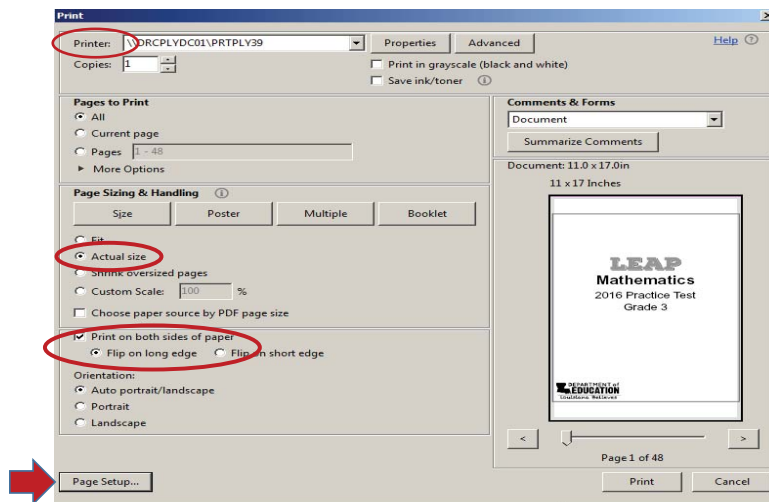


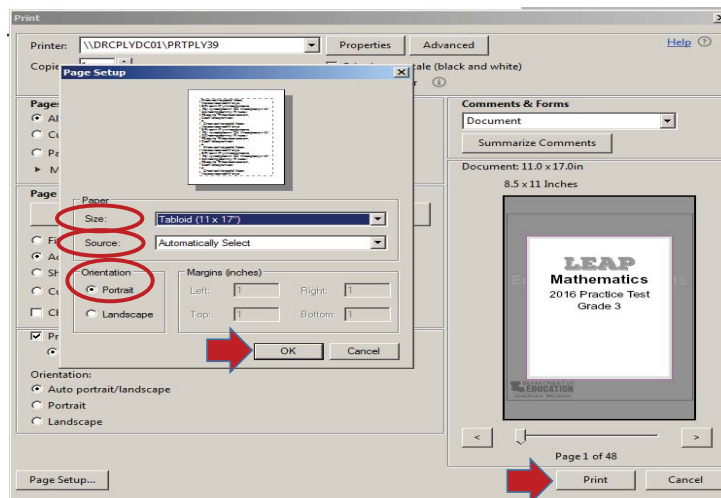
# INSTRUCTIONS FOR PRINTING THIS DOCUMENT

This document has been specially formatted to ensure it meets the specifications of the large-print accommodation. It must be printed on 11" x 17" paper. Please follow the instructions below to ensure the document prints correctly.

1. Open the PDF file.
2. Click on "File", and on the drop-down menu that appears, select "Print". The Print window will pop up (see example below).
3. Make sure "Actual size" is selected.
4. If the printer has the capacity to print double-sided, select the "Print on both sides of paper" option and the "Flip on long edge" option may be selected.
5. Then select the "Page Setup..." button in the lower left corner.



6. In the Page Setup screen (see below) make sure to select the correct size option in the Size dropdown menu. It may be called "(11 x 17)" or "Tabloid (11 x 17)" or something similar.
7. Allow the Source field to default to "Automatically Select".
8. Orientation must be set to "Portrait".
9. Then select the "OK" button to save changes and close the Page Setup screen.
10. Finally, select the "Print" button.



**LEAP**

**2025**

**Science**

Practice Test

Grade 3



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# Session 1 Directions

**Directions:**

Today, you will take Session 1 of the Grade 3 Science Practice Test.

Read each stimulus and question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any stray pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely. You may look back at the stimuli when needed.

Two of the questions will ask you to write a response. Write your response in the space provided in your test booklet. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

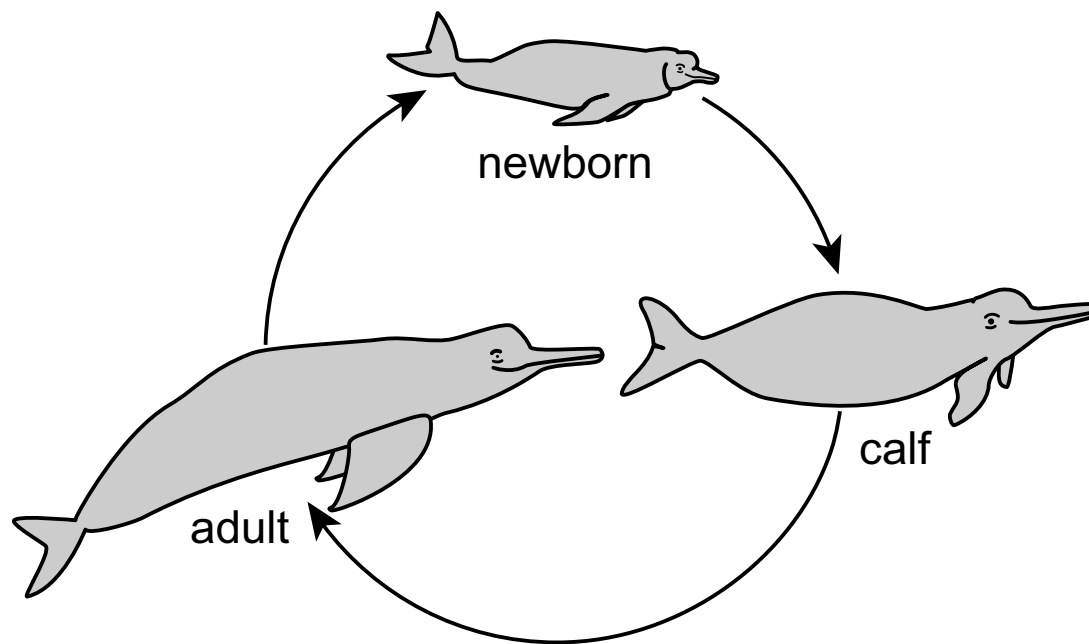
**GO ON ►**

Use the information about Amazon River dolphins and your knowledge of science to answer questions 1–4.

### Amazon River Dolphins

Amazon River dolphins live mostly in fresh water. They live in the Amazon River in South America. Figure 1 shows the life cycle of the Amazon River dolphin.

**Figure 1. Life Cycle of the Amazon River Dolphin**



Amazon River dolphins live in groups of up to six dolphins. These groups help the dolphins survive. These are some things Amazon River dolphins do in groups:

- hunt together
- take turns eating and watching for predators
- make groups around their young to protect them
- whistle and click to talk to one another

**GO ON ►**

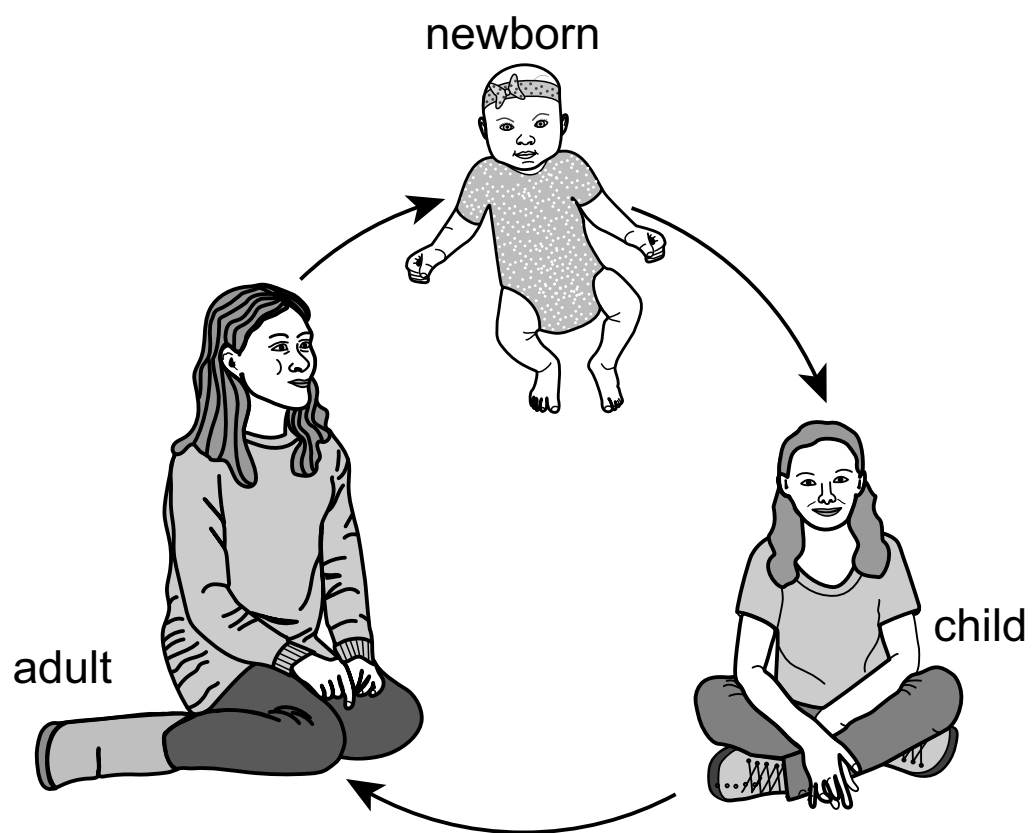
1. A student claims that living in groups helps Amazon River dolphins survive.

Which evidence **best** supports the student's claim?

- Ⓐ The dolphins can see each other.
- Ⓑ The dolphins are able to swim faster.
- Ⓒ The dolphins can play with each other.
- Ⓓ The dolphins are able to protect each other.

2. Use the information in Figure 1 to answer the question.

The life cycle of humans is similar to the life cycle of dolphins. The life cycle of humans is shown in the figure.



Based on their life cycles, how are Amazon River dolphins and humans **most** alike?

- Ⓐ Both change shape as they grow.
- Ⓑ Both are born and then grow larger.
- Ⓒ Both develop bodies that help them swim.
- Ⓓ Both live in groups for protection from predators.

**GO ON ►**

3. Over time, the number of Amazon River dolphin deaths has decreased.

**Part A**

Which prediction **best** describes what will happen first as a result of a decreased death rate?

- Ⓐ The population will decrease because all the dolphins will starve.
- Ⓑ The population will stay the same size because the dolphins will live longer.
- Ⓒ The population will increase because more dolphins will survive and reproduce.
- Ⓓ The population will decrease for a while and then increase so that the population size is balanced.

**Part B**

What will **most likely** occur second as a result of a decreased death rate?

- Ⓐ The population will continue to increase because dolphins are living longer.
- Ⓑ The population will begin to increase because it will be easier to find a mate.
- Ⓒ The population will continue to change at random so that the population size is balanced.
- Ⓓ The population will begin to decrease because there will not be enough food for all the dolphins.

4. Sometimes a dolphin will be forced out of its group. Predict one effect of a dolphin living without a group. Use evidence to support your response.

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**GO ON ►**

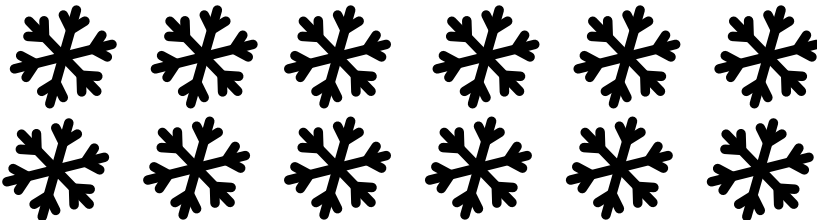

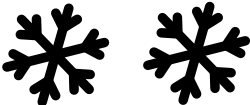
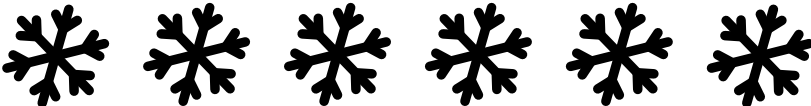



Use the information about winter storms and your knowledge of science to answer questions 5–8.

**Winter Storms**

Winter storms can be very dangerous. Winter storms can bring ice, snow, freezing rain, and high winds. Winter storms can also cause snowdrifts, or deep piles of snow, to form. Table 1 shows how many winter storms occur in four states.

**Table 1. Usual Number of Winter Storms per Year**

State	Number of Storms
Maine	
Missouri	
New Mexico	
North Dakota	

Key
 = one winter storm

**GO ON ►**

Blizzards are snowstorms where strong winds blow for several hours. A blizzard can happen anywhere it gets cold enough to have snow. Picture 1 shows what a road looks like after a blizzard.

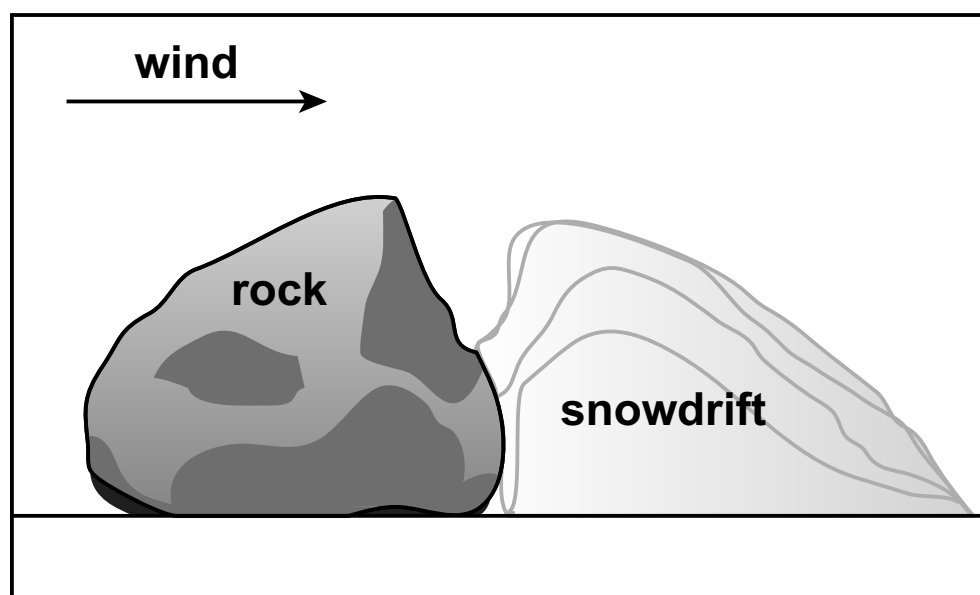
**Picture 1. Blizzard**



*Source: David Sacks/Getty Images, Inc.*

Snowdrifts form when a tall object keeps the wind from blowing snow away. Snowdrifts can block doors or driveways. Snowdrifts can also cause roofs to break. Figure 1 shows an example of how a snowdrift forms.

**Figure 1. How a Snowdrift Forms**



**GO ON ►**

5. The table shows information about four cities.

City	Does the city have temperatures below freezing for most of the winter?	Does the city have strong winds during the year?	Usual amount of winter snowfall (centimeters)
W	yes	no	8
X	no	no	25
Y	no	no	15
Z	yes	yes	51

Which city is **most likely** to have a blizzard in winter?

- Ⓐ city W
- Ⓑ city X
- Ⓒ city Y
- Ⓓ city Z

6. Use the information in Table 1 to answer the question.

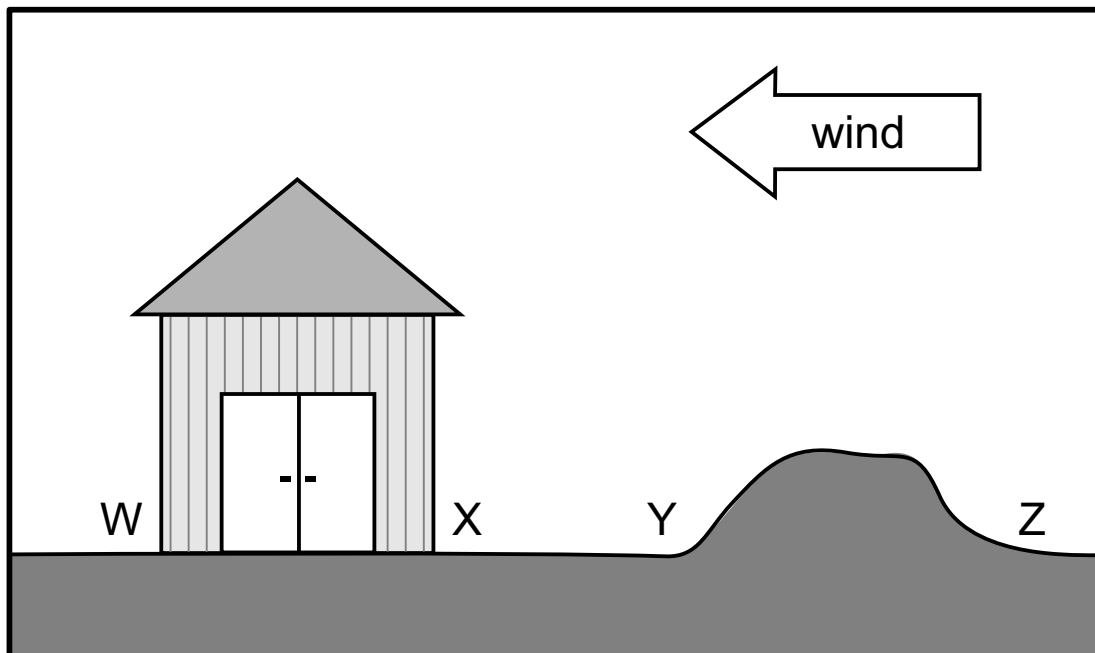
In which state is it **most** important for people to prepare for winter storms?

- Ⓐ Maine
- Ⓑ Missouri
- Ⓒ New Mexico
- Ⓓ North Dakota

**GO ON ►**

7. Use the information in Figure 1 to answer the questions.

A rancher is trying to predict what will happen when it snows. There is a low hill and a small storage shed on his ranch. The wind usually blows from the east, as shown in the diagram.



**Part A**

In which two places on the ranch will snowdrifts **most likely** form?

- Ⓐ locations X and Z
- Ⓑ locations W and Z
- Ⓒ locations W and Y
- Ⓓ locations Y and Z

**Part B**

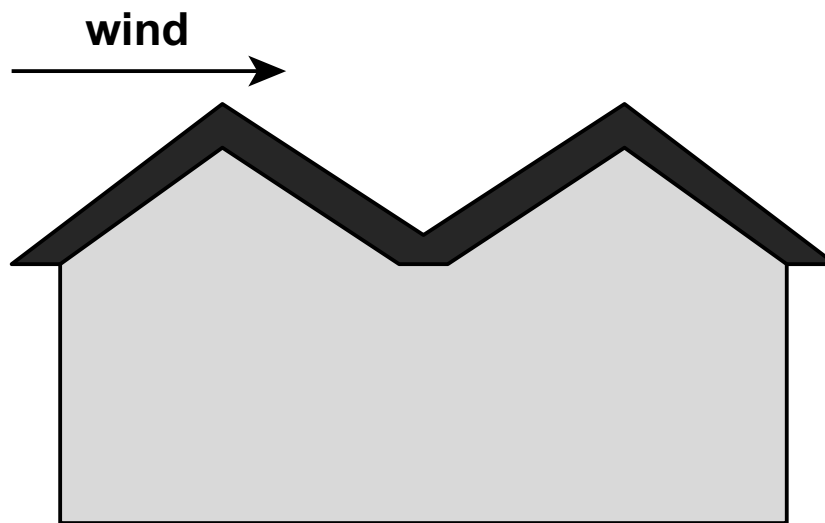
A snow fence blocks the wind so that snowdrifts will form in a chosen place. The rancher wants to build a snow fence that will prevent the snow from collecting by his storage shed. Where is the best location for the snow fence?

- Ⓐ location W, because a snowdrift will form on the left side of the fence
- Ⓑ location X, because a snowdrift will form on the right side of the fence
- Ⓒ location Y, because a snowdrift will form on the hill
- Ⓓ location Z, because a snowdrift will form far away from the storage shed

**GO ON ►**

8. Snowstorms can cause large amounts of snow to fall in a short amount of time. The snow can cover the roof of a house. If too much snow sits on the roof, it can cause a roof leak or even cause the roof to fall in.

A new group of houses is being built in a state that has many snowstorms.



Use evidence to support an explanation about why this design will **not** prevent damage from snow. Be sure to explain why this design will cause snow to sit on the roof.

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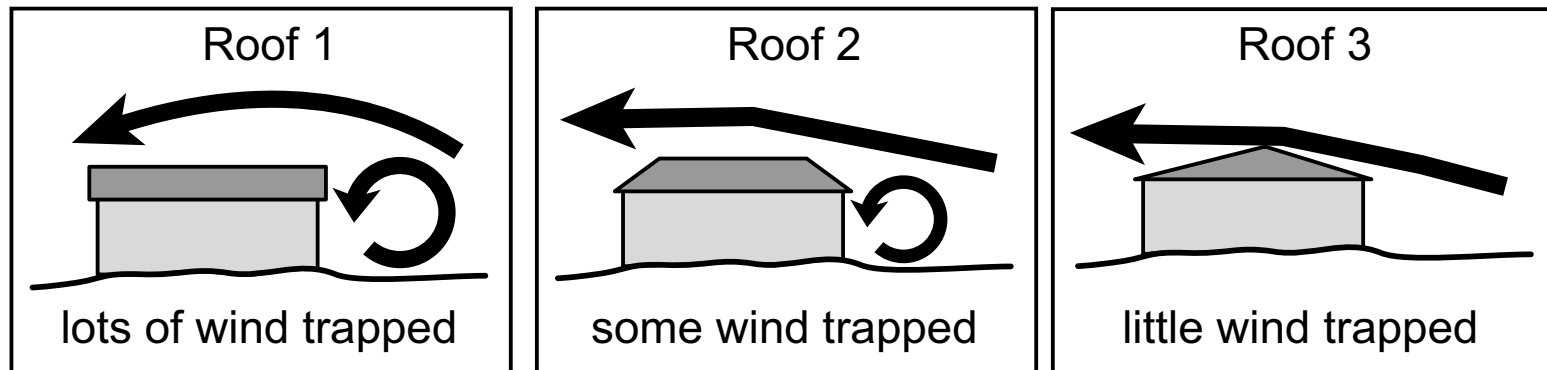
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9. Use the information and your knowledge of science to answer the question.

A builder compares roof designs for a house to be built in an area that has high winds.

**Roof Designs and Wind**



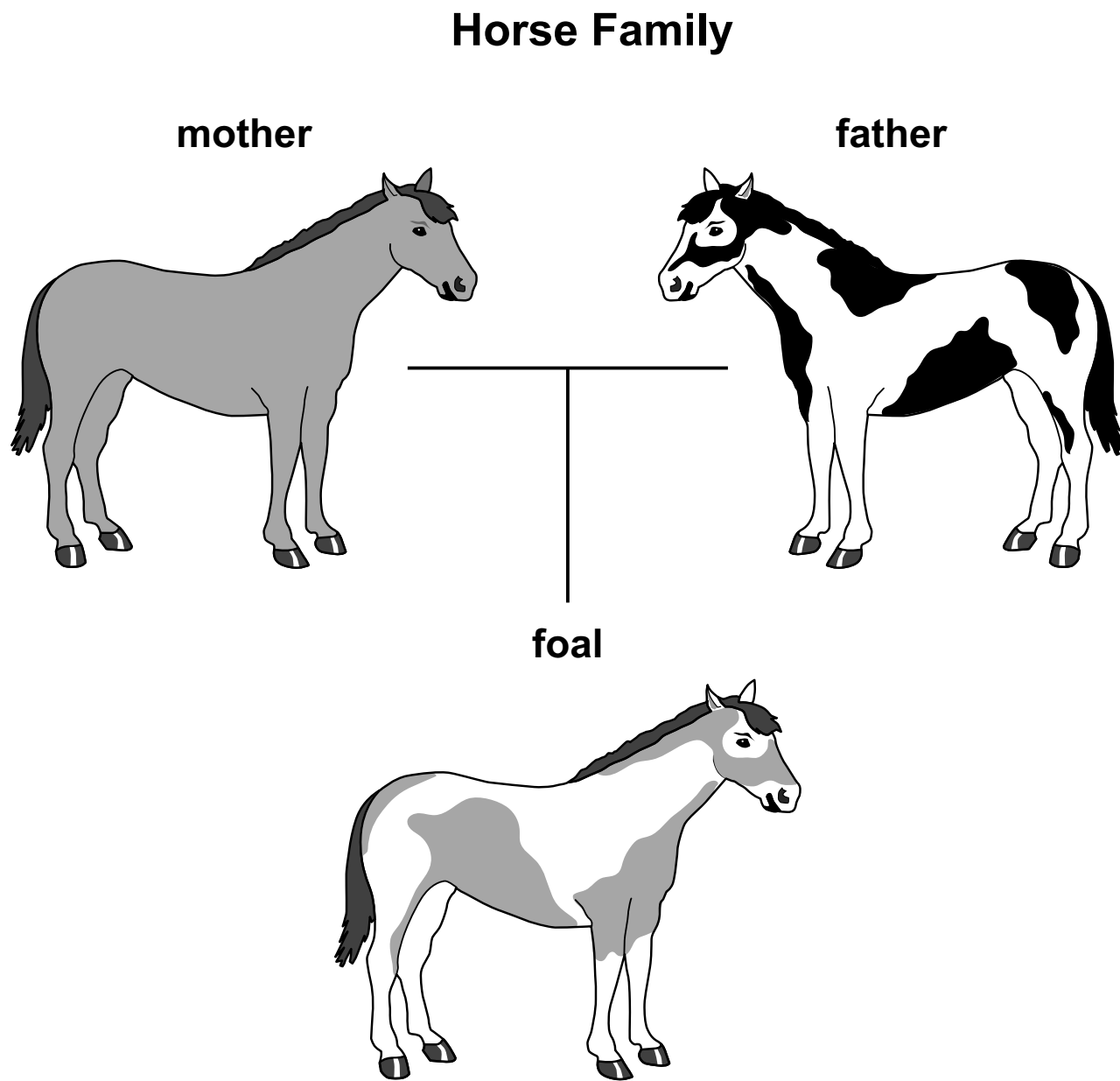
Which statements **best** describe a design that will protect the roof of a house in an area with high winds?

Select the **two** correct answers.

- Ⓐ The best design stops the greatest amount of wind from blowing across the roof.
- Ⓑ The best design allows the roof to stay on the house even when strong winds blow.
- Ⓒ The design of roof 1 is best, because wind blows past the walls of the house.
- Ⓓ The design of roof 2 is best, because no wind is trapped by the roof.
- Ⓔ The design of roof 3 is best, because very little wind is trapped by the roof.

10. Use the information and your knowledge of science to answer the question.

The diagram shows two parent horses and their foal.



Which statements identify traits the foal **most likely** inherited from its parents?

Select the **two** correct answers.

- Ⓐ gray hair from its mother
- Ⓑ a white tail from its mother
- Ⓒ a solid hair color from both parents
- Ⓓ a spotted hair pattern from its father
- Ⓔ white hair on its face from both parents

**GO ON ►**



**11. Use the information and your knowledge of science to answer the question.**

People need vitamin D to help their bones get enough calcium so that the bones can be strong. People can get vitamin D from milk, fish, and mushrooms. People's bodies can also make vitamin D when their skin absorbs light from the Sun.

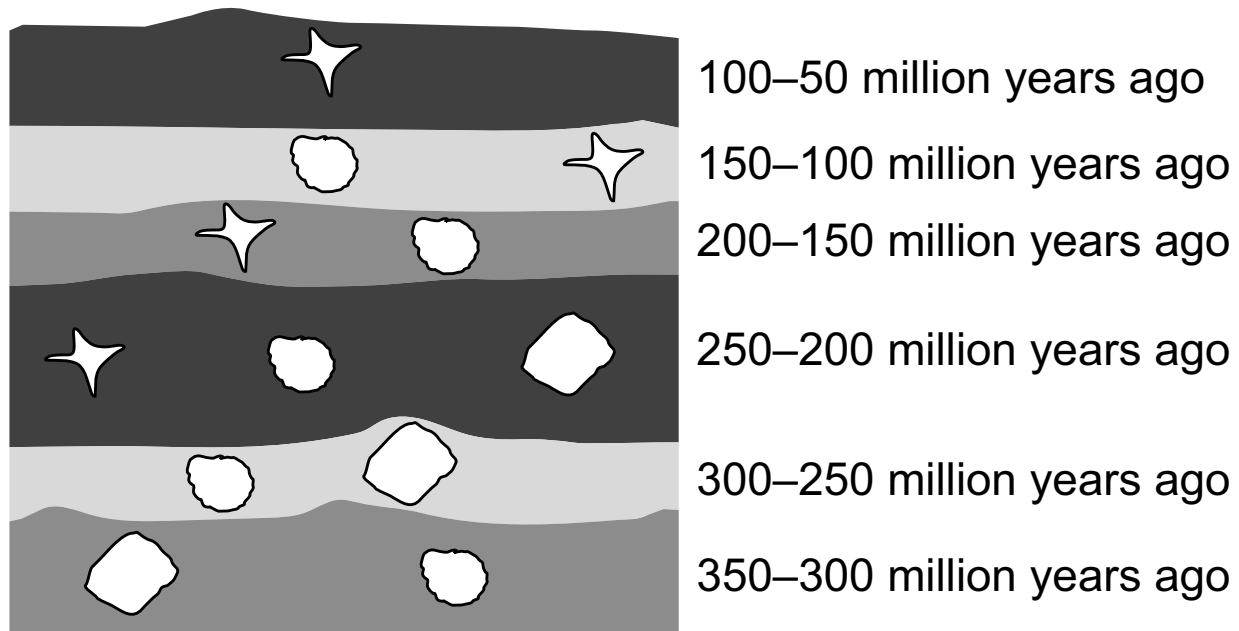
Which situation will **most likely** cause a person's bones to become weak?




- Ⓐ The person spends a lot of time outside.
- Ⓑ The person avoids foods with vitamin D.
- Ⓒ The person eats cereal with milk for breakfast each morning.
- Ⓓ The person eats lots of fish that provide vitamin D.

12. Use the information and your knowledge of science to answer the question.

Sam found a figure of animal fossils in rock layers.

**Animal Fossils Found in Rock Layers**



Key		
		
Fossil W	Fossil X	Fossil Y

Which claims can **best** be supported by the fossil record in the figure?

Select the **two** correct answers.

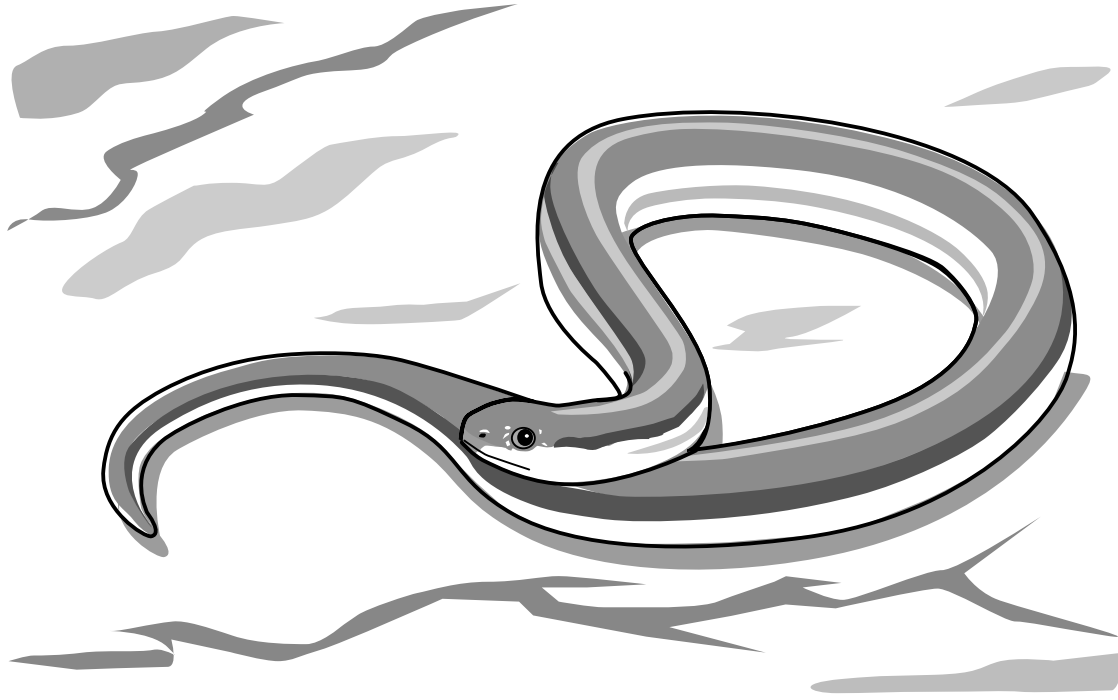
- Ⓐ The type of animal that formed fossil Y existed for only 50 million years.
- Ⓑ The type of animal that formed fossil W existed for the longest period of time.
- Ⓒ The type of animal that formed fossil X was the last of the animals to die out.
- Ⓓ The type of animal that formed fossil Y died out more than 350 million years ago.
- Ⓔ The type of animal that formed fossil X could be found on Earth more than 300 million years ago.

**GO ON ►**

13. Use the information and your knowledge of science to answer the question.

The lined snake lives in the central United States. A lined snake is shown in the picture.

**Lined Snake**



Some of the lined snake's needs include:

- food to eat (mainly worms, but also slugs and insects)
- a grassy area to move around in and find food
- a den in a rocky place to spend the winter
- a place to lie in the sunlight in cool weather
- protection from birds and mammals that eat lined snakes

A road is being built through a grassy area where lined snakes live.

In which way will this road **most likely** affect the snakes in the area?

- Ⓐ More snakes will die because they will have less grass to live in.
- Ⓑ More snakes will die because new predators will move into the area.
- Ⓒ More snakes will survive because they will be able to find more food to eat.
- Ⓓ More snakes will survive because they will have better places to sun themselves.

**GO ON ►**

**14. Use the information and your knowledge of science to answer the question.**

Black carp are fish that were brought to the United States in the 1970s. Some black carp escaped into rivers during floods. They began to eat mussels and snails. The way mussels and snails feed helps clean the water in a river.

Which effects will **most likely** be caused by introducing black carp into new ecosystems?

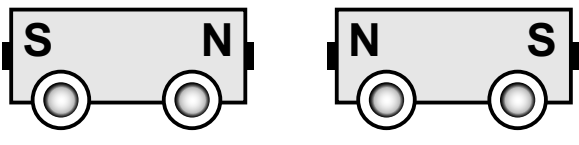
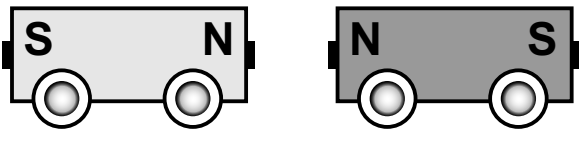
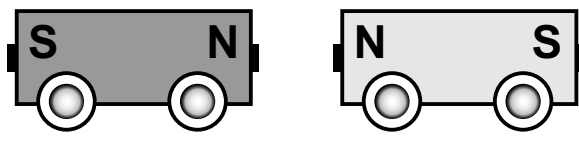
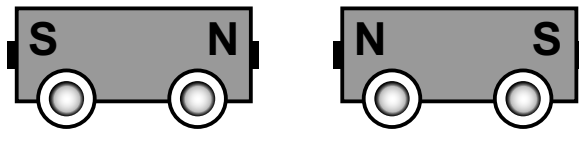
Select the **two** correct answers.

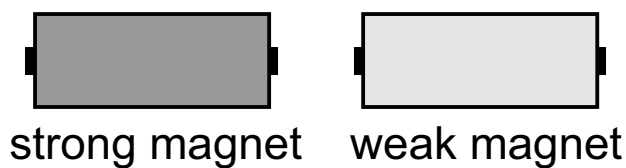
- Ⓐ Other types of fish will find new food sources.
- Ⓑ Some types of snails will disappear from the ecosystems.
- Ⓒ The water in rivers will become dirty as black carp eat more mussels.
- Ⓓ Plants that live in rivers will be healthier because fewer nutrients will be in the water.
- Ⓔ The number of large predators will increase because they will have more kinds of fish to eat.

**GO ON ►**

15. Use the information and your knowledge of science to answer the question.

Jacob investigated the strength of magnets by playing with magnetic train cars. He slid two cars toward each other. He tried different combinations of the train cars, as shown in the table.

Trial	Setup	Observations
1		Train cars did not crash but got very close together.
2		Train cars did not crash but did get close together.
3		Train cars did not crash but did get close together.
4		Train cars did not crash and stayed far apart.



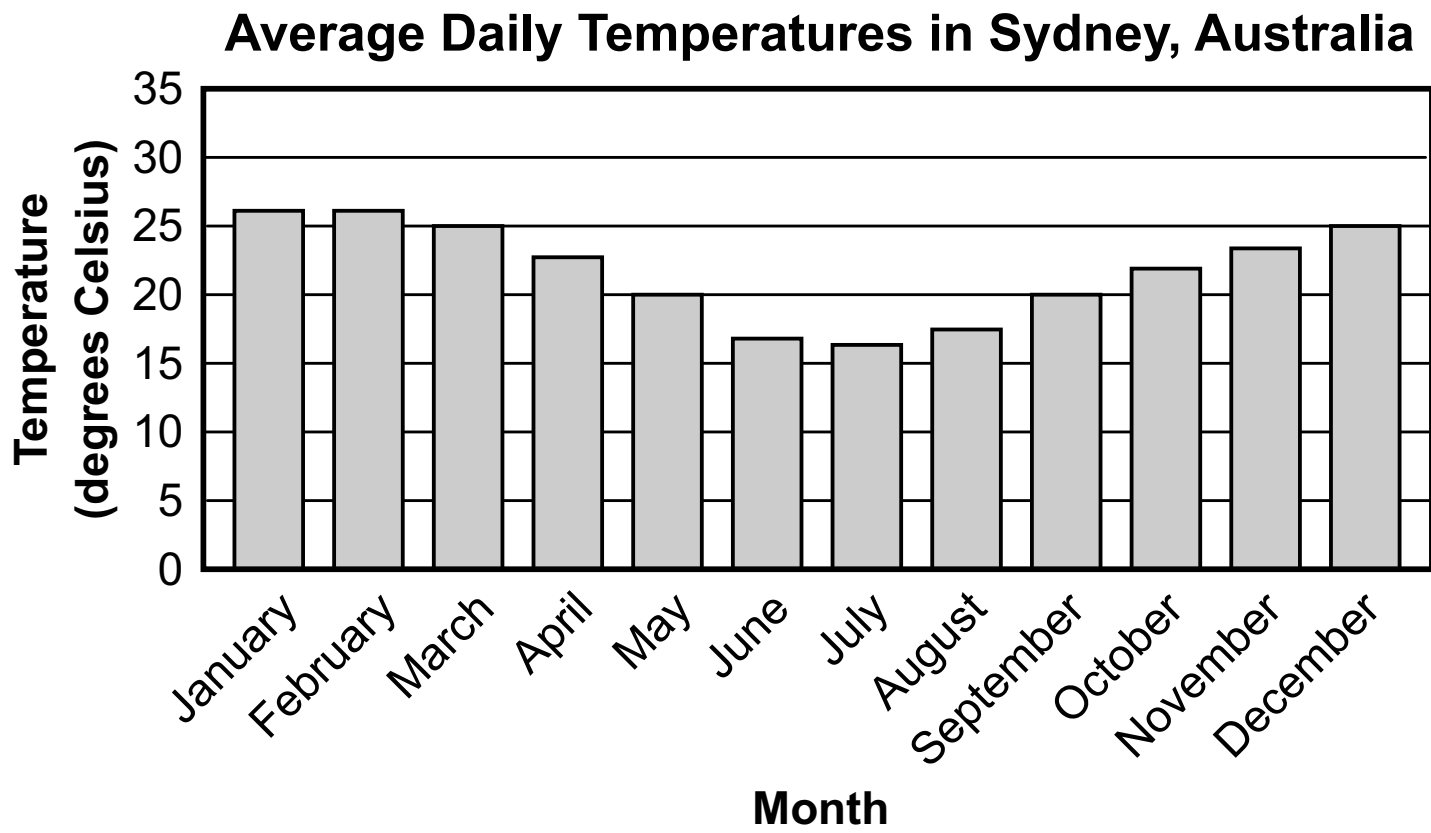
Which statement **best** explains the pattern in Jacob's observations?

- (A) Two strong magnets will have a strong attractive force when the same poles face each other.
- (B) Two strong magnets will push away from each other with a great force when the same poles face each other.
- (C) Two weak magnets will push away from each other with a great force when the same poles face each other.
- (D) One strong magnet and one weak magnet will have a strong attractive force when the same poles face each other.

**GO ON TO NEXT PAGE**

16. Use the information and your knowledge of science to answer the questions.

The graph shows the average daily temperatures in Sydney, Australia, each month. 0°C is freezing, 20°C is room temperature, and 30°C is a warm summer temperature.



**Part A**

What kind of clothing should someone living in Sydney wear in July?

- Ⓐ a heavy coat, because the average temperatures in July are close to freezing
- Ⓑ shorts, because the average temperatures in July are warm summer temperatures
- Ⓒ a light jacket, because the average temperatures in July are close to room temperature
- Ⓓ a warm sweater, because the average temperatures in July are much colder than room temperature

**Part B**

How does the temperature graph allow someone living in Sydney to decide what to wear?

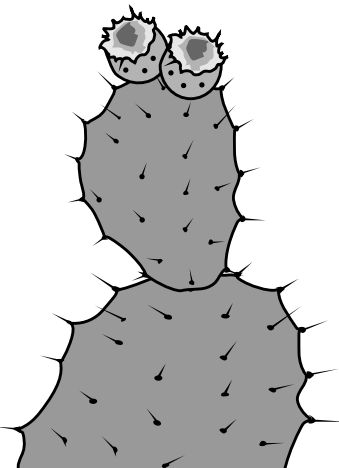
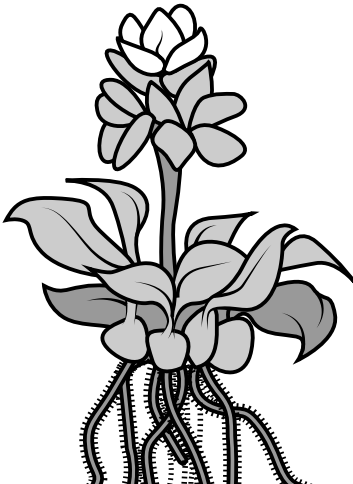
- Ⓐ The numbers on the graph predict the high and low temperatures that will occur each day.
- Ⓑ The graph shows the temperatures from many years to provide information about Sydney's climate.
- Ⓒ The numbers on the graph help identify whether Sydney's climate is rainy or dry during different parts of the year.
- Ⓓ The graph shows the temperatures from the past year to explain the changes in Sydney's weather over time.



17. Use the information and your knowledge of science to answer the questions.

Some students in Louisiana claimed that plants from the wetlands cannot grow in the desert. They also claimed that plants from the desert do not grow well in the wetlands. They exchanged plants with students from Arizona to find evidence for their claims. The table describes the two plants.

**Plants Exchanged by Arizona and Louisiana Students**

Description	Plant from Arizona	Plant from Louisiana
name of plant	prickly pear	water hyacinth
what the plant looks like		
where the plant usually grows	soil made of clay, silt, and sand that does not hold much water	a place with a lot of water, like a bog or water garden

The Louisiana students put both kinds of plants in a water garden. The Arizona students put both kinds of plants in a desert garden. The students observed the plant growth for three months.

**Part A**

Which observation **best** supports the claim that plants from the wetlands cannot survive in the desert?

- Ⓐ Arizona students observed that their water hyacinth plants did not produce flowers.
- Ⓑ Louisiana students observed that their water hyacinth plants floated on top of the water.
- Ⓒ Arizona students observed that their water hyacinth plants turned brown and stopped growing.
- Ⓓ Louisiana students observed that their water hyacinth plants grew quickly when there was a lot of water.

**Part B**

Which observation **best** supports the claim that plants from the desert do not grow well in the wetlands?

- Ⓐ Louisiana students observed that their prickly pear plants turned pale and grew slowly.
- Ⓑ Louisiana students observed that their prickly pear plants grew spines instead of leaves.
- Ⓒ Arizona students observed that their prickly pear plants grew roots deep into the ground.
- Ⓓ Arizona students observed that their prickly pear plants produced flowers and a few fruits.





**You have come to the end of Session 1 of the test.**

- **Review your answers from Session 1 only.**
- **Then, close your test booklet and sit quietly or read silently.**





**NO TEST MATERIALS**

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# Session 2 Directions

**Directions:**

Today, you will take Session 2 of the Grade 3 Science Practice Test.

Read each stimulus and question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any stray pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely. You may look back at the stimuli when needed.

One of the questions will ask you to write a response. Write your response in the space provided in your test booklet. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

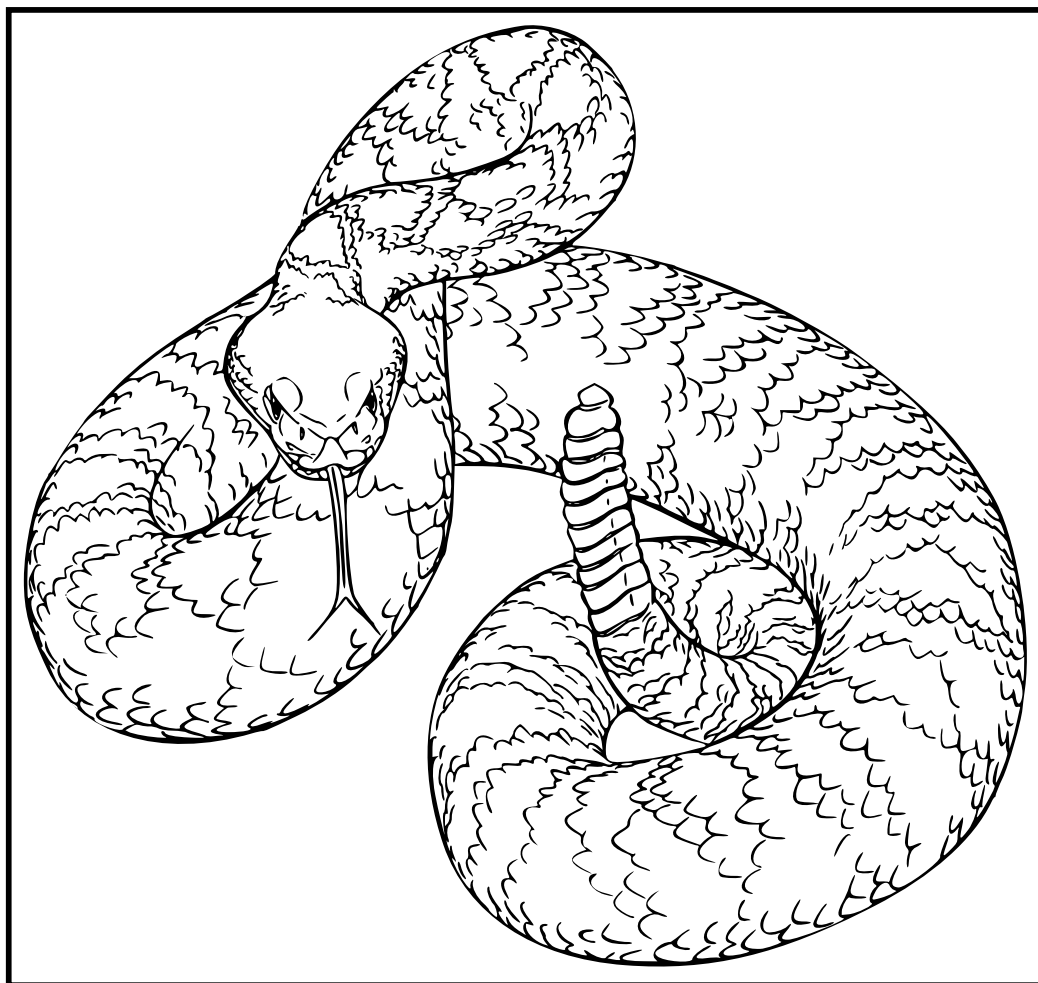
**GO ON ►**

Use the information about rattlesnake rattles and your knowledge of science to answer questions 18–22.

### Rattlesnake Rattles

Sammy saw a rattlesnake at the zoo. Picture 1 shows a rattlesnake.

**Picture 1. Rattlesnake**



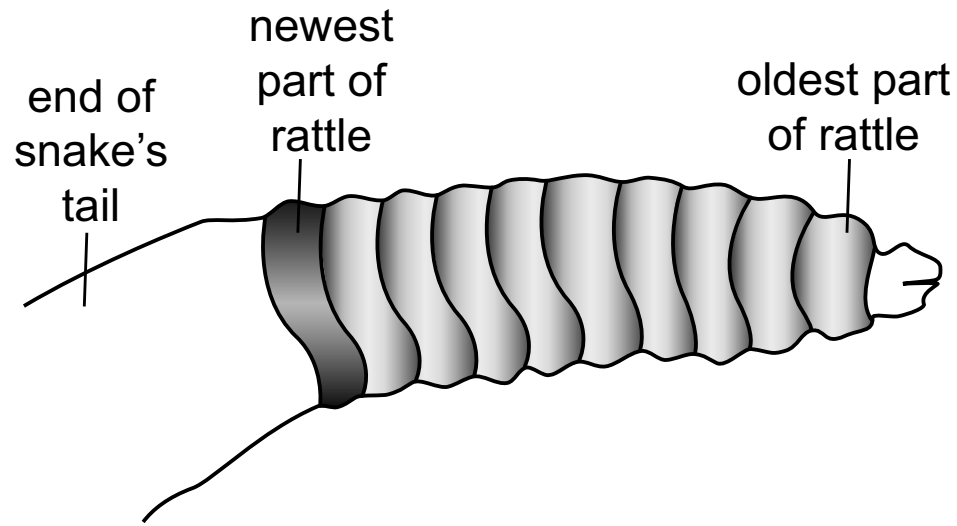
*Source: OpenClipart-Vectors.*

Sammy wanted to learn more about rattlesnakes. She read that:

- Rattles are hollow pieces that are joined together. They are made of the same material as the snake's scales.
- A rattlesnake shakes its tail to warn predators that the snake will attack.
- The rattling noise is made when the snake holds its tail straight up and shakes it. The pieces hit one another and make a buzzing sound.
- When a rattlesnake grows, it sheds its skin. A new rattle is added each time.
- The rattles on a snake may break off. The rattles grow back one piece at a time.

**GO ON ►**

**Figure 1. Rattlesnake Rattle**



Sammy read a news article that said some groups of rattlesnakes do not have fully developed rattles. Instead, they have curled tails with a rattle that cannot make a rattling sound. She made a table to show what she learned.

**Table 1. Rattlesnakes Without Rattles**

Type of Rattlesnake	Where These Rattlesnakes Live	Characteristics
prairie	South Dakota	<ul style="list-style-type: none"> <li>• Most snakes in the population have rattles on their tails.</li> <li>• Some of the snakes have a curled tail with a rattle.</li> <li>• Curled tails cannot make a rattling noise.</li> <li>• Snakes with curled tails are more likely to bite predators and prey.</li> </ul>
Santa Catalina	Catalina Island, California	<ul style="list-style-type: none"> <li>• The population of snakes is from a small island.</li> <li>• None of the snakes in the population have rattles on their tails.</li> </ul>



18. Which statement **best** explains why prairie rattlesnakes can have different tails?

- Ⓐ The snakes with curled tails are very old and lost the rattles on their tails.
- Ⓑ The snakes with curled tails broke off their rattles so that they could hide in new places.
- Ⓒ The snakes with normal tails and the snakes with curled tails live in different environments.
- Ⓓ The snakes with normal tails and the snakes with curled tails inherited different traits from their parents.

19. Use the information in Table 1 to answer the question.

Which statement **best** explains why none of the Santa Catalina rattlesnakes have rattles?

- Ⓐ The rattlesnakes have the trait for curled tails instead of normal tails.
- Ⓑ The rattlesnakes shed their skin too often to make rattles.
- Ⓒ The rattlesnakes did not inherit the trait for rattles from their parents.
- Ⓓ The rattlesnakes remove the rattles from their tails when they are born.

20. Use the information in Table 1 to answer the questions.

**Part A**

A scientist observed that there has been an increase in the number of prairie rattlesnakes that have curled tails instead of normal tails.

Which statement **best** explains why more snakes with curled tails are able to survive in their environments?

- Ⓐ The curled tails help the rattlesnakes catch prey.
- Ⓑ The curled tails cause the rattlesnakes to bite their predators.
- Ⓒ The curled tails allow the rattlesnakes to be quiet, which makes the rattlesnakes harder to find.
- Ⓓ The curled tails allow the rattlesnakes to hide underneath rocks, which makes the rattlesnakes harder to find.

**Part B**

Which evidence **best** supports the answer to Part A?

Select the **two** correct answers.

- Ⓐ Snakes that bite their predators inject all their venom so they can escape.
- Ⓑ Humans are more likely to kill snakes that they hear rattling.
- Ⓒ Other animals are more likely to get close to snakes that are hidden.
- Ⓓ Predators are more likely to notice snakes that make a rattling noise.
- Ⓔ Snakes that can trick prey into coming closer are more likely to catch enough food.

**GO ON ►**

21. Bull snakes do not have venom. Bull snakes can be found in some of the same places as prairie rattlesnakes. Bull snakes and prairie rattlesnakes are not related to each other. The two kinds of snakes have some traits that are alike.

The pictures show a bull snake and a prairie rattlesnake when a predator is nearby.

**Bull Snake**



Source: Wikimedia Commons.

**Prairie Rattlesnake**



Source: Charles Peterson.

**GO ON ►**

**Part A**

Based on the pictures, how are bull snakes and prairie rattlesnakes alike?

Select the **two** correct answers.

- Ⓐ They both have rattles on their tails.
- Ⓑ They both have patches of light and dark scales.
- Ⓒ They both curl up when a predator is nearby.
- Ⓓ They both kill predators when they are in danger.
- Ⓔ They both have long tongues that help them smell.

**Part B**

Why do bull snakes and prairie rattlesnakes both have the traits described in Part A?

- Ⓐ Bull snakes and prairie rattlesnakes inherit traits from each other.
- Ⓑ Bull snakes and prairie rattlesnakes obtain traits from their habitats.
- Ⓒ Bull snakes and prairie rattlesnakes learn the same behaviors by watching each other.
- Ⓓ Bull snakes and prairie rattlesnakes inherit the same kinds of traits from their parents.

22. Some ranchers in South and Central Texas have observed the following:

- Some rattlesnakes with rattles no longer shake their tails when they are scared.
- The feral (wild) hog populations in South and Central Texas have been getting bigger.
- Feral hogs have been known to eat snakes.

The ranchers claim that rattlesnakes are changing their rattling behavior. Use evidence to explain why not rattling their tails may help rattlesnakes in South and Central Texas survive. In your explanation, be sure to:

- Explain how not rattling their tails can affect the survival of the snakes.
- Explain why not rattling their tails may provide the snakes with an advantage over other snakes.

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**You have come to the end of Session 2 of the test.**

- **Review your answers from Session 2 only.**
- **Then, close your test booklet and sit quietly or read silently.**







**NO TEST MATERIALS**

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# Session 3 Directions

**Directions:**

Today, you will take Session 3 of the Grade 3 Science Practice Test.

Read each stimulus and question. Then, follow the directions to answer each question. Mark your answers by completely filling in the circles in your test booklet. Do not make any stray pencil marks outside of the circles. If you need to change an answer, be sure to erase your first answer completely. You may look back at the stimuli when needed.

One of the questions will ask you to write a response. Write your response in the space provided in your test booklet. Only responses written within the provided space will be scored.

If you do not know the answer to a question, you may go on to the next question. If you finish early, you may review your answers and any questions you did not answer in this session **ONLY**. Do not go past the stop sign.

**GO ON ►**

Use the information about plants and heat and your knowledge of science to answer questions 23–26.

### Plants and Heat

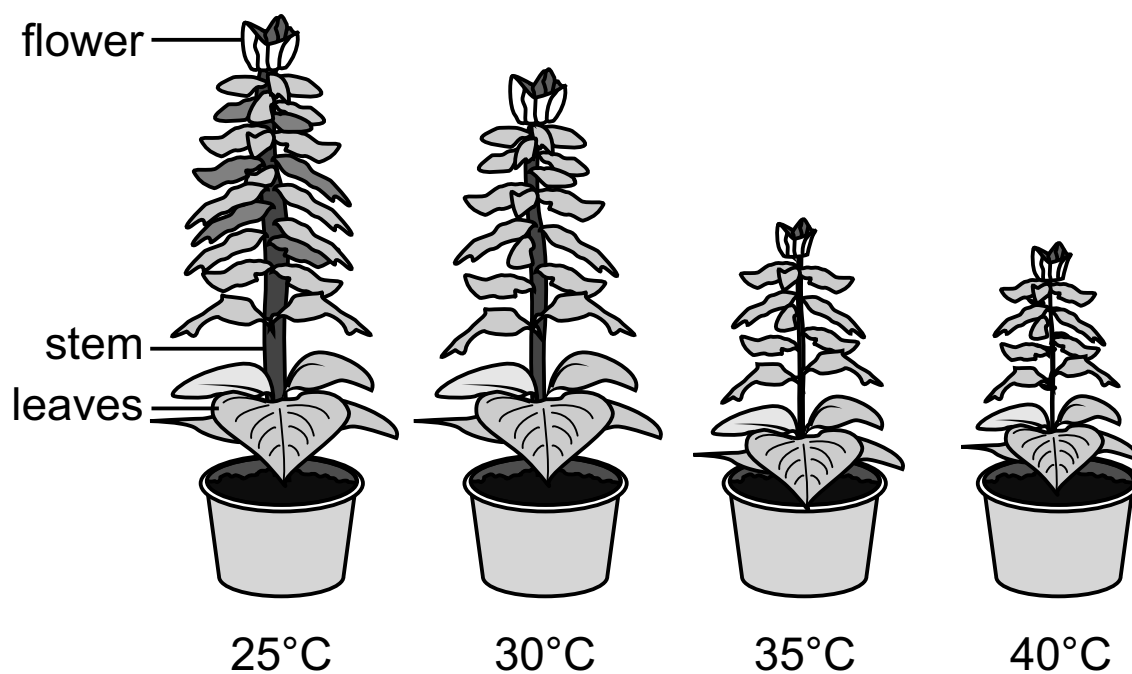
Each type of plant has different needs. A cactus grows well where it is hot and dry. A fern grows best where it is damp. Some plants grow best in sunlight. Other plants do better in the shade. Students investigated how hot weather affects plants.

Students test a type of plant called salvia to determine what conditions are best for the salvia plant to grow in.

Students completed the following investigation:

- Students bought four plants that were each the same height and age.
- All plants were planted in the same soil.
- All plants were given the same amount of water, light, and nutrients.
- All plants were kept at a temperature of 25°C most of the time.
- Every three days, the plants were exposed to different temperatures for several hours.
- The plants were compared after several weeks.

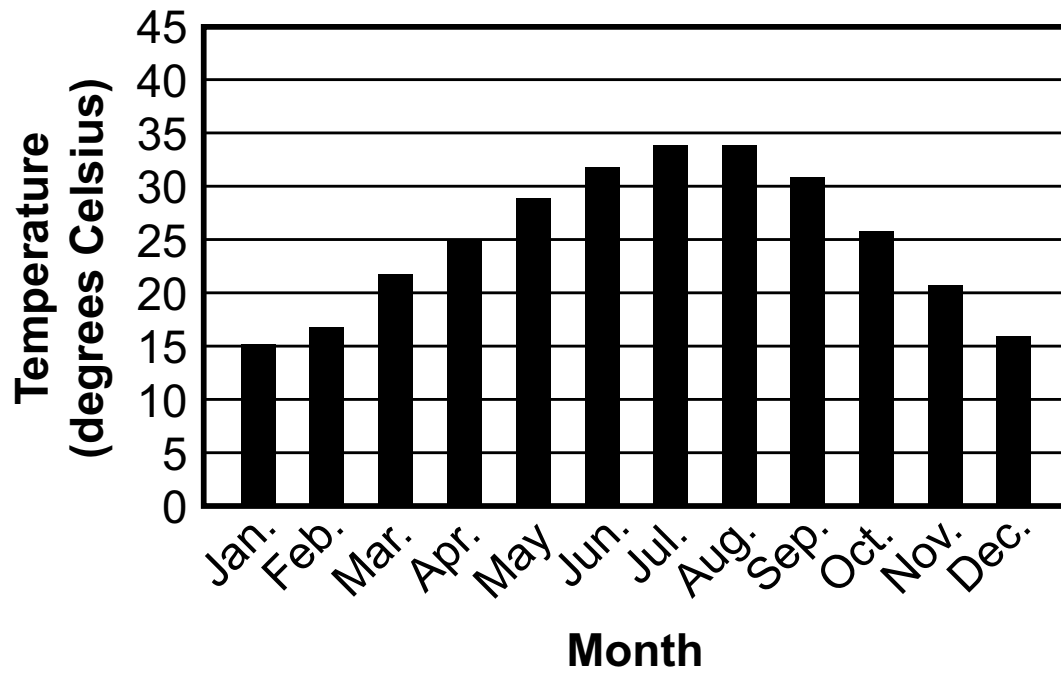
**Figure 1. Growth of Salvia Plants at Different Temperatures**



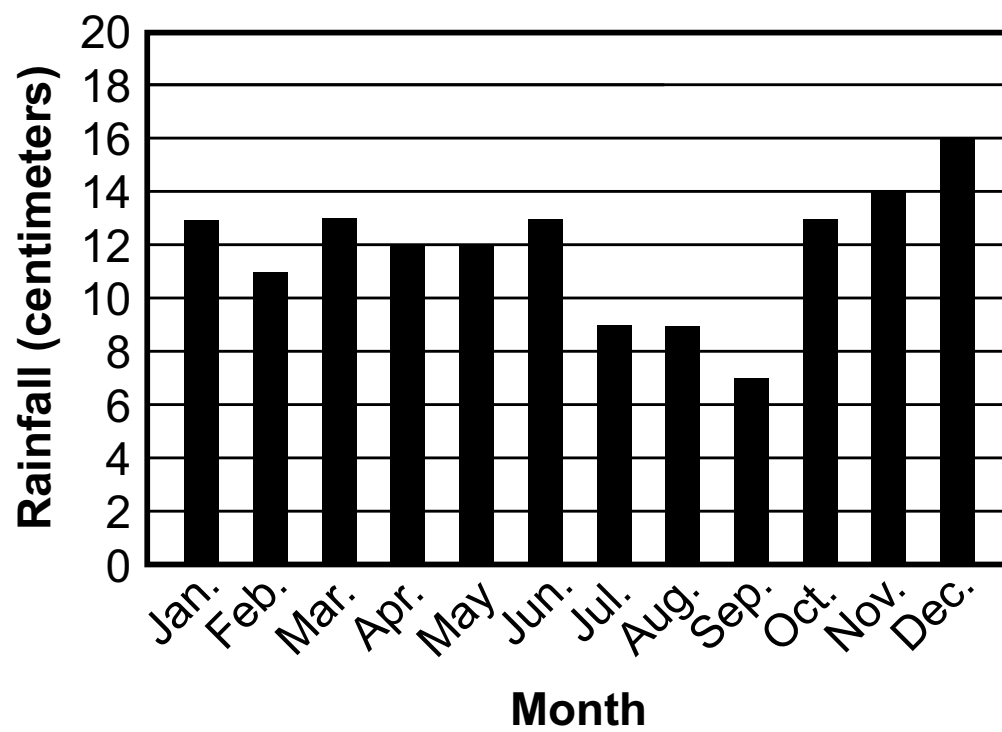
**GO ON ►**

Rainfall and temperature change during the year. Plants may grow better at certain times of the year. The graphs show usual high temperatures and rainfall for each month in Leesville, Louisiana.

**Graph 1. Usual High Temperatures in Leesville, Louisiana**



**Graph 2. Usual Rainfall Each Month in Leesville, Louisiana**



**GO ON ►**

23. Use the information in Figure 1 to answer the question.

In which ways were the salvia plants in the investigation affected by the temperature?

Select the **two** correct answers.

- Ⓐ width of stem
- Ⓑ height of plant
- Ⓒ shape of leaves
- Ⓓ shape of flowers
- Ⓔ number of flowers

24. Which variables have the **greatest** effect on how tall the plants in the investigation grow?

Select the **two** correct answers.

- Ⓐ the temperature around the plants
- Ⓑ the length of the roots of the plants
- Ⓒ the number of leaves the plants have
- Ⓓ the inherited characteristics of the plants
- Ⓔ the size of the plants when they are first planted

25. Use the information in Figure 1, Graph 1, and Graph 2 to answer the questions.

**Part A**

In which month would the salvia plants **most likely** grow best?

- Ⓐ April
- Ⓑ June
- Ⓒ August
- Ⓓ December

**Part B**

Which evidence **best** supports the answer to Part A?

- Ⓐ The month has temperatures below 20°C and receives less than 10 centimeters of rain.
- Ⓑ The month has temperatures close to 25°C and receives between 10 and 15 centimeters of rain.
- Ⓒ The month has temperatures below 20°C and receives more than 15 centimeters of rain.
- Ⓓ The month has temperatures above 30°C and receives between 10 and 15 centimeters of rain.

**GO ON ►**

**GO ON TO NEXT PAGE**

26. A student lives in a desert that has little rainfall and very high temperatures. The student researches two plants and finds the information shown in the table.

Plant	Amount of Rainfall Required in One Year (cm)	Temperature Range (°C)
1	10	9–44
2	70	15–30

Predict which plant will grow **best** in the desert. Support your prediction with evidence.

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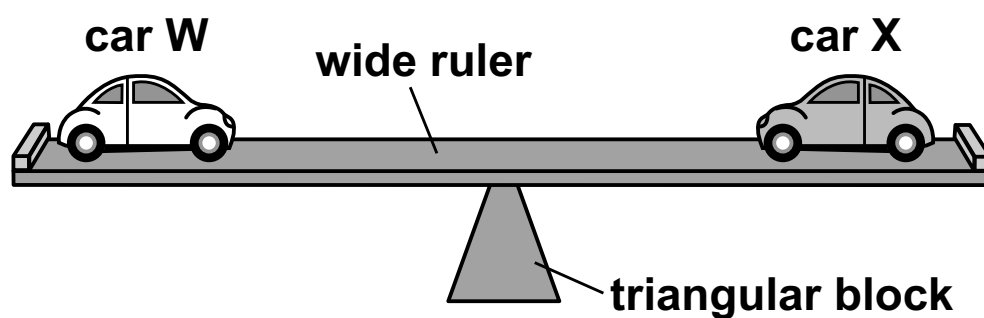
Use the information about seesaws and your knowledge of science to answer questions 27–30.

### Seesaws

Students make a model seesaw. They balance a ruler on a triangular wood block. They use the model to learn about forces on a seesaw.

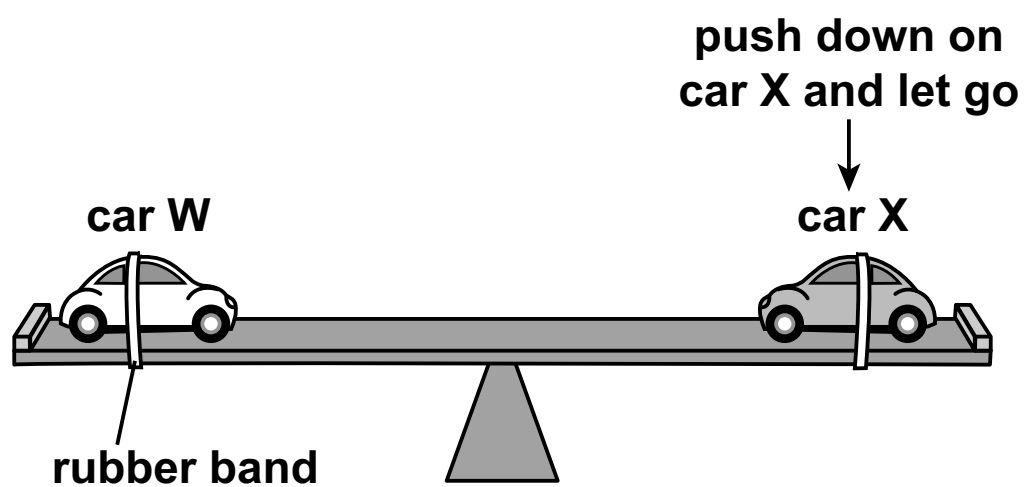
In Experiment 1, the students find two toy cars with the same mass. They put a toy car on each end of the ruler. They then move the cars on the ruler until the ruler is flat.

#### Experiment 1



In Experiment 2, the students use rubber bands to hold both cars in place on the ruler. One of the students pushes down on car X and then lets go. The students watch how the ruler moves.

#### Experiment 2

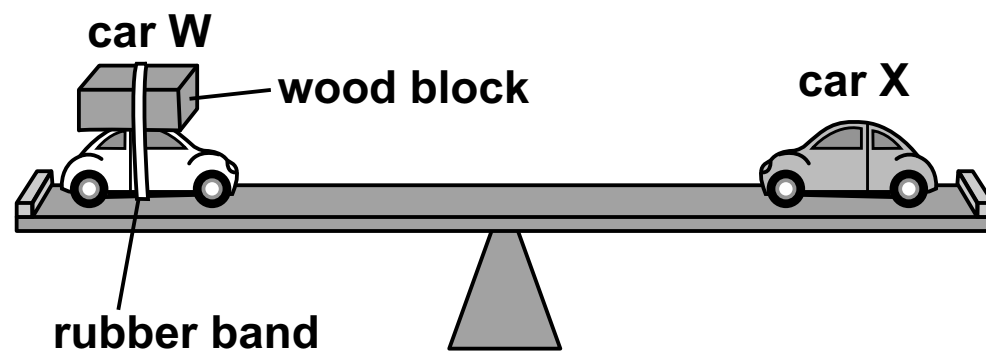


**GO ON ►**

In Experiment 3, the students remove the rubber bands that hold the cars in place on the ruler. They then put a wood block on car W. They use a rubber band to keep the block in place on the car.

During the experiment, the students move the cars on the ruler until the ruler is flat.

### Experiment 3



**GO ON ►**

27. During Experiment 1, a student pushes car X much closer to the center of the seesaw.

Which statements **best** predict what will happen to the forces and motion as soon as car X starts to move?

Select the **two** correct answers.

- Ⓐ The seesaw will begin to tilt.
- Ⓑ The seesaw will stop moving and be flat.
- Ⓒ The forces on the seesaw will become balanced.
- Ⓓ The forces on the seesaw will become unbalanced.
- Ⓔ The seesaw will move up and down in a repeated pattern.

28. Use the information in Experiment 2 to answer the questions.

**Part A**

Which statement **best** predicts how the ruler will move as soon as the student pushes down on car X and lets go?

- Ⓐ Car X's side of the ruler will stay tilted downward.
- Ⓑ Car X's side of the ruler will move upward.
- Ⓒ Car W's side of the ruler will move closer to the triangular block.
- Ⓓ Car W's side of the ruler will tilt downward until it touches the table.

**Part B**

Which statement **best** predicts how the ruler will move after a few minutes have passed?

- Ⓐ The ruler will stop moving, with car X's side of the ruler tilted downward.
- Ⓑ The ruler will tilt up and down faster than when first pushed.
- Ⓒ The ruler will move more slowly and stay more flat than when first pushed.
- Ⓓ The ruler will not be moving, and car W's side of the ruler will be sitting on the triangular block.

29. Use the information in Experiment 3 to answer the questions.

**Part A**

Which statement **best** predicts how one of the cars will move at the beginning of Experiment 3?

- Ⓐ Car X will roll across the ruler toward car W.
- Ⓑ Car W will roll to the center of the ruler and stop.
- Ⓒ Car W will roll across the ruler and crash into car X.
- Ⓓ Car X will roll away from car W.

**Part B**

How can the students move a car to cause the forces to become balanced?

- Ⓐ Push car W toward the center of the ruler.
- Ⓑ Push car X toward the center of the ruler.
- Ⓒ Push car W and car X equal distances toward the center of the ruler.
- Ⓓ Push car W toward the edge of the ruler, and push car X toward the center of the ruler.

30. After school, two students with the same mass sit on opposite sides of a seesaw on the playground. They want to repeat Experiment 1.

How can the students cause the forces on the seesaw to become balanced?

- Ⓐ Both students can push up and down on the seesaw.
- Ⓑ One of the students can move to the center of the seesaw.
- Ⓒ The students can ask a friend to sit on the left side of the seesaw.
- Ⓓ The students can each sit at the same distance from the center of the seesaw.

**GO ON ►**

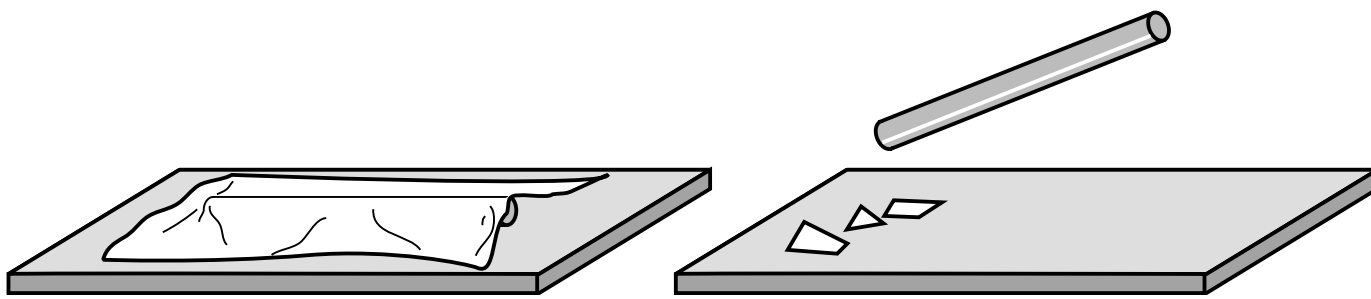
31. Use the information and your knowledge of science to answer the question.

Nathan and Kara learn that a glass rod can get an electric charge if the glass rod is rubbed on a piece of cloth. They do two experiments with a glass rod, a piece of cloth, and a few pieces of paper. Their experiments are shown in the figure.

### Nathan's Experiment

Cover the glass rod with the cloth for 30 seconds.

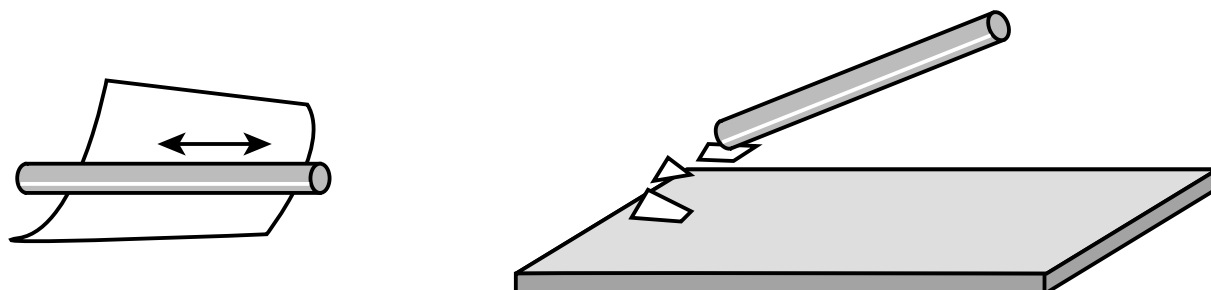
Hold the glass rod above the pieces of paper.



### Kara's Experiment

Rub the glass rod on the cloth for 30 seconds.

Hold the glass rod above the pieces of paper.



After the experiments, Nathan and Kara compare their observations.

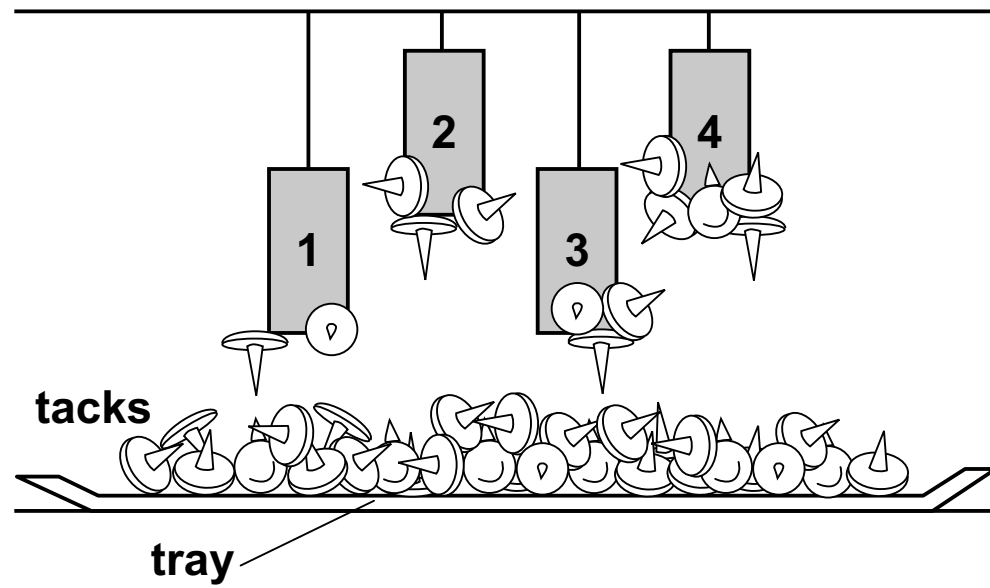
Which question are Nathan and Kara **most likely** trying to investigate?

- (A) Which glass rod stays charged for a longer period of time?
- (B) Does a glass rod need to touch pieces of paper to pick them up?
- (C) Does a glass rod need to be charged in order to attract pieces of paper?
- (D) Which glass rod can attract pieces of paper from a greater distance?

**GO ON ►**

**32. Use the information and your knowledge of science to answer the question.**

Students hang magnets at different heights above a tray full of tacks. The magnets attract different numbers of tacks, as shown in the diagram.



What can the students conclude from this experiment?

- Ⓐ Magnet 1 and magnet 3 are the strongest, because they hang closest to the tacks.
- Ⓑ Magnet 2 and magnet 3 are the strongest, because they can reach more tacks in the middle.
- Ⓒ Magnet 3 and magnet 4 are the strongest, because they pick up the greatest number of tacks.
- Ⓓ Magnet 2 and magnet 4 are the strongest, because they pick up tacks from a greater distance.

**33. Use the information and your knowledge of science to answer the question.**

A scientist studied layers of rock on the side of a cliff. In the top layer of rock, she found fossilized sand dunes. In the middle layer of rock, she found fossils of coral, clamshells, and shark teeth. In the bottom layer of rock, she found fossils of fern leaves.

What is the correct order of the environments of the three layers, from oldest to youngest?

- Ⓐ desert, ocean, forest
- Ⓑ desert, forest, ocean
- Ⓒ ocean, forest, desert
- Ⓓ forest, ocean, desert

**34. Use the information and your knowledge of science to answer the question.**

Male mockingbirds sing complicated songs. Some male mockingbirds also dance. They leap into the air and flap their wings while they sing.

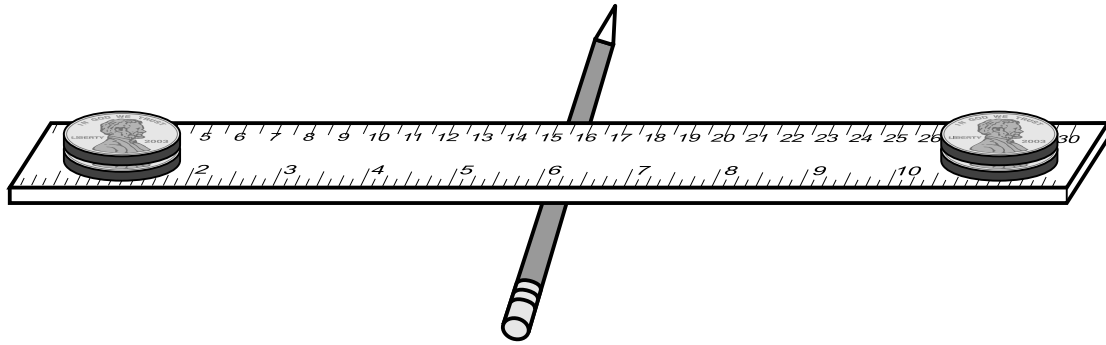
How do singing and dancing behaviors provide male mockingbirds with advantages in surviving or reproducing?

- Ⓐ These behaviors attract prey.
- Ⓑ These behaviors scare predators away.
- Ⓒ These behaviors get the attention of female mockingbirds.
- Ⓓ These behaviors keep other male birds out of a mockingbird's territory.

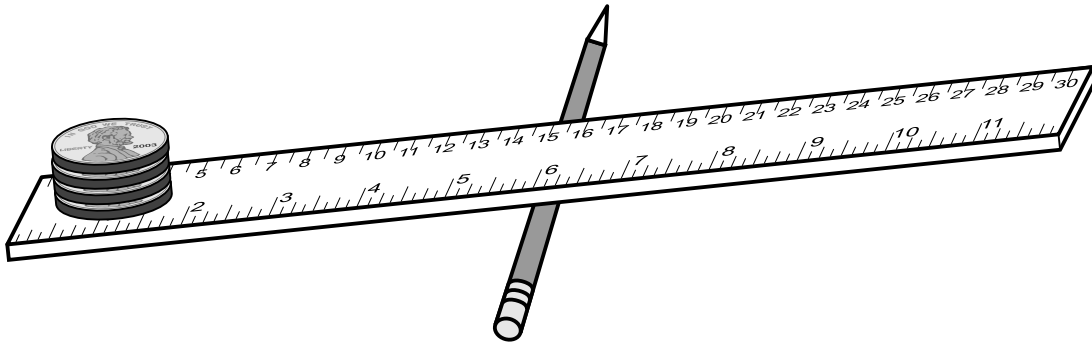
35. Use the information and your knowledge of science to answer the question.

Samantha and David each design an experiment to see whether they can balance a ruler on a pencil by placing pennies on the ends of the ruler.

### Samantha's Experiment



### David's Experiment



Why do the designs of the experiments allow Samantha and David to find evidence about balanced and unbalanced forces?

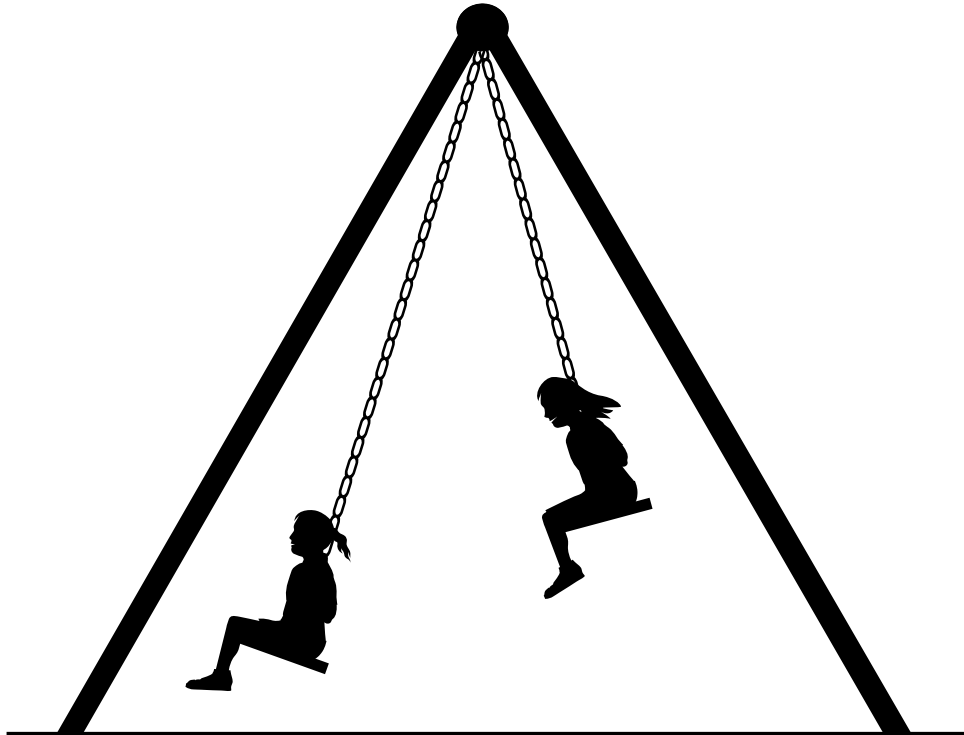
- Ⓐ The ruler and the pennies are set up in different ways in each experiment.
- Ⓑ The pennies are placed on the same side of the ruler in each experiment.
- Ⓒ All the pennies are the same distance from the center of the ruler in each experiment.
- Ⓓ The same number of pennies and the same type of pencil and ruler are used in each experiment.

**GO ON ►**



36. Use the information and your knowledge of science to answer the question.

Beth and her younger sister Jenny are on a swing set. Jenny's swing has a shorter chain and is higher off the ground than Beth's swing.



Their cousin Lisa watches them swing. Lisa makes these observations:

- Beth moves forward and backward three times in six seconds.
- Jenny moves forward and backward four times in six seconds.
- Beth and Jenny are in the same place and going in the same direction at three seconds and at six seconds.

Lisa correctly predicts how Beth and Jenny will be moving at twelve seconds.

Why is Lisa able to predict how her cousins will be moving in the future?

- Ⓐ Lisa observes that one swing is shorter than the other.
- Ⓑ Lisa observes that Beth moves farther than Jenny does.
- Ⓒ Lisa observes that the motion of each swing happens in a pattern.
- Ⓓ Lisa observes that Beth moves back and forth more times than Jenny does.

**GO ON ►**

**37. Use the information and your knowledge of science to answer the question.**

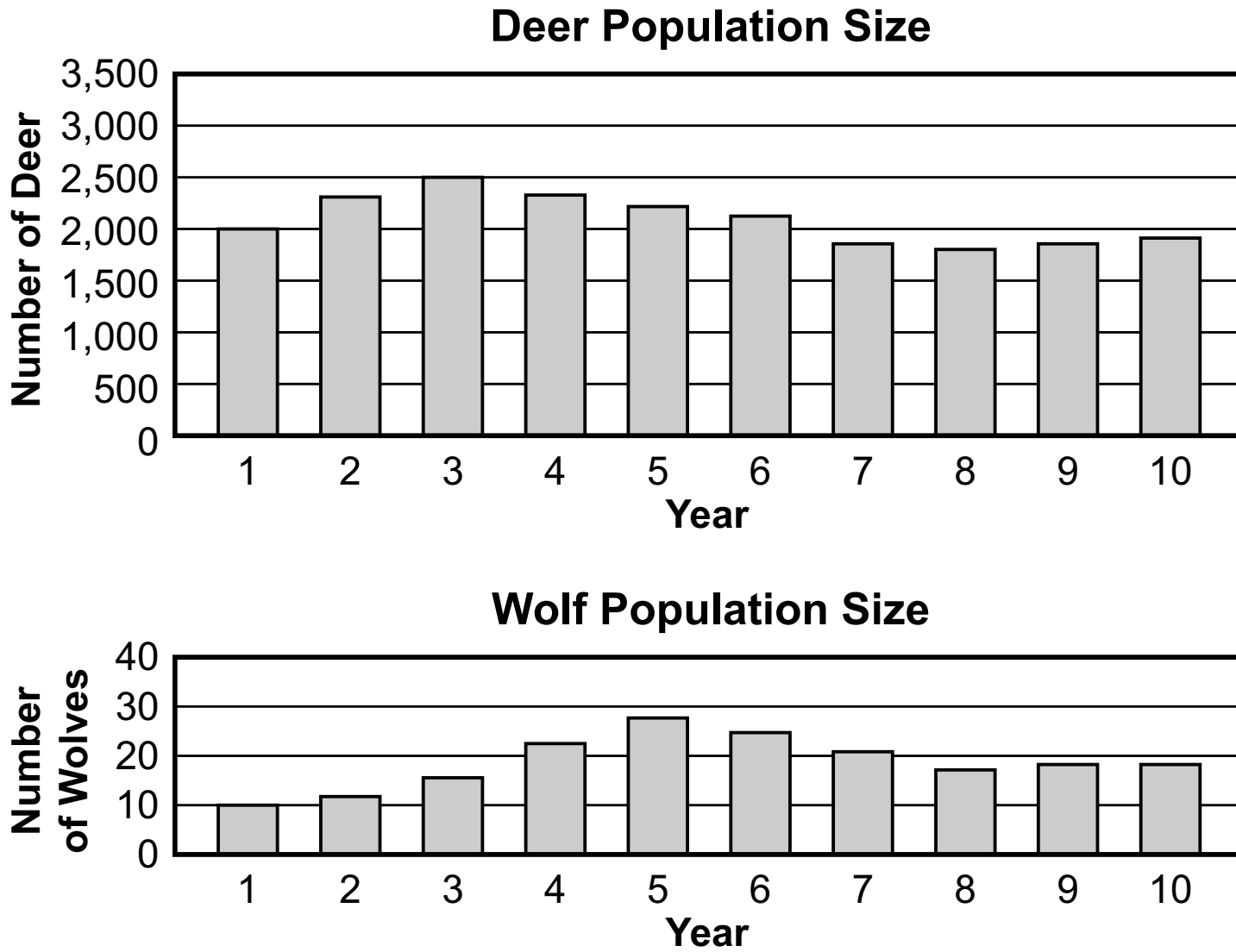
The wetlands of Louisiana are home to many plants and animals. Due to a rise in ocean levels, these wetlands are being covered by salt water. In order to save the wildlife, a community decides to build a canal. A canal carries water from a nearby river to the wetlands.

Which evidence **best** supports the claim that a canal will help the plants and animals in the wetlands?

- Ⓐ A canal will carry sediment and nutrients into the wetlands.
- Ⓑ A canal will provide a path for water to wash away non-native fish.
- Ⓒ A canal will increase the level of ocean water so more fish can live there.
- Ⓓ A canal will allow new predators to move into the wetlands from river habitats.

38. Use the information and your knowledge of science to answer the question.

Students look at bar graphs that compare the populations of wolves and deer in an area over ten years.



One student claims that wolves and deer are parts of a system.

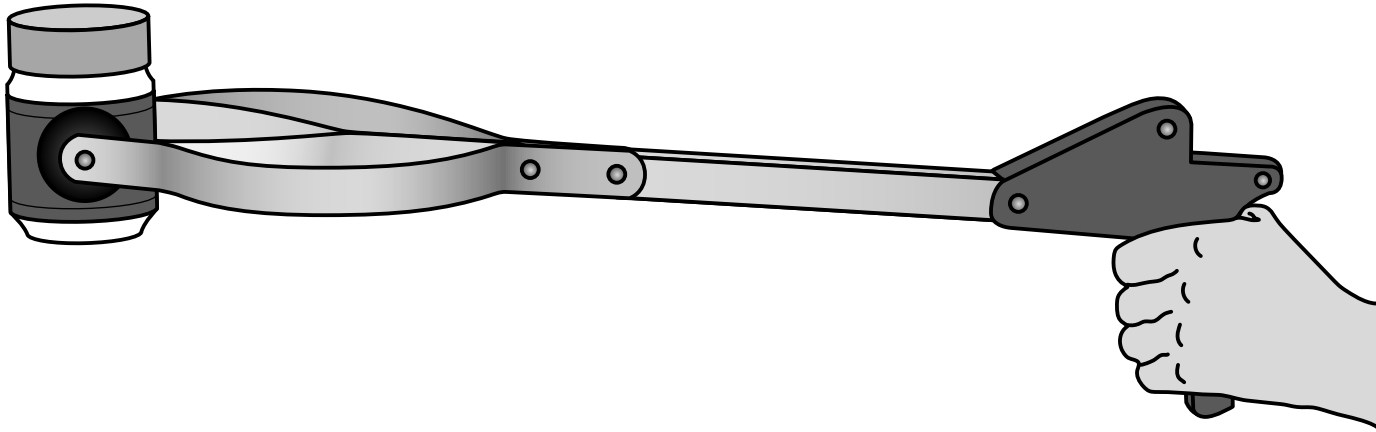
Which evidence from the bar graphs **best** supports the student's argument?

- Ⓐ The deer population changed before the wolf population changed, so deer depend on wolves to survive.
- Ⓑ The wolf population decreased after the deer population decreased, so wolves depend on deer to survive.
- Ⓒ The wolf population increased at the same time the deer population increased, so wolves and deer help each other survive.
- Ⓓ The wolf population was always lower than the deer population, so wolves and deer need to have steady populations so that they can survive.

**GO ON ►**

**39. Use the information and your knowledge of science to answer the questions.**

A grabber tool can be used to pick up an object that would otherwise be too hard to reach. A grabber tool is shown in the figure.

**Part A**

Yasmin has a desk that is difficult to move. The desk is in a corner of her bedroom. She often loses small steel tacks and paper clips behind the desk. The current design of the grabber tool does not allow for it to pick up the steel tacks and paper clips.

Which statement **best** describes the problem with the design of the grabber tool that Yasmin needs to solve?

- Ⓐ The grabber tool cannot grab and move a heavy desk.
- Ⓑ The grabber tool cannot pick up very small objects.
- Ⓒ The grabber tool cannot pick up objects without breaking them.
- Ⓓ The grabber tool cannot grab and move objects of different sizes.

**Part B**

Which change to the grabber tool would **best** help Yasmin solve the design problem in Part A?

- Ⓐ making the handle of the tool longer
- Ⓑ making the grabbing area on the end of the tool larger
- Ⓒ adding magnets to the grabbing area on the end of the tool
- Ⓓ adding soft padding to the grabbing area on the end of the tool





**You have come to the end of Session 3 of the test.**

- **Review your answers from Session 3 only.**
- **Then, close your test booklet and sit quietly or read silently.**











# LEAP 2025