ELA
Grade 4

Wall ELA, 4 Unit

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WAKE COUNTY SCHOOLS **2013 - 2014**

Mining Fun in North Carolina

Mining Vocabulary

- **Flume**- a large, flat open box on legs through which water flows to clean rocks
- **Sifter box**- a box with a screen bottom and an open top to use in searching for gemstones
- **Sluice**- to wash rocks and dirt with water running through a flume or in a stream

North Carolina has many enjoyable and unusual places to visit. One interesting activity is mining for gemstones. Found in the western part of the state, there are many mines that provide visitors with their own mining experience. It is fairly easy to find your own precious gemstone to take home. Rubies and sapphires can be found in mines in North Carolina.

Mining locations are designed to give visitors the experience of mining in real-life settings. Some mines offer tours in real mines, while other mines provide spaces to sort through rocks from mines so visitors can find their own treasures.

3 When stopping at a gemstone mine, a visitor can buy a bucket of gravel and rocks. They then take a seat in front of a flume, pour some of their rocks into a sifter box, and dip their rocks in the water to sluice off the dirt and look for shiny stones. Once the dirt is washed off, a gemstone may appear. The gemstone may be taken home or made into a piece of jewelry, like a ring or a necklace.

4 Follow these steps to search for gems:

1. Pour a small amount of rocks into the sifter box. Push large rocks to the side and pile small rocks into the middle.
2. Cup your hands over the pile in the middle and move your hand around in a circle. This movement helps remove the dirt from the stones.
3. Wash dirt off the stones and rub them again. Keep washing and rubbing until there is no more mud on your hands. Then wash again to clear the dirt from the stone.
4. Spread your stones into one layer and look for shiny spots or hints of color. Gemstones from mines don't have the glassy looking shine of gems in jewelry.

Mining for gems can be a fun experience. Visitors often can bring home a beautiful stone as well. When visiting the western part of North Carolina, a mining visit can be an exciting activity for the whole family.

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1. What is the main problem with locating gemstones in a bucket of gravel and rocks?

A. There are so many rocks to sort through.

B. Rocks must be washed completely to find gemstones in them.

C. The buckets of gravel and rocks are heavy and hard to carry.

D. It takes a lot of water to wash the rocks.

2. What will be the result of spreading the gemstones into one layer in step 4?

A. It will be easier to see the shine of a gemstone.

B. The gemstones will not fall through the screen in the sifter box.

C. The stones can be sorted by size.

D. Dirty rocks are easier to locate.

3. Which set of words contributes *most* to the tone of the selection?

A. flume, sifter box, sluice

B. enjoyable, fun, unusual

C. gemstones, rubies, sapphires

D. beautiful, interesting, shiny

4. What is the *main* idea for *Mining Fun in North Carolina?*

A. Mining is hard to do and costs a lot of money.

B. Mines in North Carolina are extremely dangerous.

C. Mining is an easy activity if you follow a few simple steps.

D. Mines are found in the mountains of western North Carolina.

A Letter to Callie

Dear Callie,

Have you heard about the new Math Club? I am so excited about it. I hope you will want to join it with me. We have talked about how hard math is in fourth grade, and this club could really help us improve our math skills.

Here's the information that was on the poster:

Come Join the Math Club
When: Tuesdays, starting Oct. 1st
Time: 3:45-4:45
What: Games and Challenges to Improve Math Skills
Who: Ms. Martin will be the Math Club Sponsor
Where: Room 300

3 It sounds like it will be a fun way to work on our math. Playing games and meeting challenges might make math seem easier while we are working on hard skills. Ms. Martin is a great math teacher. She likes to use technology, so we might get to use computers when we are practicing in Math Club and that would be really cool.

4 I hope that we will work on multiplication and especially division. I do not understand what to do with long division. It is really baffling to me. Maybe other kids in the Math Club can show me tricks that will make it easier for me. I hope so because I dislike feeling confused.

5 I think we can assist others with big numbers since we really understand place value. It would be nice to be able to shine sometimes and not be the only ones who always need help.

We both have not been doing very well in math. I really want you to join with me so we can work on our math skills together and help each other get better. Won't it be great to get better grades on our math tests? Please join the Math Club with me!

Your friend,
Marissa

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5. What does Marissa hope will be the result of joining the Math Club?

A. She will improve her math skills and get better grades on math tests.

B. She will have fun playing math games.

C. She will enjoy working with her friend Callie during Math Club.

D. She will do math drills on the computer.

6. What qualities *best* describe Marissa?

A. funny and intelligent

B. curious and creative

C. honest and hardworking

D. childish and lazy

7. Why does Marissa think that Ms. Martin will be a good teacher for the Math Club?

A. Ms. Martin is the best teacher in the school.

B. Ms. Martin uses computers to teach math.

C. Ms. Martin lets kids play games to learn.

D. Ms. Martin is very strict with behavior.

8. Which is the *best* summary for this selection?

A. Marissa sees a poster for the Math Club and writes a letter explaining about it.

B. Marissa tells her friend Callie about playing math games on the computer.

C. Marissa writes a letter to Callie about Math Club and tries to convince her to join the club.

D. Marissa describes her strengths and weaknesses in math to her friend Callie.

A North Carolina Inventor

Can you imagine a time when there were no soft drinks of any kind? Thanks to a native North Carolinian, Caleb Bradham, we can all sit back and enjoy an ice cold Pepsi on a hot summer day because he invented it!

Bradham grew up in Duplin County and in 1886, enrolled in the University of North Carolina at Chapel Hill. He later went to the University of Maryland and studied to become a pharmacist. When he graduated, he opened his own drug store and named it "Bradham's Pharmacy." It was located in New Bern, North Carolina.

Back then, pharmacies often had soda fountains in them to keep the customers coming back to the store. Bradham had a deep interest in medicine, and he wanted to make a healthy drink for the people who came to his store. He experimented with different combinations of syrups, spices, and juices. The drink people liked best was a mixture of vanilla, pepsin, rare oils, and kola nuts. The people of New Bern soon started calling it Brad's Drink.

4 Brad's Drink was later renamed Pepsi Cola after the pepsin and kola nuts he used in the recipe. It sold so well that Bradham began working full time trying to sell his new beverage. He set up shop in the back of his drug store and worked there while he was selling it as a syrup. Later, he was selling so much he decided to bottle the product and sell the new drink to more people.

5 Bradham eventually helped operate 300 bottling companies in twenty-four states. His neighbor designed Pepsi's first logo. Throughout Pepsi's history, the logo has changed many times.

6 However, in 1917 when the United States entered World War I, the cost of producing the drink changed drastically. Sugar was a main ingredient in the product, and the cost of sugar changed day-by-day, from record highs to disastrous lows. It made it hard to stay in business.

In 1923 Bradham lost his company and returned to work at his pharmacy. His trademark, Pepsi-Cola, and the recipe were sold to several other companies. Under one of the new owners, Charles Guth, Pepsi would make over one million dollars within two years. Today PepsiCo is a $29 billion company and has expanded to become one of the best-known and well-loved products throughout the world.

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9. What is the *main* reasonBradham's drink was later renamed *Pepsi Cola* ?

A. because of the pepsin and kola nuts used in the recipe

B. due to the soda fountains in Bradham's Pharmacy

C. because the people of New Bern liked it

D. due to Brad's deep interest in medicine

10. What is the *main* idea of the text?

A. Caleb Bradham was the inventor of Pepsi Cola which became a very popular drink worldwide.

B. Caleb Bradham helped operate 300 bottling companies in twenty-four states for Pepsi Cola.

C. Caleb Bradham was a pharmacist who wanted to make a healthy drink for people who came into his store.

D. Caleb Bradham studied at The University of North Carolina in 1886 and became a pharmacist after attending the University of Maryland.

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11. What caused Caleb Bradham to lose his company in 1923?

A. PepsiCo bought Mr. Bradham's idea and now is a $29billion company.

B. The United States entered World War I which greatly changed the cost of producing Pepsi-Cola.

C. Sugar was impossible to purchase in the United States because of the cost of World War I.

D. Caleb Bradham decided he wanted to return to his work at his pharmacy.

12. Which trait best describes Caleb Bradham?

A. ambitious

B. considerate

C. loyal

D. understanding

13. Why did Bradham experiment with recipes for a new beverage?

A. He wanted to make a million dollars in two years.

B. He wanted to invent a new product named Pepsi.

C. He wanted more people to come to his pharmacy.

D. He wanted to create a new and different drink.

Chester's Earmuffs

Who is an inventor anyway? Inventors can be simple people – young and old, male or female – who solve problems. When a person brings a new solution to a problem, that person is called an inventor.

One day in the winter of 1873, Chester Greenwood wanted to ice skate. He gathered his new pair of skates and walked to a nearby pond. The air was colder than he liked, so Chester returned home. He found his grandmother, whom he called Gram, and asked her for help. He needed some ear protectors, and the wool muffler worn by most children would not work. Unfortunately, he was allergic to wool! Working side by side, Chester and Gram created a new muff. Chester provided the idea and materials, and Gram provided the labor. The design of the muff was simple. Using a combination of beaver fur and black velvet for the muff, soft wire was needed for the headband. They bent the wire, cut soft material, and then Gram sewed a few stitches. Chester's ear protector was an instant hit. Children all over town wanted a muff like Chester's!

After wearing his muff, Chester realized he was not satisfied. He needed a muff that did not flap away from his ears. Chester was determined to change the material in the headband. He needed to use a stronger wire, so he chose a springy steel wire. The stronger steel wire allowed the muff to fit snugly against his ears. When he wasn't wearing the muff, he could fold it and conveniently tuck it in his pocket. His neighbors were once again impressed by his drive. Chester had always been willing to help his family. It has been told that he would walk an eight-mile route selling eggs, fudge, and other candies. Chester continued his efforts by selling the muff. His grandfather once said, "Like Henry Ford's auto, the Ear Protector came in any color you wanted as long as it was black."

In 1877, at the age of 18, Chester was awarded a patent for his invention. He opened a factory in Maine called "The Shop." For the next 60 years, Chester and his 20 employees made earmuffs. Even though "The Shop" had many machines to make the ear muffs, Chester continued to have the hinged flap attached the way Gram did it!

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14. What was the significance of the statement, "*Like Henry Ford's auto, the Ear Protector came in any color you wanted as long as it was black,* " made by Chester's grandfather?

A. to explain the limited color choices of the earmuffs

B. to teach the reader about Henry Ford

C. to inform the reader of the invention of the auto

D. to tell about Chester's grandfather

15. Which is the *most* important reason for including Gram in the selection?

A. to show Chester spent most of his time with Gram

B. to show Chester honored Gram for her part in developing earmuffs

C. to show Gram created the design for the earmuffs

D. to show how Gram attached the flap to the earmuff

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16. Based on the information in the selection, how could Gram *best* be described?

A. creative

B. satisfied

C. sweet

D. talented

Helen Keller's Success

Helen Keller was born in Alabama in 1880. Before she was two years old, she became seriously ill. The doctors were not sure what was wrong with her. Soon the fever passed, but Helen was left deaf and blind.

Helen could only learn about the world around her by touching things with her hands. She made up signs for a few things she wanted to say, like yes, no, come, and go. She could not hear, see, or speak, and that made her feel very lonely. She became upset, angry, and threw fits when she did not get her way. Helen's parents decided that she needed a teacher, someone who could help her understand the world around her and how to behave in it.

Just before Helen turned seven years old, Anne Sullivan came to teach her. She taught Helen by using her hands to spell words. Miss Sullivan would use sign language. She would sign a letter with her own hand and press her hand into the palm of Helen's hand. Helen soon learned to make the same signs with her hands, but she did not really understand what they meant.

4 Then, one day Miss Sullivan put Helen's hand under the water pump. The cool water rushed over Helen's hand. Miss Sullivan spelled the word water in Helen's other hand. Finally, Helen understood that these signs, called finger spelling, were naming the things in her world. It was as if a light had suddenly been turned on.

She was so excited that she started asking the names of all the things that she knew: mother, father, sister, and teacher. Miss Sullivan also had to teach Helen about words that named things she could not touch or hold, like think and love.

5 Miss Sullivan was a gifted teacher and worked hard to help Helen learn. After she taught Helen the names of everything, she had to teach her the things that any other child learns in school. She taught Helen about history and science and math. She also taught Helen how to read Braille – groups of raised dots that stand for letters.

When Helen was older, she went to the Perkins School for the Blind. Then she went on to Radcliffe College. She was the first blind and deaf person to ever graduate from college. As a grown-up, Helen was a public figure and a writer. She used sign language to tell people about her life. She also wrote a book about her life. Miss Sullivan was there with her every step of the way. Helen and Miss Sullivan remained companions for 49 years until Miss Sullivan died in 1936. After living a life of learning, Helen Keller died in 1968 at the age of 88.

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17. Based on the information in the selection, what is Braille?

A. a kind of sign language

B. a language spoken only by those who are deaf

C. finger spelling used by those who are blind

D. a system of reading through touch

18. What word *best* describes Helen Keller?

A. angry

B. friendly

C. intelligent

D. sad

19. Why did Helen's parents decide she needed a teacher?

A. Helen had a very high fever and saw the doctor.

B. Helen needed someone to help her learn about the world.

C. There were very few teachers in Alabama.

D. They were too busy to teach Helen themselves.

20. What is the *main* idea of the selection?

A. A blind and deaf girl becomes angry and upset with her teacher.

B. A blind and deaf girl learns how to understand the world.

C. A girl gets very sick and becomes blind and deaf.

D. A teacher tries to help a blind and deaf girl learn how to finger spell.

It's Your Churn!

Butter is a dairy product that is used all over the world. It is made by churning (or shaking) heavy cream which is the fat in milk. It can be made from the milk of many different animals but is most often made from the milk of a cow. Butter is used in cooking or as a spread on biscuits and bread.

Years ago, it was common for people to make their own butter. Farmers would use the cream from their cows' milk and turn it in a wooden churn until it became butter. Today people generally buy their butter from the store, but by following this simple recipe, you can make your own butter right at home.

Ingredients:

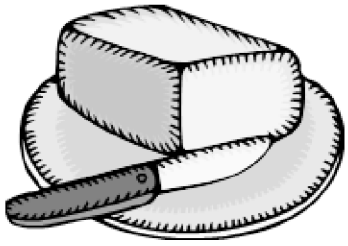
- heavy cream

Things You Will Need:

- a glass jar with a lid
- strong arms

Instructions:

1) Let the heavy cream sit out of the refrigerator for 12 hours.
2) Pour the heavy cream into the jar.
3) Screw the lid on tight.
4) Shake the jar back and forth. You will be shaking the jar for a long time. If other people are helping you make the butter, it is a good idea to take turns shaking so that your arms do not get tired.
5) Keep shaking the cream until it thickens. After 10 to 20 minutes, a lump of butter will appear in the jar.
6) The lump of butter will be surrounded by buttermilk.
7) Drain the buttermilk.
8) If you wish, you can save the buttermilk to make buttermilk biscuits.
9) Place the butter in a small bowl.
10) Refrigerate the butter so it will harden.
11) Serve the butter with biscuits, muffins, or on your favorite bread.



21. Which sentence would fit as the final step of the instructions?

A. Buttermilk can also be used to make pancakes.

B. Do not shake the cream too long.

C. Now you are ready to sell your butter at the store.

D. Enjoy your homemade butter.

22. What would happen if step 7 were left out of the process?

A. The butter would not thicken.

B. The butter would be wet and soft.

C. The butter would turn back into cream.

D. The butter would not taste good.

23. What will be the result of step 1 in the instructions?

A. The cream will become buttermilk.

B. The cream will harden.

C. The cream will get warm.

D. The cream will thicken.

#	Answer	Objective
1.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
2.	A	Obj : RI.4.3. Explain events, procedures, ideas, or c...
3.	B	Obj : RI.4.2. Determine the main idea of a text and e...
4.	C	Obj : RI.4.2. Determine the main idea of a text and e...
5.	A	Obj : RI.4.3. Explain events, procedures, ideas, or c...
6.	C	Obj : RI.4.3. Explain events, procedures, ideas, or c...
7.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
8.	C	Obj : RI.4.2. Determine the main idea of a text and e...
9.	A	Obj : RI.4.3. Explain events, procedures, ideas, or c...
10.	A	Obj : RI.4.2. Determine the main idea of a text and e...
11.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
12.	A	Obj : RI.4.3. Explain events, procedures, ideas, or c...
13.	D	Obj : RI.4.3. Explain events, procedures, ideas, or c...
14.	A	Obj : RI.4.3. Explain events, procedures, ideas, or c...
15.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
16.	D	Obj : RI.4.3. Explain events, procedures, ideas, or c...
17.	D	Obj : RI.4.3. Explain events, procedures, ideas, or c...
18.	C	Obj : RI.4.3. Explain events, procedures, ideas, or c...
19.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
20.	B	Obj : RI.4.2. Determine the main idea of a text and e...
21.	D	Obj : RI.4.3. Explain events, procedures, ideas, or c...
22.	B	Obj : RI.4.3. Explain events, procedures, ideas, or c...
23.	C	Obj : RI.4.3. Explain events, procedures, ideas, or c...

Objectives Measured:	Items	Questions measuring this objective
Obj : RI.4.2. Determine the main idea of a text and e...	5	3, 4, 8, 10, 20
Obj : RI.4.3. Explain events, procedures, ideas, or c...	18	1, 2, 5, 6, 7, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23

#	Key	Item ID
1.	B	MC 118604
2.	A	MC 118605
3.	B	MC 118608
4.	C	MC 118601
5.	A	MC 120533
6.	C	MC 120534
7.	B	MC 120535
8.	C	MC 120536
9.	A	MC 136409
10.	A	MC 136406
11.	B	MC 136404

#	Key	Item ID
12.	A	MC 136403
13.	D	MC 121756
14.	A	MC 121785
15.	B	MC 121784
16.	D	MC 121783
17.	D	MC 122411
18.	C	MC 122415
19.	B	MC 122410
20.	B	MC 122409
21.	D	MC 143314
22.	B	MC 143312
23.	C	MC 143310