



Name _____

5th Grade Modified ELA Remote Learning Packet

Week 38



Dear Educator,

My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.

(Parent Signature)

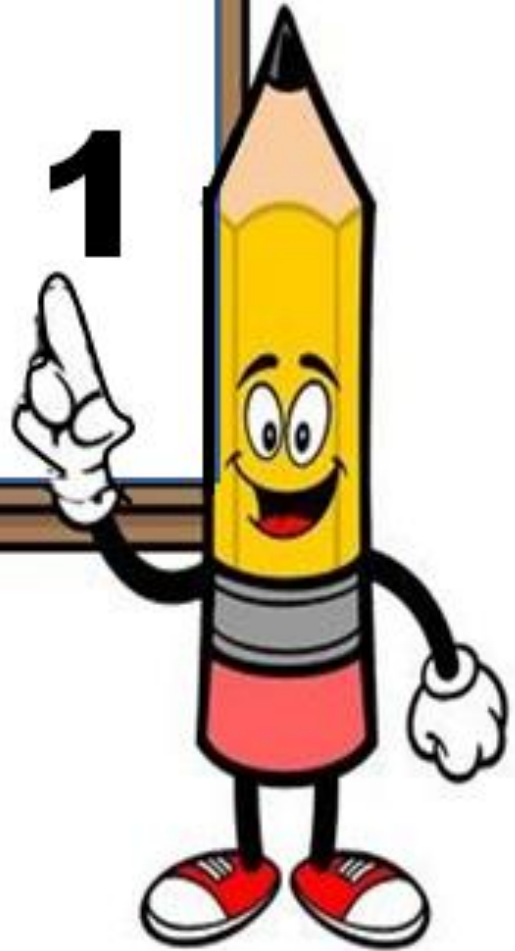
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Parents please note that all academic packets are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars.



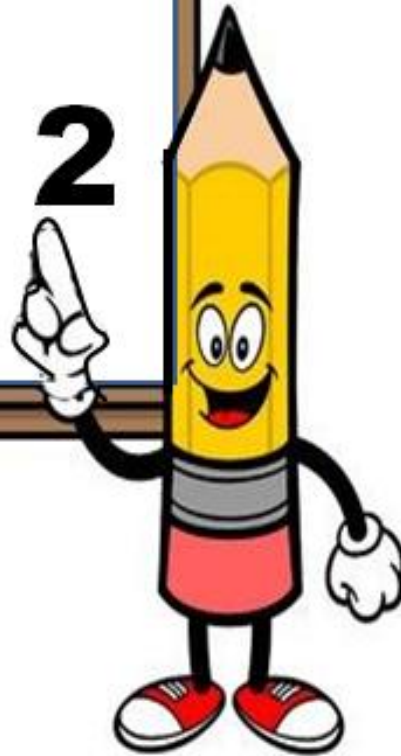
Day # 1

Sub Plans





Day # 2

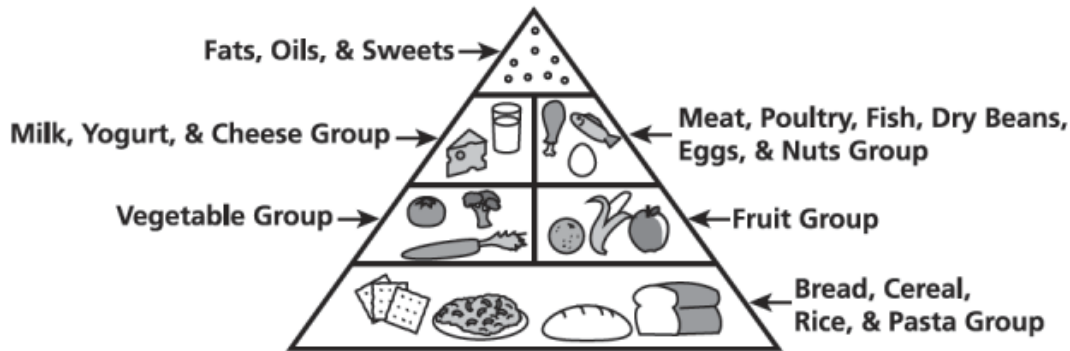


***D*irections** Read this story. Then answer questions 1 through 7.

Excerpt from *Trading Places*

by Claudia Mills

- 1 Todd was lying on the family room floor doing math homework, when he heard his mother, back from her shift at the Crafts Cottage. She was later than usual, so she must have stopped on the way home to get groceries. Todd hoped so. Groceries were one of life's good things.
- 2 Math homework was another. Todd knew other kids thought it was strange to like having math homework, but he did. He loved questions that had answers, problems that had solutions, twenty of them, all on one page. He loved looking at a neat page of calculations and knowing that he had them all one hundred percent right.
- 3 His mother came into the family room and clicked off the TV. Todd looked at Amy, so lost in her book that she didn't seem to register their mother's presence in the room. But their father, dozing on the couch with the remote in his hand, came awake with a guilty startle.
- 4 "David. Todd. Amy." Quiet voices could sound so much more menacing than shouting ones. "I need you to come into the kitchen. Now."
- 5 Amy put her book down then, and the three of them straggled into the kitchen. If they had had tails like Wiggy, the tails would have been tucked between their legs.
- 6 "Look at this place," Todd's mother said.
- 7 It was bad: newspapers in an untidy heap on the table, dirty dishes everywhere, an empty milk carton standing on the counter next to spilled cereal left over from breakfast, and two sacks of groceries his mom had just carried in from the car.
- 8 "I want this cleaned up. I want these groceries put away. I want a decent meal with every part of the food pyramid represented on the table in sixty minutes. Call me when it's ready. I'm going to be upstairs soaking in a hot tub."



9 Then she was gone.

10 Once his first spasm of remorse had passed, Todd actually felt relieved. It was so much better to be doing something rather than nothing, to be solving a problem rather than pretending it didn't exist. He opened the dishwasher and started loading dirty dishes into it, as Amy and their father took the groceries out of the paper sacks and put them on the pantry shelves and in the fridge.

11 "How does the food pyramid work?" their father broke the silence to ask.

12 "You're supposed to eat a lot of grains and cereals," Todd explained. They had studied the food pyramid at school last year. "They're on the bottom of the pyramid, the wide part. And hardly any fats and sugars. They're the little point at the top. And eat lots of vegetables and fruits. And some protein, too."

13 "I don't think she really cares if we have the whole pyramid," Amy said. "Just so it looks sort of balanced. I mean, not just popcorn and apples."

14 "Maybe we should look in a cookbook," their father suggested.

15 There was a whole bookcase full of cookbooks against one kitchen wall. It was hard to know where to begin. Some of them were as thick as dictionaries; others had obviously unhelpful titles such as *Fifty Christmas Cookies from One Basic Dough* or *Easy Entertaining*.

16 "Here's one," Todd said. He pulled out *Thirty-Minute Meals*.

17 Their father glanced at the clock on the microwave. "Can you find one that says *Fifteen-Minute Meals*?"

18 Todd checked the shelves again. "Nope. The only other one that tells the minutes is the *Sixty-Minute Gourmet*."

19 "Okay, thirty minutes it is."

20 "Let's make something with chicken," Amy said. "I just put away a lot of chicken."

21 "How about curried chicken breasts with rice?" Todd asked. It looked good in the picture. "Do we have any rice?"

- 22 “Right here!” their father answered.
- 23 “What about fruits and vegetables?” Amy reminded them.
- 24 “We’ll have broccoli on the side,” their father said.
- 25 “Dairy products?” Todd thought the pyramid had dairy products on it somewhere.
- 26 “You kids can drink milk. And look, there’s some cream in the sauce. Do we have any cream?”
- 27 Amy checked the fridge. “We have half-and-half. That’s sort of like cream.”
- 28 The meal took more than thirty minutes to make. It turned out that the thirty minutes started *after* you had chosen the recipe, located the ingredients, and done whatever preliminary chopping you had to do, which for curried chicken breasts was a lot. Still, forty-five minutes later, their father sent Amy upstairs to summon their mother for dinner.
- 29 When she came into the kitchen, she stared in apparent disbelief. “You even fixed broccoli,” she whispered.

1 What do details in paragraphs 1 through 5 suggest about Amy and Todd?

- A Todd has different interests than Amy does.
- B Todd is more focused on school than Amy is.
- C Todd is more interested in watching TV than Amy is.
- D Todd has a different reaction to his mother’s voice than Amy does.

2 What does the word “straggled” in paragraph 5 suggest about Todd, Amy, and their father?

- A They are trying to keep the mother from seeing the kitchen.
- B They are determined to finish the work in the kitchen.
- C They want to keep close together in the kitchen.
- D They want to avoid going into the kitchen.

- 3 Why does Todd and Amy's father refuse to look at the *Sixty-Minute Gourmet* cookbook?
- A He thinks that they do not have the skills to make the recipes.
 - B He knows the family does not have the right ingredients.
 - C He knows that the recipes will take too long to make.
 - D He thinks that the mother will dislike the meal.
- 4 The narrator's description of the conversation in paragraphs 11 through 13 shows that
- A the family has different ideas about a balanced diet
 - B Amy knows which foods her mother likes best
 - C Todd has experience with cooking
 - D the father relies on his children's knowledge
- 5 The illustration **best** supports the information provided in which paragraph?
- A paragraph 12
 - B paragraph 13
 - C paragraph 24
 - D paragraph 27
- 6 How does paragraph 28 relate to paragraph 8?
- A Paragraph 28 provides further details about the problem.
 - B Paragraph 28 shows the result of the mother's instructions.
 - C Paragraph 28 presents a summary of the tasks that are introduced.
 - D Paragraph 28 explains how the meal is unlike the mother's request.

7 Which theme is supported by the events in the story?

- A** Solving problems becomes easier with daily practice.
- B** Challenges can give people opportunities for learning.
- C** Doing work can help people forget their problems.
- D** Feelings of guilt may go away over time.

Directions

Read this article. Then answer questions 8-11

Warning: Flash Flood!

By Kathiann M. Kowalski

- 1 Flash floods are America's deadliest weather hazard, says the National Weather Service. They occur in all 50 states and kill an average of 100 people each year in urban as well as rural areas.
- 2 In 1972, 15 inches of rain fell in five hours near Rapid City, SD. Flooding killed 238 people and caused \$164 million in damages. In June 1990, 4 inches of rain falling in under two hours produced a wall of water over 30 feet high at Shadyside, OH. Over two dozen people died.



Soldiers with the Texas Army National Guard move through Houston streets flooded by Hurricane Harvey in 2017.

3 Flash floods happen when prolonged heavy rain can't drain quickly enough—typically, within six hours of a rainstorm. Without warning, sudden surges of water weaken or wash away bridges and dams. They uproot trees, and destroy homes and other buildings. The United States' average annual damage from flash floods is over \$2 billion.

4 Just 6 inches of surging floodwater can sweep you off your feet. Two feet of floodwater can carry away most automobiles. In part, this happens because floodwaters transfer their momentum to vehicles stalled in the water. With an average flow of between 6 and 12 mph, the water applies about 500 pounds of force to a car for each 12 inches that the water rises. Buoyancy is a big factor, too. For each 12 inches of floodwater, it's as if the car weighed 1,500 pounds less.

5 What can you do to protect yourself? Before any heavy rains fall, know your area's relative risk for flooding. Have emergency supplies on hand. Also, have a plan in case your family needs to evacuate.

6 Stay inside during prolonged intense rainstorms. Listen to weather warnings on the TV or radio. In case of a warning, get to higher ground as soon as possible. Otherwise, watch out for rapidly rising water.

7 Never play around rising floodwaters. Never try to wade through flash-flood water, either, even if it only reaches your ankles. Stay far away from culverts and drains into which you could be swept; if you slip and fall, even a small current can be dangerous. And if you're in a car, don't drive into areas covered by floodwaters. Instead, follow the advice of the National Weather Service: "Turn Around and Don't Drown!"

8 For more information, see "Floods," on the National Oceanic and Atmospheric Administration's website: www.noaa.gov.

8

According to the article, which detail **does not** best support that flash floods are dangerous?

- A. They occur in all 50 states and kill an average of 100 people each year in urban as well as rural areas.
- B. Flash floods happen when prolonged heavy rain can't drain quickly enough—typically, within six hours of a rainstorm.
- C. They uproot trees, and destroy homes and other buildings.
- D. Just 6 inches of surging water can sweep you off your feet.

9

Which of these details would you **not** include in a summary of the article?

- A. Flash floods are American's deadliest weather hazard, says National Weather Service.
- B. Flash floods happen when prolonged heavy rain can't drain quickly enough—typically, within six hours of a rainstorm.
- C. Before any heavy rains all, know your area's relative risk for flooding.
- D. Two feet of floodwater can carry away most automobiles.

10

Read this sentence from the article.

Never try to wade through flash-flood water, either, even if it only reaches your ankles.

Which of the following phrase best support the meaning of wade?

- A. To paddle through something.
- B. To make your way through something.
- C. To swim through something.
- D. To climb through something.

11

Which of the following heading supports paragraphs 5, 6, and 7?

- A. Emergency supplies for flash floods
- B. Staying Safe
- C. National Weather Service
- D. Intense Rainstorms

Directions

Read this article. Then answer questions 12-18

The Night The Dogs Danced

A play based on an Iroquois Tale

Retold By Pat Bettley

Illustrated by Greta Songe



CHARACTERS: Narrator 1, Narrator 2, Gray Wolf (wolf), Black Nose (wolf), Faithful One (elder dog), Mighty Hunter (elder dog), Long Tail (pup), Blossom (pup), Shaking Snow (pup), Tumbling Stream, Big Mountain

- 1 **Narrator 1:** Long ago, the wolves came to live with the people. The animals were welcomed, but given rules to live by.
- 2 **Gray Wolf:** We agree not to sneak into the chicken coops or plunder fields of cattle in exchange for a warm home and plenty of food.
- 3 **Black Nose:** And we will not howl at night and wake the children.
- 4 **Gray Wolf:** We will walk on four legs.
- 5 **Black Nose:** And be faithful to our families.
- 6 **Narrator 1:** True to their words, the wolves were obedient, loving, and faithful. Soon, the people began calling them “dogs.” The dogs were quite happy with the arrangement. Those few dogs who did not follow the rules were banished back into the wilderness.
- 7 **Narrator 1:** Many years passed. Then one night, a pup named Long Tail sat by the fire watching his people dance and sing. He closed his eyes and listened dreamily.

8 **Long Tail:** What is this? My tail is dancing to the tune. My tummy is tingling, and my feet are beginning to twitch. I have this crazy desire to stand, and dance, and sing, like my people.

9 **Narrator 2:** In those days, the dogs often gathered in the fields where the older dogs liked to tell stories and counsel the younger ones.



10 Faithful One: Your great-great granddogs lived in the wild. They had to hunt their own food, sleep outside in the freezing rain and snow, and constantly watch their tails so stealthy predator didn't attack. You young pups have it easy-always safe and warm.



11 Blossom: But we have too many rules!

12 Mighty Hunter: Rules? Hump! We have good lives in exchange for following a few easy rules.

13 Long Tail: My life would be even better if I could dance and sing.

14 Faithful One: Nonsense! Only people dance and sing, not dogs!

15 Blossom: I wonder what it would feel like to stand on two feet and dance. I would like to try it, too.

16 Mighty Hunter: Do not ever stand on two legs. Four legs are much better than two!

17 Faithful One: Four legs help us balance.

18 Mighty Hunter: Do not forget about our tails. They help us balance too. Our poor people do not have tails.

19 Faithful One: And doesn't it feel great to wag our tails? Every bit as good as dancing!

- 20 **Narrator 2:** The young dogs were not convinced. One night, they called a secret meeting in a forest clearing. As the light of the moon shone down. They could hear the sounds of their people playing drums and flutes in the distance.
- 21 **Long Tail:** I feel it again. That tug in my belly. That twitch in my toes. I am going to push myself up and stand on two feet. Whoa! This swaying is hard to control.
- 22 **Blossom:** I will stand on two feet, too. We can lean against each other so we do not fall.
- 23 **Narrator 2:** The two dogs leaned together, paw to paw. Soon other dogs lifted their paws, leaned into each other, and began to dance and sing, too.
- 24 **Long Tail:** This is so much fun!
- 25 **Shaking Snow:** Except your tails look silly, dragging on the ground.
- 26 **Long Tail:** I will take mine off and hang it on the bush, then. Now I look just like my people.
- 27 **Narrator 1:** All of the other dogs took off their tails and hung them on the bushes, too. Soon their singing grew so loud that the people ran to the forest to investigate the strange sounds.
- 28 **Tumbling Stream:** What is this? Dogs dancing and singing?
- 29 **Narrator 1:** The young dogs were mortified when their people found them breaking the rules. One by one, they dropped to their four legs and raced to the bushes to grab their tails.
- 30 **Long Tail:** I will take this one.
- 31 **Blossom:** This one will work.
- 32 **Shaking Snow:** Wrong one, but it is the only one left!

33 Narrator1: Within moments, all dogs had selected any old tail; not stopping to make sure it was their own. They walked on four feet to their people who petted them.

34 Tumbling Stream: Good girl, Blossom.

35 Big Mountain: Way to obey, Long tail.

36 Narrator 2: Ever since that night, dogs are still searching for their original tails. That is why dogs sniff each other's tails when they meet.

37 Blossom: Is this my tail?

38 Long Tail: Too short.

39 Shaking Snow: No, this is definitely not the one.

40 Narrator 2: They are hoping to find their own tails that were lost on that night under the full moon, long, long, ago.



12 What is the difference about Tumbling Stream and Big Mountain from the other characters in this play?

- A. They are dogs, not people.
- B. They are people, not dogs.
- C. They have tails.
- D. They are hunters, not gatherers.

13 How can you describe these characteristics based on lines 1 and 2 of the play?

- A. They are wolves that have been tamed.
- B. They are a different animal no human have ever seen.
- C. They are chickens that escaped their coop.
- D. They are types of cattle.

14 Which line from the play shows that Faithful One and Mighty Hunter have been around longer than the rest of the dogs?

- A. "And we will not howl at night and wake the children." (line 3)
- B. "The dogs were quite happy with the arrangement." (line 6)
- C. "You young pups have it easy-always safe and warm." (line 10)
- D. "My life would be even better if I could dance and sing." (line 13)

15 How are the dogs convinced that they need to sing and dance?

- A. They are inspired by the music and dancing of their humans.
- B. They are listening to the advice of their elders.
- C. They are only able to sing and dance at night.
- D. They feel as though they are safer when they are dancing.

16 Which line from the play is best represented in the illustration on page 14?

- A. "Only people dance and sing, not dogs!" (paragraph 14)
- B. "All of the other dogs took off their tails and hung them on the bushes, too." (paragraph 27)
- C. "And doesn't it feel great to wag our tails?" (paragraph 19)
- D. "One by one, they dropped to their four legs and raced to the bushes to grab their tails." (paragraph 29)

17 Read this line from the play:

The young dogs were mortified when their people found them breaking the rules.

What does *mortified* mean in this line?

- A. lost
- B. angry
- C. ashamed
- D. tired

18 What word best describes Long Tail in this play?

- A. cautious
- B. bored
- C. resentful
- D. curious

Directions
Read this article. Then answer questions 19-25

The Myth of Paul Revere's Ride

By Eric Arnesen

1 By the spring of 1775, the conflict between Great Britain and the citizens of its Massachusetts Bay Colony had grown increasingly tense. Five years earlier, in 1770, in an effort to punish those resisting their authority, British troops had fired on a crowd in what was called "The Boston Massacre." Then in 1773, colonists had protested the Tea Act with the "Boston Tea Party," a dumping of tea in Boston's harbor. The British responded by closing the port.

2 Matters came to a head in 1775 as the British prepared to attack armed colonists. General Thomas Gage, the soldier who commanded the British garrison in Boston, dispatched 1,000 troops to Concord, Massachusetts, to seize the colonists' weapons.



Paul Revere

A TALE BEGINS

3 One version of what happened that day in April was made famous 75 years later in 1861, when Henry Wadsworth Longfellow published Paul Revere's Ride" in the Atlantic Monthly magazine. The poem immortalized the feats of one particular Bostonian on the eve of the American Revolution. *Listen my children and you shall hear/ Of the midnight ride of Paul Revere,* wrote Longfellow. In April 1775, Revere said to a friend, *'If the British march/ By land or sea from the town tonight./ 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.'*

4 In Longfellow's telling, Revere waited on the opposite shore, *Ready to ride and spread the alarm/ Through every Middlesex village and farm/ For the country folk to be up and to arm.* The signal came – two lights. Revere sprang into action on his horse, *fearless and fleet. The fate of a nation was riding that night;/ And the spark struck out by that steed, in his flight,/ Kindled the land into the flame with its heat.*

5 The Paul Revere of Longfellow's poem spread the word to the communities outside of Boston. *And so through the night went his cry of alarm/ To every Middlesex village and far.../ A Cry of defiance, and not of fear.* Revere reached the towns of Lexington and Concord after midnight. *"Through all history, to the last,"* wrote Longfellow, *"In the hour of darkness and peril and need, / The people will waken and listen to hear...the midnight message of Paul Revere."*

THE TRUTH COMES OUT

6 As it turns out, Longfellow's poem contained a good deal of fiction. Paul Revere, the son of a French immigrant and a prominent Boston silversmith, was not the single hero of Longfellow's imagination. Paul Revere's ride "was truly a collective effort," Revere's recent biographer, David Hackett Fischer, tells us. Revere "would be very much surprised by his modern image as the lone rider of the revolution." Not only did many other messengers travel by horse to warn neighboring towns, Revere's actual assignment had been to warn two prominent colonists – Samuel Adams and John Hancock- that the British military was on its way. Further, after successfully warning Adams and

Hancock, Revere was temporarily taken prisoner by the British. (He then escaped.)

- 7 The Battle of Concord and Lexington that followed the ride of the many messengers was the beginning of the American War for Independence. Longfellow may have created the legend of Paul Revere, but the credit for alerting the colonists to the coming of British troops deserved to be shared by the many colonists who risked their lives on that night – and on many that followed.

19

How are paragraphs 1 and 2 connected?

- A. They explain the legend of Paul Revere.
- B. They introduce a setting to the reader.
- C. They teach the reader about poetry.
- D. They make the readers sympathize with Paul Revere.

20

How does the author support the claim that Paul Revere “would be very surprised” at his portrayal during the American Revolution?

- A. Paul Revere’s efforts actually involved many people.
- B. Paul Revere would only help male colonists.
- C. Paul Revere did not actually ride at all.
- D. Paul Revere was promptly captured by the British.

21

What can you infer about Longfellow’s poem about Paul Revere?

- A. Longfellow met Paul Revere, and did not like him.
- B. Longfellow did not know the details about the war.
- C. Longfellow exaggerated Paul Revere’s hero status.
- D. Longfellow was secretly British and was against Paul Revere.

22 Read this sentence from paragraph 2.

Matters came to a head in 1775 as the British prepared to attack armed colonists.

What does “came to a head” mean?

- A. fought in a war
- B. ended
- C. reached a breaking point
- D. prepared to battle

23 Longfellow wrote his Paul Revere poem in 1861, right before the start of the Civil War in the United States. How might this situation have affected his writing?

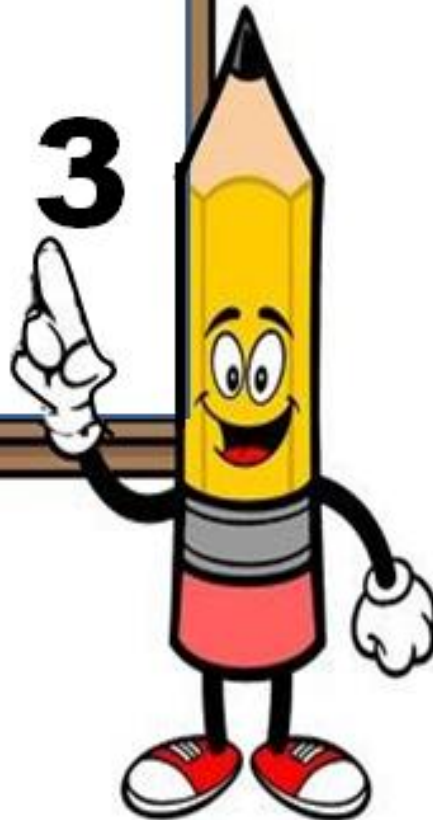
- A** He did not know Paul Revere personally, so he kept a neutral tone in the poem.
- B** He wanted to uplift the spirits of the country, so the poem has an inspired tone.
- C** He wanted to describe a similar war scenario to people of his time.
- D** He wanted to warn readers of the dangers of depending on one man to fight.

24 What ended up happening to Paul Revere after he delivered his message?

- A** He returned home a hero.
- B** He was captured by the enemy, but escaped.
- C** He ended up fighting in the war.
- D** He passed the message on to other messengers.



Day # 3



Directions

Read this article. Then answer questions 25 and 26.

On a May afternoon in Siberia, Yuri Khudi and his sons, members of the nomadic Nenets people of northern Russia, were hunting along the bank of the Yuribey River when they discovered something amazing.

Excerpt from *Baby Mammoth Mummy: Frozen in Time!*

by Christopher Sloan

- 1 As Yuri and his sons stood around the little body lying on the sandbar, they were shocked by what they had found: a perfectly preserved baby woolly mammoth. It was frozen solid.
- 2 These animals disappeared from this part of the world about 11,000 years ago, but mammoth bones and tusks are a relatively common find in Siberia. It's so cold in this Arctic region of Russia that the frozen soil, called permafrost, has acted as a giant freezer, preserving the carcasses of many animals that lived there long ago. As the top layer of permafrost begins to thaw in the spring, the bony remains of mammoths often appear as if they have burst from the frozen ground. But Yuri and his sons had never seen anything like this before—a baby woolly mammoth with all of its flesh in place. It looked like it could have died yesterday. They didn't dare touch it.
- 3 Mammoths play a powerful role in Nenets mythology. The story goes that woolly mammoths are giant beasts herded by gods of the underground. If the animals come to the surface and see sunlight, they die. Some Nenets say that mammoths will bring bad luck or even death to the people who touch their remains.
- 4 So it was with both fear and respect that Yuri Khudi and his sons looked at the baby mammoth. Uncertain what to do, they left the mammoth exactly where they found it and returned to camp. Yuri decided to seek the advice of Kirill Serotetto, a trusted friend who had lots of experience in the Arctic as an expedition outfitter and knew the value of mammoth bones. To get to Yar Sale, where Serotetto lived, Yuri rode his snowmobile 90 miles (145 km) to Novyy Port then boarded a helicopter to Yar Sale.
- 5 After hearing Yuri's story, Serotetto rushed him to the director of the museum, who notified the local police. Yuri had stumbled onto something big. Hours later, Yuri, Serotetto, and a few policemen were flying toward the place where Yuri had made his discovery. Finally, they landed near the site. The baby mammoth was gone!

6 Yuri's stomach dropped. He was afraid no one would believe him now. Without a body there was no reason for the police to stick around, so they flew back to Yar Sale. Serotetto stayed behind with his friend to investigate further.

7 Yuri knew that prehistoric animal remains, especially tusks, were valuable and could fetch a lot of money from fossil collectors or carvers. After making some inquiries, he and Serotetto learned that Yuri's cousin had snatched up the baby mammoth and carted it off on his sled to Novyy Port. There he had traded the valuable find to a store owner in exchange for two years' worth of food and some equipment.

8 Yuri and Serotetto had to move fast if they were going to save this precious treasure. By the time they arrived in Novyy Port, the little mammoth was propped up in the store and was already causing a stir. People were taking pictures of it with their cell phones. Yuri's heart sank when he saw that stray dogs in town had already gnawed off the baby's tail and most of one ear. But the rest of the body was still in perfect condition. They had to get the mammoth to a safe location fast! Serotetto, with the help of the local police chief, explained the importance of the find to the owner. Finally, after much discussion, he agreed to give up the mammoth.

SAFE AND SOUND

9 At last the baby mammoth was in the hands of museum staff at Yar Sale. Now they needed to find a place where she would be preserved and taken care of. The calf was packed onto a helicopter and flown to the Shemanovsky Museum in Salekhard, a regional capital of Siberia. The director there immediately called Bernard Buigues, a French explorer who had become an expert in mammoths and who had established a center for preserving mammoth remains in the Siberian town of Khatanga. When Bernard heard the exciting news, he offered to organize an international team of experts to study the baby mammoth. The team would include researchers from Russia, the United States, and Japan.

10 It would take several weeks for the team to assemble in Salekhard. To keep the carcass frozen, it was placed in a freezer. Bernard was the first member to arrive. When he saw the baby mammoth, he was struck by how tiny she was—only 33 inches (84 cm) high and 110 pounds (50 kg) in weight. "I was fascinated by her lifelike expression. Her smiling mouth, her front legs seemingly in motion—it was as if she had been enjoying herself." He couldn't wait for the rest of the team to meet her.

25

What is the meaning of the phrase "perfectly preserved" in paragraph 1 of "Excerpt from *Baby Mammoth Mummy: Frozen in Time!*"? Use **two** details from the article to support your response.

26

What is a main idea of the article "Excerpt from *Baby Mammoth Mummy: Frozen in Time!*"? Use **two** details from the article to support your response.

Directions

Read this article. Then answer questions 27 and 28.

In September of 1995, Dr. Johan Reinhard and his climbing partner, Miguel Zarate, climbed a peak of the volcano Nevado Ampato. While climbing, they found pieces of pottery, wood, grass, and other materials that told them that over 500 years earlier the Incas had been on this part of the mountain.

Excerpt from *Discovering the Inca Ice Maiden: My Adventures on Ampato*

by Johan Reinhard

- 1 I stopped to take notes while Miguel continued along the ridge. He whistled, and I looked up to see him with his ice ax raised.
- 2 When I reached him, he pointed without saying a word: Even from 40 feet away, it was possible to see reddish feathers sticking out near the top of the ridge. We had both seen feathers like this on Inca statues at other sites, and so we knew instantly they would most likely be from a feathered headdress.
- 3 Although the feathers were only about 10 feet down from the top, the slope was steep and slippery—a mix of gravel and sand over ice. A slip would have meant certain death. Miguel weighed far less than I did, so I tied a long sling onto him and held him as he climbed down to uncover a statue made of a rare seashell, with a reddish feathered headdress. Nearby, also covered with gravel, were two more statues, one gold and one silver.
- 4 Their textiles were so well preserved, they looked new.
- 5 The feathers that had been exposed were still in good condition. This meant that the gravel in which the statues had been buried had fallen away only days before. Indeed, the statues could have fallen farther down the slope at any moment.
- 6 Back on the summit ridge, we saw stones that had formed a corner of a building. Most of the structure had fallen down one of two naturally formed gullies that dropped 200 feet to the inside of the crater. From the ridge we could not see where these led. So I wrapped two stones in yellow plastic that I had carried in case we needed to mark our way. I threw a stone down each of the gullies, thinking “It’ll be a miracle if we ever see them again.”
- 7 We then climbed down off the ridge and scrambled our way around beneath it. We soon spotted yellow plastic below us where the rocky slope met the ice pinnacles where we had been climbing to the summit only a few hours before.

- 8 A little farther we saw what looked to us like a mummy bundle lying on the ice.
- 9 It seemed so unlikely to find a mummy out in the open, we literally couldn't believe our eyes. Miguel said, "Maybe it's a climber's backpack."
- 10 Only half joking, I replied, "Maybe it's a climber."
- 11 As we drew closer, I knew from the stripes on the cloth that it was probably a mummy bundle. This would mean only one thing: The Incas had performed a human sacrifice on the ridge top. The bundle containing the victim had been buried in the structure that had collapsed when part of the summit ridge crashed into the crater.
- 12 I knew that even a partially frozen body would be invaluable¹ for science. A frozen body is like a time capsule, which allows scientists to look back into the past and find out things difficult to know otherwise—such as what foods were eaten, what diseases and bacteria existed, who was related to the mummy, where it came from, and much more.
- 13 I grew more excited as I remembered that only three frozen mummies had been recovered in all of South America.
- 14 Descending toward it, we found fragments of a torn textile. A seashell, two cloth bags containing food offerings (maize kernels and a maize cob), llama bones, and pieces of Inca pottery were strewn about on the slope above the bundle.
- 15 After I photographed these items, Miguel used his ice ax to cut loose the bundle from the ice.
- 16 He turned it on its side for a better grip. Both of us were momentarily stunned as the body turned.
- 17 We looked straight into the face of a young girl.
- 18 She was the first *frozen* female mummy found in South America!
- 19 Her dried-out features made me fear that we had arrived too late. However, the bundle weighed about 90 pounds, which meant the body was still frozen. A dried-out mummy would have weighed much less.
- 20 I wondered what to do next. If we left the mummy behind in the open, the sun and volcanic ash would cause further damage. Climbers might find her and take her and the other artifacts as souvenirs or to sell. The ground was frozen rock hard, and it was impossible to bury the mummy. A heavy snowfall could cover the summit and make recovery impossible....
- 21 Thoughts rushed through my mind. It could take weeks, if not months, to get a government permit that would allow me to return and recover the mummy. Obtaining the funding to organize a scientific expedition could take even longer.
- 22 I decided that we should try to carry the mummy and the statues down the mountain.

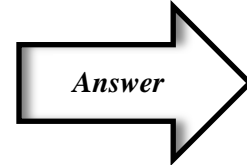
¹ **invaluable**: extremely valuable

27

According to "Excerpt from *Discovering the Inca Ice Maiden: My Adventures on Ampato*," why is the discovery of the mummy significant? Use **two** details from the article to support your response.

Planning Page

You may PLAN your writing for question 28 here if you wish, but do NOT write your final answer on this page. Writing on this Planning Page will NOT count toward your final score. Write your final answer on Pages 33 and 34.



Lined writing area consisting of 25 horizontal lines.

STOP





Name: _____

Week 38 Day 4 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. Who do you think should help when a natural disaster occurs?

2. What could YOU do to help when a natural disaster occurs in a different country or a different part of the United States?

Module 4: Natural Disasters

Standard	RI.5.2: Text Summary
LEQ	What can I learn about people and organizations that are there to assist during and after a natural disaster?
Objective	I can summarize the words of Barack Obama in a speech about the _____ and _____ efforts in Haiti after the earthquake.
Assignment to Submit	Nearpod

	Recovery	Rebuilding	Opening Remarks
Definition	The action or _____ of regaining possession or control of something.	Build something (_____) after it has been damaged or destroyed.	A _____ given as an introduction or welcome before an event.

Informational Text Summary

Summarize means - make it _____; include just _____, like a reporter!

1. Start with a SAAC statement.

S: State it (name of article, type of writing)

A: Assign (use the author's name or publication)

A: Action (choose a verb, like explains or tells)

C: Complete the sentence (with your main idea)

Example: In the article "During Ramadan, Muslims strive for personal and spiritual growth", the Detroit News explains the purpose behind fasting and other traditions during the holy month of Ramadan.

2. Add at least 3 key details with logical transitions (first, then, next, etc)

Summaries are paraphrased! (details are written in YOUR OWN WORDS)

Transcript:

Opening Remarks by President Obama

Good morning, everybody. In times of great challenge in our country and around the world, Americans have always come together to lend a hand and to serve others and to do what's right. That's what the American people have been doing in recent days with their extraordinary generosity and contributions to the Haitian people.

At this moment, we're moving forward with one of the largest relief efforts in our history—to save lives and to deliver relief that averts an even larger catastrophe. The two leaders with me today will ensure that this is matched by a historic effort that extends beyond our government, because America has no greater resource than the strength and the compassion of the American people.

We just met in the Oval Office—an office they both know well. And I'm pleased that President George W. Bush and President Bill Clinton have agreed to lead a major fundraising effort for relief: the Clinton Bush Haiti Fund. On behalf of the American people, I want to thank both of you for returning to service and leading this urgent mission.

This is a model that works. After the terrible tsunami in Asia, President Bush turned to President Clinton and the first President Bush to lead a similar fund. That effort raised substantial resources for the victims of that disaster—money that helped save lives, deliver aid, and rebuild communities. And that's exactly what the people of Haiti desperately need right now.

Every day that goes by, we learn more about the horrifying scope of this catastrophe—destruction and suffering that defies comprehension. Entire communities buried under mountains of concrete. Families sleeping in the streets. Injured desperate for care. Many thousands feared dead. That's why thousands of American personnel—civilian and military—are on the scene working to distribute clean drinking water and food and medicine, and thousands of tons of emergency food supplies are arriving every day.

Transcript:
Opening Remarks by President Obama

It will be difficult. It is an enormous challenge to distribute this aid quickly and safely in a place that has suffered such destruction. That's what we're focused on now—working closely with our partners: the Haitian government, the United Nations, and many organizations and nations—friends from Argentina and France, from Dominican Republic and Brazil, and countries all around the world.

And Secretary Hillary Clinton will be in Haiti today to meet with President Préval and continue our close coordination with his government. But we also know that our longer-term effort will not be measured in days and weeks; it will be measured in months and even years. And that's why it's so important to enlist and sustain the support of the American people. That's why it's so important to have a point of coordination for all the support that extends beyond our government.

Here at home, Presidents Bush and Clinton will help the American people to do their part, because responding to a disaster must be the work of all of us. Indeed, those wrenching scenes of devastation remind us not only of our common humanity but also of our common responsibilities. This time of suffering can and must be a time of compassion.

As the scope of the destruction became apparent, I spoke to each of these gentlemen, and they each asked the same simple question: How can I help? In the days ahead they'll be asking everyone what they can do—individuals, corporations, NGOs, and institutions. And I urge everyone who wants to help to visit www.clintonbushhaitifund.org.

We're fortunate to have the service of these two leaders. President Bush led America's response to the Asian tsunami, aid, and relief that prevented even greater loss of life in the months after that disaster. And his administration's efforts to fight against HIV/AIDS in Africa treated more than 10 million men, women, and children.

As president, Bill Clinton helped restore democracy in Haiti. As a private citizen, he has helped to save the lives of millions of people around the world. And as the United Nations special envoy to Haiti, he understands intimately the daily struggles and needs of the Haitian people.

And by coming together in this way, these two leaders send an unmistakable message to the people of Haiti and to the people of the world: In these difficult hours, America stands united. We stand united with the people of Haiti, who have shown such incredible resilience, and we will help them to recover and to rebuild.

Transcript:

Opening Remarks by President Obama

Yesterday we witnessed a small but remarkable display of that determination—some of you may have seen it—Haitians with little more than the clothes on their back marched peacefully through a ruined neighborhood, and despite all their loss and all their suffering, they sang songs of faith and songs of hope.

These are the people we're called upon to help. Those are the hopes that we're committed to answering. That's why the three of us are standing together today. And with that, I would invite each president to say a few words. I'm going to start with President Bush.



Name: _____

Week 38 Day 5 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. Is it our responsibility as Americans to help other countries facing a natural disaster? Why or why not?

2. What kind of work do you think was necessary to rebuild in Haiti after the earthquake of 2010?

Module 4: Natural Disasters

Standard	RI.5.6: Compare and Contrast multiple accounts of the same event or topic.
LEQ	What can I learn about people and organizations that are there to assist during and after a natural disaster?
Objective	I can _____ and _____ different accounts of the rebuilding and recovery efforts in Haiti after the earthquake of 2010.
Assignment to Submit	Nearpod

Nearpod Code: _____

___Task One: Think about yesterday's speech by Barack Obama.
There were about 13 paragraphs. (Scholar Discourse)

- What did the paragraphs have in common?
- What was different between the paragraphs?

___Task Two: Read your assigned article silently.

- Jot down 2 main ideas present in the article in the notecatcher.
- Jot down 2 – 3 supporting details for each main idea.

___Task Three: Summarize your article aloud to your group and tell them the main ideas and supporting details.

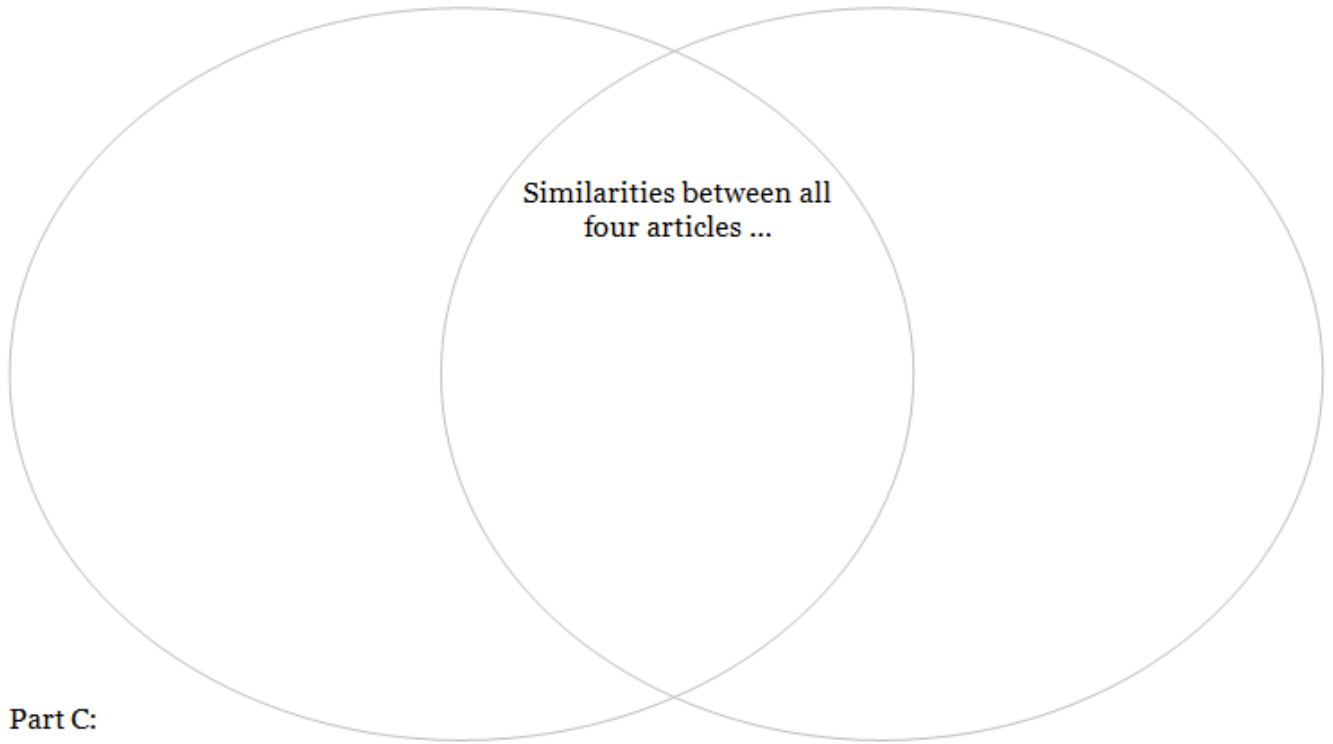
___Task Four: Listen to the other 3 summaries and take notes.

___Task Five: Work together to complete the VENN diagram page on all 4 articles.

Article Title:	
Main Idea #1:	2-3 Supporting Details:
Main Idea #2:	2-3 Supporting Details:

“Surface Amplified Haiti Earthquake”

“A Rocky Road Ahead,” “Help for Haiti,” and “On Shaky Ground”



Part C:

Use the information from your Venn diagram to complete the synthesis statement:

All four articles about the earthquake in Haiti explain ...



Name _____

5th Grade Modified ELA Remote Learning Packet

Week 39



Dear Educator,

My signature is proof that I have reviewed my scholar's work and supported him to the best of my ability to complete all assignments.

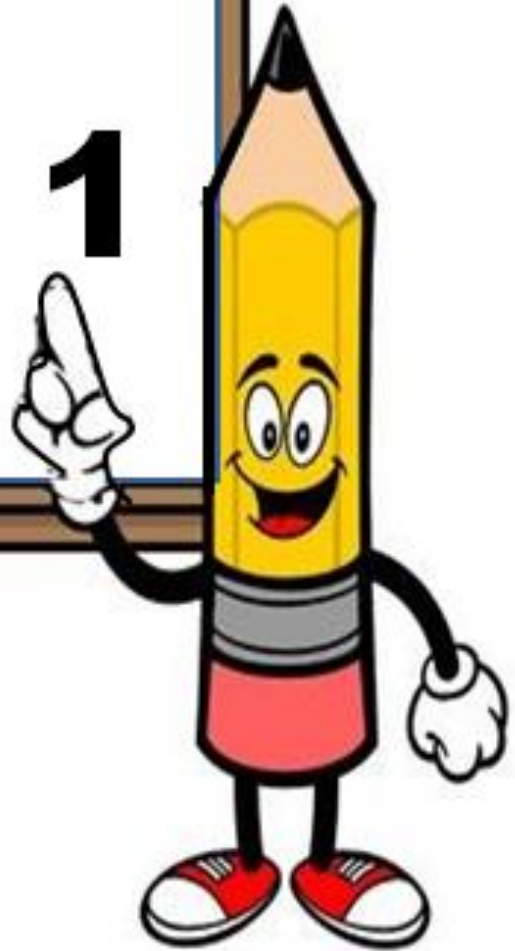
(Parent Signature)

(Date)

Parents please note that all academic packets are also available on our website at www.brighterchoice.org under the heading "Remote Learning." All academic packet assignments are mandatory and must be completed by all scholars.



Day # 1



Name: _____

Week 39 Day 1 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. Why does the United States try to help when there are natural disasters in other countries?

2. Do you agree or disagree that the US should help? Explain.

Module 4: Natural Disasters

Standard	RI.5.2: Summarize an informational article.
LEQ	What can I learn about people and organizations that are there to assist during and after a natural disaster?
Objective	I can explain what a multinational aid _____ is and explain how the _____ _____ is a multinational aid organization.
Assignment to Submit	Nearpod

The Red Cross at a Glance

by Dave Coustan

When disaster strikes anywhere around the world, the Red Cross is always among the first and biggest aid organizations to set up relief efforts. The Red Cross always finds a way to bring support staff, food aid, shelter, and medical care to areas of great need, even in the most dangerous and difficult conditions imaginable. Their efforts to provide relief for victims of Hurricane Katrina represent the largest mobilization of its kind in history.

- The mission of the American Red Cross is to provide nonpartisan aid in times of war and peace, as well as disaster and emergency relief.
- It was founded by Clara Barton in 1881.
- The Red Cross is led by a staff of volunteers.
- The American Red Cross is a private charity and is not a part of the U.S. government. It works in cooperation with government organizations such as the Federal Emergency Management Agency (FEMA) and the U.S. Armed Forces.
- The costliest disaster was the terrorist attacks of September 11, 2001. Those events resulted in costs of almost \$1 billion in disaster assistance. The greatest loss of life occurred during the Galveston, Texas hurricane of 1900, when 6,000 people lost their lives.
- The Red Cross does not accept individual donations of goods in kind like food and clothing. The costs and difficulties associated with organizing, sanitizing, maintaining, and distributing those goods makes it more efficient for the Red Cross to work through cash donations from individuals. Where possible, they use vouchers to allow victims to select the most locally appropriate aid.
- The American Red Cross is part of the International Red Cross and Red Crescent Movement, which values all nations equally and respects the status of all people.
- There are almost 900 chapters of the American Red Cross in the United States.
- Almost 25 percent of the Red Cross's funding comes from private donations.

In addition to providing direct aid in times of war and disaster, the American Red Cross provides regular educational, medical, and community services through its local chapters. Together, they collect and test more than 7 million units of donated blood each year. In 2004 they taught 11 million Americans critical lifesaving skills such as CPR and first aid.

Three-column note-catcher: What is a Multinational Aid Organization?

Multinational means ...	Aid means ...	Organization means ...
The Red Cross is <i>multinational</i> ...	The Red Cross provides <i>aid</i> ...	The Red Cross is an <i>organization</i> ...



Name: _____

Week 39 Day 2 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. What is a multinational organization?

2. What services does the Red Cross provide?

Module 4: Natural Disasters

Standard	RI.5.1: Cite evidence from a text to support an inference.
LEQ	What can I learn about people and organizations that are there to assist during and after a natural disaster?
Objective	I can explain how the Red Cross is a multinational aid organization with _____ details from a text.
Assignment to Submit	Nearpod

Video Viewing

1. What types of aid does the Red Cross provide?

2. Where does the Red Cross provide aid?

Directions: Read the article that follows. Write a main idea statement and gist statements. Then, complete Part 1 and Part 2 below.

Part 1: “The Red Cross: Disaster Response”

- Read the article “The Red Cross: Disaster Response” *AGAIN* to locate and underline details about how “The Red Cross is *multinational* ...” how “The Red Cross provides *aid* ...,” and how “The Red Cross is an *organization* ...”
- Add two to three pieces of paraphrased information to the lower half of your note-catcher to explain how “The Red Cross is *multinational* ...,” how “The Red Cross provides *aid* ...,” and how “The Red Cross is an *organization* ...”.

Part 2: Explaining How the Red Cross Is a Clear Example of a Multinational Aid Organization

- Review key ideas from your note-catcher to determine how the Red Cross is a clear example of a multinational aid organization.
- To complete *the second statement* at the bottom of your note-catcher “The Red Cross is a clear example of a multinational aid organization because ...,” use details from your note-catcher.

The Red Cross Disaster Response

A Growing Global Need

Global trends such as rapid population growth, unplanned urbanization, environmental degradation, and climate change have caused an increase in the frequency and severity of natural disasters. Communities living in disaster-prone areas are the most at risk, and often the least able to cope with the effects of disaster.

The American Red Cross helps vulnerable people worldwide prevent, prepare for, and respond to disasters. Through our emergency disaster response efforts, we provide relief and recovery assistance to millions of people annually.

The Red Cross Advantage

In collaboration with the global Red Cross network, the American Red Cross is constantly monitoring disasters around the globe. When disasters occur, the local Red Cross or Red Crescent can often handle crises alone. Other times, they need a helping hand and request assistance through the global Red Cross system. This coordinated approach helps ensure that available resources match needs on the ground.

How We Respond

When a Red Cross or Red Crescent partner reaches out for assistance, the American Red Cross can respond by deploying technical experts, mobilizing relief supplies, or providing financial assistance.

Technical Support—The American Red Cross has a network of highly experienced disaster responders and volunteers who can assist in the assessment of needs and implementation of vital relief services immediately following global disasters. The American Red Cross manages two Emergency Response Units (ERUs), or trained teams specializing in specific disaster services. A Relief ERU assists with supply management and distribution, while an IT and Telecommunications ERU facilitates the flow of critical information.

The Red Cross Disaster Response

Relief Supplies—To ensure the rapid delivery of assistance, we pre-position relief supplies at warehouses in Panama City, Panama; Dubai, United Arab Emirates; and Kuala Lumpur, Malaysia. Stocks include hygiene kits, blankets, kitchen sets, tarps, and mosquito nets.

Financial Assistance—We provide cash for the rapid purchase of the most needed supplies in disaster-affected countries. Cash reduces the time and cost of delivery and stimulates the local economy, which is often undermined by a disaster.

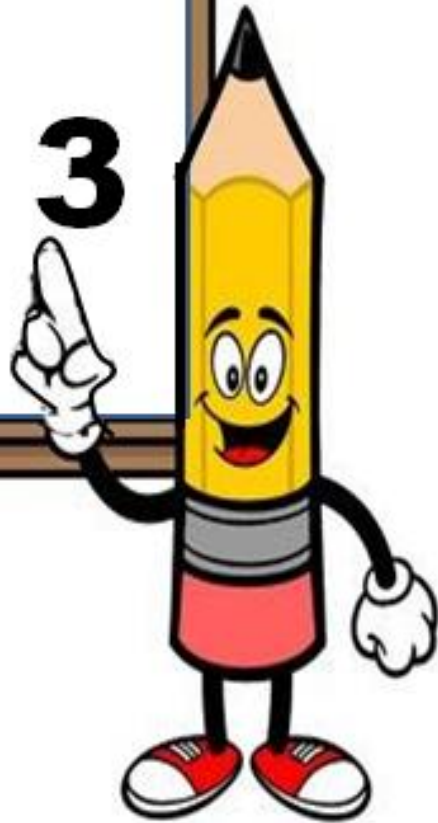
<p>The Red Cross is <i>multinational</i> ...</p> <ul style="list-style-type: none"> • “... one of the biggest <u>aid organizations</u> ...” • “... almost 900 <u>chapters</u> of the American Red Cross in the U.S ... to help when <u>disaster</u> strikes anywhere around the world ...” 	<p>The Red Cross provides <i>aid</i> ...</p> <ul style="list-style-type: none"> • “Set up <u>relief efforts</u> ...” • “Provides <u>aid</u> in times of ... <u>disaster</u>.” • Provided “... almost \$1 billion in <u>disaster assistance</u>...” after September 11 terrorist attacks 	<p>The Red Cross is an <i>organization</i> ...</p> <ul style="list-style-type: none"> • “Brings support staff ... to areas of great need ...” • “... led by a staff of <u>volunteers</u>.”
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

A multinational aid organization is ...

The Red Cross is a clear example of a multinational aid organization because ...



Day # 3



Name: _____

Week 39 Day 3 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. If YOU had gone into Haiti to help after the earthquake, what would YOU have done? Explain at least 3 things and why.

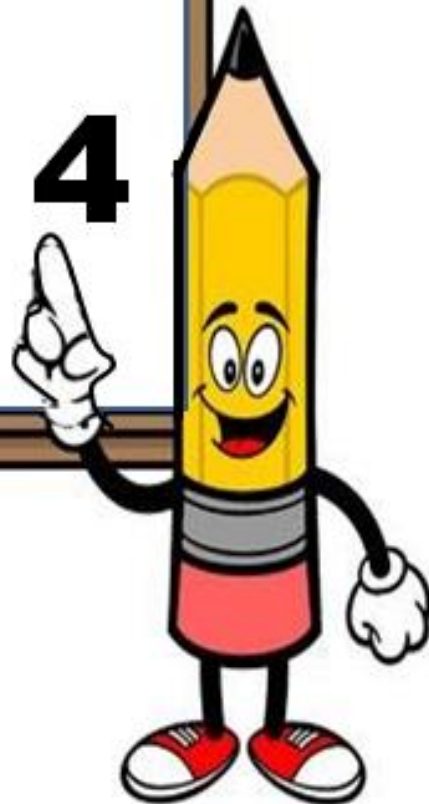
Module 4: Natural Disasters

Standard	W.5.8: I can document what I learn about a topic by taking notes.
LEQ	What can I learn about people and organizations that are there to assist during and after a natural disaster?
Objective	I can _____ from an informational text about the Red Cross aid to Haiti.
Assignment to Submit	Nearpod

Transitional and Permanent Homes	Health, Water, and Sanitation
Disaster Risk Reduction	Livelihood and Host Families



Day # 4



Name: _____

Week 39 Day 4 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. How does an earthquake affect the Earth's surface?

2. What could we do to better prepare for earthquakes?

Module 4: Natural Disasters

Standard	RI.5.2: Central Idea
LEQ	How can I think critically about natural disasters and society?
Objective	I can determine a idea of a text and how it is conveyed through particular details.
Assignment to Submit	Nearpod

Preparing for a Disaster

by Megan McGibney



Some disasters cannot be stopped. These disasters include earthquakes and tornadoes. Tornadoes ruin whatever is in their path. They can destroy houses and other buildings. Earthquakes have a wider range of intensity-some are so small that no one even notices them, except for the people checking earthquake monitoring equipment. Others have leveled cities. It is very hard to deal with these disasters, and it can take a very long time for life to get back to normal.

Because earthquakes and tornadoes are forces of nature, people have to deal with them as they come. The time or intensity of an earthquake cannot usually be predicted. Tornadoes form when the right conditions are met, so a warning would be given once the conditions are detected. But there is still very little time to get ready once a tornado warning is issued. That's why planning for disaster ahead of time is so important. With proper preparation, we can minimize the disaster's impact.

Earthquakes cannot be reliably predicted. While volcanic activity sometimes triggers earthquakes, many other earthquakes happen without warning. Fortunately, we do know the areas where earthquakes are most likely to occur. The people who live in these places, such as California, Japan, or Italy, know what to do when the ground begins to shake. If they are indoors, they will get away from windows and exterior walls and take cover under a desk or table. If there is no desk around, they can stand against an interior wall, that is, a wall whose other side is not the outside of the building. It is important to take cover in an area that is safe

from potential falling objects, such as wall decor, appliances, or furniture. As you can see, people who live in an earthquake territory need to be very aware of their surroundings.

If people are outside during an earthquake, it is best to get into an open spot. They should get away from buildings, power lines, and anything else that may fall and hurt them. Electrical lines which have already fallen are also dangerous-they may be capable of electrocuting people!

Earthquakes can be incredibly destructive, even if they do not last very long. The majority last less than a minute, but there are often aftershocks-smaller earthquakes that occur minutes or hours after the first one. Of course, it all depends on the size of the quake; most are small and don't have much impact. But the big ones can wreak havoc, especially if the area is not prepared. In places where earthquakes often strike, there are strict codes for buildings with the goal that earthquakes would not cause serious damage. These buildings must be built in such a way that they likely would not fall apart as a result of a big quake. Places like Japan and California have much stricter building codes than places without such a high earthquake risk. But even these rigorous codes sometimes fail to protect people; the disastrous 1995 Great Hanshin-Awaji Earthquake destroyed the city of Kobe, Japan, and killed over 5,500 people.

Knowing what to do when earthquakes happen usually saves lives. The same goes for tornadoes. While some places get tornadoes more than others, it is not easy to predict them. There may be warnings that they will happen, but tornadoes cannot be predicted in the same way rainstorms can, days before they happen.

In order to be safe when a tornado does strike, people must already know where they will find shelter. Families and schools must have tornado drills and discuss where to go once a tornado has been spotted. The best place to go to is a basement. If there is no basement, then people should go into hallways or rooms with no windows on the ground floor. Tornadoes can be strong enough to break windows, which can injure anyone nearby. Even after finding shelter in a basement or windowless room, people should cover themselves with a mattress or other padding in case the tornado damages the ceiling and debris falls through.

People who are outdoors when a tornado hits should seek shelter in a building. If that isn't possible, they must lie flat on low ground away from vehicles, trees, or anything else the tornado might fling about. As with an earthquake, it is important to protect one's head and neck by covering them with one's arms. One of the worst places to be during a tornado is in a car, truck, or bus, because those can easily be thrown around, or simply hit with other flying debris. Tornadoes are very powerful and can even move trailer homes. Anyone in a mobile home during a tornado should leave and seek shelter elsewhere immediately.

Just as places with earthquakes have special building codes, places plagued by tornadoes often have building codes designed to protect buildings from strong winds. People can also build extra-strong safe rooms to weather the storm in. But often nothing can stop this natural disaster from doing a lot of damage.

Although scientists are trying to find better ways to predict these two natural disasters, it is still very hard to know exactly when they will hit and how much damage they will do. In the meantime, people must always be aware that an earthquake or tornado can happen without warning. The important thing is to be prepared and take precautions to stay safe from harm. Buildings can be restored, but lives cannot.



Name: _____

Week 39 Day 5 Date: _____

BCCS Boys

MIT/Stanford

Do Now

1. What do you know about volcanoes?

2. What can cause a volcano to erupt?

Module 4: Natural Disasters

Standard	RI.5.2: Summarize key details of an informational text.
LEQ	How can I summarize an informational text?
Objective	I can _____ key details and ideas about a text.
Assignment to Submit	Nearpod

Mount Pinatubo and the Ring of Fire

by ReadWorks



the June 12, 1991 eruption column from Mount Pinatubo taken from Clark Air Base

On July 16, 1990, a large earthquake struck Luzon, an island in the Philippines. The earthquake devastated cities for hundreds of miles around, and killed more than 1,600 people. Yet the destruction was not over.

Two weeks later, residents of Luzon discovered steam coming out of a volcano called Mount Pinatubo. But when scientists inspected the volcano, they did not find any evidence the volcano would erupt. However, on March 15, 1991, villagers on the northwestern side of the island were startled by a series of earthquakes. The earthquakes continued until two weeks later, when Mt. Pinatubo began to rumble.

On April 2, the mountain sent an explosion of steam, water, ash, and rock into the air. Over the next several weeks, it continued to belch volcanic ash into the air. Scientists detected increased levels of carbon dioxide, a sign that hot liquid magma was nearing the surface. By June 7, a dome of lava 130 feet high and 660 feet across had formed on the surface of the volcano.

Five days later, the volcano erupted. Hot volcanic ash rose about 20 miles into the air. An ash cloud of

almost 50,000 square miles blanketed the island in darkness. The summit of the volcano was blown off, replaced by a new hole 1.6 miles wide. 847 people in surrounding communities died, most of them when their roofs, buckling under the weight of wet ash, collapsed. Geologists would later rank the eruption of Mt. Pinatubo as the second-largest volcanic eruption of the 20th century.

While scientists have never determined whether the earthquake in 1990 directly caused the volcanic eruption a year later, the two events are generally considered to be related. Although it's difficult to predict when or where an earthquake or a volcanic eruption will strike, these events can occur in patterns.

Mt. Pinatubo is located on the Ring of Fire. The Ring of Fire is a horseshoe-shaped zone characterized by earthquakes and more than 450 volcanoes. It is 25,000 miles long and runs roughly along the edges of the Pacific Ocean. The Ring of Fire begins on the southern edge of South America, runs north along the western coast of the Americas, cuts across the southern edge of Alaska, and down the eastern edge of Eurasia before culminating in a series of deep trenches, several thousand miles off the coast of Australia. Seventy-five percent of the world's active volcanoes are located on this ring, and almost 90% of the world's earthquakes happen there.

The reason why so many earthquakes and volcanic eruptions occur here has to do with plate tectonics. On the surface of the earth is a patchwork of enormous plates, atop which all geographic features—seas, oceans, fields, mountain ranges—sit. These plates are in constant motion, although they move very slowly—under six inches per year. These plates separate, collide, or slip past each other along their boundaries. These movements are referred to as plate tectonics. Massive events, such as earthquakes and volcano eruptions, can occur along plate boundaries.

Most earthquakes occur in areas often close to plate boundaries. Areas that are in the middle of the plates generally do not suffer from these same forces. This is why there are earthquakes in San Francisco, which is close to where two plates slide past each other, and usually not in Chicago, a thousand miles from any plate boundary.

Similarly, volcanoes tend to form near plate boundaries where the movement of the earth's plates creates vents, which are openings on the earth's surface. Magma, liquid rock located below the earth's surface, can rise toward the surface of the earth and erupt out of volcanoes. The island of Luzon, where Mt. Pinatubo erupted, is near a location where a sea plate has been sliding under a continental plate.

The location of mountain ranges is also closely linked to the activity of plates. The collision of two continental plates has formed Earth's tallest mountain ranges on land, such as the Himalayas. These mountain chains are essentially crumpled up parts of continental plates, formed when two continental plates push against each other.

Deep ocean trenches, such as the Mariana Trench of the Pacific Ocean, can also form along plate boundaries. The Mariana Trench reaches almost seven miles down.

If you look on a detailed map, one that includes physical features, such as mountain ranges and trenches, you will begin to see patterns. You may even be able to guess where some of the giant continental plates are located.