The response incorrectly states that the tins are “not longer affected by gravity” and does not provide evidence for a change in motion.

This response is insufficient for credit due to incorrect evidence.

EXEMPLARY RESPONSE

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	<pre>graph TD; A((19)) --- B((19)); A --- C((38)); B --- C;</pre>
Outgrowth from root system	<pre>graph TD; A((38)) --> B((38));</pre>

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

Unlike asexual reproduction, chromosomes of both parent trees are inherited in sexual reproduction, resulting in genetic variation.

OR

During sexual reproduction, traits from both parents are inherited.

OR

When seeds are produced by pollination, each parent contributes half the genes acquired by the offspring.

OR

Different traits from each parent can be inherited.

OR other valid response

ILS Training 1

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	<pre>graph TD; A((19)) --- B((19)); A --> C((38)); B --> C;</pre>
Outgrowth from root system	<pre>graph TD; A((38)) --> B((38));</pre>

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

In sexual reproduction, the offspring would get the DNA from both parents, while asexual would limit the variations as it would only be coming from a single parent.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The models are correctly completed.
- The explanation addresses that receiving DNA from two parents results in greater variation.

This response is complete and correct.

ILS Training 2

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	
Outgrowth from root system	

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

Asexual is a direct copy of the genetic information, where as sexual reproduction is a mix between the mother and father's genes.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The models are correctly completed.
- The explanation addresses that receiving a mix of genes from two parents results in greater variation.

This response is sufficient for credit.

ILS Training 3

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	
Outgrowth from root system	

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

Because the parents can of diffrent gentics then the other, while asesexual is just making another tree that has the exact dna and genes as the parent

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The models are correctly completed.
- The explanation implies receiving “diffrent gentics” from two parents results in greater variation.

This response is sufficient for credit.

ILS Training 4

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	
Outgrowth from root system	

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

Sexual reproduction requires half of the father and half of the mother and asexual requires one full part of the plant or creature

Score Credit 0 (out of 1 credit)

This response demonstrates a limited understanding of the concepts in the task.

- The models are correctly completed.
- The explanation does not specify that genetics, DNA, traits, chromosomes, or genes are inherited from each parent.

This response is insufficient for credit due to an incomplete explanation.

ILS Training 5

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	
Outgrowth from root system	

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

Sexual reproduction results in offspring with more genetic variation compared to asexual reproduction because asexual reproduction is growing the same tree and sexual reproduction occurs during pollination.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The models are correctly completed.
- The explanation does not indicate what happens during pollination to increase variation.

This response is insufficient for credit due to an incomplete explanation.

ILS Training 6

22

Complete the models below by placing the correct number of chromosomes, from the choices provided, to show each reproduction method exhibited by the quaking aspen. Choices for number of chromosomes may be used more than once.

Choices for Number of Chromosomes:



Reproduction Method Used by Quaking Aspen	Model
Seed produced by pollination	<pre>graph TD; A((19)) --- B((19)); A --> C((38)); B --> C;</pre>
Outgrowth from root system	<pre>graph TD; A((38)) --> B((38));</pre>

Explain why sexual reproduction results in offspring with more genetic variation compared to asexual reproduction. [1]

the chromosomes add together in sexual reproduction.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The models are correctly completed.
- The explanation does not specify that the chromosomes that “add together” come from different parents, which results in more variation.

This response is insufficient for credit due to an incomplete explanation.

EXEMPLARY RESPONSE

23

Select the **two** statements that help to explain why girdling prevents the quaking aspen from directly using photosynthesis to cycle matter and energy. [1]

Dissolved minerals from the soil cannot enter the roots.

Sunlight cannot be absorbed by the leaves.

Water from the roots cannot travel to the leaves.

Carbon dioxide from the air cannot enter the leaves.

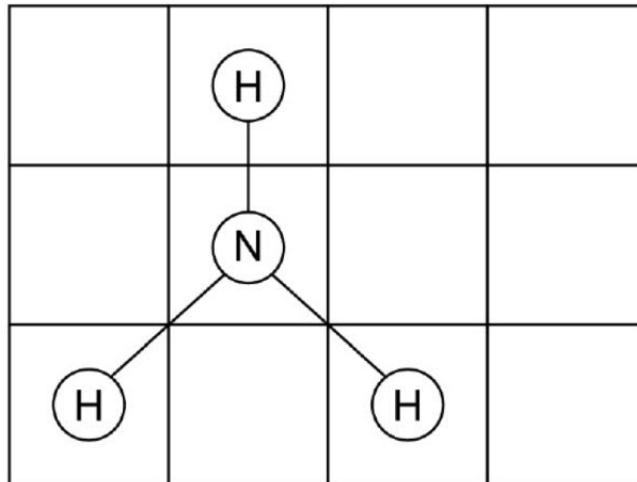
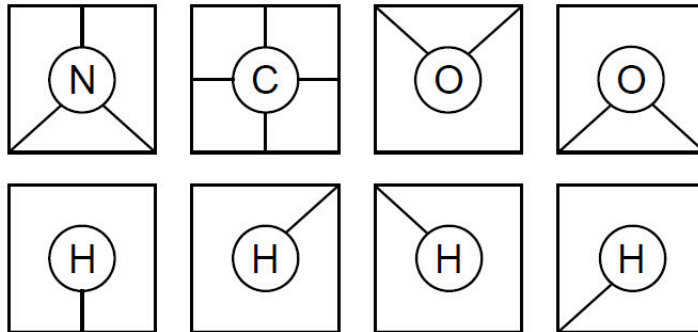
Sugars cannot move to all of the cells in the tree.

EXEMPLARY RESPONSE

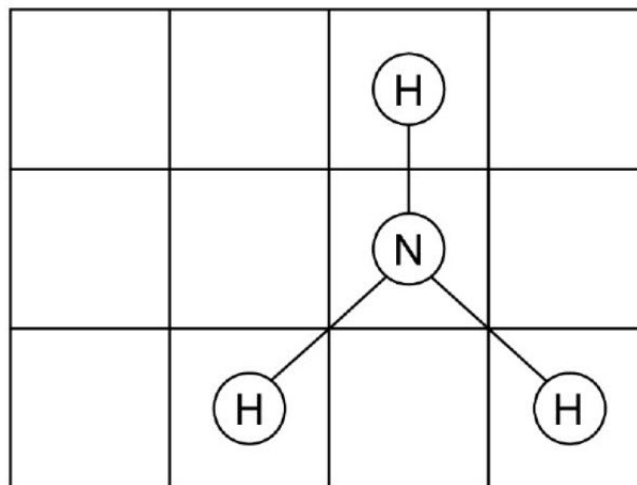
25

Place the correct chemical and bond symbols from the choices provided below into the spaces in the grid to construct a ball and stick model of **one** molecule of ammonia showing the correct orientation and arrangement of the individual atoms and bonds. [1]

Choices:



OR



EXEMPLARY RESPONSE

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

The ocean floor gets older the farther you move away from the ridge, so new ocean floor must be created at the ridge and then move away from the ridge.

OR

The pattern of youngest-aged rocks at the ridge to older-aged rocks farther from the ridge is evidence the ocean floor moves.

OR

The ocean crust must be moving since the age of the ocean floor increases as you move farther out from the ridge.

OR other valid response

ILS Training 1

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

The ages of the rocks get younger and younger the closer to the mid-atlantic ridge they are, supporting the idea that they have formed towards the middle as time went on. This shows that the plate motions causing these formations have been happening for millions of years.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The description provided identifies the age pattern seen and how it shows past plate motion.

This response is complete and correct.

ILS Training 2

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

the middle of the sea florr is the youngest while the seafloor on each side of south america and africa are the oldest. This could indicate that new seafloor is spreading pushing the two places away from eachother

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The description provided identifies the age pattern seen and how it shows past plate motion.

This response is complete and correct.

ILS Training 3

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

The oldest rocks of the ridge are closer to the continents, while the newest rocks are directly on the ridge. This provides evidence that these plates are divergent.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The description provided identifies the age pattern seen, and the use of the term “divergent” implies past plate motion.

This response is sufficient for credit.

ILS Training 4

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

The ages of the rockfloor indicated tells were the continents used to be. It also shows as time moves on that ocean floor began to expand.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The description provided includes the past plate motion, but it does not identify the age pattern seen.

This response is insufficient for credit due to an incomplete description.

ILS Training 5

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

The fact that the sea floor a mile away from the mid-atlantic ridge is the same age west and east away from the mid-atlantic ridge.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The description provided identifies the age pattern seen, but it fails to link that pattern to past plate motion.

This response is insufficient for credit due to an incomplete description.

ILS Training 6

35

Describe the evidence that supports the claim that patterns in the ages of rocks on the seafloor indicate past plate motions between South America and Africa. [1]

In this portion it shows how the tectonic plates have moved which causes the distance between continents. The oceans sea rocks show in lines on how it has been moving for millions of years.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The description provided includes the past plate motion, but mentions the “lines” without identifying the age pattern seen.

This response is insufficient for credit due to an incomplete description.

EXEMPLARY RESPONSE

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

Rising magma below Earth's surface occurs at mid-ocean ridges, creating new igneous ocean floor.

OR

Heat causes molten rock below Earth's surface to rise and cool/harden.

OR

Convection currents cause molten rock to rise and solidify.

OR other valid response

ILS Training 1

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

molten rock creates new rock by coming up from beneath older rocks.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- A description of molten rock rising up and forming new rock is provided.

This response is sufficient for credit.

ILS Training 2

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

One process that cycles the Earth materials that create the rocks of the ocean floor at the Mid-Atlantic Ridge is the molten rock and the heat flow, there is a chance that lava is created and the lava is cooled off with the water to make igneous rocks.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- A description of molten rock rising up (as lava) and cooling off to form new rock is provided.

This response is sufficient for credit.

ILS Training 3

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

Volcanic eruptions that cool, making rocks on the ocean floor.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- A description of molten rock rising up (as volcanic eruptions) and cooling to form new rock is provided.

This response is sufficient for credit.

ILS Training 4

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

molten rock creates the rocks of the ocean floor

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The response names molten rock as the material that creates the rocks of the ocean floor, but it does not describe a process that cycles.

This response is insufficient for credit due to an incomplete description.

ILS Training 5

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

the molten rock rises to the ocean floor

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- A description of molten rock rising is provided, but it does not include the the cycling of materials.

This response is insufficient for credit due to an incomplete description.

ILS Training 6

38

Use the model to describe a process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge. [1]

one process that cycles Earth materials that creates the rocks of the ocean floor at the Mid-Atlantic Ridge is the flow of energy in Earth's interior and the cycling of Earth materials as a result of energy flows.

Score Credit 0 (out of 1 credit)

This response demonstrates no overall understanding of the concepts in the task.

- The response uses text from the model title and question but does not answer the question.

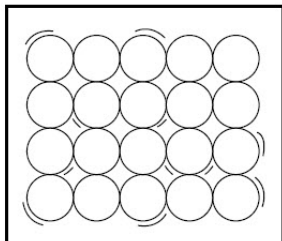
This response is insufficient for credit because it does not answer the question.

EXEMPLARY RESPONSE

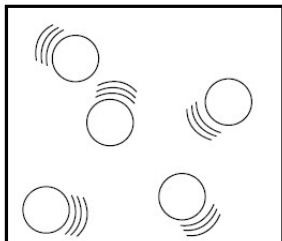
39

The diagrams below represent the position and movement of particles of water in three different phases. Place the letters of the correct particle phase diagrams, from the choices below, into the correct boxes to complete the model of heating water used to hard-boil the eggs. The numbers 1 and 2 indicate different periods of time during which the water is heated.

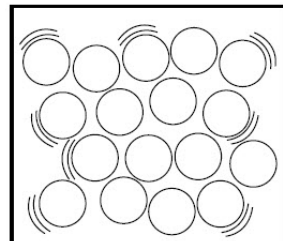
Phase Diagram Choices for Water Particles:



A

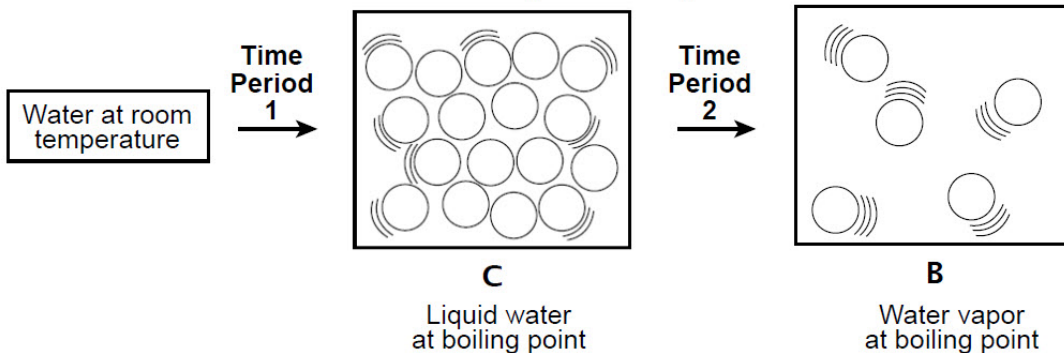


B



C

Model of Heating Water Sequence



Select *either* Time Period 1 or Time Period 2 to indicate when *each* change in water took place. [1]

Changes in Water	Time Period 1	Time Period 2
Temperature increased	✓	
Phase changed		✓

EXEMPLARY RESPONSE

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

The clear, thick liquid of the egg turned white.

OR

The soft, yellow yolk became a solid and will not go back to an uncooked egg.

OR other valid response

ILS Training 1

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

The clear liquid egg turning into a white solid could be a possible chemical reaction.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The provided evidence indicates a color change and production of a solid (when heated).

This response is complete and correct.

ILS Training 2

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

A chemical change was made while the eggs were boiling. The color of the egg turned from clear to white, and the yolk turned from yellow liquid to yellow solid.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The provided evidence indicates a color change and production of a solid (when heated).

This response is complete and correct.

ILS Training 3

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

the color of the egg changed and the inside went from a liquid to a solid

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- Color change is identified, but because not all parts of the egg changed color and no part of the egg is specified, this portion of the response was not enough for credit. However, the provided evidence indicates the production of a solid (when heated).

This response is sufficient for credit.

ILS Training 4

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

i support this claim because before the egg was boiled it was clear, thick, cool liquid, round, cool, yellow liquid, broken, and cool egg shell and when it was boiled it was, warm, white solid, warm, yellow solid, broken, and warm egg shell.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- Because nearly all of the observations from the table are provided, it is not possible to know which is being provided as evidence of chemical change.

This response is insufficient for credit due to lack of specific evidence.

ILS Training 5

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

The evidence of this chemical change was how egg was broken which can no longer go back ot its original form, and also how the egg has been cooked and can no longer go back to its raw uncooked form.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- The physical change of the shell breaking is incorrectly provided as evidence of chemical change, and the discussion of chemical change does not include evidence from the table.

This response is insufficient for credit due to lack of evidence.

ILS Training 6

40

The student made a claim that a chemical change occurred while the eggs were boiled. Analyze the given information and identify the evidence that supports this claim. [1]

chemical chnage is evident since a new substance was formed and the process cannot be reversed

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- While the response indicates that a new substance was made, no evidence from the table is provided.

This response is insufficient for credit due to lack of evidence.

EXEMPLARY RESPONSE

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

The neck length of the boar is much shorter than the *Decennatherium rex*, so the boar is not related to the *Decennatherium rex*.

OR

The *Decennatherium rex* has horns and the boar does not, so they are probably not related.

OR

The feet of the boar have visible toes and the *Decennatherium rex* does not.

OR

The spine of the boar is longer.

OR other valid response

Similarity between *Decennatherium rex* and modern-day giraffe:

The neck length of the modern-day giraffe is similar to the *Decennatherium rex*.

OR

The bone structure of the legs looks similar in the giraffe and the *Decennatherium rex*.

OR

Both have horns.

OR other valid response

ILS Training 1

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

one difference is the Decennatherium rex has longer neck legs and shorter tail than the boar.

Similarity between *Decennatherium rex* and modern-day giraffe:

One simmilarity is the horn like fetures on the decennatherium rex and the giraffe.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- An acceptable difference between the *D. rex* and the boar is provided.
- An acceptable similarity between the *D. rex* and the giraffe is provided.

This response is complete and correct.

ILS Training 2

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

The boar has a short neck and the decennatherium rex has a long neck

Similarity between *Decennatherium rex* and modern-day giraffe:

The giraffe has a long neck and so does the decennatherium rex

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- An acceptable difference between the *D. rex* and the boar is provided.
- An acceptable similarity between the *D. rex* and the giraffe is provided.

This response is complete and correct.

ILS Training 3

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

The modern-day boar has shorter legs, no horns, and has the shortest neck.

Similarity between *Decennatherium rex* and modern-day giraffe:

They all have tails. The decennatherium rex and the modern-day giraffe both have longer necks and taller legs. They are both very similar, and the boar isn't close to having these traits.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- An acceptable difference between the *D. rex* and the boar is implied because of the comparative terms used, including “shorter”.
- An acceptable similarity between the *D. rex* and the giraffe is provided. The additional information included in the response is correct and does not conflict with the acceptable similarity provided.

This response is sufficient for credit.

ILS Training 4

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

the Decennatherium rex has a longer neck-legs and its body structure is much different then a wild boar. A boar has a shorter neck shorter legs a longer tail and a different tail.

Similarity between *Decennatherium rex* and modern-day giraffe:

The similarity between a wildboar and Decennatherium rex is that they both have a similar rib cage similar like legs they both have tails.

Score Credit 0 (out of 1 credit)

This response demonstrates an incomplete understanding of the concepts in the task.

- An acceptable difference between the *D. rex* and the boar is provided.
- A similarity between the *D. rex* and the boar, rather than the giraffe, is provided.

This response is insufficient for credit because the provided similarity does not answer the question.

ILS Training 5

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

The *Decennatherium rex* would be able to run faster than the boar.

Similarity between *Decennatherium rex* and modern-day giraffe:

Both of them can reach up high.

Score Credit 0 (out of 1 credit)

This response demonstrates no overall understanding of the concepts in the task.

- The provided difference between the *D. rex* and the boar is related to function and not the skeletons themselves.
- The provided similarity between the *D. rex* and the giraffe is related to function and not the skeletons themselves.

This response is insufficient for credit because it does not answer the question.

ILS Training 6

46

Scientists claim that *Decennatherium rex* is an extinct ancestor of the modern-day giraffe and **not** the modern-day boar. Identify **one** difference and **one** similarity between pairs of skeletons that can be used as evidence to support this claim. [1]

Difference between *Decennatherium rex* and modern-day boar:

I can tell that they are not related because they do not look alike.

Similarity between *Decennatherium rex* and modern-day giraffe:

I can tell that they are related because they both have horns.

Score Credit 0 (out of 1 credit)

This response demonstrates incomplete understanding of the concepts in the task.

- The provided difference between the *D. rex* and the boar is not specific enough and does not compare the skeletons.
- An acceptable similarity between the *D. rex* and the giraffe is provided.

This response is insufficient for credit due to incorrect evidence for the provided difference.

EXEMPLARY RESPONSE

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

Since giraffes eat the leaves of Acacia trees, planting them will prevent giraffe populations from decreasing.

OR

The stability of ecosystems in African savannas will be protected by reintroducing Acacia trees for giraffes to eat.

OR

Planting Acacia trees will provide giraffes with more food.

OR other valid response

ILS Training 1

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

The planting of Acacia trees protects the stability of ecosystems by making sure the giraffes have enough food to eat in order to survive. If they weren't getting the food needed, they could go extinct, which would mess up the whole food chain.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The provided description indicates how planting Acacia trees will give the giraffes enough food so their numbers do not decline.

This response is complete and correct.

ILS Training 2

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

Reforestation of Acacia Trees in Africa will help protect the stability of the savanna ecosystems. It will help via giving an easier access to the trees that Giraffes enjoy to eat, which was said within the second paragraph. Also, if the Giraffes are able to eat more, they will reproduce more, which will then allow predators, such as the Lion to eat more as well, which creates the perfect balance.

Score Credit 1 (out of 1 credit)

This response demonstrates a clear understanding of the concepts in the task.

- The provided description indicates how planting Acacia trees will give the giraffes more habitat with the right food to survive so that populations balance.

This response is complete and correct.

ILS Training 3

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

The reforestation of Acacia trees protects the stability of ecosystems in African savannas by providing food for giraffes to eat. As stated in the text, "Giraffes are native to the savannas of Africa" and that "A giraffe eats hundreds of pounds of leaves each week and must travel miles to find enough food." Replanting Acacia trees provide easy access to food for the giraffes.

Score Credit 1 (out of 1 credit)

This response demonstrates a fair understanding of the concepts in the task.

- The provided description indicates how planting Acacia trees will give the giraffes enough food.

This response is sufficient for credit.

ILS Training 4

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

Well , for one thing . It is a tree , and trees contribute a lot to the ecosystem . And how they protect the stability of African savanas . By planting them in historic giraffe habitats , you are stabilizing the ecosystem and also helping out giraffes and other animals .

Score Credit 0 (out of 1 credit)

This response demonstrates incomplete understanding of the concepts in the task.

- The response provides a lot of information, but does not specify how giraffe populations are linked to Acacia trees.

This response is insufficient for credit because it does not answer the question.

ILS Training 5

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

One method used by conservationists is to replant Acacia trees in areas where these trees originally grew to restore historical habitats. A giraffe eats hundreds of pounds of leaves each week and must travel miles to find enough food.

Score Credit 0 (out of 1 credit)

This response demonstrates no overall understanding of the concepts in the task.

- The response uses text from the stimulus and question, but does not connect them to answer the question.

This response is insufficient for credit because it does not answer the question.

ILS Training 6

48

Describe how reforestation of Acacia trees protects the stability of giraffe populations in African savanna ecosystems. [1]

It protects the stability of ecosystems because replanting the acacia trees where they used to grow can cause for historical habitats to be restored and may bring more giraffes. This texts states, "One method used by conservationists is to replant Acacia trees in areas where these trees originally grew to restore historical habitats."

Score Credit 0 (out of 1 credit)

This response demonstrates incomplete understanding of the concepts in the task.

- The response uses text from the stimulus, but does describe how restoring habitats protects giraffe population stability.

This response is insufficient for credit because it does not answer the question.

EXEMPLARY RESPONSE

50

Select **one** phrase from each table to correctly complete the argument below. [1]

Considering all the celestial bodies in our solar system, the greatest force of attraction is between the Sun and Jupiter. This is evidence that the gravitational force exerted by the Sun on a planet depends on the ___ 1 ___ and the ___ 2 ___ .

Choices for 1

mass of only the Sun	<input type="checkbox"/>
mass of only the planet	<input type="checkbox"/>
mass of the Sun and the planet	<input checked="" type="checkbox"/>

Choices for 2

composition of the planet	<input type="checkbox"/>
distance between the Sun and the planet	<input checked="" type="checkbox"/>
angle of the planet's tilt	<input type="checkbox"/>
rate of the planet's rotation	<input type="checkbox"/>



Grade 8

Intermediate-Level Science (ILS)

Constructed Response

2026 Scoring Materials