All Assignments are on IXL, Schoology or Hard Copy.

**Student Assignments for April 6th - 10th**
- Complete the 20 day Review Packet from the March assignments.
  Assignments are due on April 10th by 4:00 p.m.
- Work on IXL 8th grade level for 30 minutes each day.

**Student Assignments for April 13th - 17th**
- Study and Complete problems on Flipchart "Equations Step by Step" and Flipchart "Equations Practice Assignment".
  Assignments are due on April 17th by 4:00 p.m.
- Work on IXL 8th grade level for 30 minutes each day.

**Student Assignments for April 20th - 24th**
- Study - Similar Figures PowerPoint and Complete problems Similar Figures Problems Assignment.
  Assignments are due on April 24th at 4:00 p.m.
- Work on IXL 8th grade level for 30 minutes each day.

Reminder: Do your best on IXL. Always strive to make 80 or above on your practice work. We can see how much time you are working and your grades.
When changing the size of a figure, and the angles of the figure also change?

The 60 degree angles are congruent.

Find the length of the missing side.

\[ \frac{30}{66} = \frac{5}{11} \]

Similar figures "work" just like equivalent fractions.

Similar Figures
- So, similar figures are two figures that are the same shape and whose sides are proportional.

3) Determine the missing side of the triangle.

The other 60-degree angles are congruent.

New "Hinges" are easier to see.

Two equivalent fractions are called a proportion.

30
66 = 5
11

4) Determine the missing side of the triangle.

No "Hinges" are easier to see.

Two equivalent fractions are called a proportion.

Let's translate the two triangles.

We can verify this fact by placing the smaller triangle inside the larger triangle.

The 90 degree angles are congruent.

Two equivalent fractions are called a proportion.

30
66 = 5
11

5) Determine the missing side of the triangle.

The common factor between these triangles is 5.

The triangle's shadow is...

The triangle's height is...

So the length of the missing side is...

Unfortunately all that you have is a tape measure, and you are too short to reach the top of the tree.

If you know how tall you are, then you can determine how tall the tree is.

That's right! It's true.

You can measure the length of the tree's shadow.

The tree must be 30 feet tall. Yes, that's a tall tree!

4) Determine the height of the lighthouse.

3) Determine the height of the car.

2.5
6.6

2.5
6.6

2.5
6.6

2.5
6.6
**Similar Figures**

**MINI Lab**

The figures in each pair below have the same shape but different sizes. Copy each pair onto dot paper. Then find the measure of each angle using a protractor and the measure of each side using a centimeter ruler.

1. $AB$ on the smaller rectangle matches $EF$ on the larger rectangle. Name all pairs of matching sides in each pair of figures. Then write the ratio of each pair of sides.

2. Write each ratio in simplest form.

3. What do you notice about the ratios of matching sides?

4. Name all pairs of matching angles in the figures above. What do you notice about the measures of these angles?

5. **MAKING A CONJECTURE** About figures that have the same shape but not necessarily the same size are similar figures. In the figures below, triangle $RST$ is similar to triangle $XYZ$. We write this as $\triangle RST \sim \triangle XYZ$.

![Diagram of similar triangles RST and XYZ]

The matching sides are $ST$ for $XY$, $SR$ for $XZ$, and $RT$ for $YZ$. The sides of similar figures that "match" are called corresponding sides.

The matching angles are $\angle S$ and $\angle X$, $\angle R$ and $\angle Y$, and $\angle T$ and $\angle Z$. The angles of similar figures that "match" are called corresponding angles.

**Examples**

**Example 1**

Which rectangle below is similar to rectangle $ABCD$?

**Example 2**

Find the value of $x$ in each pair of similar figures.

**Example 3**

1. **SHADOWS** A flagpole casts a 20-foot shadow. At the same time, a building, which is 10 feet tall, casts a 6-foot shadow. What is the height of the flagpole? Assume the triangles are similar.

**Practicing and Problem Solving**

**Homework Help**

For Exercises
- S, E, S 1
- I, S, E 2
- N, S, E 3

**Example 6**

Which parallelogram below is similar to parallelogram $ABCD$?

**Example 7**

Find the value of $x$ in each pair of similar figures.

![Diagram of parallelograms and triangles]
ALGEBRA Find the value of \( x \) in each pair of similar figures.

11. PARKS Ruth is at the park standing next to a slide. Ruth is 5 feet tall, and her shadow is 4 feet long. If the shadow of the slide is 48 feet long, what is the height of the slide? Assume the triangles are similar.

12. FURNITURE A child's desk is made so that it is a replica of a full-size adult desk. Suppose the top of the full-size desk measures 54 inches long by 36 inches wide. If the top of a child's desk is 24 inches wide and is similar to the full-size desk, what is the length?

13. TRIANGLES For Exercises 11 and 12, use the information below and at the left.

14. SKYSCRAPERS For Exercises 11 and 12, use the information below and at the left.

HOT! CHALLENGE For Exercises 15 and 16, use the following information.
Two rectangles are similar. The ratio of their corresponding sides is 1:4.
15. Find the ratio of their areas.
16. If the ratio of their areas is 

20. WRITING IN MATH Write a problem about a real-world situation that could be solved using proportions and the concept of similarity. Then use what you have learned in this lesson to solve the problem.

21. Which rectangle is similar to the rectangle shown?

22. Which of the following equations is a correct use of cross-multiplication in solving the proportion \( \frac{12}{x} = \frac{6}{2} \)?

23. Horatio is 6 feet tall and casts a shadow 3 feet long. What is the height of a nearby tower if it casts a shadow 25 feet long at the same time?

24. TRIGONOMETRY A triangular-shaped sail has angle measures of \( 45^\circ \) and \( 60^\circ \). Find the measure of the third angle.

GET READY for the Next Lesson

PREPARATIVE SKILL Solve each equation.

50. \( 50 = 2 \cdot 2 \cdot 5 \cdot 5 \)

60. \( 900 = 3 \cdot 3 \cdot 2 \cdot 5 \cdot 5 \)

61. \( 61 = 61 \)

Spiral Review

GEOMETRY Classify the quadrilateral using the name that best describes it.

18. \( 25 \) feet \( 25 \) feet

24. \( 25 \) feet \( 25 \) feet

27. MEASUREMENT A triangular-shaped sail has angle measures of \( 45^\circ \) and \( 60^\circ \). Find the measure of the third angle.

28. \( 60 = 2 \cdot 3 \cdot 10 \)

29. \( 8 \cdot 5 = 40 \)

30. \( 940 = 8 \cdot 5 \cdot 2 \cdot 3 \cdot 5 \)

31. \( 61 = 61 \)

What is an equation?

An equation is a statement that says the expression on the left is equal to the expression on the right.

What are equations used for?

Equations are used to show the relation between two quantities.

What is an inverse operation?

An inverse operation is an operation that has an opposite effect.

What operations do we use to solve equations?

We can use inverse operations to solve simple equations.

How can we check the solution to an equation?

We can check the solution to the equation by substituting the solution back into the original equation.

I am thinking of a number. When I multiply the number by 2 and add 3, the answer is 11.

What number am I thinking of?

We can write this as an equation.

Instead of using 7, the number I am thinking of, let's use the letter \( x \).

\[ \text{Start with } x \]

\[ \text{Multiply by 2} \]

\[ \text{Add 3} \]

\[ \text{You give me 11} \]

\[ x + 3 = 11 \]

We can solve this equation by transforming both sides of the equation in the opposite order:

\[ \text{Subtract 3 from both sides} \]

\[ x = 8 \]

Remember to show these steps in your work. We can solve the solution by substituting it back into the original equation.
Let's solve this equation by transforming both sides of the equation in the same way:

\[ \frac{x}{4} + 9 = \frac{x}{8} - 3 \]

1. Start by writing the equation down.
2. Subtract 9 from both sides.
3. Always line up the equal signs.
4. Divide both sides by 3.

This is the solution.

We can check the solution by substituting it back into the original equation:

\[ 4 \times 3 = 3 \times 9 \checkmark \]

The area of this rectangle is 27 cm².

If \( x = 2.5 \), we can find the height of the rectangle using substitution:

\[ 0.5 \times 14 = 20 - 14 \times 0.5 \text{ cm} \]

This equation contains a negative variable.

\[ 3x - 40 = 2x - 10 \]

Add 3 to both sides:

\[ 3x - 38 = 2x \]

Subtract 40 from both sides:

\[ x = 4 \]

This is the solution.

We always solve the equation first.

Equations can contain parentheses, for example:

\[ 2(2x - 5) = 4x \]

To solve this we can:

1. Distribute:
   \[ 4x - 10 = 4x \]
2. Add 10 to both sides:
   \[ 4x = 10 \]
3. Subtract 4x from both sides:
   \[ 0 = 10 \]

This is the solution.

Linear equations with unknowns on both sides can also involve division. For example:

\[ \frac{x}{2} - 3 = 6x - 12 \]

In this case we must start by multiplying both sides of the equation by 4:

\[ 2x - 12 = 24x - 48 \]

1. Subtract 2x from both sides:
   \[ 0 = 22x - 36 \]
2. Divide both sides by 22:
   \[ x = 3 \]

Two-step equations:

1. \( 4y - 4 = 16 \)
2. \( -2x + 3 = 2 \)
3. \( 5x - 3 = 6(12 - c) \)
4. \( 7c - 1 = 13 \)
5. \( 3y = 44 \)
6. \( 8y - 3x = 44 \)
7. \( 27 + 3c - 32 - 2b = 0 \)
8. \( 3a + 25 - 2b + 2 = 1 \)
9. \( 3x - 11 - 4a + 2b + 2 = 5 \)
10. \( 6m + 20n + 1 + 23 = 0 \)
11. \( 14 - 2(x + 31) = 0 \)
12. \( -32 - 2b + 12k = 0 \)
13. \( 27 - 3c - 32 - 2b = 0 \)
14. \( 3a + 6 \)
15. \( 3x - 5 \)
16. \( -6 \)
Solve equations with variables on both sides:
1. \( 3m + 3 = 5m + 1 \)
2. \( 8c - 3 = 4c - 11 \)
3. \( 10y - 15 = 8y + 4 \)
4. \( 10p - 13p = 17p - 5 \)
5. \( 9a - 4a + 4 \)
6. \( 5n - 7 = 2(n - 1) \)

Special cases:
1. Identity
2. No solution
3. \( 3(4x + 2) = 4(2x + 1) \)
4. \( 2 = 15x - 5(3x + 2) \)
Michael had practiced. "I'm so sorry to bother you," he said, "but I used to live here. I'm in town from New York and was wondering if I might look around for a few minutes? Or I could come back later if now's not a good time."

The man was pretty pleased, it seemed. He gave Michael a tour of the house leading him from the vestibule through the kitchen, living room and dining room, then down into the basement. Michael nodded all the while, pictured himself running through these hallways, sitting cross-legged on those floors. Next, the man—his name was Earl—brought him up the carpeted stairs, to the bedrooms. First to the master bedroom where his parents slept, and then onto the next biggest room which was his sister's; and then to the smallest one, now a study, that was Michael's childhood bedroom.

Michael asked if he could have a few minutes alone there. "This room was mine," he told Earl. Earl smiled, backed out and closed the door behind him. The bunk bed was gone, of course. So were the fluorescent constellation stickers from the ceiling. The room was painted a dull burgundy and all it contained was a desk and a standing lamp. But the wood floor panels were the same his family had kept, as he had hoped. As quickly as he could manage, heart rate rising, he moved to the back right corner of the room and crouched down. He poked at one wooden strip, then another. He nudged on a fourth try gave way. He had come here for this, but still he was slightly surprised, mostly at the fact that the floor hadn't been repaired. The piece of wood came completely loose with one hard tug, and Michael peered into the shallow hole he had created. There, inside, was a small metal box covered in dust and cobwebs. He cleared the box's cover with his hand and without so much as opening it up, stashed it away in the knapsack he had carried in. Earl was in the kitchen, boiling water. Michael thanked him profusely and gestured toward the floor.


He drove three or four blocks and parked by a snow bank. The street hadn't yet been cleared. He knapsack was bulging with his spots. Pulling open the box, which smelled of music, made him think of his dad's tinkle. And then there were they. He couldn't believe how easy it had been. He hockey card collection he'd left behind when he had moved to the United States. The Wayne Gretzky rookie card alone was now worth over $1,500. He had been young and afraid to ring his prizes with him to the new country, the strange country, across the imaginary line.

Michael wondered if 10 more years would pass before he came home again. He wondered if he could ever show this city to his children, when they had children. The cards were all that remained of his attachment to this place, and soon they would be sold. He reslated the car and tied to the fence, but the wheels were stuck in the snow. Michael rocked the car back and forth, back and forth; as his father had taught him the winter he first learned to drive. With a squeak, the car edged backward. Now he would head home.
6. Read the following sentences: "It was raining ice. He flinched every time a hard pellet hit his windshield, threatening to crack it. They were like stones, or worse, because they were frozen. He wondered how many of them would have to strike the same spot to bore a hole in the glass."

As used in this sentence, what does the word "bore" mean?
A. to make someone uninterested
B. to dodge around something
C. to make something shine
D. to make a hole, as if with a drill

7. Choose the answer that best completes the sentence below.

Michael's father always told him to aim for a female border agent, ________, his mother told him to choose a male border agent.
A. thus
B. ultimately
C. while
D. for example

8. Where in his old bedroom does Michael find his hockey card collection?

9. What does Michael plan to do with the hockey card collection?

10. This trip to his old house is important to Michael. Explain two possible reasons why the trip is important to Michael. Use evidence from the story to support your answer.

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Back Roads

by ReadWorks

Joe pulled up in a red Jeep Cherokee, put the car in park and let the engine idle. It was about 10:45 in the morning, a Friday. Sam arrived a few minutes later fresh off the subway, duffle bag slung over his back. The sun was clear white that day and shining down hard. It was almost spring. Joe honked the horn, and when Sam spotted the car, he pointed to the sky and startedog over.

Reaching into the backseat, Joe popped open the door opposite him so Sam could toss his stuff in, which he did, shutting the door and climbing into the front seat. Sam and Joe clasped palms in salutation. Sam was wearing jeans, a jean jacket and some boots. Joe was in grey sneakers and a blue hoodie. They were ready to roll.

The two were on their way to Steelers from New York City. Sam hated rushing things and insisted that they take back roads. Joe was in. After inching their way through the Holland Tunnel and creeping along an expanse of industrial wasteland in New Jersey, they rolled onto a tree-lined road running parallel to the highway, and cruised a cool 60 miles per hour with the windows down.

Eventually, they made their way into the country. Joe found the historical markers that dotted the sides of the roadway interesting—the ones next to old colonial stone houses and scenic graveyards, and the like—and every now and then this was a decidedly relaxed ride—he would pull over to read them.

Somewhere in the middle of Pennsylvania, he spotted one that was about an old bridge. The bridge itself could barely be seen—a thicket of barren trees obscured it. But a shining band of bright white light could be seen. It was a river, and the sun was all over it.

Joe sidled the car up to the sign. He hugged the outside of his door and took off his black sunglasses. Squinting, he read:

**ROCKVILLE BRIDGE**

The longest stone masonry arch railroad bridge in the world, visible to the south, was built between 1900 and 1902. Named for the surrounding small settlement, it has forty-eight arches and a length of 3,620 feet. It is the third bridge constructed here by the Pennsylvania Railroad. A wooden structure has been built 1824-49, followed by an iron bridge in 1877.

The two pulled back onto the road and drove up a bit further where they found an opening in the trees. A clear site of the river spilled into view. It was the Susquehanna River that was branching out before them, beautiful and mighty. They looked at the bridge. It lied low along the water and was made out of weathered stone. One arch after another crossed the water. Above the bridge and the water alike, a sloping wooded mountain sat in the sky.

The men drove on. A few miles down the road they ran into a town called Dauphin Borough. The town was located along a bend in the Susquehanna, just off its banks.

Joe found a gas station and pulled in to fill up. They had a direct view of the river. Sunlight dappled the water, which rushed over rocks where shallow and flowed slowly where deep.

Sam opened his door and stumbled out onto the pavement. He stretched out in the beauty that lay before him. He walked down to the river. After filling up the tank, Joe pulled into a parking spot and called down to him.

"This place is incredible," he ordered.

Sam came jogging up.

"It's so great down there," he said grinning. "Hey, I'm going to go into this diner and use the bathroom."

"Cool," Joe said.

Sam ran across a lawn of freshly cut green grass, pulled open the door and walked inside.

Joe leaned against the jeep. Locking down at the water, he breathed in the deep cool air. About ten minutes later Sam came out of the door with a burger in his hand and a brown paper bag full
of French fries.

They hopped into the car. Sam stuck his hand out the window and slapped the top of the jeep. Pop Pop! They hit the road. As they were on their way out of town, Sam called out, "What's that?"

"What is it?" said Joseph.

"That thing over there," Sam said, "It's like a white statue, or something."

Joseph craned his neck around and caught a glimpse of it. He shook his head in disbelief. Out there in the middle of the river on a bank of gray stone, there it sat, glowing white in the sunlight.

"It looks like a miniature Statue of Liberty," said Sam, "See how the left hand is holding up a torch."

"Yeah I do," said Joseph, "Look that thing up on your phone."

Sam entered "Dauphin Borough Statue of Liberty" into an Internet search on his smartphone.

It was built by a local area resident, a lawyer, he learned, out of plywood and venetian blinds, and erected in secret late at night one night with the help of some friends. No one else in the town knew he was going to do this, so when everyone in Dauphin Borough woke up the next day and looked out over the river, it was as if the white statue had risen miraculously from the water.

Over the years it had been blown over by wind, reconstructed and raised again. These days it's just considered part of the town.

"You know," Sam said, "America is amazing."

"Yes it is," said Joe.

"That's why these back roads are so great," Sam said, "You get to see all these things."

The two agreed it would be foolish to ever drive on a major highway. With the sun starting to set, they kept moving towards Pittsburgh where Dan was waiting. Dan was engaged to be married, and Sam and Joe were going to take him on a road trip to Texas before his wedding. This was how the trip began.

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**ReadWorks Vocabulary - expanse**

**expanse**

noun
1. a wide and open area, as of landscape; that which is of wide extent.
2. degree or amount of expansion.

**these are some examples of how the word or forms of the word are used:**

1. Neutrinos are very hard to detect, says Madsen. To sense their presence, complete darkness and a large expanse of something clear are essential. Antarctica's deep, clear ice fits the bill perfectly.
2. "As soon as somebody demonstrates the art of flying, settlers from our species of man will not be lacking. Given ships or sails adapted to the breezes of heaven, there will be those who will not shrink from even that vast expanse."
3. On a clear night, you'll be able to see stars scattered across the black expanse that we call our universe.

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**ReadWorks Vocabulary - scenic**

**scenic**

definition
1. showing a beautiful view of nature.

*We drove on the scenic road.*

**advanced definition**

1. of, pertaining to, or showing natural or beautiful scenery; picturesque.
2. representing an action, situation, scene, or event.

**scenic postcards**

3. of or relating to theatrical scenery or the stage.

**Spanish cognate**

escénico: The Spanish word escénico means scenic.

**these are some examples of how the word or forms of the word are used:**

1. The group has asked the federal government to name Route 15 as a National Scenic Byway. That designation would help protect the area. Preservationists will ask Congress for money to preserve historic areas.
5. This story is mostly about
   A. the difference between natural and man-made landmarks
   B. the importance of taking time to appreciate nature
   C. a friendship formed through the bond of sharing a car ride together
   D. the beautiful and interesting things to be discovered along back roads

6. The tone of the writing throughout the passage can be described as
   A. frantic or hurried
   B. relaxed and smooth
   C. suspenseful and unusual
   D. exhilarating or exciting

7. Choose the answer that best completes the sentence below.
   Joe and Sam decide not to take the highway _______ they could drive through back roads.
   A. even though
   B. so
   C. instead
   D. next

8. The presence and appreciation of nature is evident throughout the story. Identify at least three phrases or sentences that support this claim.

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Benjamin Franklin: The Ultimate Solution Creator

Benjamin Franklin is credited with an array of inventions and accomplishments. Among these are the repeal of Britain's Stamp Act, bifocals, the lightning rod, the Franklin stove, the recline, and creation of the original U.S. postal system. All are notable for being solutions, in the 1700s, to everyday problems faced by Franklin's peers or to bigger social and political issues (like the American colonies' lack of representation during Britain's rule).

When faced with some kind of roadblock or trouble, Franklin was particularly adept at finding a way around it. Beyond his keen intuition that facilitated his discoveries and solutions, Franklin had an exceptional intelligence. This was evident in the way he approached problems—the man

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9. What did Joe and Sam enjoy about their trip?

10. Sam and Joe's trip to Pittsburgh would have been quicker had they taken the highway. Why was it more worthwhile that they drove through the back roads?
By understanding that lightning tended to hit the highest, nearest point, Franklin determined that putting a rod on the top of a building meant lightning would be more likely to hit the rod than the house itself. Franklin's lightning rod connected to a wire that ran down through the house and into the ground, where it was attached to a ground rod. Both rods were made from metal, which Franklin theorized would conduct the electricity of the lightning. By moving from the first rod down the length of the wire, the lightning's energy could be safely transmitted into the ground, where it would no longer pose a threat to one's home or body.

Franklin wasn't just deal with objects as solutions to problems. He was the first known creator of a "pros and cons" list, which is an invention to assist with decision-making. In a 1772 letter to a friend, he laid out how he made difficult decisions: he divided a piece of paper into two columns, with one headed "pros" and the other "cons." He would think about the pros and cons of a particular decision for several days, writing down points whenever they came to him. When no more occurred to him, he would go through each side of the list, assigning a weight to every point. Then he would strike out a pro for every con. At the end, he would see if the balance was on one side or the other, think about the problem for another day, and then make a decision.

This kind of systematic approach to decision-making was probably quite useful for Franklin's overall approach to making scientific inquiries, which he applied in his research too. For instance, he was very interested in population growth, particularly in the American colonies. In the 1700s, the colonies' population was exploding, but no one knew how much. After studying the growth for several decades, beginning in the 1730s, Franklin published "Observations on the Increase of Mankind" in 1755. This essay explained that rapid population growth usually accompanied an abundance of food supplies. At the time, the Americas had the fastest population growth anywhere in the world and also had a huge amount of farmland, which meant they could easily nurture a growing population. Besides enlightening his readers as to why the colonies were experiencing a surge in citizens, he was also able to explain how much their area was growing. At the time he published "Observations on the Increase of Mankind," based on his two decades of observation, Franklin theorized that the population of the Americas was set to double every 20 years.

During his lifetime, Franklin was also put in charge of systems affecting the population as a whole. He tended to improve them. In 1775, he was appointed the first Postmaster General of the American colonies. When he began the job, a letter traveling from New York to Philadelphia could take two weeks, even though the distance was only 109 miles. To get a letter safely overseas, a sender would send copies on several different ships, with the hope that at least one of them would make it to the recipient. Post offices were very informal—they could be anything from a town's inn to its local pub.

As Postmaster General, Franklin instituted several solutions that made sending and receiving mail faster and more reliable. First, he toured all the major post offices and the routes connecting them, so he could learn more about the system as a whole. Based on his observations, he dictated more direct routes between these post offices and had milestones set up on the roads used by mail carriers, so they could more easily follow the correct path. (Roads were very poorly marked in the 1700s.) Second, he specifically improved service between New York and Philadelphia, the colonies' two biggest, most important cities, by having the mail wagon travel...
systematic

Advanced Definition
adjective
1. Involving or based on a method or plan; not random or chaotic.

Presentation of concepts in the textbook is systematic.

2. Characterized by order and organization; methodical.

A systematic worker

Spanish cognate
sistemático: The Spanish word sistemático means systematic.

These are some examples of how the word or forms of the word are used:

1. After a solution or a set of testable solutions have been developed, the next step is to test them rigorously and systematically so that no aspect goes unexamined. In a controlled experiment, different groups of testable material are subjected to testing and compared with a control group for which outcomes are known. Experiments are usually regarded with a measure of skepticism themselves and are subject to change and redesign as the testing stage continues.

2. Lizzie's idea of an exciting summer was sitting in an airconditioned library and systematically devouring a high stack of novels. She'd graduated from 7th grade two weeks earlier and since then had been showing up at the library at a quarter to nine in the morning, fifteen minutes before it opened. As soon as the doors opened, she'd sprint to a table on the second floor, right next to the big window. It was an equal distance from the water fountain and the fiction section. For the next eight hours, she'd sit at the table and read. It was heavenly.

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5. What is this passage mainly about?
A. population growth in the American colonies
B. the invention of the lightning rod
C. Benjamin Franklin and his many inventions
D. the U.S. patent system

6. Read the following sentences: "When faced with some kind of roadblock or trouble, Franklin was particularly adept at finding a way around it. Beyond his keen intuition that facilitated his discoveries and solutions, Franklin had an exceptional intelligence."

What does "adept" mean?
A. quick
B. stubborn
C. impatient
D. skilful

7. Choose the answer that best completes the sentence below.

Benjamin Franklin was a brilliant inventor. _______ he never patented any of his designs.
A. also
B. yet
C. thus
D. namely

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8. What hypothesis was Benjamin Franklin trying to test with the invention of the lightning rod?

9. Benjamin Franklin greatly improved the U.S. Postal System during his time as Postmaster General. What evidence from the text supports this conclusion?

10. Why was Benjamin Franklin "the ultimate solution creator"? Support your argument with examples from the text.
Coastal Drilling in Sunny California

by Edward I. Maxwell

"Drill, baby, drill"

Some Americans across the United States are demanding increased onshore and offshore drilling for oil and natural gas. Feeding pressure at the gas pump, households are hoping some relief will come from developing the energy resources within the United States.

These hopes have led to significant growth within the green, or environmentally friendly, energy industry. Wind power and solar power companies have popped up all over the country. However, government and corporate initiatives to increase U.S. energy production have also included more traditional energy resources. Developing offshore oil and natural gas resources has been a portion of those initiatives.

But the hopes for greater energy development and environmental concerns have been colliding for decades. In 1969, six miles off the coast of Santa Barbara, the pipes of an offshore drilling rig burst, and almost 3 million gallons of oil were pumped into the coastal waters. Many consider that disaster to be a galvanizing moment behind the passage of the Clean Water Act of 1972, which aimed to "restore and maintain the chemical, physical and biological integrity of the Nation's waters."

After the Santa Barbara Spill, both the federal government and the California state government issued bans on leasing new offshore drilling fields. Oil companies have been allowed to continue drilling and developing energy resources on the fields already held under lease agreements prior to the bans. As recently as 2008, there has been increased pressure to lease new offshore oil fields under federal control.

Proponents of increased offshore drilling argue that developing alternative domestic supplies of oil to compete with international suppliers will drive down the average cost of gas. Opponents of increased offshore drilling counter that it may result in an average price decrease of only a few cents. One of the reasons for such a modest decrease is that oil is an internationally traded commodity, the price of which is strictly monitored by the Organization of the Petroleum Exporting Countries (OPEC) that sells to countless buyers. The incredibly high demand for oil allows for only modest decreases in price even if alternative suppliers arise.

As of 2013, the federal government has begun to consider other means of opening coastal drilling sites besides designating new federal offshore fields. A new approach, particularly to California, may involve the U.S. Air Force. The Vandenberg Air Force Base, located in central California, is situated on land owned and managed by the U.S. Air Force. This division of the United States military is able to lease certain portions of its properties as it so desires and therefore has the right to consider leasing the land to an oil-drilling company interested in offshore possibilities. Oil companies conducting onshore operations would reach crude oil pockets offshore using a technique known as "slant drilling." The drilling process would work into the earth at an angle, creating a well that draws from sources possibly thousands of feet out to sea.

Proponents of slant drilling argue that basing the operation on land and running the drill line below the seafloor avoids all the risks that come with conventional offshore drilling. Since no pipes will be rising up from the ocean bottom, proponents claim that a tragedy like the 1999 Santa Barbara spill is impossible. Opponents and environmentalists have argued, however, that any drilling operation taking place on the California coast, whether on the shoreline or in deep water, poses an unacceptable risk to the coastal environment.

As the energy needs of the United States grow along with the energy needs of a growing global community, the pollution from industrial development and environmental concerns may become more and more frequent. Even with the expansion of greener alternatives, more conventional energy sources are required to meet energy demands in the short term. In 1999 the people of California, determined to prevent another tragedy like the Santa Barbara Spill from ever happening again, would have had a hard time imagining a world in such desperate need of new energy resources. Would they have made the same decision to ban offshore drilling if they had been able to foresee this future?

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**initiative**

**Advanced Definition**

noun

1. The power, ability, or energy to organize or actively carry through a plan.

She will succeed because of her strong initiative.

2. The initial or leading action in a process.

Our company's initiatives in Asia are opening up new markets.

He tends to be a follower because he's fearful of taking the initiative.

3. In government, a process whereby voters can propose legislation directly.

**Spanish cognate**

iniciativa: The Spanish word iniciativa means initiative.

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**lease**

**Definition**

noun

1. An agreement to pay to use another person's property for a certain period of time.

The lease for our apartment is for one year.

**Advanced Definition**

noun

1. A contract or agreement for the occupancy or use of one party's property by another for a specified period of time and in exchange for money or other compensation; rental agreement.

2. The period of time such a contract is in effect.

a one-year lease

**transitive verb**

1. To contract for the use or occupation of one's property for a specified period of time and usu. in return for rent or other compensation; let or rent.

2. To take possession of or occupy by lease.

The tenants wanted to lease the house until May.

**intransitive verb**

1. To rent a property by the terms of a lease.
These are some examples of how the word or forms of the word are used:

1. Many people enjoy working in an office environment with computers, but Dr. Detzel felt that in the city he was losing touch with something important. So the Richmond, Virginia resident quit his job and started a farm. He and his business partner found 80 acres of available land in a small town called Claverack, N.Y., and signed a 10year lease.

2. How do we choose what kind of car to get? And how do we get it? We have a few options. One is to lease a car, which means to rent it for a period of time. This is good because it is a little cheaper than buying a car, and we won’t have to own it forever. But the downside is that the car won’t be ours, and if we keep it for very long, it will end up being more expensive than if we had bought a car.

3. The green energy industry is used to help America meet its energy needs. What evidence from the passage supports this conclusion?
   A. Government initiatives for increasing energy production include developing offshore oil resources.
   B. Wind and solar power companies have appeared across the country.
   C. Some Americans are demanding increased drilling for oil.
   D. Oil companies have proposed slant drilling as an environmentally safe method.

4. What conclusion can be made about the U.S. Air Force?
   A. The U.S. Air Force is in favor of increased coastal drilling in California.
   B. The U.S. Air Force has no say in whether coastal drilling will increase.
   C. The U.S. Air Force is opposed to increased coastal drilling in California.
   D. The U.S. Air Force plays an important role in the coastal drilling debate.

5. What is this passage mostly about?
   A. the clash between U.S. energy development and environmental concerns.
   C. reasons for the current high prices of oil and gas in the U.S.
   D. a discussion of international politics surrounding natural resources.

6. Read the following sentence: "Many consider that disastrous spill to be a galvanizing moment behind the passage of the Clean Water Act of 1972, which aimed to ‘restore and maintain the chemical, physical and biological integrity of the Nation’s waters.’"

What does “galvanizing” mean?
   A. boring, uninteresting
   B. worthwhile, important
   C. rousing, causing action
   D. surprising, unexpected

7. Choose the answer that best completes the sentence below.

Proponents of slant drilling argue that it avoids the risks associated with conventional offshore drilling;________. Opponents of slant drilling believe that it poses an unacceptable risk to the coastal environment.
   A. therefore
   B. namely
   C. ultimately
   D. however

8. What is “slant drilling”?

9. What do opponents of increased offshore drilling argue regarding the effects of increased oil drilling on average gas prices?

10. Explain whether “slant drilling” in California is a good solution to the rising cost of gas and increased energy demands in the United States. Support your answer using information from the passage.
Paul Revere's Ride
by Henry Wadsworth Longfellow

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five:
Hardly a man is now alive
Who remembers that famous day and year.

He said to his friend, "If the British march
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal-light.
One, if by land, and two, if by sea;
And I on the opposite shore will be.

Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country folk are to be up and to arm."

Then he said, Good-night! and with muffler o'er
Silently rowed to the Charlestown shore,
Just as the moon rose over the bay.

Where swinging wide at her moorings lay
The Somerset, British man-of-war;
A phantom ship, with each mast and spar
Across the moon like a prison-bar,
And a huge black hulk, that was magnified
By its own reflection in the tide.

Meanwhile, his friend, through alley and street
Wanders and watches with eager ear,
Till in the silence around him he hears
The muster of men at the barrack door,
The sound of arms, and the tramp of feet,
And the measured tread of the grenadiers,
Marching down to their boats on the shore.

Then he climbed to the tower of the Old North Church
By the wooden stairs, with stealthy tread,
To the belfry-chamber overhead,
And startled the pigeons from their perch
On the sombre rafters that round him made
Masses and moving shapes of shade.

By the trembling ladder, steep and tall,
To the highest window in the wall,
Where he paused to listen and look down
A moment on the roofs of the town.

It was twelve by the village clock
When he crossed the bridge into Medford town,
He heard the crowing of the cock,
And the barking of the farmer's dog,
And felt the damp of the river's fall.

That rises after the sun goes down.

It was one by the village clock,
When he rode into Lexington.
He saw the gilded weathercock
Swim in the moonlight as he passed,
And the meeting-house windows, blank and bare,
Gazed at him with an ancestral glare.

As if they already stood aghast
At the bloody work they would look upon,
It was two by the village clock,
When he came to the bridge in Concord town.
He heard the beating of the fife,
And the twitter of birds among the trees,
And felt the breath of the morning breeze
Blowing over the meadows brown.

And one was safe and asleep in his bed
Who at the bridge would be first to fall,
Who that day would be lying dead,
Pierced by a British musket-ball.

You know the rest. In the books you have read,
How the British Regulars fired and fired,
How the farmers gave them ball for ball,
Tommy behind each fence and farm-yard wall,
Chasing the red-coats down the lane,
Then crossing the fields to emerge again
Under the trees at the turn of the road,
And only pausing to fire and load.

So through the night rode Paul Revere,
And through the night went his cry of alarm
To every Middlesex village and farm.
A cry of defiance and not of fear,
Voice in the darkness, a knock at the door,
And the midnight message of Paul Revere.

And the midnight bowling over all,
Beneath, in the churchyard, lay the dead,
In their night-encampment on the hill,
Wrapped in silence so deep and still.
That he could hear, like a sentinel's tread,
The watchful night-wind, as it went
Creeping along from tent to tent,
And seeming to whisper, "All is well!"

A moment only he feels the spell
Of the place and the hour, and the secret dread
Of the lonely belfry and the dead;
For suddenly all his thoughts are bent
On a shadowy something far away,
Where the river widens to meet the bay.

A line of black that bends and floats
On the rising tide, like a bridge of boats.
Meanwhile, impatient to mount and ride,
Booted and spurred, with a heavy stride
On the opposite shore walked Paul Revere.
Now he paled his horse's sides,
Now he gazed at the landscape far and near,
Then, impetuous, stamping the earth,
And turning and loosening his saddle-girth;
But mos'tly he watched with eager search
The belfry-tower of the Old North Church,
As it rose above the graves on the hill,
Lonely, and spectral, and sombre and still.

And lo! as he looks, on the belfry's height
A glimmer, and then a gleam of light!
He springs to the saddle, the bridge is near,
But lingers and gazes, till full on his sight
A second lamp in the belfry burns!

A hurry of hoofs in a village street,
A shape in the moonlight, a bulk in the dark,
And beneath, from the pebbles, in passing, a spark
Struck out by a steed flying fearless and fleet.

That was all! And yet, through the gloom and the light,
The fate of a nation was riding that night.
And the spark struck out by that steed, in his flight,
Kindled the land into flame with its heel.

He has left the village and mounted the steep,
And beneath him, tranquil and broad and deep,
Is the Mystic, meeting the ocean tide;
And under the alders, that skirt its edge,
Now soft on the sand, now loud on the ledge.

Is heard the tramp of his steed as he rides.

Paul Revere's Ride - Comprehension Questions

Name: ____________________________ Date: ________________

1. At what time did Paul Revere go on his ride?
   A. six o'clock in the evening
   B. six o'clock in the morning
   C. noon
   D. midnight

2. Who is the speaker of this poem?
   A. a British soldier who fought at Concord
   B. Paul Revere
   C. a good friend of Paul Revere's
   D. someone telling the story of Paul Revere's ride
3. Read these lines from the poem:

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five:
Hardly a man is now alive
Who remembers that famous day and year.
He said to his friend, "If the British march
By land or sea from the town to-night,
Hang a lantern aloft in the belfry arch
Of the North Church tower as a signal-light,
One, if by land, and two, if by sea;
And I on the opposite shore will be,
Ready to ride and spread the alarm
Through every Middlesex village and farm,
For the country folk to be up and to arm."

Based on these lines, what can you conclude about the person speaking to his friend (line 6)?

A. The person speaking to his friend is a father with more than one child.
B. The person speaking to his friend is a soldier in the American army.
C. The person speaking to his friend is a soldier in the British army.
D. The person speaking to his friend is Paul Revere.

5. What is the theme of this poem?

A. Many people died in the fighting at Lexington and Concord.
B. War is never a good solution to a problem between two groups of people.
C. Paul Revere's ride had a big impact on history.
D. Nothing in life is more important than friendship.

6. Reread these lines from the poem:

Then he said, Good-night! and with muffled oar
Silently rowed to the Charlestown shore,
Just as the moon rose over the bay,
Where swinging wide at her moorings lay
The Somerset, British man-of-war;
A phantom ship, with each mast and spar 20
Across the moon like a prison-bar,
And a huge black hulk, that was magnified
By its own reflection in the tide.

What mood does the language in the last four lines of that passage create?

A. a silly, playful mood
B. a bright, joyful mood
C. a gentle, loving mood
D. a dark, threatening mood

7. What is the subject of the phrase "wanders and watches" (line 25)?

A. the "alley" (line 24)
B. the "street" (line 24)
C. "his friend" (line 24)
D. "eager ears" (line 25)

8. The speaker states that "through all our history," people will "waken and listen to hear / The hurrying hoof-beats of that steed." What else will people waken and listen to hear?

9. Read these lines from the poem:

Listen, my children, and you shall hear
Of the midnight ride of Paul Revere,
On the eighteenth of April, in Seventy-five:
Hardly a man is now alive
Who remembers that famous day and year.

What does the speaker mean by the statement that "hardly a man is now alive / Who remembers that famous day and year"?

10. Why might the speaker be telling his or her children about Paul Revere's ride? Support your answer with evidence from the poem.
Remember
by Christina Rossetti

Remember me when I am gone away,
Gone far away into the silent land;
When you can no more hold me by the hand,
Nor I half turn to go yet turning stay.
Remember me when no more day by day
You tell me of our future that you planned:
Only remember me; you understand
It will be late to counsel then or pray.
Yet if you should forget me for a while
And afterwards remember, do not grieve:
For if the darkness and corruption leave
A vestige of the thoughts that once I had,
Better far you should forget and smile
Than that you should remember and be sad.

Name: ___________________________ Date: ___________

1. What does the speaker ask the reader to do at the beginning of the poem?
   A. The speaker asks the reader to remember.
   B. The speaker asks the reader to go away.
   C. The speaker asks the reader to stay.
   D. The speaker asks the speaker to pray.

2. Read these lines from the poem.
   "Remember me when I am gone away,
   Gone far away into the silent land;
   When you can no more hold me by the hand,
   Nor I half turn to go yet turning stay.
   Remember me when no more day by day
   You tell me of our future that you planned:
   Only remember me; you understand
   It will be late to counsel then or pray."

   What is the relationship between indentation and rhyme in these lines?
   A. Every other line rhymes and is indented.
   B. Every fourth line rhymes and is indented.
   C. Every line that is indented rhymes with a line that is not indented.
   D. Pairs of sequential rhyming lines are indented.

3. Read these lines from the poem.
   "Remember me when I am gone away,
   Gone far away into the silent land;
   When you can no more hold me by the hand,
   Nor I half turn to go yet turning stay.
   Remember me when no more day by day
   You tell me of our future that you planned:
   Only remember me; you understand
   It will be late to counsel then or pray."

   Based on these lines, what can you conclude about the person being addressed by the speaker?
   A. The person being addressed prefers silence to noise.
   B. The person being addressed has never met the speaker.
   C. The person being addressed cares a lot about the speaker.
   D. The person being addressed does not get along with the speaker.

4. Read these lines from the poem.
   "Remember me when I am gone away,
   Gone far away into the silent land;
   When you can no more hold me by the hand,
   Nor I half turn to go yet turning stay.
   Remember me when no more day by day
   You tell me of our future that you planned:
   Only remember me; you understand
   It will be late to counsel then or pray."

   The speaker asks the addressee to remember "me when I am gone away." Based on the evidence in these lines, when will the speaker be gone?
   A. The speaker will be gone in a year.
   B. The speaker will be gone tomorrow.
   C. The speaker will be gone as soon as possible.
   D. The speaker will be gone after death.

5. What is a theme of this poem?
   A. There is no point in planning for the future because everyone is going to die eventually.
   B. If you love someone, you should spend more time counseling that person than praying for that person.
   C. If someone you love dies, moving on and being happy is better than remembering and being sad.
   D. If someone you love dies, remembering and being sad is better than moving on and being happy.
6. Read these lines from the poem.

"Yet if you should forget me for a while
And afterwards remember, do not grieve:
For if the darkness and corruption leave
A vestige of the thoughts that once I had,
Better by far you should forget and smile
Than that you should remember and be sad."

Based on these lines, what does the word "grieve" probably mean?

A. feel happy
B. feel sad
C. feel tired
D. feel eager

7. Which word indicates a shift in thinking partway through the poem?

A. "When" (line 3)
B. "then" (line 8)
C. "Yet" (line 9)
D. "For" (line 11)

8. What does the speaker tell the addressee to do in line 7?

9. What does the speaker say is better "than that you should remember and be sad"?

10. Explain whether the speaker wants to be remembered or forgotten by the addressee.

Support your answer with evidence from the text.
ASSIGNMENT ONE WEEK ONE

Georgia History

1. Which natural resource is not found in the ridge and valley region of Georgia?
   A) coal
   B) rock
   C) timber
   D) farmland

2. Which terms best describes the Piedmont region of Georgia today?
   A) broad treeless plateau, richest soil in Georgia
   B) heavily forested, highest elevation in Georgia
   C) gently sloping land, lowest elevation in Georgia
   D) rolling farmland, most heavily populated region of Georgia

3. Which best describes the full line in Georgia?
   A) the nickname of Georgia’s border with Florida
   B) the natural border between the Piedmont and the mountains
   C) a man-made boundary dividing the Piedmont from the coastal plain
   D) a zone several miles wide that marks the historic ocean’s shoreline

4. What is the natural boundary that separates the Coastal Plain and Piedmont region?
   A) Fall Line
   B) Savannah River
   C) Atlantic coastline
   D) Appalachian Mountains

5. What geographic region of Georgia is located between the Coastal Plain and the mountains?
   A) Fall Line
   B) Piedmont
   C) Georgia Plateau
   D) Ridge and Valley

6. What is the main reason that the Blue Ridge Mountains have been important to the growth of Georgia?
   A) The rich red clay soil is excellent for agriculture.
   B) Precipitation in the mountains provides water to the entire state.
   C) Natural passes through the mountains established trade routes to the Midwest.
   D) They form a natural barrier between the coastal plain and the Piedmont region.

7. Where is the ridge and valley region of Georgia located?
   A) northeastern part of the state
   B) far northeaster corner of the state
   C) between Alabama northward to the state of Delaware
   D) between the Blue Ridge Mountains and the Appalachian Mountains

8. Which of the following would be considered a resource found in Georgia’s coastal plains?
   A) rapidly flowing rivers
   B) fertile soil for farming
   C) coal deposits and natural gas
   D) bedrock such as granite and marble

9. Which landform BEST describes the Piedmont area of Georgia?
   A) hills
   B) plains
   C) peninsula
   D) mountains

10. What is the name of the area of Georgia where the land is mostly level and borders the Atlantic Ocean?
    A) southeast region
    B) Piedmont
    C) mountain
    D) coastal plain

11. In which geographical region of Georgia are the rivers navigable?
    A) Piedmont
    B) coastal plain
    C) ridge and valley
    D) Appalachian plateaus

12. In which state is the source of the Chattahoochee River located?
    A) Florida (FL)
    B) Georgia (GA)
    C) Alabama (AL)
    D) South Carolina (SC)

13. Which river flows into the Gulf of Mexico?
    A) Cape Fear River
    B) Potomac River
    C) Savannah River
    D) Chattahoochee River

14. Which of the following BEST describes Georgia’s coastal plain region?
    A) mountainous land bordering Florida
    B) rolling land in the middle of the state
    C) level land bordering the Atlantic Ocean
    D) steep highland in the northern part of the state

15. Which of the following BEST describes the Piedmont region of Georgia?
    A) steep highland bordering Tennessee
    B) flat land bordering the Atlantic Ocean
    C) grassy lowland bordering South Carolina
    D) gently rolling land between the mountains and the coastal plain

16. The textile industry has been one of Georgia’s primary industries. The textile industry developed mainly along the A) coastal plain.
    B) Atlanta River.
    C) Fall line.
    D) Chattahoochee River.

17. Which physical feature is located in the coastal plains region of Georgia?
    A) Brasstown Bald
    B) Okefenokee Swamp
    C) Chattahoochee River
    D) Lake Sidney Lanier

18. Which region of Georgia is bounded on its southeastern side by the Fall Line and is made up of low hills and narrow valleys?
    A) Piedmont
    B) Valley and Ridge
    C) Blue Ridge Mountain
    D) Appalachian Plateau

19. Which two hemispheres is the state of Georgia located?
    A) northern and eastern
    B) southern and eastern
    C) northern and western
    D) southern and western

20. Which region once served as the primary area for growing cotton in Georgia and is home to most of Georgia’s population cities?
    A) Piedmont
    B) coastal Plain
    C) Appalachian Plateau
    D) Blue Ridge Mountains

21. Why did early settlers make their homes along the fall line?
    A) The coastline was a fishing and shrimping center.
    B) Waterfalls in the area provided a source of power.
    C) The Blue Ridge Mountains received an abundance of rainfall.
    D) The 32° latitude line was Georgia’s southern border at that time.

22. Which statement is the most accurate description of the Okefenokee Swamp?
    A) It is an estuary where freshwater and salt water mix.
    B) It is a major source of drinking water for southern Georgia.
    C) It is Georgia’s largest freshwater wetland.
    D) It is located along the Atlantic Intracoastal Waterway.

23. Why was the physical feature of the Fall Line important in the development of modern Georgia?
    A) Tourists are attracted to its natural beauty.
    B) It has an abundance of timber and minerals.
    C) The soil there is fertile for growing cotton and other crops.
    D) Its many fast-flowing streams provide hydroelectric power.

24. Which of the following correctly describes the location of Georgia?
    A) northern latitude and western longitude
    B) Southern Hemisphere and eastern latitude
    C) North American continent and Western Hemisphere
    D) southeastern global quadrant and northern time zone

Part A
Explain how the Blue Ridge region historically contributed to Georgia’s economy.

Part B
Explain two reasons a tourist might want to visit the Blue Ridge region today.

Be sure to complete ALL parts of the task.
Answer with complete sentences, and use correct punctuation and grammar.
Use the map below to answer the question.

**Regional Map of Georgia**

Which statement accurately explains Georgia’s location?

A) It is along the Atlantic Coast in the Eastern Hemisphere.
B) It is along the Pacific Coast in the Western Hemisphere.
C) It is in the northwestern region of South America.
D) It is in the southeastern region of North America.

What is the significance of the shaded area on the map?

A) It is a refuge for Georgia’s diverse wildlife.
B) It is a resource for Georgia’s water power.
C) It is the location of Georgia’s highest waterfalls.
D) It is the location of Georgia’s highest mountains.

Which number on the map identifies the region that is home to Georgia’s largest cities?

A. 1
B. 3
C. 5
D. 4

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**Geographic Regions of Georgia: Overview**

The diverse landscapes of Georgia result from geological and climatic forces working throughout time, with some aspects that influence how humans interact with the environment. Georgia encompasses parts of the Appalachian plateau, the Piedmont Plateau, and the Coastal Plain. The terrain varies from mountains in the north to coastal plains in the south. The state's climate varies from the cooler temperatures in the north to the warmer temperatures in the south. The state's economy is diverse, with industries including agriculture, manufacturing, and tourism. The state's waterways are important for both transportation and recreation. Georgia is home to a variety of wildlife, including many species of birds and mammals. The state's history is rich, with major events including the American Revolution and the Civil War. The state is home to several national parks and scenic beauty spots. This overview provides a glimpse into the diversity of Georgia's geography and culture.
5. Which is a correct statement about the 1857 Supreme Court’s Dred Scott decision of 1857?
   a. The decision pleased both the North and South.
   b. Antislaveryists considered the decision a great victory.
   c. Slaves were classified as property without human rights.
   d. Expansion of slavery into new territories was declared illegal.

6. Why was Eli Whitney’s cotton gin an important invention for farmers in Georgia prior to the Civil War?
   a. Cotton could be grown much more easily.
   b. Cotton could now be transported using the railroad.
   c. Farmers used the gin to process cotton more quickly.
   d. The gin kept cotton from becoming contaminated.

7. Which event led to a special legislative session in Georgia to consider legislation affecting the Union?
   a. John Brown’s Raid
   b. The Kansas-Nebraska Act
   c. the firing upon Fort Sumter
   d. Lincoln’s presidential election

8. In 1793, several Georgia legislators became involved with illegal land speculation. What did their involvement come to be called?
   a. Land Pot Scandal
   b. Yazoo Land Fraud
   c. Oklahoma Land Rush
   d. Trans-Gulf Land Scandal

9. How did the Cherokee and Creek people lose their lands in Georgia?

10. Which Georgian negotiated and signed the Treaty of Indian Springs in 1825 that signed away all Creek lands in Georgia?
    a. William Abercombie
    b. Andrew Jackson
    c. William Walls
    d. Alexander McGillivrrey

11. What is a reason many Georgia plantation owners favored secession?
    a. a desire for increased markets in the North
    b. the need to import large numbers of new slaves
    c. fear that abolition would end their way of life
    d. trouble getting agricultural labor from Northern states

12. Which aspect of Georgia was most affected by Reconstruction efforts?
    a. politics
    b. religion
    c. consciousness
    d. agriculture

13. What was the cause of the early 1800s war in Mexico?
    a. to prevent segregation
    b. to increase immigration
    c. to prevent Indian assimilation
    d. to establish religious tolerance

14. What was the cause of the early 1800s war in Mexico?
    a. to prevent segregation
    b. to increase immigration
    c. to prevent Indian assimilation
    d. to establish religious tolerance

15. What was the misunderstanding that caused conflict between southern whites and Native Americans?
    a. disagreement about division of labor between men and women
    b. differences about treatment of land by North American Indians
    c. mixing of European language and culture throughout North America
    d. Native American insistence that white Europeans adopt native American customs and beliefs

16. Which term best describes the Piedmont region of Georgia today?
    a. broad fertile plains, fertile soil in Georgia
    b. heavily forested, highland elevation in Georgia
    c. gently sloping land, highest elevation in Georgia
    d. rolling farmland, most heavily populated region of Georgia

17. Which best describes the Southeast in Georgia?
    a. to the southeast of Georgia’s border with Florida
    b. the natural border between the Piedmont and the mountains
    c. the coastal boundary running from the Spanish coast to the Atlantic Ocean
    d. a zone several miles wide that marks the prehistoric ocean’s shoreline

18. What is the name of the area of Georgia that is the land currently leveled and borders the Atlantic Ocean?
    a. coastal area
    b. Piedmont
Hernando de Soto in Georgia

The first European to explore the interior of what is now the state of Georgia was Hernando de Soto. In fact, De Soto entered the state on two occasions during the course of his expedition.

Hernando de Soto was born about the year 1500 in Extremadura, Spain. As a very young man he participated in the conquest of Panama and Nicaragua, and later he played a major role in the conquest of the Incas in Peru, where he became immensely wealthy. Not content with mere riches, De Soto wanted to be socially elevated to a marquis, the equal of the Spanish conquistador Francisco Pizarro. He returned to Spain, and in 1537 Charles V granted him the right to explore and conquer La Florida, a territory whose only known borders at that time were the lower Atlantic coast and panhandle Florida. The nature and extent of the interior (present-day North America) were completely unknown at the time.

De Soto’s fleet sighted the western coast of Florida near Tampa Bay on May 25, 1539. He landed with about 600 men and about 220 , and from there he proceeded northward to present-day Tallahassee, where he and his men spent the winter of 1539-40 in the territory of the chiefdom of Apalachee.

On March 3, 1540, De Soto and his army departed from Apalachee. By day’s end they had reached just inside the southern border of what is now Georgia, a few miles south of present-day . When they reached the , they built a crude boat and ferried everyone to the western side of the river. From there they proceeded to the Chickasawatchee Swamp, where they came to the chiefdom of Capachequi.

After spending six days in Capachequi, they resumed traveling northeast, proceeding up the western side of the Flint River to near present-day Montgomery, where they crossed to the eastern side of the river and came to the chiefdom of Toa on March 23. After a short stay, they continued on to the northeast until they came to the . In an abandoned village on an island in the Ocmulgee, De Soto’s company discovered meat left roasting on a barbeque, a wooden frame suspended over a wood fire. This is the first recorded instance of in Georgia. They proceeded upstream a few miles until they came to the chiefdom of Ichisih, whose main town is thought to have been at the Lamar mound site at present-day . Because the people of Ichisih met them peacefully, De Soto ordered that a wooden cross be set atop a mound in the town, and De Soto and his men tried to explain its significance to the Indians.

From Ichisih they proceeded northeast to the Oconee River, where they found the of Altamaha, Ocate, and Patoka. The chiefdom of Ocate was the most powerful of these three. From Ocate they continued eastward, crossing the several miles north of where now lies. They continued through present-day South Carolina and North Carolina before turning northward to cross the Appalachian Mountains, entering the Tennessee Valley east of what is now Newport, Tennessee.

Then, proceeding westward down the Tennessee Valley, they entered Georgia for the second time around July 15, 1540. On July 16 they came to the principal town of the chiefdom of Coosa at the Little Egypt archaeological site, now submerged beneath . Like the chief of Ocate, the chief of Coosa was a particularly powerful one, with influence over chiefdoms to the northeast as far as present-day Knoxville and Newport, Tennessee, and to the southwest as far as about Chiltonsberg, Alabama. When De Soto and his army approached the capital town, the chief of Coosa was carried out on a palanquin (a covered couch) borne upon the shoulders of his retainers, while other retainers walked along singing and playing flutes.

On August 20, 1540, De Soto and his army departed from the main town of Coosa and traveled to the south, crossing the Etowah River at the town of Itaca—the site—and proceeding onto the chiefdom of Ulahahat at present-day . They continued down the Coosa River to another town, perhaps Apica, possibly located at the in Foster’s Bend. On September 5, 1540, they crossed into what is now the state of Alabama.

The expedition continued westward for another three years. During this time about half of the original army were killed by Indians or died of various causes, as did De Soto himself.

Within a few years of De Soto’s visit, the powerful chiefdoms that he had encountered began to collapse. Archaeologists believe that this collapse was due in part to the population loss from European diseases for which Native Americans lacked immunity.
such as smallpox and measles. De Soto is also thought to have been instrumental in creating a long-lasting hostile relationship between Native American tribes and Europeans. Even before De Soto arrived in La Florida, he was known for employing such harsh methods as kidnapping Native Americans to use as guides and holding Native American women and children hostage in exchange for supplies.

Two historical markers commemorate Hernando de Soto's time in Georgia: one along the Riverwalk in Augusta, and the other at the tourism office in

Assignment 2

Hernando de Soto
Georgia Encyclopedia

1. Who was the first European to explore the interior of Georgia? How many times did he enter Georgia during his expedition?

2. What unexplored territory was Hernando de Soto granted permission to explore? Who granted him permission to explore this territory?

3. Hernando de Soto had some experience in exploration, but was young and never been in charge of an expedition. Why do you think President George Washington granted Hernando de Soto permission to explore the territory in question? (Include textual information from the article to back up your answer.)

4. According to the text in paragraph two, what was Hernando de Soto's reason for wanting to become a war hero (reason for wanting to exploit)?

5. What year did Hernando de Soto and his army arrive in Georgia?

6. Hernando de Soto and his army traveled along more than one Georgia river during their first visit to Georgia. Write a short description of their travels through Georgia during their first visit to our state. Be sure to include the cities they passed through and the rivers they traveled along. In your description also include the one significant discovery they made during their first trip to Georgia.

7. What month and year did Hernando de Soto and his men enter Georgia for a second time? How much time had passed between their first and second trips to Georgia?

8. What three states did Hernando de Soto and his men venture into after their first trip to Georgia?

9. At the end of Hernando de Soto's second trip to Georgia, what state did Hernando and his men travel into? What year and month did this occur?

10. What happened as Hernando de Soto and his men continued their exploration westward?

11. Many Native Americans began to die from diseases that Hernando de Soto and his men exposed them to. What were some of these diseases?

12. According to paragraph 10, the Native Americans were dying from these diseases due to their lack of immunity. Explain why the Native American lacked immunity from these diseases.
Week 3 Assignment 1

1. Which of the following statements most accurately describes Georgia at the beginning of the Revolutionary War?
   A) The royal governor was very unpopular.
   B) Georgia relied heavily upon trade with England.
   C) A strong tradition of self-government had developed.
   D) Most Georgians strongly favored independence from England.

2. What was the main reason for removing the Cherokee from their homes in northwestern Georgia?
   A) The Cherokee had adopted a constitution and formed their own nation.
   B) Gold was discovered on Cherokee land.
   C) Congress had sold the Cherokee land to the railroad.
   D) The government promised large tracks of land to the Native Americans in Oklahoma.

3. Which man represented Georgia at the Constitutional Convention of 1787?
   A) James Madison
   B) William Few
   C) James Oglethorpe
   D) Alexander Stephens

4. Which of the following is an accurate statement concerning the 1777 Constitution of Georgia?
   A) A unicameral legislature was established.
   B) Broad powers were given to the governor.
   C) There were only two branches of government.
   D) The Georgia state government today is the same as in 1777.

5. What is the name of the long, hard journey made by the Cherokees when they were forced to leave their lands in Georgia?
   A) Oregon Trail
   B) Trail of Tears
   C) Wilderness Road

6. Why did the Creek people settle near water sources?
   A) Because it was important in their religion
   B) Because they were famous for their ability to swim
   C) Because they needed it to raise crops in the area
   D) Because they were called "Creek," which is a small river

7. Why did the Cherokee tribes move from Georgia to Oklahoma?
   A) They bought it in the West would be easier.
   B) They had used all of the natural resources in their area.
   C) They were forced to leave by the United States government.
   D) They heard rivers and land were more plentiful farther west.

8. What did the Cherokee and Creek people have that the European settlers wanted?
   A) Land
   B) Gold
   C) Water
   D) Journeys

9. Which statement best describes the controversy surrounding the Yazoo Land Fraud of 1795?
   A) The governor of Georgia deeded land to Native Americans.
   B) State legislators were bribed to sell land to land speculators.
   C) The federal government took over land that belonged to the state.
   D) Land speculators sold marshland to unsuspecting buyers.

10. Why was Eli Whitney's cotton gin an important invention for farmers in Georgia prior to the Civil War?
    A) Cotton could be grown much more easily.
    B) Cotton could now be sent to markets using the railroad.
    C) Farmers used the gin to process cotton quickly.
    D) The gin kept cotton from becoming soiled and unusable.

11. Why did many Georgians boycott British goods, such as paint and tea, during the mid-1790s?
    A) England had placed a tax on the goods.
    B) Most colonial merchants could not afford them.
    C) The goods were inferior to other European goods.
    D) Colonists were able to produce these goods on their own.

12. What was the main reason that the authors of Georgia's Constitution of 1777 created a weak executive branch of government?
    A) They believed that the judicial branch should be the most powerful.
    B) They were following the British tradition of a strong legislature.
    C) They were reacting to the tradition of powerful royal governors.
    D) They were trying to avoid conflict between the executive and judicial branches.

13. In 1795, several Georgia legislators became involved with illegal land speculation. What did their involvement come to be called?
    A) Land Plot Scandal
    B) Yazoo Land Fraud
    C) Oklahoma Land Rush
    D) Trans-Ocone Creek Land Scandal

14. How did the Cherokee and Creek people lose their land in Georgia?
    A) The settlers asked them to leave.
    B) They sold all of their land to the settlers.

15. Which Native Americans were forced to move westward on the Trail of Tears?
    A) Hopi
    B) Seminole
    C) Navajo
    D) Cherokee

16. Who traveled on the Trail of Tears into Oklahoma?
    A) Creeks
    B) Hopi
    C) Seminole
    D) Cherokee

17. Why did so many Cherokees die during their journey on the Trail of Tears?
    A) They were exposed to bitter cold and disease.
    B) They left in spring and the path was easy to follow.
    C) Travel was quick because they were given horses to ride.
    D) Most of them were very old and no children went with them.

18. The Cherokee tribe moved from Georgia to Oklahoma. What could they no longer do as easily?
    A) Farm
    B) Celebrate
    C) Worship
    D) Communicate

19. The leader of the rebel militia group that defeated 800 British troops at the Battle of Kettle Creek was
20. One major weakness of the Articles of Confederation was that
A) Congress could declare war.
B) Congress was able to pass laws.
C) The Articles were a set of rules.
D) The Articles emphasized states' rights.

21. What is one way in which the University of Georgia is unique among American universities?
A) It was the first university established in America.
B) It was the first private university constructed in America.
C) It was the first American university founded as a coed institution.
D) It was the first American university created by a state government.

22. Which Georgian negotiated and signed the Treaty of Indian Springs in 1825 that signed away all Creek lands in Georgia?
A) William Bartram
B) Andrew Jackson
C) William McIntosh
D) Alexander McGillivray

23. Under the Georgia Constitution of 1777, the governor
A) appointed most court officials.
B) could serve a total of eight years.
C) had the authority to vote on legislation.

24. How did the Yazoo Land Fraud lead to the removal of the Creek Indians from Georgia?
A) The Creeks did not want to live in the same areas as the settlers.
B) The Creeks decided to move farther west because the land was better.
C) The government agreed to remove Creeks from Georgia to places farther west.
D) The government agreed to pay the Creeks a large sum of money if they moved.

25. Which methods did Georgia use to distribute land in the late 1700s and early 1800s?
A) collective bargaining and issuing bonds
B) speculation and sharecropping
C) the headright system and the land lottery
D) the land-use plan and the embargo system

26. What was the purpose of the Declaration of Independence?
A) to serve as a preamble to the Constitution
B) to demand that the colonists be given the same rights as British citizens
C) to dissolve the political connection between the colonies and Great Britain
D) to inform King George III that the colonies had ratified the Articles of Confederation

27. At the Constitutional Convention in 1787, the Great Compromise was introduced in order to
A) end the debate over slavery.
B) separate Virginia and West Virginia.
C) maintain peace between England and America.
D) give equal representation to both large and small states.

28. Use the list of people below to answer this question.
Nancy Hart
Button Gwinnett
Lyman Hall
George Walton

Which era in American history are the people listed associated with?
A) Revolutionary War era
B) Antebellum era
C) Civil War era
D) Reconstruction era

29. What was the main way that Georgia attempted to increase the population in the western part of the state in the early 1800s?
The state allowed immigration with no restrictions.
The state increased the size of the land grants.
A cash bonus was paid to new settlers.
A lottery was established to give away land.

30. Why did Georgia invest heavily in railroads before the Civil War?
A) to transport slaves
B) as a preparation for war
C) to attract Northern industry
D) to transport agricultural products

31. This task has more than one (1) part. Read each part carefully and respond.

Part A
Explain how Georgia’s delegates to the 1787 Constitutional Convention influenced which groups of people were included in the United States census.

Part B
Explain why the legislative branch of the United States might be different if Abraham Baldwin had not represented Georgia at the Constitutional Convention.

Assignment 2
Essay Question
WRITTEN RESPONSE - Attach your essay to this sheet of paper.
How did the Native American cultures develop prior to European Contact?

Your response must be 6 paragraphs in length as described below:

Paragraph #1: Introductory Paragraph (Introduce 4 cultural periods, tell how the Native Americans go to America and Topic Sentence)

Paragraph #2: Paleo Period (At Least 3 Facts)

Paragraph #3: Archaic Period (At Least 3 Facts)

Paragraph #4: Woodland Period (At Least 3 Facts)

Paragraph #5: Mississippian Period (At Least 3 Facts)

Paragraph #6 = Concluding Paragraph (Wrapping it Up, Tell What’s to Come...
Scenario
In science class, your teacher places a tray of the pictured items on your desk. She asks you to identify the elements (pure substances), homogeneous mixtures, and heterogeneous mixtures.

Use the evidence, write a scientific explanation for how you identified the above substances: elements, heterogeneous mixtures, or homogeneous mixtures.

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Few Elements, Many Compounds

Lexile 1130L

1. Think of the English alphabet. Millions of words can be made from only 26 letters! The same thing is true of elements and compounds. It takes a few common elements (the basic form of matter that cannot be broken down any further) to make most of the planet’s many compounds, including rocks (solid earth), air, water, and even people.

2. Let’s take a trip to Maui in the Hawaiian Islands. When you cross the Pacific Ocean, you are traveling across seawater that is made of hydrogen and oxygen. When you first get to the island, you will probably walk on sand, which is actually tiny bits of worn-out rock composed largely of oxygen and silicon. A nice tropical breeze hits your face; it consists of nitrogen, oxygen, a little argon and carbon dioxide, and small amounts of other gases.

3. As you walk around, you will notice volcanic rocks and mountains on the island that are made up of mixtures of oxygen and silicon with magnesium, aluminum, potassium, iron, and small amounts of other elements. Green volcanic rock, which is also in abundance on the island, has a heavy concentration of iron and magnesium.

4. You are sure to notice all the plants and animals. The Hawaiian Islands contain much diversity, and your focus rests on the beautiful trees, bushes, and flowers. A Hawaiian tree, a beautiful purple orchid on that tree, and a beetle crawling on the ground — these are all examples of living matter composed of the elements hydrogen, oxygen, carbon, and nitrogen, with hydrogen being the most abundant.

5. As you leave Hawaii, you marvel at what you’ve seen and how so many compounds can be made from so few elements. Through chemical changes, a few simple elements can be turned into many, many different things.

4. What is the main point of the reading?
   
   A. A few elements combine to make many compounds.
   
   B. Many elements combine to make a few compounds.
   
   C. Elements cannot be combined except by artificial means.
   
   D. Hawaii is made up of only a few types of compounds.

5. This chart shows the compounds that make up the air. The rectangle on the right is an expanded view of the smallest wedge of the pie chart. What percentage of air is oxygen?
   
   A. 0.07%
   
   B. 0.93%
   
   C. 21%
   
   D. 78%

Claim-Evidence-Reasoning

1. What is the basic form of matter that cannot be broken down any further?
   
   A. A compound
   
   B. An element
   
   C. A chemical reaction
   
   D. An organism

2. Which of the following elements do living things have that volcanic rocks do not have?
   
   A. Oxygen
   
   B. Silicon
   
   C. Magnesium
   
   D. Carbon

3. Which of the following best summarizes the passage?
   
   A. Volcanic rocks and mountains are on Hawaiian Islands.
   
   B. Green volcanic rock has a heavy concentration of iron and magnesium.
   
   C. Sand is tiny bits of worn-out rock made mostly of oxygen and silicon.
   
   D. A few common elements make most of the planet’s many compounds.

Evidence of energy transformations:

- Photosynthesis = radiant energy  $\rightarrow$ chemical energy
- Fill up gas station = chemical energy  $\rightarrow$ thermal energy
- Person eating and jogging = chemical energy  $\rightarrow$ mechanical energy
- An oven plugged into an outlet = electrical energy  $\rightarrow$ thermal energy
- Generator = chemical/electrical energy  $\rightarrow$ electrical energy

Law of Conservation of Energy: Energy cannot be created or destroyed, but it may be changed from one form to another. The total energy of an isolated system is conserved. Often, energy seems to be "lost" to heat during conversions.

Examples of energy transformations:
**Claim-Evidence-Reasoning**

**Rubric for Writing a ScientificExplanation**

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**Claim-Evidence-Reasoning**

**Reading Science**

Name: ____________________________  Date: ___________

Lexile 830L

Flashlights

1. A flashlight is a portable, battery-operated device that produces light. A typical handheld flashlight consists of one or more batteries inside a compartment that forms the handle of the light. There is a switch between the batteries and the bulb. The switch controls the flow of electricity between the batteries and the bulb.

2. Flashlights have multiple uses. We use them during emergencies such as power outages or when our car breaks down. Our parents may use them while searching through the attic, the basement, or a dark closet. You may have used one on a camping trip or when you walked down the street while trick-or-treating. Everyone has used a flashlight at one time or another. When we do, energy is transformed.

3. Energy is the ability to do work or cause a change. The law of conservation of energy states that energy cannot be created or destroyed, but it can be transformed from one form to another. There are many different forms of energy, such as chemical energy, electrical energy, and light energy.

4. What energy transformations occur when we use a flashlight? First, the batteries contain chemical energy. This is energy that will be released during a chemical change. When chemical bonds are formed or broken, electrons are rearranged. This movement of electrons produces chemical energy. Batteries can convert stored chemical energy into electrical energy.

5. Electrical energy is the energy of electricity. When electrical charges move through a conductor, it is called electricity. Electricity moves through wires to places where needed. Then it can be converted into other forms of energy. In a flashlight, the electrical energy becomes light energy and thermal energy in the bulb.

6. Light energy moves by wave motion. That is, light is a form of energy caused by electromagnetic waves. It enables us to see, since objects are only visible when they reflect light into our eyes. Our eyes convert the light energy back to electrical energy. They make a nerve signal that our brain can convert into an image we see.
7. Thermal energy is the energy of heat. When energy transforms from one form into another, a small amount is often converted into thermal energy as a byproduct. The bulb transforms electrical energy into both light energy and thermal energy. It makes more light than heat, however. This is why the light bulb starts to feel warm after the flashlight has been on for a while.

8. The last time you looked at a flashlight, it probably looked pretty simple. You flip the switch, and light comes on. Now you know that there is much more happening. Energy must first be converted from chemical energy in the batteries into electrical energy. Then this energy moves to the bulb to be transformed into the light you see.

4. Identify the correct order for the energy transformations in a flashlight.
   A. Electrical to chemical to thermal
   B. Light to electrical to chemical
   C. Thermal to electrical to light
   D. Chemical to electrical to light

5. In an ideal situation where no heat energy is produced, what is the relationship between the chemical energy provided by the battery and the electrical energy produced according to the law of conservation of energy?
   A. The chemical energy should be less than the electrical energy.
   B. The chemical energy should be equal to the electrical energy.
   C. The chemical energy should be more than the electrical energy.
   D. None of the above.

Claim-Evidence-Reasoning

Name: __________________________ Date: __________

Scenario
Scientists have collected significant amounts of data about speed, distance, velocity, and acceleration. Some of the collected data can be found in the table below.

<table>
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<tr>
<th>Concept</th>
<th>Definition</th>
<th>Relationships</th>
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<td>Speed</td>
<td>rate at which an object changes over a certain amount of time</td>
<td>( s = \frac{d}{t} ) (Speed is equal to distance traveled divided by the time taken to travel.)</td>
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<tr>
<td>Distance</td>
<td>space measured between points</td>
<td>( d = vt ) (Distance is equal to the rate an object travels multiplied by how long an object traveled.)</td>
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<tr>
<td>Velocity</td>
<td>change of an object's position over a certain period of time; same as speed but includes direction</td>
<td>( v = \frac{\Delta d}{t} ) (Velocity is equal to the distance traveled in a specific direction divided by the time taken to travel.)</td>
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<tr>
<td>Acceleration</td>
<td>change in velocity over time</td>
<td>( a = \frac{\Delta v}{\Delta t} ) (Acceleration equals the change in velocity divided by the time over which the velocity changed.)</td>
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A. [Graph A]
B. [Graph B]
C. [Graph C]
D. [Graph D]

Based on the evidence, write a scientific description explaining which of the graphs above show(s) constant velocity. Defend your choice(s).
Claim Evidence Reasoning

Rubric for Writing a Scientific Explanation

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Claim Evidence Reasoning

Rebuttal (Optional)

Reading Science

Watch Your Velocity!

Lexile 980L

1. Motion of an object can be determined by its speed, velocity, and/or acceleration. The distance an object travels over a certain period of time is its speed. An object's speed and the specific direction it is traveling are its velocity. A change in an object's velocity over a specific period of time is called acceleration.

2. In order to measure velocity, you must know the speed and direction of a given object. Imagine riding in the car with your family as you take a trip to the mall. As you head down the street, your mother applies pressure to the gas pedal to move the car forward. The car, which was previously moving at 25 miles per hour, is now proceeding at 45 miles per hour. Pushing the gas pedal causes the car to accelerate, or speed up. Because the constant rate of speed or the velocity of the car increases, your family will get to your destination much faster. In this case, the velocity and the acceleration of the car are in the same direction.

3. Velocity can be constant, or it can change. Once your family reaches the main highway, your car is stuck in weekend traffic. Because of this, your mother now applies pressure to the brake pedal, causing the car to slow down, or decelerate. The car slows back down from 45 miles per hour to 25 miles per hour. In this case, the velocity of the car and its acceleration are in opposite directions. When you accelerate or decelerate, you change your velocity by a specific amount over a specific amount of time.

4. For motion to be described accurately, it needs to be described relative to a point of reference. A point of reference is just an object or position near the object in motion. During your trip to the mall, there are several ways to describe your motion. Assume that you are sitting in the car and it is moving at a speed of 25 miles per hour. Here, the ground is your point of reference. Both you and the car are moving 25 miles per hour relative to the ground. If the car is the point of reference, then you are not moving relative to the car. If you pass a car that is driving 20 miles per hour, then you are moving 5 miles per hour relative to the other car. Three different points of reference result in three different descriptions of your motion. For this reason, it is important to indicate your point of reference when measuring velocity. Most often, speed is determined with respect to the ground. However, there are instances when the speed or velocity may be determined with respect to an object or an observer.

5. Remember, you need to know two things in order to truly describe how fast an object is going. You need to know its velocity and the point of reference. How else can the officer tell if your mother is speeding?
1. Which of the following could be a definition of acceleration?
   A. A change in an object's speed
   B. An object at rest
   C. A change in an object's direction
   D. Both A and C

2. In which of the following three situations is the object accelerating?
   1. A trash truck takes off from the curb.
   3. An airplane banks to circle around the airport.
   A. 1
   B. 2
   C. 1 and 3
   D. 1, 2, and 3

3. When a police officer is trying to decide if a driver is speeding, what is his point of reference?
   A. The ground
   B. His car
   C. The speed limit
   D. All of the above

4. Which words help you to determine the meaning of the word decelerate in the third paragraph?
   A. Velocity can be constant, or it can change
   B. Applies pressure to the brake pedal
   C. The car will slow down
   D. Stuck in weekend traffic

5. A bowling ball moves 18 meters every 2 seconds down the lane at a bowling alley. What is the speed of the bowling ball?
   A. 2 meters per second
   B. 9 meters per second
   C. 18 meters per second
   D. 36 meters per second