

Spark Academy At-Home Learning Packet:

7th Grade

Name: _____

Homeroom: _____

Follow the directions for each day and complete the checklist to make
sure you keep learning while you're at home!

Use these STAR Card Resources for your math work!

Day 6

- ☐ Math: Review Star Cards from Unit 5, 6, and 7 using
the Star Card Guide
- ☐ ELA/ Humanities: “Noticing Mistakes Boosts
Learning”
- ☐ Science: Star Card questions and answers

Scientist Name: _____ Date: _____ HR: _____

Directions: Use your STARCARDS and CLASS RESOURCES to help you complete this packet

STAR Card Questions

NASA scientists are constantly discovering new objects in space, including new planets and galaxies. In order to keep up with all the new information, they must stay organized.

1. How do scientists organize the structures in space?

Rowan is studying the difference between Mars and Earth because she believes that one day there will be life on Mars. She concludes that Mars's mass is $\frac{1}{3}$ of the Earth's mass and wants to determine which planet has more gravity.

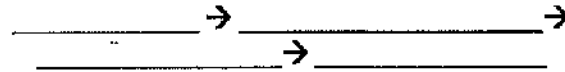
2a. What is gravity?

2a. What two variables impact an object's gravitational force?

2c. Based on the information above, which planet would have more gravity?



STAR Card Answers



Earth



Solar system



Milky Way

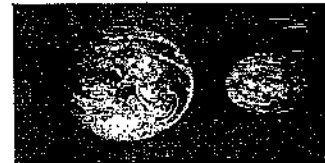


Observable Universe

2a. _____

2b. _____

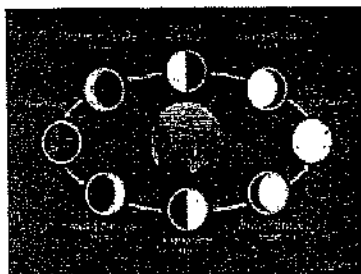
2c. _____



Every night Maria looks up in the sky at the moon and observes differences in its appearance. She thinks that the moon is growing and shrinking every month.

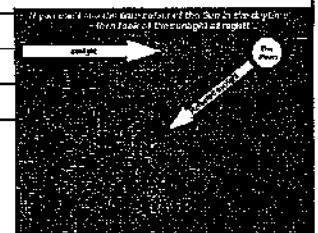
3a. Is Maria right?

3b. What is happening to the moon?



3a. _____

3b. _____



Name: _____ Class: _____

Noticing Mistakes Boosts Learning

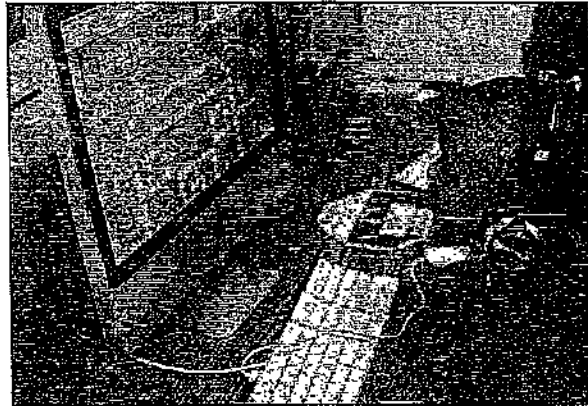
Children who pay closer attention to mistakes improve skills more quickly, study shows

By Alison Pearce Stevens
2017

In this informational text Alison Pearce Stevens discusses a study by psychologist Hans Schroder about what happens when we make mistakes. While making a mistake might feel like a negative experience, noticing these mistakes could be the key to learning. As you read, take notes on how growth mindset and fixed mindset impact children when they make mistakes.

- [1] Mistakes get a bad rap. People often brush them aside by saying, "I'll do better next time." But students who pay close attention to their mistakes actually do learn a task faster than kids who ignore them. Focusing on what went wrong helps us learn, a new study shows.

Hans Schroder is a psychologist at Michigan State University in East Lansing. He and his team wanted to know how people's brains respond to mistakes. People can ignore a mistake by simply pretending it never happened. Or they can mull it over.¹ They can try to figure out what went wrong and where. Schroder suspected that which response people chose might strongly affect how well they learned.



"Bossette 08" by Virginia Department of Education is licensed under CC BY 2.0

To find out, the team recruited 123 children, all six to eight years old. This is an important time in a child's life. It is when most kids are beginning school. How well they do in school can be related to their mindset about learning and intelligence.

A mindset is a particular attitude about a situation. Students who have a "fixed" mindset tend to believe that they are born with a certain level of intelligence. They don't believe it can ever change. Students with a "growth" mindset, however, think they can get smarter through hard work. Scientists have shown that this mindset can affect how well students learn.

- [5] To figure out whether each child had a fixed or a growth mindset, Schroder asked the recruits a series of questions. He then put a special cap on each child's head. That cap held 64 small sensors called *electrodes*. The cap held these against the child's scalp and recorded electrical signals as they sparked between the child's brain cells. This let Schroder spy on patterns of activity inside each child's brain.

1. to think deeply about something

While wearing the cap, children played a computer game. In it, they rounded up animals that had escaped from a zoo. Players had to press the space bar when they saw one of the escaped critters. But the game came with a twist. Three orangutans were also helping round up the animals. When players saw the orangutans, they were *not* supposed to press the space bar. The children could make two kinds of mistakes — either responding when they shouldn't or not responding when they should. As they played, the electrodes recorded their brain's activity.

When Schroder examined the data, he found a clear pattern. Small regions of the brain responded in the children who had a fixed mindset. Each response lasted just 150 milliseconds. The brains of children with a growth mindset showed much more activity. What's more, a larger network of areas responded. And those areas did so for longer periods — up to 500 milliseconds. This shows that these brains were paying attention to mistakes, Schroder says.

Children with growth mindsets were also better at bouncing back after their mistakes. "They were more likely to get the next trial right," Schroder says. "It was almost as if the children with growth mindsets were willing to engage with their mistakes in order to correct them." In contrast, "those with fixed mindsets wanted to ignore their mistakes," he says.

His team's results appear in the April issue of *Developmental Cognitive Neuroscience*.

- [10] "This research demonstrates one way that a growth mindset helps you learn more," says Allison Master. She is a psychologist at the University of Washington in Seattle. She was not involved with the study. "When you face your mistakes and are ready to learn from them," she says. "Then you can get better over time. But if you run away from your mistakes and try to ignore them, you'll never improve."

From Science News for Students, April 19, 2017. © Society for Science & the Public. Reprinted with permission.

This article is intended only for single-classroom use by teachers. For rights to republish Science News for Students articles in assessments, course packs or textbooks, visit: <https://societyforscience.org/permission-republish>

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following describes the central idea of the text?
 - A. Accepting and learning from your mistakes helps you improve when you try again.
 - B. Students have been taught to avoid mistakes rather than accept them.
 - C. Making mistakes shows that you're someone who's not afraid to take risks.
 - D. People with fixed mindset don't learn from their mistakes because they don't make them often.

2. PART B: Which detail from the text best supports the answer to Part A?
 - A. "Mistakes get a bad rap. People often brush them aside by saying, 'I'll do better next time.'" (Paragraph 1)
 - B. "It is when most kids are beginning school. How well they do in school can be related to their mindset about learning and intelligence." (Paragraph 3)
 - C. "Students who have a 'fixed' mindset tend to believe that they are born with a certain level of intelligence. They don't believe it can ever change." (Paragraph 4)
 - D. "Children with growth mindsets were also better at bouncing back after their mistakes. They were more likely to get the next trial right" (Paragraph 8)

3. Which statement describes the author's main purpose in the text?
 - A. to encourage readers to make as many mistakes as they can
 - B. to show how adults hurt students' intelligence by discouraging mistakes
 - C. to provide evidence for how mistakes can help you learn
 - D. to help readers determine if they have a growth mindset or fixed mindset

4. Which statement describes the relationship between fixed mindset and growth mindset?
 - A. Fixed mindset and growth mindset describes how our brains solve challenging problems.
 - B. Fixed mindset and growth mindset show how a person views their own intelligence.
 - C. Fixed mindset shows that someone has learned as much as they can while growth mindset shows they have more to learn.
 - D. Fixed mindset is the reluctance to learn any more while growth mindset is a person's desire to improve themselves.

5. How does the author's discussion of Schroder's study contribute to the development of ideas about how children react to mistakes?

Day 7

- ☐ Math: Review Star Cards from Unit 7, 2, and 5 using
the Star Card Guide
- ☐ ELA: "Theseus and the Minotaur"
- ☐ Humanities: "Should Middle and High School
Students Have to Meet a Grade Requirement to
Participate in Sports?"
- ☐ Science: Unit 3 Vocabulary and Star Card Review

UNIT 3 Vocabulary and StarCard Review

Directions: Use your STARCards to complete this homework assignment

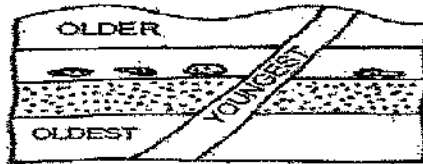
STAR Card Vocabulary

STAR Card Definitions

HOMOLOGUS STRUCTURE



LAW of SUPERPOSTION



STAR Card Questions

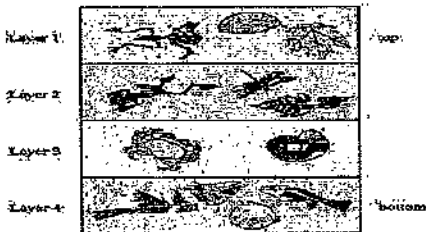
STAR Card Answers

3a. How can a scientists determine the age of fossils?

3b. Which rock layer is the oldest?

Youngest? How do you know?

3c. What is **one** thing a scientist can determine about Earth based on these rock layers?



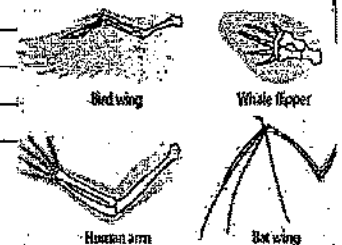
3a.

3b.

3c.

4. Scientists use various pieces of evidence to support the evolution of living organisms on Earth over time. What is a piece of evidence that help supports the theory of evolution?

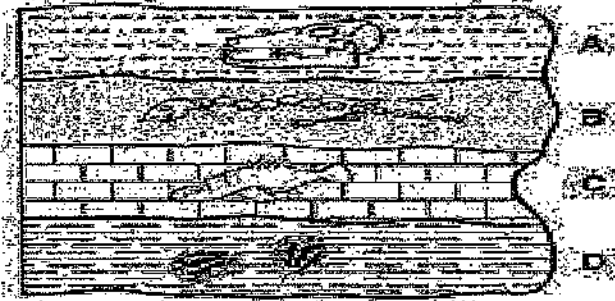
4.



"A person who never made a mistake never tried anything new "

Which rock layer is the oldest? Explain how you know.

Assertion: Layer _____ is the OLDEST.



Context and Evidence:

I know that **OLDER** rock layers are at the BOTTOM/TOP

This diagram shows layer _____ at the

Fact/Tie it Together :

The fact that relates to my evidence is....

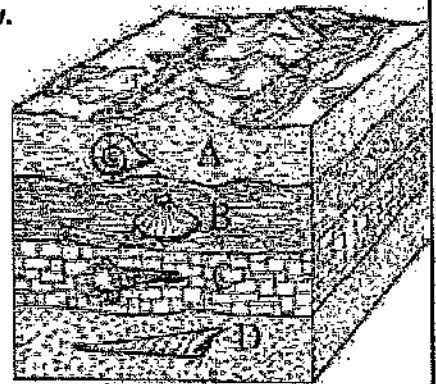
The oldest/youngest rocks are at the bottom/top.

Therefore...

Layer _____ is the OLDEST

Which rock layer is the youngest? Explain how you know.

Assertion: Layer _____ is the YOUNGEST



Context and Evidence:

I know that

This diagram shows

Fact/Tie it Together

The fact that relates to my evidence is....

Therefore.....

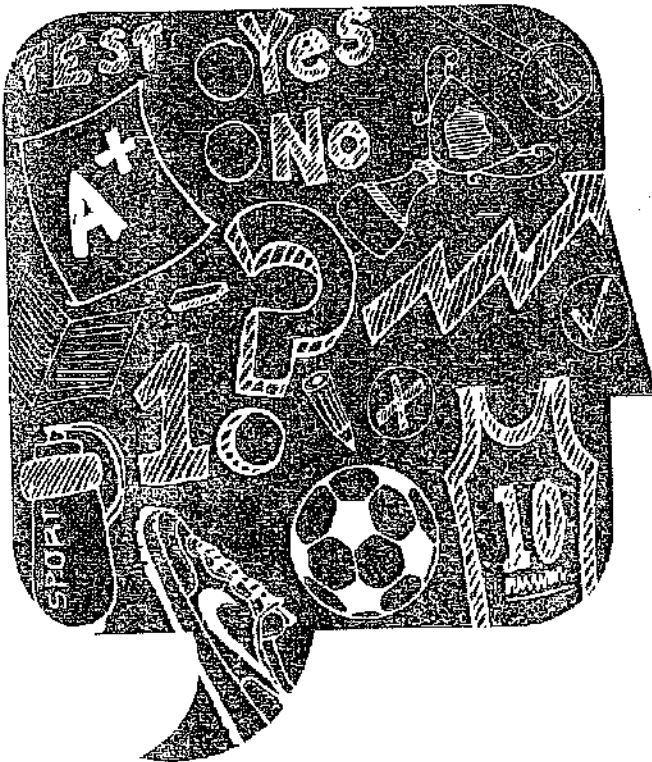
**SHOULD
MIDDLE AND HIGH
SCHOOL STUDENTS
HAVE TO MEET A
GRADE
REQUIREMENT
TO PARTICIPATE
IN SPORTS?**

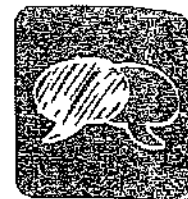
Some people think that middle and high school students should **maintain** certain grade point averages to play sports. Many schools use grades as a **prerequisite** for participation in after-school activities. They feel that the students should work as hard in the classroom as on the field. If students really want to play they should work extra hard in school to make sure that they can.

Not only does this rule encourage student athletes to keep up with their schoolwork, it also motivates coaches to teach players how to balance their time. Coaches don't want their star athletes to fall behind in school and be dropped from the team.

On the other hand, there are people who do not think grade requirements are a good idea. They think that forcing students to get a certain grade will keep too many from participating. In **previous** years, some students took easier classes just so they could play sports. This was unfair to the athletes who had to work harder to keep up their grades in challenging classes.

What do you think about this? Does the “no pass, no play” rule seem fair to you? Should middle and high school students have to meet a grade requirement to participate in sports?





SHOULD MIDDLE AND HIGH SCHOOL STUDENTS HAVE TO MEET A GRADE REQUIREMENT TO PARTICIPATE IN SPORTS?

eligible | affect | maintain | prerequisite | previous

USE THE FOCUS WORDS * and alternate parts of speech

prerequisite (noun) requirement that must be met before moving on

➡ **Sample Sentence:** Turning in all your homework is usually a **prerequisite** for getting good grades.

💬 **Turn and Talk:** What are some **prerequisites** for getting a driver's license?

***prerequisite** (adjective) required before something else can happen

➡ **Sample Sentence:** Punctuality (being on time) is a **prerequisite** behavior for getting a raise.

💬 **Turn and Talk:** What are some **prerequisite** achievements for becoming a doctor?

eligible (adjective) qualified for

➡ **Sample Sentence:** Students must bring in signed permission slips to be **eligible** to participate in field trips.

💬 **Turn and Talk:** Do you think students who don't do their homework should be **eligible** to go on field trips?

maintain (verb) to keep up; to sustain

➡ **Sample Sentence:** Raphael got a 100% on the quiz, which allowed him to **maintain** his A+ average in class.

💬 **Turn and Talk:** What can you do to **maintain** a good reputation among your peers?

affect (verb) to have an effect on

➡ **Sample Sentence:** Eating a healthy breakfast can **affect** how well you do in school.

💬 **Turn and Talk:** Besides diet, what else can **affect** your performance in school?

***affect** (noun) observable emotion

➡ **Sample Sentence:** Ella's **affect** changed as soon as she saw the grade on her test.

💬 **Turn and Talk:** Describe a poker player's **affect**.

previous (adjective) earlier, most recent

➡ **Sample Sentence:** We won our game last night because we played a lot better than we had in the **previous** game.

💬 **Turn and Talk:** If you could choose any of your **previous** teachers to teach your class next year, who would you choose and why?

eligible | effect | maintain | prerequisite | previous

eligible | affect | maintain | prerequisite | previous

[illegible]

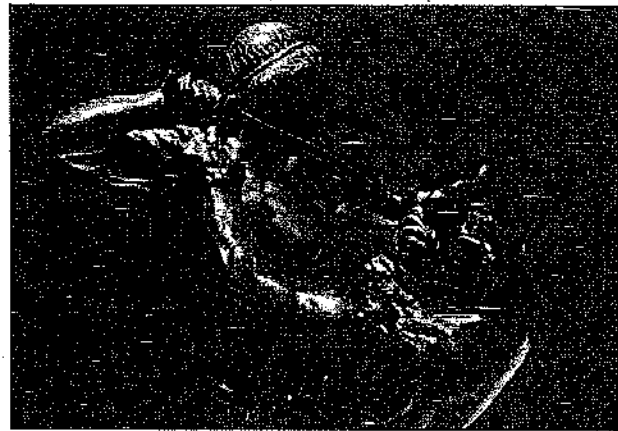
Name: _____ Class: _____

Theseus and the Minotaur

By E2BN.org
2006

In ancient Greece, people told myths to explain the ways of the world. Myths often portrayed brave heroes and vicious monsters. The ancient Greeks also believed in powerful gods who watched over Earth and intervened when they saw fit. In this particular myth, a prince from Greece's capital city of Athens travels by sea to another city, Crete, in order to fight a monster. As you read, take notes on how Theseus' actions and characteristics help drive the plot.

- [1] King Minos of Crete was a powerful man, feared by the rulers of the lands around him. When he demanded goods or men for his great armies, they felt they had to agree. When he demanded they send tributes¹ to honour him, they sent them without question. It was the only way they could stop him going to war with them. But his demands on Athens became too much for them to bear.



"Antoine-Louis Barye's Theseus Slaying The Minotaur" by Timothy Vogel is licensed under CC BY-NC 2.0

King Minos had a great palace built for himself. Inside this palace, Minos had built a giant maze, a labyrinth, and, at the centre of the maze, he kept a terrifying creature – the Minotaur. Now this was no ordinary animal; it was a monster, half man and half bull.

It was powerful and savage,² and it loved to eat the flesh of the humans who had been shut into the labyrinth by King Minos. They would wander through the maze, completely lost, until at last they came face to face with the Minotaur. Not a great way to die, really.

As for Athens, Minos demanded that every year King Aegeus of Athens send him seven young men and seven young women.

- [5] "Why do we send these young people to Crete every year?" Theseus, the King's son, asked his father. "And why is it that none of them ever return?"

"Because if we did not send them, Minos would wage war on us and it is a war that we would not win," said King Aegeus. "And they do not return because they do not go to Crete as slaves. They go as food for the Minotaur."

"Father, this is terrible," shouted Theseus, "we cannot let this go on. We cannot sacrifice any more of our young citizens to this tyrant. When it is time to send the next tribute, I will go as one of them and I vow that it is the last time the Minotaur will be fed with the flesh of any of our people."

1. In this context, a tribute is a payment made by one state or ruler to another, especially as the price of peace, security, protection or to recognize authority
2. **Savage (adjective):** fierce, violent, or uncontrolled

Try as he might, his father could not persuade him to change his mind. Aegeus reminded him that every year, other young men had sworn to slay this terrible beast and they had never been seen again.

Theseus insisted that he understood the dangers but would succeed. "I will return to you, father," cried Theseus, as the ship left the harbour³ wall, "and you will be proud of your son."

- [10] "Then I wish you good luck, my son," cried his father, "I shall keep watch for you every day. If you are successful, take down these black sails and replace them with white ones. That way I will know you are coming home safe to me."

As the ship docked in Crete, King Minos himself came down to inspect the prisoners from Athens. He enjoyed the chance to taunt the Athenians and to humiliate⁴ them even further.

"Is this all your king has to offer this year?" he jeered. "Such puny⁵ creatures. Hardly even a snack for the mighty creature within the labyrinth. Anyway, let's get on with it. I am not a hard-hearted man, so I will let you choose which one goes first into the Minotaur's den. Who is it to be?"

Theseus stepped forward.

"I will go first. I am Theseus, Prince of Athens and I do not fear what is within the walls of your maze."

- [15] "Those are brave words for one so young and so feeble.⁶ But the Minotaur will soon have you between its horns. Guards, open the labyrinth and send him in."

Standing behind the king, listening, was his daughter, Ariadne. From the moment she set eyes on Theseus, Ariadne fell in love with him. As she listened to her father goading⁷ and taunting the young prince, she decided that she would help him. As he entered the labyrinth and the guards walked away, she called softly to him.

"Theseus, take this," she whispered. "Even if you kill the Minotaur, you will never find your way out again."

She threw him a great ball of string and he tied one end of it to the entrance. He smiled at her, turned and began to make his way into the maze, the string playing out behind him as he went.

Theseus walked carefully through the dark, foul-smelling passages of the labyrinth, expecting at any moment to come face-to-face with the creature. He did not have long to wait. Turning a corner, with his hands held out in front of him feeling his way, he suddenly touched what felt like a huge bony horn.

- [20] In an instant his world turned upside-down, quite literally. He was picked up between the Minotaur's horns and tossed high into the air. When he landed on the hard cold stone, he felt the animal's huge hooves come down on his chest. Every last breath seemed to be knocked out of him and he struggled to stay alive in the darkness.

3. A harbour is a place on the coast where ships may find shelter

4. **Humiliate (verb):** to make someone feel ashamed or foolish

5. **Puny (adjective):** small and weak

6. **Feeble (adjective):** lacking physical strength, especially due to age or illness

7. **Goad (verb):** to provoke or annoy in order to create a reaction

But Theseus was no ordinary man. He was the son of the King, he was brave and he was stubborn. As the Minotaur bellowed⁸ in his ear and grabbed at him with its hairy arms, Theseus found a strength which he did not know he possessed.

He grabbed the animal's huge horns, and kept on twisting the great head from side to side. As the animal grew weak, Theseus gave one almighty tug on the head, turning it almost right around. The creature's neck snapped, it gurgled its last breath and fell to the floor with an enormous thud.

It was over, he had done it. The Minotaur was dead. All he had to do was make his way out of... and then he realised the awful truth. In the struggle, he had let go of the string, his lifeline. Theseus felt all over the floor in the pitch darkness and kept thinking he had found it, only to realise that all he had was a long wiry hair from the Minotaur.

Despair⁹ set in and Theseus wondered if this was where his life would end, down in the dark, all alone, next to the stinking body. Then, his hand brushed a piece of string and, with a whoop of delight, he knew he had found the thread which would lead him back out. As he neared the entrance of the labyrinth, the darkness began to fade and he made out the figure of Ariadne, waiting for his return.

- [25] "You must take me back to Athens with you," she cried, "My father will kill me when he finds out that I have helped you."

"But of course you must come with us," said Theseus, "it would be cruel to leave you here." Quickly and quietly, they unfurled¹⁰ the great black sails of their ship and headed for home.

"I cannot believe how my life has changed," said Ariadne, as they sailed across the calm seas towards Athens. "To think that I am free of my cruel father and that I will soon be married to a great prince."

"Married?" said Theseus, "Oh, yes, that will be... er... wonderful." But in truth, Theseus did not really find her attractive.

So, when their ship docked at an island on their way home, to collect fresh water, Theseus sent Ariadne off to find bread and fruit. The moment she was gone, he set sail and left her on the island. Now, you might think that this was a bad way to reward someone who had helped him and had saved him from certain death.

- [30] The Gods clearly thought the same thing, for they had a further horror in store for him, as a punishment for his ungrateful treatment of the young girl.

In his haste¹¹ to get away, Theseus forgot to change his sails to white. King Aegeus, waiting on the headland, saw the ship approaching with its black sails flying in the wind.

"My son has failed and he is dead," he cried. And in despair, he flung himself from the cliff into the raging waters below. From that day on, the sea was named in memory of Theseus' father, and to this day, it is known as the Aegean Sea.

8. **Bellow** (*verb*): to shout in a loud or deep voice

9. **Despair** (*noun*): a feeling that everything is wrong and nothing will get better

10. to open something, like a flag, so that it is spread out

11. **Haste** (*noun*): speed or hurry, often made with urgency

"Theseus and the Minotaur", © 2006, East of England Broadband Network. Reprinted with permission, all rights reserved.

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. How does the author characterize Theseus in the story? Cite evidence from the text in your response.

2. PART A: How does the interaction between Theseus and King Minos in paragraphs 12-15 contribute to the plot as a whole?
- A. It establishes King Minos as Theseus' central challenge in the labyrinth, setting up the king's battle with Theseus.
 - B. It creates an atmosphere of fear which remains with Theseus as he travels the labyrinth.
 - C. It helps the reader to fully visualize the new setting of Crete through the eyes of Theseus.
 - D. It further contrasts King Minos' villainous ways with Theseus' bravery, setting Theseus up as the hero.
3. PART B: Which later quote from the story confirms your answer to Part A?
- A. "Theseus walked carefully through the dark, foul-smelling passages of the labyrinth, expecting at any moment to come face-to-face with the creature." (Paragraph 19)
 - B. "He was picked up between the Minotaur's horns and tossed high into the air. When he landed on the hard cold stone, he felt the animal's huge hooves come down on his chest." (Paragraph 20)
 - C. "As the Minotaur bellowed in his ear and grabbed at him with its hairy arms, Theseus found a strength which he did not know he possessed." (Paragraph 21)
 - D. "Theseus felt all over the floor in the pitch darkness and kept thinking he had found it, only to realize that all he had was a long wiry hair from the Minotaur." (Paragraph 23)
4. PART A: What does the word "tyrant" most closely mean as it is used in paragraph 7?
- A. A person who runs a country
 - B. A leader who torments people
 - C. A soldier who is ready to fight
 - D. An innocent young citizen

5. PART B: Which quote from later in the story best supports your answer to Part A?
- A. "As the ship docked in Crete, King Minos himself came down to inspect the prisoners from Athens." (Paragraph 11)
 - B. "He enjoyed the chance to taunt the Athenians and to humiliate them even further." (Paragraph 11)
 - C. "Those are brave words for one so young and so feeble." (Paragraph 15)
 - D. "Standing behind the king, listening, was his daughter, Ariadne." (Paragraph 16)

6. How do the actions of Ariadne help further the plot? Cite evidence from the text in your response.

Day 8

- ☐ Math: Review Star Cards from Unit 1, 2, and 6 using
the Star Card Guide
- ☐ ELA/ Humanities: “The Underground Railroad”
- ☐ Science: Unit 4 Vocabulary and Star Card Review

UNIT 4 Vocabulary and StarCard Review

STAR Card Vocabulary

STAR Card Definitions

NUCLEUS

MULTICELLULAR



CHARACTERISTICS of LIFE

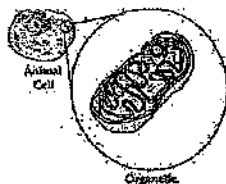


In order to be considered alive....

CELL MEMBRANE

The cell membrane....

3a. What is a cell and it's relationship to a living organism?



3a.

3b.

3b. What allows a cell to function on it's own?

5a. Which **organelle** breaks down sugar to release energy to the rest of the cell?

5b. What do we call it (nickname)?

5c. What would happen to an organism if this organelle was not functioning properly?



5a.

5b.

5c.

"A person who never made a mistake never tried anything new"

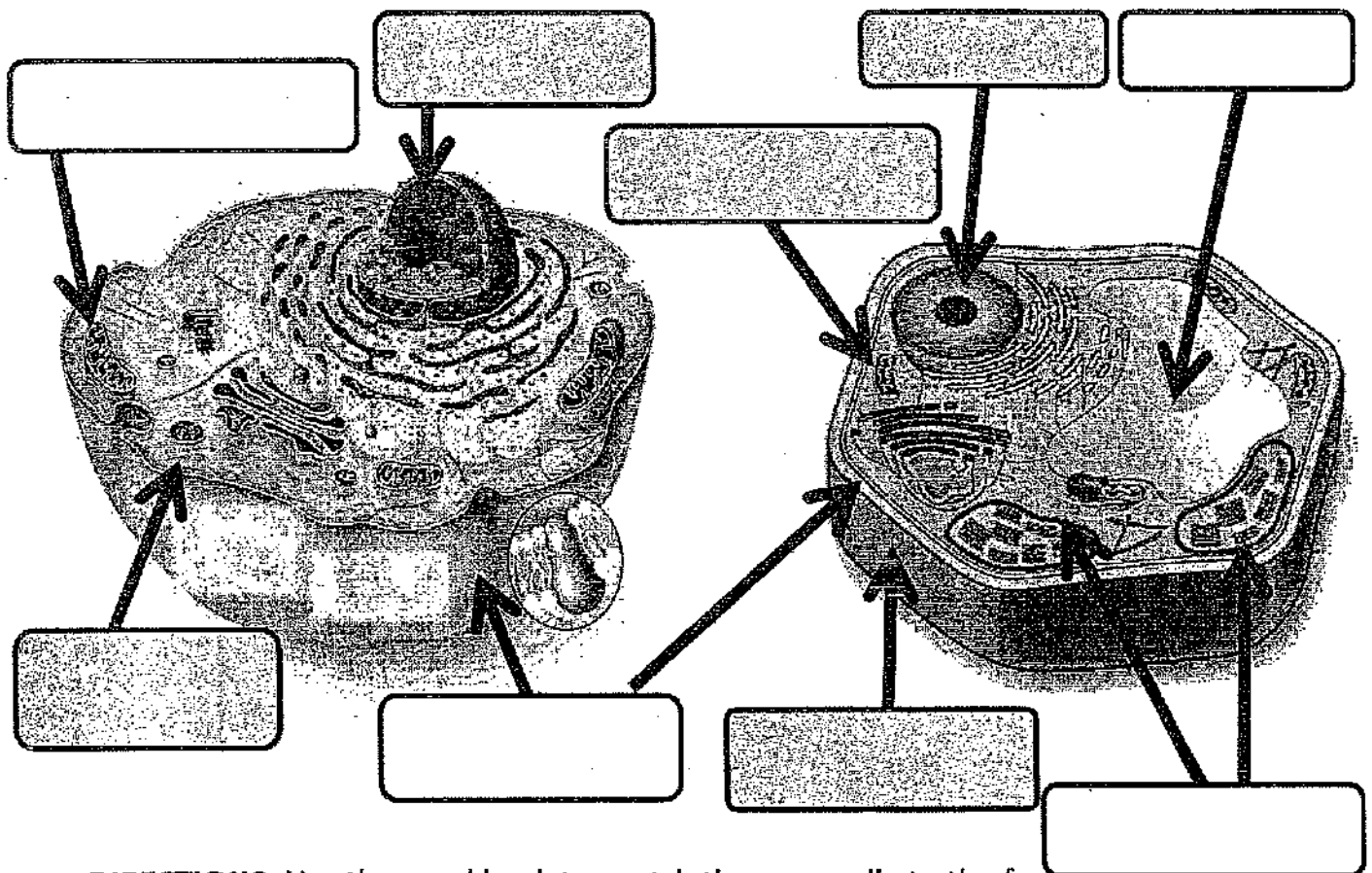
Scientist Name: _____ Date: _____ HR: _____

ORGANELLES and their FUNCTIONS

DIRECTIONS: Use the word bank to help you identify the labeled organelles. NOTE: SOME organelles will be used TWICE

WORD BANK:

Cell Membrane, Mitochondria, Nucleus, Vacuole, Cell Wall, Chloroplast



DIRECTIONS: Use the word bank to match the organelle to the function

Captures sun energy for the plant cell to make food. _____

Creates ATP (energy) for all cells _____

Protects and supports plant cells _____

Controls what enters/leaves the cell; gets rid of waste. _____

Stores water and other necessary substances for all cells. _____

Name: _____

Class: _____

The Underground Railroad

By USHistory.org
2016

In the 1850's and 1860's, the United States became even more divided on the issue of slavery. States in the South still practiced slavery, while many states in the North prohibited slavery. As a result, many slaves tried to run away to freedom in North. The Underground Railroad was established to provide a secret way for slaves to escape from slavery in the South to freedom in the North. As you read, take notes on how the Underground Railroad helped slaves to freedom in the North.

- [1] Any cause needs speakers and organizers. Any mass movement requires men and women of great ideas.

But information and mobilization are not enough. To be successful, revolutionary change requires people of action — those who little by little chip away at the forces who stand in the way. Such were the “conductors” of the Underground Railroad. Not content¹ to wait for laws to change or for slavery to implode itself,² railroad activists helped individual fugitive slaves³ find the light of freedom. The Underground Railroad was not an actual railroad, but was instead a network of safe houses and routes slaves could take to escape from the South to freedom in the North.

The Underground Railroad operated at night. Slaves were moved from “station” to “station” by abolitionists.⁴ These “stations” were usually homes and churches — any safe place to rest and eat before continuing on the journey to freedom in the North, sometimes as far away as Canada. Often whites would pretend to be the masters of fugitives to prevent their capture. Sometimes lighter-skinned African Americans took this role. In one spectacular case, Henry “Box” Brown arranged for a friend to put him in a wooden box, where he had only a few biscuits and some water. His friend mailed him to the North, where bemused⁵ abolitionists received him in Philadelphia.



“Harriet Tubman” by H. Seymour Squer is in the public domain.

1. **Content (adjective):** in a state of peace, happiness, or satisfaction
2. “Implode” in this sense means to self-destruct.
3. A fugitive slave was someone who ran away from the slave owner and went into hiding to avoid being taken back.
4. Abolitionism was a movement to “abolish,” or end, slavery.
5. **Bemused (adjective):** confused and also somewhat amused

Most of the time, however, slaves crept northward on their own, looking for the signal that designated the next safe haven.⁶ This was indeed risky business, because slave catchers and sheriffs were constantly on the lookout. Over 3,200 people are known to have worked on the railroad between 1830 and the end of the Civil War. Many will remain forever anonymous.⁷

- [5] Perhaps the most outstanding "conductor" of the Underground Railroad was Harriet Tubman. Born a slave herself, after she escaped to Philadelphia, she began working on the railroad to free her family members. Throughout the 1850s, Tubman made 19 separate trips into slave territory. She was terribly serious about her mission. She threatened to shoot any slave who had second thoughts with the pistol she carried on her hip. By the end of the decade, she was responsible for freeing about 300 slaves. When the Civil War broke out, she used her knowledge from working the railroad to serve as a spy for the Union.

Needless to say, slave owners did not appreciate the Underground Railroad. Although they disliked Abolitionist talk and literature, the railroad was far worse. To them, these were simple cases of stolen property. Slave catchers often traveled to the North to try to recapture freed slaves. When Northerners rallied around freed slaves and refused to compensate⁸ former slave owners, Southerners felt they were being robbed of property.

This disagreement over freed slaves lay yet another brick of the foundation for the South to eventually secede⁹ from the Union and help spark the American Civil War.

"The Underground Railroad" by USHistory.org. Copyright © 2016, CC BY 4.0. Reprinted with permission, all rights reserved.

6. **Haven (noun):** a place of safety

7. **Anonymous (adjective):** not named or identified

8. **Compensate (verb):** to trade or give money as payment for something lost, stolen, or damaged

9. "Secede" refers to the South's decision to leave the Union at the start of the American Civil War.

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. Why does the author choose to call the individuals who worked on the Underground Railroad “conductors”?
 - A. They were responsible for driving the trains that took slaves from slavery in the South to freedom in the North.
 - B. Even though it was not an actual railroad, the “conductors” were individuals responsible for helping slaves travel from the South to the North.
 - C. They conducted trains and boats that took fugitive slaves back to their masters in the South.
 - D. They carried pistols on their hips that were known by people in the North as “conductors.”

2. Which phrase from the text does the author use to support their argument that a wide variety of people worked for the Underground Railroad?
 - A. “Railroad activists helped individual fugitive slaves find the light of freedom.” (Paragraph 2)
 - B. “Often whites would pretend to be the masters of fugitives to prevent their capture. Sometimes lighter-skinned African Americans took this role.” (Paragraph 3)
 - C. “Most of the time, however, slaves crept Northward on their own, looking for the signal that designated the next safe haven.” (Paragraph 4)
 - D. “Perhaps the most outstanding ‘conductor’ of the Underground Railroad was Harriet Tubman.” (Paragraph 5)

3. How does paragraph 5 contribute to the ideas developed throughout the text?
 - A. The paragraph provides an example of a famous train conductor who shipped pistols to the North to help them win the war.
 - B. The paragraph is used to show that Harriet Tubman is the only true hero of the Underground Railroad.
 - C. The paragraph is used to provide an example of a famous woman who worked on the Underground Railroad and the great impact she had on history.
 - D. The paragraph is used to demonstrate that most of the slaves that escaped to the North were shipped to the North on boxes in trains.

4. Which phrase best describes the relationship between slave catchers and the “conductors” of the Underground Railroad?
 - A. They worked together towards a common goal.
 - B. They were united in trying to provoke a war.
 - C. They were in disagreement about the value of property.
 - D. They represent the opposite sides of the conflict.

5. What is the central idea of the text? Cite specific evidence from the text to support your answer.

Day 9

☐ Math: Review Star Cards from Unit 7, 5, and 1 using
the Star Card Guide

☐ ELA: Questions for “Theseus and the Minotaur” and
“The Underground Railroad”

☐ Humanities: “Should Drug Companies Be Allowed to
Advertise Prescription Drugs on TV?”

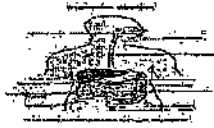
 ☐ Science: Unit 5 Vocabulary and Star Card Review

UNIT 5 Vocabulary and StarCard Review

STAR Card Vocabulary

STAR Card Definitions

Digestive System



Immune System

Excretory System



Nervous System

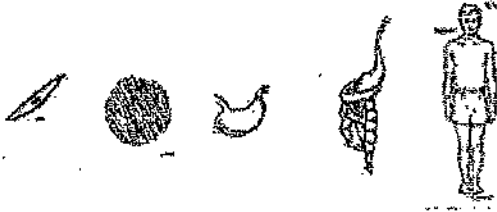


Homeostasis



2a. What is a cell and how does it relate to the human body?

2b. Put the structures in order from **least complex** to **most complex** starting with a cell and going to a human.



2a. _____

2b. _____

4a. What is the purpose of your body systems working together?

4b. Which body systems are responsible for allowing your kidneys to remove toxic waste from your blood?



4a. _____

4b. _____

"A person who never made a mistake never tried anything new"

Match that Function!

Organ System

Function

11. _____ Skeletal System

12. _____ Muscular
System

13. _____ Respiratory
System

14. _____ Excretory
System

15. _____ Digestive
System

16. _____ Nervous
System

17. _____ Immune
System

18. _____ Circulatory
System

A. Exchanges gases between the body and the environment

B. Protects and supports your body, allows you to move and stores nutrients

C. Protects your body from disease

D. Breaks down food into nutrients, both for energy and for materials for growth

E. Allows both your body and your organs to move

F. Uses blood cells to deliver materials to your cells and take wastes away from your cells

G. Filters and removes toxic waste from your body

H. Communicates with your body by sending signals from your brain throughout your body.

Use the word bank to organize the structures from **LARGEST** to **SMALLEST**

WORD BANK: organism, organ, cell, tissue, organ system

_____ → _____ → _____ → _____ → _____

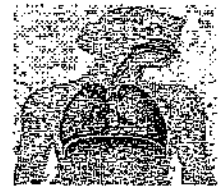
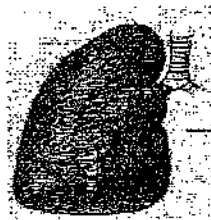
What does it mean to be **more complex**?

To be more complex means to have _____.

"A person who never made a mistake never tried anything new "

Which is more complex – your lung or your respiratory system? How do you know?

Assertion: Your _____ is more complex.



Context and Evidence:

I know that ...

Fact/Tie it Together :

The fact that relates to my evidence is....

This diagram shows...

Therefore, your _____ is more complex.

This organ system breaks down food we need for energy and growth. What body system is being shown in the diagram?

Assertion: This is your _____ system



Context and Evidence:

I know that

Fact/Tie it Together

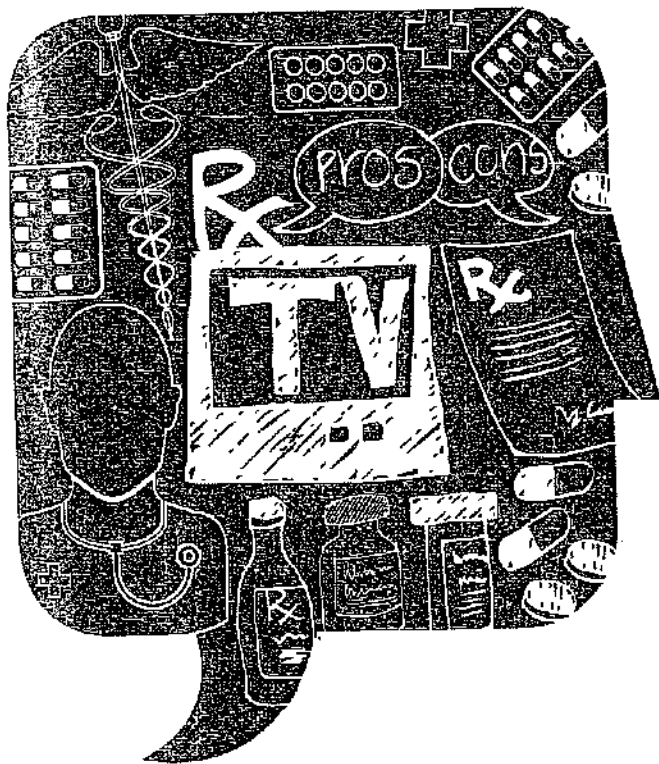
The fact that relates to my evidence is....

This diagram shows

Therefore, this is your _____ system.

This week's issue:

SHOULD DRUG COMPANIES BE ALLOWED TO ADVERTISE PRESCRIPTION DRUGS ON TV?



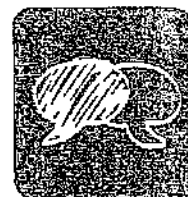
In 1997, the law was changed to allow drug companies to advertise **prescription** drugs on television without including a lengthy statement of every possible side effect. Each year since, there have been more of these ads. Television ads are still required to provide disclaimers about the main risks of each drug. Typically, such disclaimers are stated very quickly while good-looking actors distract the viewers. In 1991, drug companies spent \$55 million on advertising directly to consumers. By 2012, they were spending over \$4 billion. The average number of prescriptions per person in the United States has also increased. In 1992, that average was 7.2. By 2011, it was 13.

Prescription drug advertisements have the **potential** to be helpful. They often provide useful information. They can lead people to talk to their doctors instead of ignoring a health problem. Yet this advertising also causes some problems. Many people who go to the doctor **assume** they need a certain drug that might not be right for them. Doctors can feel pressured to prescribe the medication that the patients ask for. This might mean that the patient takes an expensive drug when there are less costly alternatives available. Advertisements might also lead people to think that there is a pill that will solve any problem. This could make them **rely** on drugs instead of preventing health risks with good diets and regular exercise. Also, they might not know about the risks of taking the medication they see on television. There is not enough time in a typical **disclaimer** to tell consumers about all of the possible side effects of a drug. The United States is one of only two countries in the world that allow drug companies to advertise directly to consumers.

Do prescription drug advertisements help people more than they hurt? Or should drug companies be restricted from advertising on television?

SHOULD DRUG COMPANIES BE ALLOWED TO ADVERTISE PRESCRIPTION DRUGS ON TV?

UNIT 2.18



disclaimer | prescription | potential | assume | rely

USE THE FOCUS WORDS

disclaimer (noun) statement denying responsibility

➡ **Sample Sentence:** Television ads are required to provide **disclaimers** about the major risks of each drug.

💬 **Turn and Talk:** Should products that promise to clear away pimples come with a **disclaimer**?

prescription (noun) an order that allows someone to use a medication or therapy

➡ **Sample Sentence:** The average number of **prescriptions** per person in the United States has increased.

💬 **Turn and Talk:** Why do you think only doctors can write **prescriptions**?

potential (noun) possibility

➡ **Sample Sentence:** Prescription drug advertisements have the **potential** to be helpful.

💬 **Turn and Talk:** What do adults mean when they say a young person has a lot of "**potential**"? Explain.

assume (verb) to decide without much evidence

➡ **Sample Sentence:** Many people who go to the doctor **assume** they need a certain drug that might not be right for them.

💬 **Turn and Talk:** Why might young people take risks and **assume** that they will not get injured?

rely (verb) to depend on

➡ **Sample Sentence:** People who see advertisements for prescription drugs might **rely** on drugs instead of preventing health risks with good diets and regular exercise.

💬 **Turn and Talk:** Do you think teenagers **rely** too much on technology? Explain.

SHOULD DRUG COMPANIES BE ALLOWED TO ADVERTISE PRESCRIPTION DRUGS ON TV?

disclaimer | prescription | potential | assume | rely

Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

disclaimer | prescription | potential | assume | rely

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or printed text on the paper.

Name: _____ Class: _____ Date: _____

Pairing Questions for "Theseus and the Minotaur" and "The Underground Railroad"

Directions: After reading the texts, choose the best answer for the multiple-choice questions below and respond to the writing questions in complete sentences.

1. PART A: Which of the following qualities led to Theseus' and Harriet Tubman's successes? [RI.3, RL.3]
 - A. bravery in the face of danger
 - B. patience despite pressure
 - C. tolerance of others who think differently from them
 - D. knowledge of their enemies

2. PART B: Select TWO quotations that best support the answer to Part A. [RI.1, RL.1]
 - A. "Theseus insisted that he understood the dangers but would succeed. 'I will return to you, father,' cried Theseus, as the ship left the harbour wall, 'and you will be proud of your son.'" ("Theseus and the Minotaur," Paragraph 9)
 - B. "Then I wish you good luck, my son,' cried his father, 'I shall keep watch for you every day. If you are successful, take down these black sails and replace them with white ones. That way I will know you are coming home safe to me.'" ("Theseus and the Minotaur," Paragraph 10)
 - C. "Theseus walked carefully through the dark, foul-smelling passages of the labyrinth, expecting at any moment to come face-to-face with the creature." ("Theseus and the Minotaur," Paragraph 19)
 - D. "This was indeed risky business, because slave catchers and sheriffs were constantly on the lookout." ("The Underground Railroad," Paragraph 5)
 - E. "She threatened to shoot any slave who had second thoughts with the pistol she carried on her hip." ("The Underground Railroad," Paragraph 5)
 - F. "When the Civil War broke out, she used her knowledge from working the railroad to serve as a spy for the Union." ("The Underground Railroad," Paragraph 5)

3. What motivations do Theseus and Harriet Tubman share? [RI.3, RL.3]

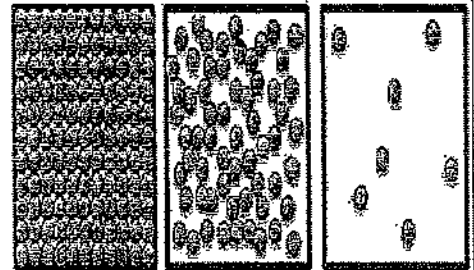
Day 10

- ☐ Math: Review all STAR Cards!
- ☐ ELA/ Humanities: “Things that Show and Things that Don’t”
- ☐ Science: Density and Engineering Design Process

Review

DENSITY

- + Which material is the most dense? How do you know?

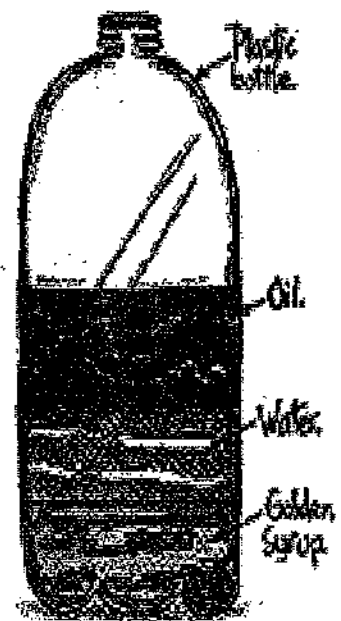


- + Which material is the least dense? How do you know?

- + Which material is the most dense?
How do you know?

- + Which material is the least dense?
How do you know?

- + Water is _____ dense than oil and
_____ dense than syrup.



Scholar Name: _____ Date: _____ Class: _____

Engineering Design Process Review

For a technology project, Kyle came up with an idea to build a model bridge. He wants his bridge to span 75 cm and to support a 30lb object. According to the engineering design process, which of the following should be Kyle's next step?

- A. Construct prototypes of different kinds of bridges**
- B. Research the different designs of bridges**
- C. Gather the materials needed to build the bridge**
- D. Make a drawing to show how to build the bridge**

****Explain Your Reasoning****

Explanation:

_____ is correct because I know that Kyle has already
done _____

According to the steps of the engineering design process, Kyle's next step
should be _____

because _____

Name: _____

Class: _____

Things That Show and Things That Don't

By BirdBrain Science

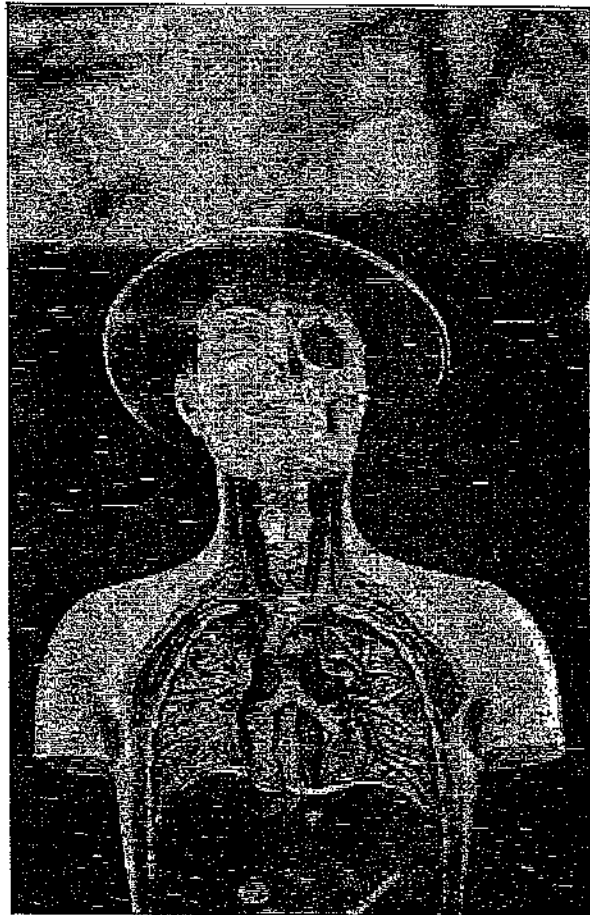
2016

This informational text explains how different genes, or instructions for how we look, are stronger than others. It explains how gene types, or alleles, can be dominant (strong) or recessive (weak), as well as how different alleles combine to make people look the way they do. As you read, note what comparisons the author makes between everyday things and scientific concepts.

Romeo and Juliet[1] are having a baby boy. They are trying to guess who the baby will look like. Romeo has brown eyes and black hair. Juliet has blue eyes, and blonde hair. Will their son look like his mom or his dad? Will he look like both of them? Maybe he won't look like either of them!

No two people are exactly alike. Our bodies have many different parts, and each part is built in a different way. As your body grows, it needs directions to tell all of these parts how to grow. Picture your body as a library full of books. Each book in the library has instructions for a different body part. There is a book for eye color, a book for nose shape, a book for hair color, a book for ear shape and so on. Scientists call each one of these books a gene. Every person has almost 25,000 genes. This means that your library has 25,000 books of directions for your body.

Genes make us look the way we do. Most people look like their parents because they get their genes from their parents. Each of our parents have their own set of genes, or library of directions that make them look the way they do. When two people have a child, the child gets half of each parent's genes. The dad's genes join up with the mother's to make a new person!



"Untitled" by Samuel Zeller is in the public domain.

Just as we got our genes from our parents, they got theirs from their parents. Genes are passed down through families from grandparents to parents to children. Inherit means to have something given to you by your parents. Our genes are given to us by our parents, which means that we inherited them from our parents. When your mom decides to give you her piano, you have inherited the piano from her. However, even though she gave you that piano, you might not play it like she plays it. In the same way, having your parents' genes does not mean you look completely like them.

Like a book with two chapters, each of our genes has two parts, or two sets of directions. Parents pass one set of directions from each of their genes on to their children. Picture your mom and dad each holding a book with two chapters. The pages of your mom's book are red and your dad's are blue. Your mom and dad each rip their book in half and give one chapter to you. You put the two together and you now have a book with one red and one blue chapter. The two parts of a gene are called alleles. Every one of your genes has one allele from your mom's genes and one from your dad's; they mix together and make a new and different book of instructions that tell how to make you.

Body parts can come out looking different ways. That's why each gene has two sets of directions. Remember how Romeo has brown eyes while Juliet has blue eyes? That means that Juliet has a book with a set of directions, or alleles, for making blue eyes and Romeo has a book with a set of alleles for making brown eyes. However, each of those books has two sets of directions; there are two alleles in each gene. Some people might have a book for eye color with two sets of brown directions, and some might have a book with two sets of blue directions. Others might have a book with one brown set of directions and one blue set of directions.

People with an eye color gene that has two brown alleles will always have brown eyes. The same is true for two blue alleles. However, we also have people with two different alleles, or sets of directions in their eye color gene. What color does that make their eyes? If Romeo and Juliet each give their son one allele from each gene, he will have directions for brown eyes and blue eyes. Which eye color will he have? How will his body know what color to make his eyes?

The simple answer is that some alleles, or chapters of directions, are stronger than others. When a baby duck hatches, the first thing it sees is its mom. From that point on it will only follow her. If the baby duck's dad comes around, the baby duck will still only follow its mom. Our bodies are the same way. We will read and follow the strongest set of directions. When one set of directions is stronger than the other it is called a dominant allele.

Do our bodies ever follow the weaker set of directions? They won't if the stronger set is there. It's just like the mom and dad duck with their baby. The daddy duck may really want his baby to follow him, but the baby will only follow its mom because it saw her first. What happens, though, if one of the chapters in a book is not stronger than the other? What if the stronger allele isn't there? If the mother duck was not there when the baby duck was born and it saw its dad first, would it follow its dad? Yes! Sometimes a book can have two weak chapters in it. If a gene has two weak alleles one is not stronger than the other. The body will read and then follow the weaker set of directions. The weaker set of directions is called a recessive allele.

Most of the way we look is based on which genes, or chapters, we have, and which are strong and which are weak. That is why people look so different. It all depends on which directions you have and how they mix together. Romeo has brown eyes, which come from stronger alleles than Juliet's blue eyes. He has black hair, which comes from stronger alleles than blonde hair. However, the genes for his attached ear lobes are weaker than Juliet's genes for her free ear lobes. Their son will most likely have Romeo's eyes and hair, but Juliet's ears.

Here are some more sets of stronger and weaker directions:

- Brown eyes are stronger than green eyes and blue eyes.
- Green eyes are stronger than blue.

- Having a pointed hairline is stronger than having a straight hairline.
- Being able to curl your tongue is stronger than not being able to.
- Being able to bend your thumb backwards is weaker than having a straight thumb.
- Having a cleft or split chin is weaker than having a smooth chin.

We can only guess what Romeo and Juliet's son will look like based on the stronger and weaker chapters in their books of directions. In truth, the way we look is not that simple. It takes many different genes all acting together to make a body look the way it does. There might be five different books that have directions for your nose. Romeo and Juliet's son could have either one of his parent's nose or, a mix of each, or it could be completely different. He might even have his great Uncle Melvin's crooked nose. It all depends on what sets of directions he gets, how they mix together, and which ones are weak or strong.

"Things That Show and Things That Don't" by BirdBrain Science. Copyright © 2016 by BirdBrain. Used with permission. All rights reserved.

Text-Dependent Questions

Directions: For the following questions, choose the best answer or respond in complete sentences.

1. Which of the following best identifies a central idea of the text?
 - A. People look the way they do because they have a set of instructions called genes that they inherit.
 - B. People inherit books from their parents that tell them how they should grow and act.
 - C. Romeo and Juliet would have very beautiful children because they are both beautiful.
 - D. People look the way that they do because they inherit their behavior from their parents.

2. PART A: Which of the following best describes the relationship between dominant and recessive alleles?
 - A. People need two copies of a dominant allele for that trait to be expressed.
 - B. People need two copies of a recessive allele for that trait to be expressed.
 - C. When people have one dominant and one recessive allele, the recessive allele is usually expressed.
 - D. People always have either a set of two dominant or two recessive alleles.

3. PART B: Which phrase from the text best supports the answer to Part A?
 - A. "Our genes are given to us by our parents, which means that we inherited them from our parents." (Paragraph 4)
 - B. "We will read and follow the strongest set of directions." (Paragraph 8)
 - C. "If a gene has two weak alleles one is not stronger than the other. The body will read and then follow the weaker set of directions." (Paragraph 9)
 - D. "Romeo has brown eyes, which come from stronger alleles than Juliet's blue eyes." (Paragraph 10)

4. How does paragraph 5 contribute to the author's explanation of alleles?
 - A. It explains how a person's genes come only from one of their parents.
 - B. It explains how genes mix together like colors.
 - C. It explains how people inherit one allele from each parent.
 - D. It explains how alleles are complex and confusing, like books.

5. A person's mother has blue eyes, brown hair, and a cleft chin. The person's father has brown eyes, blond hair, and a cleft chin. Explain what the person may look like and why each trait comes out the way it does.
