8th Grade Independent Projects

Hello Students,

This resource packet includes multiple projects that you can work on independently at home. Each project can be completed over multiple days, and the projects can be completed in any order. These projects are standards-aligned and designed to meet the Remote Learning instructional minutes guidelines by grade band.

Additional enrichment activities are also available and organized into Read, Write, Move, Design, and Solve categories to engage you in learning in many different ways while at home. Please be sure to also pick up an enrichment packet for access to these activities.

Use the table of contents on this page to navigate through the project packet.

8th Grade Literacy Project: Point of View in Narrative Writing 1
8th Grade Math Project: Which Wage is Better? 10
8th Grade Science Project: Physics of Jousting 17
8th Grade Social Science Project: Creating A ‘How To’ Manual 25
# 8th Grade Literacy Project: Point of View in Narrative Writing

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>Total Time 120-130 minutes</th>
</tr>
</thead>
</table>
| **Grade Level Standard(s)** | RL.8.2 Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.  
RL.8.6 Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.  
W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. |
| **Caregiver Support Option** | Caregivers can read and discuss the story with their student. |
| **Materials Needed** | Lined paper  
Pen/pencil |
| **Question to Explore** | How does the point of view influence the theme? |
| **Student Directions** | In this task, you will consider the impact point of view has on the way a story is written. First, you will read and annotate a short story called “The War of the Wall” to consider the point of view and theme. Then, you will rewrite a part of the story from a different point of view. |

## Activity 1: “The War of the Wall”

**A. Directions:** Read “War of the Wall” by Toni Cade Bambara. As you read the story, annotate details that help you to understand the narrator’s **point of view**. You can ask yourself “Who is telling this story? What details help me understand who the “I” of this story is?” You should also read to understand the narrator’s **perspective**. What in the narrator’s culture and experience shape and inform how they tell the story?

### The War of the Wall

By Toni Cade Bambara

Me and Lou had no time for courtesies. We were late for school. So we just flat out told the painter lady to quit messing with the wall. It was our wall, and she had no right coming into our neighborhood painting on it. Stirring in the paint bucket and not even looking at us, she mumbled something about Mr. Eubanks, the barber, giving her permission. That had nothing to do with it as far as we were concerned. We’ve been pitching pennies against that wall since we

### Notes/Annotations
were little kids. Old folks have been dragging their chairs out to sit in the shade of the wall for years. Big kids have been playing handball against the wall since so-called integration when the crazies 'cross town poured cement in our pool so we couldn't use it. I'd sprained my neck one time boosting my cousin Lou up to chisel Jimmy Lyons's name into the wall when we found out he was never coming home from the war in Vietnam to take us fishing.

“If you lean close,” Lou said, leaning hipshot against her beat-up car, “you'll get a whiff of bubble gum and kids’ sweat. And that'll tell you something—that this wall belongs to the kids of Taliaferro Street.” I thought Lou sounded very convincing. But the painter lady paid us no mind. She just snapped the brim of her straw hat down and hauled her bucket up the ladder.

“You’re not even from around here,” I hollered up after her. The license plates on her old piece of car said “New York.” Lou dragged me away because I was about to grab hold of that ladder and shake it. And then we’d really be late for school.

When we came from school, the wall was slick with white. The painter lady was running string across the wall and taping it here and there. Me and Lou leaned against the gumball machine outside the pool hall and watched. She had strings up and down and back and forth. Then she began chalking them with a hunk of blue chalk.

The Morris twins crossed the street, hanging back at the curb next to the beat-up car. The twin with the red ribbons was hugging a jug of cloudy lemonade. The one with yellow ribbons was holding a plate of dinner away from her dress. The painter lady began snapping the strings. The blue chalk dust measured off halves and quarters up and down and sideways too. Lou was about to say how hip it all was, but I dropped my book satchel on his toes to remind him we were at war.

Some good aromas were drifting our way from the plate leaking pot likker onto the Morris girl’s white socks. I could tell from where I stood that under the tinfoil was baked ham, collard greens, and candied yams. And knowing Mrs. Morris, who sometimes bakes for my mama’s restaurant, a slab of buttered cornbread was probably up under there too, sopping up some of the pot likker. Me and Lou rolled our eyes, wishing somebody would send us some dinner. But the painter lady didn't even turn around. She was pulling the strings down and prying bits of tape loose.

Side Pocket came strolling out of the pool hall to see what Lou and me were studying so hard. He gave the painter lady the once-over,
checking out her paint-spattered jeans, her chalky T-shirt, her floppy-brimmed straw hat. He hitched up his pants and glided over toward the painter lady, who kept right on with what she was doing.

"Whatcha got there, sweetheart?" he asked the twin with the plate.

"Suppah," she said all soft and countrylike.

"For her," the one with the jug added, jerking her chin toward the painter lady's back.

Still she didn't turn around. She was rearing back on her heels, her hands jammed into her back pockets, her face squinched up like the masterpiece she had in mind was taking shape on the wall by magic. We could have been gophers crawled up into a rotten hollow for all she cared. She didn't even say hello to anybody. Lou was muttering something about how great her concentration was. I butt him with my hip, and his elbow slid off the gum machine.

"Good evening," Side Pocket said in his best ain't-I-fine voice. But the painter lady was moving from the milk crate to the step stool to the ladder, moving up and down fast, scribbling all over the wall like a crazy person. We looked at Side Pocket. He looked at the twins. The twins looked at us. The painter lady was giving a show. It was like those oldtimey music movies where the dancer taps on the tabletop and then starts jumping all over the furniture, kicking chairs over and not skipping a beat. She didn't even look where she was stepping. And for a minute there, hanging on the ladder to reach a far spot, she looked like she was going to tip right over.

"Ahh," Side Pocket cleared his throat and moved fast to catch the ladder.

"These young ladies here have brought you some supper."

"Ma'am?" The twins stepped forward. Finally the painter turned around, her eyes "full of sky," as my grandmama would say. Then she stepped down like she was in a trance. She wiped her hands on her jeans as the Morris twins offered up the plate and the jug. She rolled back the tinfoil, then wagged her head as though something terrible was on the plate.

"Thank your mother very much," she said, sounding like her mouth was full of sky too. "I've brought my own dinner along." And then, without even excusing herself, she went back up the ladder, drawing on the wall in a wild way. Side Pocket whistled one of those oh-brother breathy whistles and went back into the pool hall. The Morris twins shifted their weight from one foot to the other, then
crossed the street and went home. Lou had to drag me away, I was so mad. We couldn’t wait to get to the firehouse to tell my daddy all about this rude woman who’d stolen our wall.

All the way back to the block to help my mama out at the restaurant, me and Lou kept asking my daddy for ways to run the painter lady out of town. But my daddy was busy talking about the trip to the country and telling Lou he could come too because Grandmama can always use an extra pair of hands on the farm.

Later that night, while me and Lou were in the back doing our chores, we found out that the painter lady was a liar. She came into the restaurant and leaned against the glass of the steam table, talking about how starved she was. I was scrubbing pots and Lou was chopping onions, but we could hear her through the service window. She was asking Mama was that a ham hock in the greens, and was that a neck bone in the pole beans, and were there any vegetables cooked without meat, especially pork.

“I don’t care who your spiritual leader is,” Mama said in that way of hers. “If you eat in the community, sistuh, you gonna eat pig by-and-by, one way or t’other.”

Me and Lou were cracking up in the kitchen, and several customers at the counter were clearing their throats, waiting for Mama to really fix her wagon for not speaking to the elders when she came in. The painter lady took a stool at the counter and went right on with her questions. Was there cheese in the baked macaroni, she wanted to know? Were there eggs in the salad? Was it honey or sugar in the iced tea? Mama was fixing Pop Johnson’s plate. And every time the painter lady asked a fool question, Mama would dump another spoonful of rice on the pile. She was tapping her foot and heating up in a dangerous way. But Pop Johnson was happy as he could be. Me and Lou peeked through the service window, wondering what planet the painter lady came from. Who ever heard of baked macaroni without cheese, or potato salad without eggs?

“Do you have any bread made with unbleached flour?” the painter lady asked Mama. There was a long pause, as though everybody in the restaurant was holding their breath, wondering if Mama would dump the next spoonful on the painter lady’s head. She didn’t. But when she set Pop Johnson’s plate down, it came down with a bang.

When Mama finally took her order, the starving lady all of a sudden couldn’t make up her mind whether she wanted a vegetable plate or fish and a salad. She finally settled on the broiled trout and a
tossed salad. But just when Mama reached for a plate to serve her, the painter lady leaned over the counter with her finger all up in the air.

"Excuse me," she said. "One more thing." Mama was holding the plate like a Frisbee, tapping that foot, one hand on her hip. "Can I get raw beets in that tossed salad?"

"You will get," Mama said, leaning her face close to the painter lady’s, "whatever Lou back there tossed. Now sit down." And the painter lady sat back down on her stool and shut right up.

All the way to the country, me and Lou tried to get Mama to open fire on the painter lady. But Mama said that seeing as how she was from the North, you couldn’t expect her to have any manners. Then Mama said she was sorry she’d been so impatient with the woman because she seemed like a decent person and was simply trying to stick to a very strict diet. Me and Lou didn’t want to hear that. Who did that lady think she was, coming into our neighborhood and taking over our wall?

"Wellllll," Mama drawled, pulling into the filling station so Daddy could take the wheel, "it’s hard on an artist, ya know. They can’t always get people to look at their work. So she’s just doing her work in the open, that’s all." Me and Lou definitely did not want to hear that. Why couldn’t she set up an easel downtown or draw on the sidewalk in her own neighborhood? Mama told us to quit fussing so much; she was tired and wanted to rest. She climbed into the back seat and dropped down into the warm hollow Daddy had made in the pillow.

All weekend long, me and Lou tried to scheme up ways to recapture our wall. Daddy and Mama said they were sick of hearing about it. Grandmama turned up the TV to drown us out. On the late news was a story about the New York subways. When a train came roaring into the station all covered from top to bottom, windows too, with writings and drawings done with spray paint, me and Lou slapped five. Mama said it was too bad kids in New York had nothing better to do than spray paint all over the trains. Daddy said that in the cities, even grown-ups wrote all over the trains and buildings too. Daddy called it "graffiti." Grandmama called it a shame.

We couldn’t wait to get out of school on Monday. We couldn’t find any black spray paint anywhere. But in a junky hardware store downtown we found a can of white epoxy paint, the kind you touch up old refrigerators with when they get splotchy and peely. We spent our whole allowance on it. And because it was too late to use our
bus passes, we had to walk all the way home lugging our book satchels and gym shoes, and the bag with the epoxy.

When we reached the corner of Taliaferro and Fifth, it looked like a block party or something. Half the neighborhood was gathered on the sidewalk in front of the wall. I looked at Lou, he looked at me. We both looked at the bag with the epoxy and wondered how we were going to work our scheme. The painter lady’s car was nowhere in sight. But there were too many people standing around to do anything. Side Pocket and his buddies were leaning on their cue sticks, hunching each other. Daddy was there with a lineman he catches a ride with on Mondays. Mrs. Morris had her arms flung around the shoulders of the twins on either side of her. Mama was talking with some of her customers, many of them with napkins still at the throat. Mr. Eubanks came out of the barbershop, followed by a man in a striped poncho, half his face shaved, the other half full of foam.

“She really did it, didn’t she?” Mr. Eubanks huffed out his chest. Lots of folks answered right quick that she surely did when they saw the straight razor in his hand.

Mama beckoned us over. And then we saw it. The wall. Reds, greens, figures outlined in black. Swirls of purple and orange. Storms of blues and yellows. It was something. I recognized some of the faces right off. There was Martin Luther King, Jr. And there was a man with glasses on and his mouth open like he was laying down a heavy rap. Daddy came up alongside and reminded us that that was Minister Malcolm X. The serious woman with a rifle I knew was Harriet Tubman because my grandmama has pictures of her all over the house. And I knew Mrs. Fannie Lou Hamer ’cause a signed photograph of her hangs in the restaurant next to the calendar. Then I let my eyes follow what looked like a vine. It trailed past a man with a horn, a woman with a big white flower in her hair, a handsome dude in a tuxedo seated at a piano, and a man with a goatee holding a book. When I looked more closely, I realized that what had looked like flowers were really faces. One face with yellow petals looked just like Frieda Morris. One with red petals looked just like Hattie Morris. I could hardly believe my eyes.

“Notice,” Side Pocket said, stepping close to the wall with his cue stick like a classroom pointer. “These are the flags of liberation,” he said in a voice I’d never heard him use before. We all stepped closer while he pointed and spoke. “Red, black and green,” he said, his pointer falling on the leaflike flags of the vine. “Our liberation flag. And here Ghana, there Tanzania, Guinea-Bissau, Angola,
Mozambique.” Side Pocket sounded very tall, as though he’d been waiting all his life to give this lesson. Mama tapped us on the shoulder and pointed to a high section of the wall. There was a fierce-looking man with his arms crossed against his chest guarding a bunch of children. His muscles bulged, and he looked a lot like my daddy. One kid was looking at a row of books. Lou hunched me ’cause the kid looked like me. The one that looked like Lou was spinning a globe on the tip of his finger like a basketball. There were other kids there with microscopes and compasses. And the more I looked, the more it looked like the fierce man was not so much guarding the kids as defending their right to do what they were doing.

Then Lou gasped and dropped the paint bag and ran forward, running his hands over a rainbow. He had to tiptoe and stretch to do it, it was so high. I couldn’t breathe either. The painter lady had found the chisel marks and had painted Jimmy Lyons’s name in a rainbow. “Read the inscription, honey,” Mrs. Morris said, urging little Frieda forward. She didn’t have to urge much. Frieda marched right up, bent down, and in a loud voice that made everybody quit oohing and ahhing and listen, she read,

To the People of Taliaferro Street
I Dedicate This Wall of Respect
Painted in Memory of My Cousin
Jimmy Lyons

Source: CommonLit.org

B. **Directions:** Respond to the following questions on a separate piece of paper.

1. From whose point of view is “The War of the Wall” written? How does the author develop this person’s point of view?

2. Determine a theme in “The War in the Wall.” Think about what the writer wants the reader to understand about the world from reading this story. Provide quoted evidence from the text.

3. Compare Mama’s perspective about the painter lady to the narrator’s. How are their perspectives similar? How are they different? Think about what they see and understand based on their experiences. Provide evidence to support your ideas.

**Activity 2: Plan a Narrative**
A. **Directions:** In the next part of this project, you will begin planning for your narrative. In this narrative, you will write part of the story from a different character’s perspective. First, choose who your narrator will be. You could narrate the story from the perspective of the painter lady, the perspective of the wall, the perspective of Mama, or the perspective of some other person/object from the text - get creative! Then, use the prompts below to help you develop the perspective. Note: A narrator does not have to be a person! You can turn an object into a narrator.

- Who or what is telling this story?
- From which point of view will the story be narrated?
- Describe the narrator. Which traits are typical for this character?
- What experiences does this character have that shape their perspective?
- What message or theme do you want to convey?

B. **Directions:** Map out your story. Copy the chart below onto notebook paper, leaving space to write your ideas. Plan your story by answering the questions and completing the prompts.

<table>
<thead>
<tr>
<th>Introduction - How will you introduce the characters? Where will the story begin?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main Event 1:</strong> Describe the narrator’s actions, thoughts, and/or dialogue.</td>
</tr>
<tr>
<td><strong>Main Event 2:</strong> Describe the narrator’s actions, thoughts, and/or dialogue.</td>
</tr>
<tr>
<td><strong>Main Event 3:</strong> Describe the narrator’s actions, thoughts, and/or dialogue.</td>
</tr>
<tr>
<td><strong>Conclusion - How will you wrap up the story?</strong></td>
</tr>
</tbody>
</table>

**Activity 3: Draft a Narrative**

A. **Directions:** On a separate piece of paper, draft your narrative using the notes in your graphic organizer.

B. Check your draft to see if you were able to:
   - Keep the perspective you have developed
   - Create a beginning that introduces the characters, setting, and conflict
   - Use actions, thoughts, description, and dialogue to SHOW the reader what is going on
   - Provide some type of conclusion that provides closure to your writing

C. Revise your draft. Reading out loud can help you craft your language and ideas!

**Activity 4: Reflection**
A. **Directions:** On a separate piece of paper, respond to the following reflection questions.

1. How did the theme of the story change when you rewrote it from a different point of view?

2. As a reader, why is it important to think about other points of view?

**Cross Content Connection**

- **Social Science:** Consider the articles you are reading about COVID-19 and Ebola. From whose point of view are these texts written? Consider another point of view from the text. How would the story change if it were written from this point of view?
### 8th Grade Math Project: Which Wage is Better?

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>Total Time 120-130 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade Level</strong></td>
<td><strong>Standard(s)</strong></td>
</tr>
<tr>
<td><strong>Caregiver Support Option</strong></td>
<td>Discuss with the differences in real-life between minimum wage versus tipped minimum wage and the types of jobs that fall in each category. Support students in a discussion of different characteristics of lines and how to problem solve and compare different situations, as needed.</td>
</tr>
<tr>
<td><strong>Materials Needed</strong></td>
<td>Paper, graph paper, calculator, pencil</td>
</tr>
<tr>
<td><strong>Question to Explore</strong></td>
<td>Would you rather have a job earning regular minimum wage or one in which you also earn tips?</td>
</tr>
<tr>
<td><strong>Student Directions</strong></td>
<td>In order to better understand the connection between proportional relationships, lines, and equations, you will first study the similarities and differences between four graphs. Then, you will work on a task in which you compare three different Internet data plans. Finally, you will consider the current minimum wage in Illinois and compare it to the wage per hour you would earn in the service industry where tips are considered part of your earnings. You will use a variety of strategies including graphing and solving equations algebraically. Unless otherwise indicated, please provide your responses on a separate sheet of paper.</td>
</tr>
</tbody>
</table>
Activity 1: Which One Doesn't Belong?
A. Study and analyze the four graphs below. State at least one reason why each graph does not fit into the same category as the others. Consider the slope (steepness) of the lines, the directions of the lines, and x-intercepts and y-intercepts.
B. Develop a real-life scenario that could be represented by each graph. Use mathematical terms whenever possible.
Activity 2: Comparing Internet Data Plans

Consider the following scenario:

Meghan’s family bought an internet data plan so that she could do her schoolwork from home. The company offers three options for its monthly service:

Option 1: $0.10 per minute
Option 2: $25 per month plus an additional $0.05 per minute
Option 3: $100 per month

Meghan estimates that she will spend about three hours a week on schoolwork plus a little extra, so about 800 minutes per month. Which option should she choose and why?

C. Write an equation for each option using the variable, x, to represent the number of minutes Meghan uses per month.

Option 1: __________________________________________________

Option 2: __________________________________________________

Option 3: __________________________________________________

D. Make an input-output table (see below) for each equation and choose five values for each situation. *Hint: choose easy numbers to work with!

<table>
<thead>
<tr>
<th>Number of minutes (x)</th>
<th>Cost in dollars (y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of minutes (x)</th>
<th>Cost in dollars (y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of minutes (x)</th>
<th>Cost in dollars (y)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
E. Graph all three lines on the same coordinate plane using the input-output tables above. In other words, you should have five ordered pairs, or points, for each line.
Based on your graph, what are three conclusions you can make. (For example, how much would each plan cost if Meghan used 1000 minutes? At what point is one plan a better deal than the other?)

Activity 3: Minimum Wage - Tip vs. No Tips

According to the Illinois Department of Labor ([https://www2.illinois.gov/idol/Laws-Rules/FLS/Pages/minimum-wage-rates-by-year.aspx](https://www2.illinois.gov/idol/Laws-Rules/FLS/Pages/minimum-wage-rates-by-year.aspx)), the minimum wage in Illinois as of 1/1/2020 is as follows:

- $9.25/ hour if the employee doesn’t earn tips
- $5.55/ hour if the employee does earn tips

Some examples of jobs that earn tips include waiter, taxi driver, pizza delivery driver, or a golf caddy. Tips are considered to be a significant part of your earnings and therefore, the wage per hour is much less.

Your task is to compare these two scenarios for a typical 40-hour workweek and assuming that the average tip is 15%. You will use the same steps as we did in Activity 2.

A. Write an equation for each scenario:

   Scenario 1 (for a job that doesn’t earn tips): _______________________________________________

   Scenario 2 (for a job that does earn tips): _______________________________________________

B. Make an input-output table (see below) for each equation and choose five values for each situation.

   Equation for Scenario 1:  
   
   Number of hours (x) | Earning in dollars (y)  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

   Equation for Scenario 2:  
   
   Number of hours (x) | Earning in dollars (y)  
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
C. Graph both lines on the same coordinate plane using the input-output tables above. In other words, you should have five ordered pairs, or points, for each line.
D. Based on your graph, draw a conclusion about the benefits of having a job that earns tips vs.
a job that doesn’t earn tips? Would you rather have a job earning regular minimum wage or
one in which you also earn tips?

Activity 4: Reflection
Discuss the following questions with a family member:

- Why do you think a minimum wage exists?
- Why would the minimum wage in Illinois possibly be different than the minimum wage in other
  states?
- Why do you think there is a tipped minimum wage?
- Do you think you would rather have a job in which you can earn tips? Why or why not?
- What factors should you take into consideration before taking such a job?

Youths under the age of 18 that work less than 650 hours per calendar year make $8/ hour. Do you
think this is fair? Why or why not?

Cross Content Connection:
Do some additional research on minimum wage in Illinois as well as in other states. Write a letter to
your state representative regarding your opinion on the current minimum wage.
# 8th Grade Science Project: Physics of Jousting

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>Total Time 120-130 minutes</th>
</tr>
</thead>
</table>
| **Grade Level Standard(s)** | **MS-PS2-1.** Apply Newton’s Third Law to design a solution to a problem involving the motion of two colliding objects.*  
  **MS-PS2-2.** Plan an investigation to provide evidence that the change in an object’s motion depends on the sum of the forces on the object and the mass of the object. |
| **Caregiver Support Option** | Students may need assistance in having the balls collide in Activities 1 and 2, as well as, releasing the balloons in Optional Activity 5. We also recommend engaging in discussions with your student around project questions. |
| **Materials Needed** | ● Paper or notebook to record notes, observations and reflections  
  ● Writing utensils (e.g., pencil, pen, markers or crayons, etc.)  
  ● 2 balls with the same mass (or other objects if balls are not available)  
  ● 1 ball with a different mass (or other objects if ball is not available)  
  ● A ruler or some type of measurement tool |
| **Question to Explore** | How do forces apply to the sport of jousting? |
| **Student Directions** | This project guide will lead you through multiple activities that will help you explore the science behind **Newton’s Third Law of motion: for every action, there is an equal and opposite reaction.** There are three hands-on activities, which complement the scientific principles you will be reviewing throughout this project. By the end of the project, you will be able to answer the question, “How forces apply to the sport of jousting?”  
  Grab a piece of paper or notebook and a writing utensil and let’s do science! |
Activity 1: Introduction to the Phenomenon & Background Information (15 min.)
[Adapted from: Newsela — All About the Knights of Old]

A. Read the passage below on the history of the sport of jousting.

The Sport of Jousting

Tournaments

In peacetime, when no wars are going on, knights often demonstrated their martial skills in tournaments, which usually took place on the grounds of a castle. Medieval tournaments were like large sporting events today.

The most popular competition in tournaments was the joust. In an area of the grounds called the lists, two knights on horseback would charge each other. Each knight held a wooden lance with a blunted tip. Each would try to break his lance on the body or head of his opponent or try to knock his opponent off his horse. Even though the weapons were blunted, many knights were injured or killed in jousts.

The winner of the joust moved on in the competition and could challenge other knights. The loser had to turn his armor and horse over to the victor. Usually, the victor would then sell the armor and horse back to the loser. In this way, knights could amass a fortune in tournaments.

B. On a piece of paper or in your notebook, write down your initial thoughts on how you think a knight would win a jousting battle.

C. Draw a model explaining your initial ideas about how a knight would win a jousting contest. Label the forces you think play a role in the sport.
Activity 2: Colliding Objects With the Same Mass (30 min.)

A. Design an investigation, step by step, to observe what happens when two balls (or other objects) of the **same mass** collide at the **same speed**. Write your investigation procedure on a piece of paper or in your notebook.

Things to keep in mind while designing your investigation:
- How will you record your data?
- How far apart will you set the balls (or objects)?
- How will you set the balls (or objects) in motion? Are you able to keep the speed consistent?
- What data can you collect after the balls (or objects) have collided?
- How will you measure your data?
- How many trials will you conduct? Will you average the results?
- Do you need to make any revisions to your investigation procedures?

B. Repeat your investigation with the same balls (or objects) colliding at **different speeds**. Record your data. Reminder: for this investigation the balls/objects must have the **same mass**.

C. On your piece of paper or in your notebook, draw and describe the impact of the balls (or objects) and the forces at play.

D. Write down how you think speed would impact a jousting contest? Revise your original model of jousting to include ideas you have learned from this activity.

Activity 3: Colliding Objects With Different Masses (30 min.)

A. Design an investigation, step by step, to observe what happens when two balls (or other objects) of **different masses** collide at the **same speed**.

Things to keep in mind while designing your investigation:
- How will you record your data?
- How far apart will you set the balls (other objects)?
- How will you set the balls (other objects) in motion? Are you able to keep the speed consistent?
- What data can you collect after the balls (other objects) have collided?
- How will you measure your data?
- How many trials will you conduct? Will you average the results?
- Do you need to make any revisions to your investigation procedures?

B. Repeat your investigation with the same balls (or objects) colliding at **different speeds**. Record your data. Reminder: for this investigation the balls/objects must have **different masses**.

C. On your piece of paper or in your notebook, draw and describe the impact of the balls (or objects) and the forces at play.

D. Write down how you think a knight and their horse’s mass would impact a jousting contest? Revise your original model of jousting to include ideas you have learned from this activity.
Activity 4: Let’s Read About It! (25-30 min.)
[Source: Amplify Science, Crash!  Spanish]

A. Read the article, Crash!, and annotate any important ideas about collisions, mass, and speed/velocity.

Crash!
Forces in Collisions
Say you’re in a car driving down the highway at 60 miles per hour, and...SPLAT! Your car hits a bug. It probably seems like all the force of that collision acted on the bug. After all, the bug is splattered across your windshield, but you and the car probably didn’t feel a change. However, not all collisions result in such different results. When two bugs that are about the same size fly into each other, the effect on both bugs is similar: they’re both bumped off course by about the same amount. How can some collisions affect objects the same way (like the two bugs) and other collisions have vastly different effects (like the bug splattered on the car windshield)? The world is full of things running into each other, and what happens as a result of those collisions depends on the physics of force, mass, and velocity. Below, you’ll read about everyday examples of how collisions affect objects around us.

How to Stop a Pool Ball
In a game of pool, also known as billiards, you hit a white cue ball with a long stick called a cue. You want the cue ball to knock other balls, sitting stationary on the pool table, into the pockets on the edges of the table. However, you don’t want the cue ball to follow them into the pockets. Hitting the cue ball can be risky! Whether they know it or not, pool players use physics to their advantage: if they set up the collision just right, the cue ball comes to a complete stop after the collision, while the colored ball starts moving. How does that work? During a collision, both balls experience the same force, but in opposite directions. When a moving object collides in a straight line with an object of the same mass that’s sitting still, both objects experience the same amount of force. However, the motion of the balls changes in different ways because of their initial velocity and the direction of the force on them. The moving object changes its velocity by going from motion to rest, while the still object goes from rest to motion with the same velocity the moving object used to have. Since the force is experienced by both balls, but in different directions, the colored ball moves across the table while the cue ball stops. That gives you the chance to win the game!

When a car hits a bug, both the car and the bug experience the same forces. However, those same forces have a much greater effect on the bug because its mass is so much less than the mass of the car.

When two pool balls collide, both balls experience the same amount of force, but in opposite directions. Because they have the same mass, the ball that is moving stops, while the ball that is sitting still begins to move.
Bump!
If you’ve ever driven a bumper car at a carnival or fair, you’ve already studied your fair share of collisions. After all, bumping into other cars is the whole point of bumper cars—it’s right there in the name! If you and your bumper car bump into a car carrying a friend who’s about the same size as you are, you might expect that both of you would experience equal forces. You have about the same amount of mass and are about the same size, so if you’re both already moving, you bounce away from each other to about the same distance. But what if you bump into somebody with a different mass? Say you bump into your little brother, who has less mass than you do. You bounce back just a little bit, but your brother and his bumper car go zooming across the floor. Would you believe that the forces you experienced during the collision are still exactly the same? They are! Your brother moved far away from you because he has less mass than you do—the amount of force you both experienced was enough to send him flying at high speed. You didn’t travel as far as he did because you have more mass. The effect of that same amount of force was only enough to change the velocity of your mass a small amount.

The distribution of forces in a collision between your car and a bug isn’t so different from the forces in a collision between your bumper car and your brother’s—in both collisions, both objects (or people) experience equal forces. It’s the difference in the masses of the objects or people that makes the effects of the collisions dramatically different. Since the bug is so tiny, the effect of the collision with the windshield is large enough to suddenly change its velocity by a lot—so much that it ends up exploding on the windshield. Nothing so terrible happens to your brother in the bumper car when you run into him, though—your mass and his mass aren’t very different, so the effects of the equal forces your collision produces affect you only slightly differently.
B. Answer the questions below in your journal or on a piece of paper:
   a. What are the effects of the collision forces when objects with different masses collide?
   b. What are the effects of the collision forces when objects of the same mass collide?
   c. Why are the effects of a collision between a bug and a car’s windshield so different from the effects of a collision between two bugs? Create drawings to help you explain your ideas.

Activity 5: Reflection (20-25 min.)

A. Read the article, Medieval Vs. Modern Jousting, by National Geographic.

MEDIEVAL VS MODERN JOUSTING
By Patrick J. Kiger

The basic concept of modern jousting is pretty much the same as when the sport started a millennium ago as training for battle: two armor-clad opponents charge at each other on horseback while wielding wooden lances, with the goal of slamming one’s lance into the opponent’s shield or chest plate.

The high speed collision of wood, man and metal that results was so appealing in the old days that jousting contests continued as popular entertainment for several centuries after the combat methods they simulated had become obsolete (out of date, no longer practiced). And today, as jousting is undergoing a major revival,
those same qualities give it panache as an “extreme” sport, as well as a colorful form of historical reenacting. But while jousting competitions strive for historical authenticity, there also are some significant differences between the medieval sport and the modern one.

Mass and muscular power, for example, are major factors that influence the outcome of a jousting competition, and modern athletes and their steeds (horses) probably have a significant edge (advantage) over their ancient counterparts. Research shows that people in the Middle Ages generally were slightly smaller than today’s people, that may not necessarily have been true of knights, who had better nutrition than the serfs (slaves). (Measurements of Renaissance-era armor in the Metropolitan Museum of Art in New York suggests that its wearers varied tremendously in size; Emperor Ferdinand I of Austria, who stood an estimated six feet four inches and sported a 54-inch chest measurement, was more robust than the average NFL linebacker.) But modern competitors can take advantage of nutritional knowledge and training methods; medieval knights didn’t have the opportunity to bulk up with creatine supplements or Cybex weight-training machines. According to equine historian John Clark, medieval war horses were significantly smaller than today’s horses, and presumably less powerful.

On the other hand, medieval jousting competitions, particularly prior to 1300, were closer to actual warfare than today’s sporting contests, according to John McClelland’s book, Body and Mind: Sport in Europe from the Roman Empire to the Renaissance. What we think of today as jousting—two knights in armor on horseback, charging at each other with lances—sometimes was only the preliminary. The two contestants often continued fighting with swords, axes, pikestaffs, or other weapons, either on horseback or on foot. The specter of grisly injuries and deaths eventually led European nobles to institute more rules and structure. But even so, the contests were far more violent than anything insurance companies would allow today, with competitors receiving additional points for hitting an opponent in the head or for injuring him so that he was unable to continue, according to McClelland.

And if a modern jouster is injured in a competition, he’s got a much better chance at surviving, due to advances in trauma care. In contrast, consider the fate of French King Henri II. When the monarch entered a Renaissance-era jousting tournament in 1559, he had the misfortune to have his opponent’s lance splinter and penetrate his eye, causing a subdural hematoma, in which bleeding builds up between the inner and outer brain membranes. Depending on the severity of the injury, modern doctors might have drilled into the king’s skull to relieve the pressure or created a larger surgical opening to remove a sizable clot. Instead, as this article from the UK’s Science Museum describes, Henri’s physicians cleaned the splinters out of his eye, gave him rhubarb as a laxative, and bled 34 centilitres of blood from his body, a standard practice at the time. None of that worked, of course, and nine days later, Henri was dead, from an injury that a modern athlete might well survive.

B. If jousting were to make a modern day comeback, what could you do to make the sport safer for the athletes? Would you modify the protective gear? The lance? Or another part of the sport? Use evidence from the previous activities to support your idea. Model your proposed changes and label the forces at play.
Optional Extension: Balloon Jousting Rockets (30 mins)

A. Does the position of the lance matter in jousting? On a piece of paper, make a prediction whether you think that lance placement matters in jousting and why it may or may not?

B. Use the balloon rocket investigation to test different lance positions and see their impacts.
   - Fix one end of the string to a stable surface, like a chair or door knob.
   - Thread the string through two straws.
   - Fix the other end of the string to a stable surface, like a chair or door knob. *Make sure the string is pulled tight*
   - Inflate the balloons, one at a time, and use a paper clip or binder clip to seal the opening.
   - Tape the balloon to the straw.
   - Tape a toothpick or other item to the balloon to act like the lance.
   - Release the balloons at the same time.
   - Observe and record the data.

C. On your piece of paper, model (draw, label, and write) the impact and the forces at play.

D. Write down how you think the position of a knight’s lance would impact a jousting contest? Revise your original model of jousting to include ideas you have learned from this activity.

Cross Content Connection:
- Social Science:
  - SS.H.1.6-8.MdC: Analyze connections among events and developments in broader historical contexts.

Additional Resources:
National Geographic: Knights of Mayhem:
8th Grade Social Science Project: Creating A ‘How To’ Manual

<table>
<thead>
<tr>
<th>Estimated Time</th>
<th>Total Time 120-130 minutes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Grade Level Standard(s)</th>
<th>SS.IS.3.6-8: Determine sources representing multiple points of view that will assist in organizing a research plan.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SS.IS.5.6-8.MdC- Identify evidence from multiple sources to support claims, noting its limitations.</td>
</tr>
<tr>
<td></td>
<td>SS.IS.6.6-8.MdC- Construct explanations using reasoning, correct sequence, examples and details, while acknowledging their strengths and weaknesses.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Caregiver Support Option</th>
<th>Encourage your student to revise their work. Provide feedback on the final product that your student creates. Celebrate your student’s efforts!</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Materials Needed</th>
<th>Notebook/journal, pen/pencil; choose materials to create final project</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Question to Explore</th>
<th>How do people and communities respond to disasters? What are effective ways to cope with disasters?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Directions</td>
<td>The following lesson will guide you through different strategies and procedures that have been used to manage disasters. You will be asked to analyze, compare, and contrast a variety of sources. The final task in this project will require you to create a ‘How To’ guide to help others cope with the current Coronavirus quarantine.</td>
</tr>
</tbody>
</table>

Activity 1: Why social distancing?

A. Everybody has to overcome adversity in their lives. Think about a time or times that you were faced with a conflict or a disaster. What strategies and techniques did you use to overcome that conflict or disaster?
   ○ Open your notebook and write 5 strategies that you have used in the past to cope with a conflict or disaster.
   ○ What questions do you have about how people are coping now or have coped with other disasters in the past?
   ○ Then, interview one or more family members and record strategies they use to cope with disasters. This information will help you complete the final project.

Keep these strategies in mind as you analyze the sources that follow in this packet. You will be analyzing the ways in which governments and communities responded to the Ebola outbreak of 2019 and the COVID-19 (Coronavirus) outbreak of 2020.
   ○ The final task in this packet will be for you to create a ‘How To’ guide to help others cope with challenges and disasters.

B. Everyone from the Mayor of Chicago to your favorite athletes and celebrities are asking us to
keep a six-foot distance between ourselves and others. But, why?
○ Use your notebook to reflect on what you already know about social distancing. What does this term mean? How could social distancing help to prevent the spread of Coronavirus?

C. Look at Source A: Coronavirus Chain of Transmission (the graph below), and answer the following questions in your notebook-
○ What do you notice? If you make a claim, write what you noticed from the graph that supports your claim.
○ What do you wonder? What are you curious about that comes from what you notice in the graphs? Write 2-3 questions that you would like to have answered.
○ What’s going on in this graph? Imagine you have to include this graph on the front page of a newspaper or on a social media page. Write a catchy headline that captures the graph's main idea.
○ How have you been coping with social distancing? How has it been challenging for you? What are other ways you, your family, and your community are coping with this pandemic?

Source A: Coronavirus Chain of Transmission - What’s Going On in This Graph? (Chart and questions adapted from the New York Times Learning Network, published March 26, 2020, updated April 3, 2020.) This source provides you with visual representations of how social distancing impacts the spread of the Coronavirus.

Activity 2: Crisis comparison and contrast
A. As you might remember, there was an outbreak of Ebola in the Congo in 2019. Read Source B, After 1,600 deaths, the WHO officially declares Ebola crisis in Congo below and annotate the ways in which the Congolese Government responded to the outbreak.

Source B: After 1,600 deaths, WHO officially declares Ebola crisis in Congo
By Associated Press, adapted by Newsela staff, Published 07/22/2019
https://newsela.com/read/ebola-global-crisis/id/54332/

Image 1. A health worker wearing a protective suit enters a patient's isolation pod at a treatment center in Beni, Congo, July 13, 2019. Photo by: Jerome Delay/AP Photo

GENEVA, Switzerland — The deadly Ebola outbreak in Congo is now an international health emergency. Congo is a country in Central Africa. The World Health Organization (WHO) made this announcement on July 17.

The emergency was declared after a case of the deadly disease was confirmed in Goma, a city of 2 million people. Ebola is a rare disease that spreads through contact with infected body fluids. Sick people usually have a fever, stomach pain and internal bleeding. Often, people are unable to get better.

A WHO expert committee declined three previous times to advise the United Nations health agency to make the emergency declaration for this outbreak. Other experts say the disease has long met the required conditions. More than 1,600 people have died since August 2018 in the second-deadliest Ebola outbreak ever, which is unfolding in a region described as a war zone.

Emergency Declared After Ebola Patient's Death
A declaration of a global health emergency often brings greater international attention and aid. It also brings concerns that nervous governments might overreact with border closures.

Image 2. The Ebola outbreak spread in mid-July to Goma, a city of more than 2 million people in Congo near the border with Rwanda. Photo by: AP

The declaration comes days after a single case was confirmed in Goma, the city with an international airport. Also, a sick Congolese fish trader traveled to Uganda and back — and later died of Ebola.

The risk of regional spread remains high, WHO chief Tedros Adhanom Ghebreyesus said after the announcement in Geneva, Switzerland. However, the risk outside the region remains low.

Ghebreyesus insisted the declaration wasn’t made to raise more money. Still, WHO estimated “hundreds of millions” of dollars would be needed to stop the epidemic, or widespread sickness.

Dr. Joanne Liu is president of Doctors Without Borders. The international group of medical professionals provides help in difficult areas. Liu hoped the emergency designation would improve Ebola response efforts.

“The reality check is that a year into the epidemic, it’s still not under control, and we are not where we should be,” she said. “We cannot keep doing the same thing and expect different results.”

Liu said vaccination plans should be broadened. More efforts should be made to build trust within communities as well, she believed.

The U.S. Agency for International Development (USAID) applauded the WHO’s decision and said USAID officials would “continue to scale up lifesaving support” to end the outbreak.

Questions Over Delayed Declaration

This is the fifth such declaration in history. Previous emergencies were declared for the devastating...
2014-16 Ebola outbreak in West Africa that killed more than 11,000 people. The others were the emergence of Zika in the Americas, the swine flu disease and polio.

WHO defines a global emergency as an out-of-the-ordinary event that constitutes a risk to other countries. It also requires a coordinated international response. In June, the outbreak spilled across the border for the first time when a family brought the virus into Uganda after attending the burial in Congo of an infected relative. Even then, the expert committee advised against a declaration.

Alexandra Phelan is a global health expert at Georgetown University Law Center. She said the July 17 declaration was long overdue.

"This essentially serves as a call to the international community that they have to step up appropriate financial and technical support," Phelan said. Still, she warned that countries should be cautious about creating travel or trade restrictions.

Such restrictions "would actually restrict the flow of goods and health care workers into affected countries," she said. Future emergency declarations might be perceived as punishment. They "might result in other countries not reporting outbreaks in the future, which puts us all at greater risk."

WHO had been heavily criticized for its slow response to the West Africa outbreak. The global emergency wasn't declared until the virus had spread explosively in three countries and nearly 1,000 people were dead. Internal documents later showed WHO held off partly out of fear a declaration would anger the countries involved and hurt their economies.

The July 17 announcement sparked fear in eastern Congo. Many there do business across borders and travel overseas.

"I am vaccinated and I protect myself against Ebola," said Zoe Kibwana, a 46-year-old shoe salesman who does business in Uganda. Kibwana said closing Congo's borders would handicap business.

Health Workers Struggling To Contain Outbreak

The current outbreak is spreading in a turbulent Congo border region. Dozens of rebel groups are active there and Ebola hadn't been experienced there before. Efforts to contain the virus have been hurt by people who doubt the efforts of medical workers, causing deadly attacks on health workers. Some infected people have purposely evaded health authorities.

The pastor who brought Ebola to Goma used fake names to get into the city, Congolese officials said. WHO said the man had died and health workers were scrambling to trace many people he contacted.

Doctors say the outbreak is clearly taking a turn for the worse. The spread is in spite of advances
that include using an experimental but effective Ebola vaccine for many who are infected.

Dr. Maurice Kakule was one of the first people to survive the current outbreak. He fell ill while treating a woman last July.

"What is clear is that Ebola is an emergency because the epidemic persists despite every possible effort to educate people," he said.

B. After reading the article, respond to the following question in your notebook. Be sure to cite text evidence in your response.
   ○ How can declaring a health emergency have positive and negative consequences?

C. Now look at Source C: Photo from Ebola Response in the Democratic Republic of Congo below and answer the following questions in your notebook:
   ○ What are the people doing in the photo?
   ○ How do you think the people are feeling at that moment in the photo? What evidence from the photo supports your response?
   ○ Who took the photo? What do you think is the purpose of capturing this moment?
   ○ Why do you think the Congolese Government held community sessions in response to the Ebola outbreak?
   ○ How could holding community sessions help to manage the spread of the Ebola virus?
   ○ Describe how building a stronger sense of community could help people cope with a disaster such as Ebola, or the current Coronavirus pandemic.

Source C: Photo from Ebola Response in the Democratic Republic of Congo

The image [on the previous page] shows a community information session in Kalunguta,
Democratic Republic of the Congo. These sessions were held throughout the country to raise awareness and build community to curb the spread of the Ebola virus.


D. Governor of Illinois, JB Pritzker has provided some suggestions about ways that Chicago residents can help with the Coronavirus outbreak. Read Source D: Here Are Ways To Help The Chicago Region Grapple With COVID-19 below and annotate the different ways that Chicago residents can help others in need.

Source D: Here Are Ways To Help The Chicago Region Grapple With COVID-19
By Natalie Moore, WBEZ Chicago, March 16, 2020

Illinois Gov. JB Pritzker is calling on residents to not hoard food but also help others in need as the state grapples with social distancing amid COVID-19.

"Please do not hoard food. Buy what you need, but please be reasonable. Think of your friends and your neighbors. There is enough food to go around, but we need people to not be selfish," Pritzker said during his daily press conference on Sunday.

The governor also encouraged healthy individuals, who are eligible, to donate blood and platelets with the American Red Cross as soon as possible.

"A blood shortage could impact patients who need surgery, victims of car accidents and other emergencies, or patients suffering from cancer," Pritzker said." One of the most important things that you can do, to ensure that we don't have another health care crisis on top of the Coronavirus, is to give blood."

Donating blood is one of a number of ways people in the Chicago area can help as the region grapples with the spread of the Coronavirus.

The Greater Chicago Food Depository said it is in touch with state and city officials to coordinate a response to provide food for families affected by school closings. On Saturday, volunteers in its warehouse packed thousands of emergency food boxes in preparation.

"We know the economic impact of COVID-19 will dramatically increase the need for food assistance across our community. The Food Depository is actively preparing to meet this demand,
but we need your help,” the food bank said Sunday, in an email asking for donations.

The Food Depository buys food at cost so the money helps them more than food donations. To volunteer, go to [https://www.chicagosfoodbank.org/volunteer/](https://www.chicagosfoodbank.org/volunteer/) and check out the calendar for availability. To find the food pantry nearest you, visit [https://www.chicagosfoodbank.org/find-food/](https://www.chicagosfoodbank.org/find-food/).

Mission of Our Lady of the Angels is also taking food donations. The mission provides food to about 1,000 families each month. The mission is asking individuals to call before dropping off food donations in person at its West Side location. People can also buy food for the mission’s pantry on the Amazon wish list.

My Block My Hood My City has launched a campaign to receive and distribute donations of hand sanitizers, health supplements, toiletries, and food to Chicago’s elderly. Individuals can offer donations and seniors can request assistance by visiting the group’s website.

On Monday, United Way of Metro Chicago, Chicago Community Trust and the City of Chicago are launching a Chicago COVID Response Fund.

It’s not just big institutions stepping up to help. Chicago-based activist Kelly Hayes created a "Chicago COVID-19 Mutual Aid Volunteer Sign-up" Google document. She is sending names of people looking for volunteer opportunities to Chicago groups.

Brave Space Alliance, a South Side-based LGBTQ organization, has new online and mutual aid programming in response to COVID-19. It will have an online drop-in center to continue programming and a crisis pantry to deliver food and supplies. The food pantry will prioritize people who are sick, disabled, quarantined without pay, elderly, undocumented, black, brown or indigenous people. Anyone interested in volunteering can fill out this form.

This list is circulating with names of available childcare workers in Chicago. People who need pet assistance can get help from Rescue Chicago.

Artists and performers are struggling as shows are shut down. This independent group of artists has created a Chicago Artists Relief Fund to help those suffering from financial instability. Similarly, there is a Chicago Hospitality Employee Relief Guide with several links for individuals to contribute to employee funds and to purchase online gift cards.

**Natalie Moore** is a reporter on WBEZ’s Race, Class and Communities desk. You can follow her on Twitter at [@natalieymoore](https://twitter.com/natalieymoore).

---

E. After reading the article, answer the following question in your notebook using text evidence:

○ What are some potential positive and negative consequences of the suggestions made by Governor JB Pritzker?
F. Compare and contrast the government responses to each outbreak by recreating the chart below in your notebook. Similarities will go in the middle column and differences will be recorded in the outer columns.

<table>
<thead>
<tr>
<th>Ebola outbreak (Source B &amp; C)</th>
<th>Similarities</th>
<th>Coronavirus outbreak (Source D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

G. Keeping in mind everything that you have read about government responses to disasters, answer the question below in your notebook.
- How are the strategies that you wrote about in Activity 1 similar to and different from those used by the governments that you read about?
- How do you think the government (and organization-led) efforts have helped people cope with these outbreaks?

H. Read and annotate Source E: Coping Mechanisms and Source F: Teens Are Using TikTok to Cope with Coronavirus Fears excerpts below to examine adaptive (positive) coping mechanisms. Then, answer in your notebook:
- How do people cope in stressful situations?
- What connections can you make with any of the articles or charts that you have already analyzed?

Source E: Excerpt from COPING MECHANISMS

Work, school, money — these are some of the most common stressors in everyday life. The effects of stress on a person’s mental and emotional health may vary, but without the proper tools to cope, stress can have serious consequences. It can even manifest physically, causing pain and high blood pressure. It’s important to learn how to adapt to, minimize, or overcome stressful situations, but some coping mechanisms are more advantageous than others. How do you deal with stress? As you read, identify the benefits and drawbacks to certain coping methods.

People have many different strategies for dealing with stressful situations — some helpful, and some not so helpful. Psychologists call these “coping mechanisms.” A coping mechanism is a method that a person uses to deal with stress or conflict. It is a way for a person to “master” or minimize the effect of a stressful situation.

ADAPTIVE COPING MECHANISMS
Adaptive coping mechanisms are positive ways people alleviate stress.

Anticipation
Anticipation is a way to reduce the stress of a difficult challenge by anticipating what it will be like and preparing for how to cope with it. Some literary critics believe that this is the reason why
people enjoy reading about, watching, and analyzing tragedies. Thinking about tragic events helps people prepare for unforeseen difficult circumstances.

Seeking Support
Finding emotional support from others or asking for help can be an instrumental way of maintaining emotional health during a difficult period. The brain’s response to worry enhances the effectiveness of this strategy. Stress releases neurohormones that strengthen your ability to seek emotional support by increasing your empathy and encouraging you to look for close social bonds.

Problem-Solving
Problem-solving focuses on locating the source of the problem and determining solutions, or action steps. Developing a plan can help lessen stress that comes from the unknown. Problem-solving can be strengthened by creativity, and it is a useful response to both simple and complex issues. A strong problem-solving process involves defining the issue, brainstorming alternatives, evaluating and choosing between these alternatives, and implementing solutions.

Humor
People of all ages and cultures respond to humor. Studies show people who laugh and smile often live longer and develop healthier relationships. Humor is also a common coping mechanism because it can diffuse the tension of a stressful situation. However, when humor is overused as a coping mechanism, it can lead to denial or avoidance...
Source F: Teens Are Using TikTok to Cope with Coronavirus Fears
Comedy is a way of coping. But be careful — it’s not always productive.
By Paige Skinner, Teen Vogue, MARCH 26, 2020

Turn on the TV and suddenly you’re flooded with serious news alerts about the Coronavirus, cancellations, and isolation. It’s easy to feel like you’re watching the end of the world. But if you open TikTok, the landscape is quite different. You’ll see a wave of Gen Z creators dancing to “It’s Corona Time” or making short comedy sketches poking fun at the seriousness of the contagious virus. For the young people on TikTok, making jokes about that end-of-the-world feeling seems to be a way of coping with the scary, uncertain times. …

“You can completely ignore the situation and laugh about other things, but I think there’s a satirical pleasure to look at something and make fun of it,” Nicko Manning, a 19-year-old college freshman who created a TikTok about Coronavirus “hopping off the plane at LAX,” a play on Miley Cyrus’s “Party in the USA,” tells Teen Vogue. “It helps everyone relieve the seriousness and magnitude of the situation. That’s not saying we shouldn’t take it seriously, but it’s saying there can be a positive effect using humor, which we’ve seen over the history of entertainment.”

Not all TikToks are about doomsday. Some are informative. High-schooler Erik Guardado created the popular “It’s Corona Time” mix that has been viewed hundreds of thousands of times on TikTok. He says he created the sound in January on the app CueCut as a riff on the popular “It’s Modelo Time” meme. When you search the sound on TikTok, several informative TikToks come up, telling users to wash their hands and not touch their face.

“I feel like a lot of people are learning from it,” Erik says. “At the time, it wasn’t a pandemic...but now it’s all over the place. I stopped joking about it, but other people are still doing it.”

As the pandemic claims more and more lives, TikTokers were quick to say they aren’t taking it lightly, despite the jokes. Still, Barreca [Gina Barreca, a professor of English at the University of Connecticut and an author and expert on gender and humor] says it’s OK to laugh with others.

Activity 3: ‘How To’ Manual for Coping with These Uncertain Times
A. Your final task is to create a ‘How To’ instruction manual to help yourself and those around you cope with the quarantine that we are under as a result of the Coronavirus.
   ○ You should reflect on and use information from the strategies from Activity 1, the sources, the chart you created, to support a claim to the essential question: What are effective ways to cope with disasters?
   ○ Your list is unique, so you are free to choose any format to present your information.
   Some examples are provided below to get you started:
   i. Do you love to write? Maybe you could create your ‘How To’ guide in the form of a poem or a short story.
   ii. Are you a performer? A skit or song might be an engaging way to present your information.
   iii. Any artists out there? You could create a cartoon, poster, or collage.
**Remember, this is your manual, so be creative!**

B. Finally, share this project with your family and friends! Your resource could provide some comfort to those around you.

Activity 4: Reflection

A. You should be proud of what you’ve accomplished and your work is sure to help others cope with these uncertain times. Use your notebook to reflect on the following questions:

- What did I learn during this investigation? (5-7 sentences)
- How did completing these activities change my perspective on the Coronavirus and quarantine? (5-7 sentences)

Cross Content Connection:
Social Science, Science & Literacy - Students have been asked to analyze, compare, and contrast a variety of sources to gain a better understanding of how governments have managed different disease outbreaks. This work has asked students to understand the ways that diseases spread by citing evidence to support claims. Additionally, students were required to synthesize their learning and create a unique product to help others cope with the current quarantine resulting from the COVID-19 outbreak.