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.

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6th Grade Literacy Project: Memoirs and Informational Texts

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<td>Grade Level</td>
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<tr>
<td>Standard(s)</td>
<td>RI.6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.</td>
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<td></td>
<td>RI.6.2 Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.</td>
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<td>RI.6.9 Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).</td>
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<td></td>
<td>W.6.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)</td>
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<tr>
<td>Caregiver Support</td>
<td>Discuss with your child the importance of memoirs and their importance in history. Optional: Assist in writing, revising, and editing memoir/essay</td>
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<td>Materials Needed</td>
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<tr>
<td>Question to Explore</td>
<td>• What is a memoir? How does it compare and contrast with an autobiography?</td>
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<td></td>
<td>• Why is it important to be able to express a personal memory?</td>
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<td></td>
<td>• How do memoirs play a part in history?</td>
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<tr>
<td>Student Directions</td>
<td>This project will guide you towards reflecting on the importance of memoirs and the role they play in history. You will review the components of a memoir and an autobiography, and create a frayer model for key vocabulary words. To create a deeper learning around memoirs, you will read a memoir titled, “The Scholarship Jacket” and a paired informational text titled, “Mexican Migrant Workers in the Twentieth Century”. As a culmination to the project, you will create your own memoir and answer the essential question in an essay format.</td>
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Activity 1: What is a memoir?
An autobiography gives an account of a person’s whole life from beginning to end, usually chronologically. It is based in fact. Memoirs are also written in first person, but they tell the story of a part of a person’s life.

A Brief Note on What Historians Believe: Some historians believe that memoirs play an important role.
in history because they provide a person’s unique perspective (point of view) to an historical event that is occurring. Other historians believe that memoirs are not factually accurate and are filled with biases. As we move forward in this learning, I want you to consider the connection of memoirs and history.

A. How might reading memoirs help us understand history? In your notebook, give two reasons why. As you explore the texts, keep these two answers in mind.

B. How important is it to tell history from various perspectives (points of view)? Explain.

Activity 2: Read Paired Texts
Read “The Scholarship Jacket” and annotate as you read using the annotation guide below.

Remember when we annotate, we “talk to the text.” This means your thoughts should be written in the margin for each annotation mark you make. You may want to note
- Something interesting - !
- Questions you have - ?
- Important ideas - !!
- Connections ← →
- Words you find interesting (make a box around them)
- Word you don’t know (circle)

As you read this story, take notes on the descriptive language and word choice that help reveal Marta’s point of view.

THE SCHOLARSHIP JACKET by Marta Salinas1986

“The Scholarship Jacket” is one of the best-known stories by Mexican American author Marta Salinas. It describes a difficult situation that Marta, called “Martha” by her teacher, is faced with after she earns excellent grades in school.[1]

The small Texas school that I went to had a tradition carried out every year during the eighth-grade graduation: a beautiful gold and green jacket (the school colors) was awarded to the class valedictorian, the student who had maintained the highest grades for eight years. The scholarship jacket had a big gold S on the left front side and your name written in gold letters on the pocket.

My oldest sister, Rosie, had won the jacket a few years back, and I fully expected to also. I was fourteen and in the eighth grade. I had been a straight A student since the first grade and this last year had looked forward very much to owning that jacket. My father was a farm laborer who couldn’t earn enough money to feed eight children, so when I was six I was given to my grandparents to raise. We couldn’t participate in sports at school because there were registration fees, uniform costs, and trips out of town; so, even though our family was quite agile and athletic there would never be a school sports jacket for us. This one, the scholarship jacket, was our only chance.

In May, close to graduation, spring fever had struck as usual with a vengeance. No one paid any attention in class; instead we stared out the windows and at each other, wanting to speed up the last few weeks of school. I despaired every time I looked in the mirror. Pencil thin, not a curve anywhere. I was called “beanpole” and “string bean,” and I knew that’s what I looked like. A flat
chest, no hips, and a brain; that’s what I had. That really wasn’t much for a fourteen-year-old to work with, I thought, as I absent-mindedly wandered from my history class to the gym. Another hour of sweating in basketball and displaying my toothpick legs was coming up. Then I remembered my P.E. shorts were still in a bag under my desk where I’d forgotten them. I had to walk all the way back and get them. Coach Thompson was a real bear if someone wasn’t dressed for P.E. She had said I was a good forward and even tried to talk Grandma into letting me join the team once. Of course Grandma said no.

I was almost back at my classroom door when I heard voices raised in anger as if in some sort of argument. I stopped. I didn’t mean to eavesdrop, I just hesitated, not knowing what to do. I needed those shorts and I was going to be late, but I didn’t want to interrupt an argument between my teachers. I recognized the voices; Mr. Schmidt, my history teacher, and Mr. Boone, my math teacher. They seemed to be arguing about me. I couldn’t believe it. I still remember the feeling of shock that rooted me flat against the wall as if I were trying to blend in with the graffiti written there.

“I refuse to do it! I don’t care who her father is, her grades don’t even begin to compare to Martha’s. I won’t lie or falsify records. Martha has a straight A-plus average and you know it.” That was Mr. Schmidt and he sounded very angry. Mr. Boone’s voice sounded calm and quiet.

“Look. Joann’s father is not only on the Board, he owns the only store in town: we could say it was a close tie and—”

The pounding in my ears drowned out the rest of the words, only a word here and there filtered through. “… Martha is Mexican … resign … won’t do it…” Mr. Schmidt came rushing out and luckily for me went down the opposite way toward the auditorium, so he didn’t see me. Shaking, I waited a few minutes and then went in and grabbed my bag and fled from the room. Mr. Boone looked up when I came in but didn’t say anything. To this day I don’t remember if I got in trouble in P.E. for being late or how I made it through the rest of the afternoon. I went home very sad and cried into my pillow that night so Grandmother wouldn’t hear me. It seemed a cruel coincidence that I had overheard that conversation.

The next day when the principal called me into his office I knew what it would be about. He looked uncomfortable and unhappy. I decided I wasn’t going to make it any easier for him, so I looked him straight in the eyes. He looked away and fidgeted with the papers on his desk.

“Martha,” he said, “there’s been a change in policy this year regarding the scholarship jacket. As you know, it has always been free.” He cleared his throat and continued. “This year the Board has decided to charge fifteen dollars, which still won’t cover the complete cost of the jacket.”

I stared at him in shock, and a small sound of dismay escaped my throat. I hadn’t expected this. He still avoided looking in my eyes.

“So if you are unable to pay the fifteen dollars for the jacket it will be given to the next one in line.” I didn’t need to ask who that was.

Standing with all the dignity I could muster, I said, “I’ll speak to my grandfather about it, sir, and let
you know tomorrow.’ I cried on the walk home from the bus stop. The dirt road was a quarter mile from the highway, so by the time I got home, my eyes were red and puffy.

“Where’s Grandpa?” I asked Grandma, looking down at the floor so she wouldn’t ask me why I’d been crying. She was sewing on a quilt as usual and didn’t look up.

“I think he’s out back working in the bean field.”

I went outside and looked out at the fields. There he was. I could see him walking between the rows, his body bent over the little plants, hoe in hand. I walked slowly out to him, trying to think how I could best ask him for the money. There was a cool breeze blowing and a sweet smell of mesquite fruit in the air, but I didn’t appreciate it. I kicked at a dirt clod. I wanted that jacket so much. It was more than just being a valedictorian and giving a little thank you speech for the jacket on graduation night. It represented eight years of hard work and expectation. I knew I had to be honest with Grandpa; it was my only chance. He saw my shadow and looked up.

He waited for me to speak. I cleared my throat nervously and clasped my hands behind my back so he wouldn’t see them shaking. “Grandpa, I have a big favor to ask you,” I said in Spanish, the only language he knew. He still waited silently. I tried again. “Grandpa, this year the principal said the scholarship jacket is not going to be free. It’s going to cost fifteen dollars, and I have to take the money in tomorrow, otherwise it’ll be given to someone else.” The last words came out in an eager rush. Grandpa straightened up tiredly and leaned his chin on the hoe handle. He looked out over the field that was filled with the tiny green bean plants. I waited, desperately hoping he’d say I could have the money.

He turned to me and asked quietly, “What does a scholarship jacket mean?”

I answered quickly; maybe there was a chance. “It means you’ve earned it by having the highest grades for eight years and that’s why they’re giving it to you.” Too late I realized the significance of my words. Grandpa knew that I understood it was not a matter of money. It wasn’t that. He went back to hoeing the weeds that sprang up between the delicate little bean plants. It was a time-consuming job; sometimes the small shoots were right next to each other. Finally he spoke again as I turned to leave, crying.

“Then if you pay for it, Marta, it’s not a scholarship jacket, is it? Tell your principal I will not pay the fifteen dollars.”

I walked back to the house and locked myself in the bathroom for a long time. I was angry with Grandfather even though I knew he was right, and I was angry with the Board, whoever they were. Why did they have to change the rules just when it was my turn to win the jacket? Those were the days of belief and innocence.

It was a very sad and withdrawn girl who dragged into the principal’s office the next day. This time he did look me in the eyes.
“What did your grandfather say?”

I sat very straight in my chair.

“He said to tell you he won’t pay the fifteen dollars.”

The principal muttered something I couldn’t understand under his breath and walked over to the window. He stood looking out at something outside. He looked bigger than usual when he stood up; he was a tall, gaunt man with gray hair, and I watched the back of his head while I waited for him to speak.

“Why?” he finally asked. “Your grandfather has the money. He owns a two-hundred acre ranch.”

I looked at him, forcing my eyes to stay dry. “I know, sir, but he said if I had to pay for it, then it wouldn’t be a scholarship jacket.” I stood up to leave. “I guess you’ll just have to give it to Joann.” I hadn’t meant to say that, it had just slipped out. I was almost to the door when he stopped me.

“Martha—wait.”

I turned and looked at him, waiting. What did he want now? I could feel my heart pounding loudly in my chest and see my blouse fluttering where my breasts should have been. Something bitter and vile tasting was coming up in my mouth; I was afraid I was going to be sick. I didn’t need any sympathy speeches. He sighed loudly and went back to his big desk. He watched me, biting his lip.

“Okay. We’ll make an exception in your case. I’ll tell the Board, you’ll get your jacket.”

I could hardly believe my ears. I spoke in a trembling rush. “Oh, thank you, sir!” Suddenly I felt great. I didn’t know about adrenaline in those days, but I knew something was pumping through me, making me feel as tall as the sky. I wanted to yell, jump, run the mile, do something. I ran out so I could cry in the hall where there was no one to see me.

At the end of the day, Mr. Schmidt winked at me and said, “I hear you’re getting the scholarship jacket this year.”

His face looked as happy and innocent as a baby’s, but I knew better. Without answering I gave him a quick hug and ran to the bus. I cried on the walk home again, but this time because I was so happy. I couldn’t wait to tell Grandpa and ran straight to the field. I joined him in the row where he was working, and without saying anything I crouched down and started pulling up the weeds with my hands. Grandpa worked alongside me for a few minutes, and he didn’t ask what had happened. After I had a little pile of weeds between the rows, I stood up and faced him.

“The principal said he’s making an exception for me, Grandpa, and I’m getting the jacket after all. That’s after I told him what you said.”

Grandpa didn’t say anything; he just gave me a pat on the shoulder and a smile. He pulled out the crumpled red handkerchief that he always carried in his back pocket and wiped the sweat off his forehead.

“Better go see if your grandmother needs any help with supper.”

I gave him a big grin. He didn’t fool me. I skipped and ran back to the house whistling some silly
Answer in your reading notebook or on a separate sheet of paper.

A. How do Marta’s feelings change over the course of the story? Cite evidence from at least 3 examples in the story.
B. How does the principal’s point of view towards Marta change throughout the story? Cite evidence from the story in your response.
C. This story is from Marta’s point of view and is about her experience. However, any reader can learn from this story. What is the theme of this memoir? What do you, as a reader, learn from reading this?

Read the next informational text on migrant workers. Annotate the text as you read using the same chart shown above. Remember to “talk to the text.”

MEXICAN MIGRANT WORKERS IN THE 20TH CENTURY by Jessica McBurney 2016

The United States is a nation made up of people with many different backgrounds. Since Mexico is a neighboring country, many of these people are Mexican or Mexican-American. This informational text describes how many immigrants and Mexican-Americans worked on farms for low pay and little respect throughout the 20th century, and even today.

Have you ever had to move to a different town before? Maybe you just moved somewhere new, or maybe you have always lived in the same place. But can you imagine having to move to a new place every few months? This is what Mexican migrant farm workers had to do in California in the 1900s. Because they worked in fields and farms, they had to move several times a year, every time there was a new crop to harvest.

WHO WORKED IN THE FIELDS? Many people of Mexican descent had lived in California for a long time before it first became an American state in 1850. The territory used to belong to Mexico, and many residents did not leave when the United States bought the land. However, even more Mexican immigrants crossed the border when Mexico experienced a revolution in 1910. The revolution put some in danger and they fled for safety. The revolution also caused an economic downturn in Mexico, and many workers realized they could earn more money in the United States than they could in their home country.

Workers continued to move to California and other southwest states throughout the 1920s. The U.S. government set up a program to give immigrants short-term work visas. The program was designed for workers to come to the U.S. for a short time, just long enough to earn money to send back to their families. Most workers relied on these visas to stay in the country, but some stayed long enough to earn their citizenship and have children.

When the Great Depression hit the U.S. in the 1930s, unemployment across the country rose to 25%. Many white Americans grew upset, believing that immigrants were “taking” their jobs. They blamed the Mexican workers for the fact that so many other people did not have jobs. Local and even state governments began to deport anyone who looked Mexican. Police did not
bother to check if the people they removed were citizens.

LIFE AS A MIGRATORY WORKER The workers who remained in the states often became migratory workers. They had to move around as different crops came into season, so they could be employed all year round. Life as a migratory worker in the 1930s was hard. Even though agriculture in California depended on migratory workers, they made the lowest wages in the country. Farm owners did not treat their laborers with respect. Most farms did not have bathroom facilities or water for the workers to drink, and there was no place to wash dangerous pesticide chemicals off their hands. Families moved too much and did not make enough money to own a house, so they usually stayed in makeshift homes right next to the fields. They built these houses out of whatever they could find, including scrap wood, cardboard, canvas, or tin cans. Although it was technically illegal, some children had to work in the fields alongside their parents for long hours. Even when children could go to school during the days, they had to change schools so often that it was very difficult to learn.

GOVERNMENT INTERVENTION The U.S. government started programs to help families hurt by the Great Depression, but few of these programs applied to agricultural workers. The one program that brought some assistance was the Farm Security Administration, which set up living camps and provided food and medicine to migratory workers. They separated Mexican and Mexican-American workers from whites because they did not want racial tensions to cause problems in the camps. A few Mexican workers tried to organize strikes and protests during the Depression, but they did not succeed in improving working or living conditions. After the Depression ended, life did not get much easier for the migratory laborers. However, change began when Cesar Chavez first created a union for farm workers in 1965: the National Farm Workers Association. Chavez and the NFWA wanted higher wages and better working conditions for all laborers, Mexican and white alike.

REFORM AT LAST One of Chavez’s most famous campaigns was his strike and boycott against grape growers in California. It began in 1965 when fruit companies refused to meet the demands of their workers. The workers went on strike and would not agree to keep working until they were paid better. To raise awareness and pressure the fruit companies, Chavez organized a 300-mile march to Sacramento, the capital of California. He also encouraged consumers around the country not to buy grapes. Finally, in 1970, the grape growers agreed to give their workers better wages. Today, Mexican immigrants or people of Mexican descent still make up a large majority of farm workers. In 2005, a survey found that 53% of these workers were undocumented workers, 21% were permanent residents, and 25% were full U.S. citizens. Most farm workers still make less than $10,000 per year, especially since many are paid per bucket of fruit they pick, rather than per hour. Despite some improvements from the 1930s, being a farm worker is still a dangerous and difficult job. Many organizations and politicians are still working to improve the lives of migrant laborers across the country.

Source: Commonlit.com:

Answer the following comprehension questions in your reading notebook or on a separate sheet of paper:

D. Agriculture is important because everyone needs to eat, and yet migrant workers were paid
low wages for decades (and in many cases, they still are). In your opinion, is this fair? Why or why not?
E. How did change eventually come about for migrant workers in the United States? To create change, is the government, unions (or groups of people together in general), or a strong leader important? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

Activity 3: Comparing Memoir and Informational Texts
Write a short answer response to each question on notebook paper.
A. In the memoir you read, Marta shares a memory she has as the granddaughter of migrant workers. How does Marta’s experience relate to the informational piece you read on migrant workers? Cite textual evidence.
B. Does the memoir help you understand the struggles of migrant workers better than the informational text? Explain your reasoning.
C. What role do memoirs play in history? Should memoirs be a part of history? Explain.

Activity 4: Reflection
Answer the following questions on notebook paper.
A. How can writing a memoir during our current situation with COVID-19 be important to telling this story as a part of history one day?
B. Why is it important for individual people to write about their lives?

Cross Content Connection:
● **Art:** Create a symbol for the theme of the two texts you read. Write a brief description of your symbol and how it relates to the texts.
● **Social Studies:** Imagine you are a migrant worker from the informational text, “Mexican Migrant Workers in the 20th Century” and rewrite the story in the first person point of view. Be sure to include facts from the text.
● **Writing:** Write your own memoir or Rewrite “The Scholarship Jacket” from the grandfather’s point of view.
# 6th Grade Math Project: Dividing Fractions

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| **Grade Level Standard(s)** | **The Number System**  
6.NS.A: Apply and extend previous understandings of multiplication and division to divide fractions by fractions.  
6.NS.C: Apply and extend previous understandings of numbers to the system of rational numbers. |
| **Caregiver Support Option** | Talk to your child about places you may see math, particularly fractions in your day to day life. How do you use those fractions?  
For Activity 4, share your experience with shipping and receiving packages. |
| **Materials Needed** | Pencil and paper |
| **Question to Explore** | How are division and multiplication of a fraction by a fraction related? |
| **Student Directions** | Complete the following activities about dividing fractions by fractions. Show your thinking and use additional paper if needed. |
Activity 1: Open Middle, Dividing Fractions
Source: https://www.openmiddle.com/

A. Use the digits 1 to 9, at most one time each, to fill in the boxes to make two fractions that have a quotient that is as close to 4/11 as possible.

B. Using the digits 1 to 9 at most one time each, fill in the boxes to make the smallest quotient.

C. Using the digits 0 to 9 at most one time each, fill in the boxes to create at least two different examples where the quotient is undefined.

D. Using the digits 1 to 9 at most one time each, fill in the boxes to make the largest quotient.
Activity 2: How Much in Each Group?

A. Think of a situation with a question that can be represented by the equation $12 \div \frac{2}{3} = ?$ Describe the situation and the question.

B. For each question below, write a multiplication equation or a division equation. Next, draw a diagram that could represent your equation. Lastly, find the answer.
   a. To make 4 batches of cupcakes, it takes 6 cups of flour. How many cups of flour are needed for 1 batch?
   b. To make $\frac{1}{2}$ batch of rolls, it takes $\frac{3}{4}$ cups of flour. How many cups of flour are needed for 1 batch?
   c. Two cups of flour make $\frac{2}{3}$ batch of bread. How many cups of flour make 1 batch?

C. To make a Cantor ternary set:
   - Start with a tape diagram of length 1 unit. This is step 1.
   - Color in the middle third of the tape diagram. This is step 2.
   - Do the same to each remaining segment that is not colored in. This is step 3.
   - Keep repeating this process.

   \[
   \begin{array}{c}
   \text{step 1} \\
   \text{step 2} \\
   \text{step 3} \\
   \end{array}
   \]

1. How much of the diagram is colored in after step 2? Step 3? Step 10?

2. If you continue this process, how much of the tape diagram will you color?

3. Extension: Can you think of a different process that will give you a similar result? For example, draw and color the first fifth instead of the middle third of each strip.
Activity 3: Solving Problems Involving Fractions

A. Write a word problem involving \( \frac{3}{4} \times \frac{1}{2} \). Solve and explain your reasoning. Draw a tape diagram, if needed

B. Write a word problem involving \( \frac{3}{4} \div \frac{1}{2} \). Solve and explain your reasoning. Draw a tape diagram, if needed

C. Write a word problem involving \( \frac{1}{2} \times \frac{3}{4} \). Solve and explain your reasoning. Draw a tape diagram, if needed

D. Write a word problem involving \( \frac{1}{2} \div \frac{3}{4} \). Solve and explain your reasoning. Draw a tape diagram, if needed

E. Baking Cookies: Mai, Kiran, and Clare are baking cookies together. They need \( \frac{3}{4} \) cup of flour and \( \frac{1}{3} \) cup of butter to make a batch of cookies. They each brought the ingredients they had at home.

Mai brought 2 cups of flour and \( \frac{1}{4} \) cup of butter.
Kiran brought 1 cup of flour and \( \frac{1}{2} \) cup of butter.
Clare brought 1 \( \frac{1}{4} \) cups of flour and \( \frac{3}{4} \) cup of butter.

If the students have plenty of the other ingredients they need (sugar, salt, baking soda, etc.), how many whole batches of cookies can they make? Explain your reasoning.
Activity 4: Fitting Boxes into Boxes
A. Determining Shipping Costs (Part 1)
   An artist makes necklaces. She packs each necklace in a small jewelry box that is 1 ¾ inches by 2 ¼ inches by ¾ inch.

   A department store ordered 270 necklaces. The artist plans to ship the necklaces to the department store using flat-rate shipping boxes from the post office.

   USPS flat-rate information:
   • Medium box 1: 11 inches by 8 1/2 inches by 5 1/2 inches. Cost: $13.45.
   • Large box: 12 inches by 12 inches by 5 1/2 inches. Cost: $18.75.

   1. Consider the problem: Which of the flat-rate boxes should she use to minimize her shipping cost? What other information would you need to be able to solve the problem?

   2. Make a plan for using this information to find the most inexpensive way to ship the jewelry boxes.

B. Determining Shipping Costs (Part 2)
   1. Find how many jewelry boxes can fit into the box. Explain or show how the jewelry boxes can be packed in the shipping box. Draw a sketch to show your thinking if needed.

   2. Calculate the total cost of shipping all 270 jewelry boxes in shipping boxes of that type. Show your reasoning and organize your work so it can be followed by others.

Activity 5: Reflection

Reflecting on your work with dividing fractions by fractions, answer these questions:
• Why is it important to identify fractions as a part of a whole?
• How can models help us understand the multiplication and division of fractions?
• How can you use concrete materials and drawings to understand and show understanding of multiplying and dividing fractions?
# 6th Grade Science Project: Great Lakes Invaders

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<tr>
<td>Grade Level Standard(s)</td>
<td><strong>MS-LS2-1.</strong> Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. <strong>MS-LS2-2.</strong> Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.</td>
</tr>
</tbody>
</table>
| Caregiver Support Option | • Accompany your student on a nature walk around their neighborhood. Discuss with them the living and nonliving things they see.  
• Assist your student in creating their graphs.  
• Discuss the reflection questions in the activities with them. |
| Materials Needed | • Paper  
• Pencil  
Optional:  
• Clipboard  
• Ruler  
• Markers  
• Colored pencils |
| Question to Explore | What are the living and nonliving things in an ecosystem? How do the living and nonliving things interact to support each other’s survival? What happens when an organism’s access to resources changes? How do new organisms change the balance of an ecosystem? |
| Student Directions | In this project, you will be collecting data about the urban ecosystem that you live in. Using those observations, you will create a diagram showing how organisms and the nonliving things around them interact. You will look at data about the fish population in Lake Michigan and how changes in the number of fish and the types of fish impact the overall health of the ecosystem. Directions are provided for each activity. |

**Activity 1: Be a sidewalk scientist (30 minutes)**

Ecosystems are systems in which organisms and the nonliving things around them interact. Ecosystems provide food for living things, as well as move nutrients and other things organisms need.

A. The neighborhood where you live is its own ecosystem. Think about some of the organisms in your neighborhood and how they interact with the nonliving things around them. Respond to the following questions on a sheet of paper:

  a. What are some of the living things in your neighborhood?  
  b. What are some of the nonliving things in your neighborhood?  
  c. How do the organisms in your neighborhood interact with the nonliving surroundings?
B. Let’s capture some of your initial thinking about organisms in your neighborhood in our Sidewalk Scientist Table!
   a. Make a copy of the chart below on your own sheet of paper. Be sure to leave space in the columns for you to put more information down later.
      i. ONLY complete columns 1 and 2 right now. Columns 3 and 4 will be completed later. Use the examples to help get you started.
         1. Add at least 2 to 3 things in column 1 and in column 2.

<table>
<thead>
<tr>
<th>Things I know about my neighborhood ecosystem.</th>
<th>Questions about my neighborhood ecosystem.</th>
<th>What I learned about ecosystems.</th>
<th>Connections to my neighborhood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: There are a lot of cars in my neighborhood.</td>
<td>Example: Where do the squirrels go in the winter?</td>
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<td></td>
</tr>
</tbody>
</table>

C. Gathering data in your own neighborhood.
   a. Let’s gather some data on the organisms and the nonliving surroundings in your own block.
      i. You will need:
         1. Paper and pencil
   b. Take the necessary precautions to prepare yourself for a 15 minute walk. If you cannot walk around your neighborhood, then stand in your front or back yard. If going outside is not possible, then find a window with a good view of the outside.
   c. On your paper,
      i. Collect data about the number of organisms you see, where you see organisms, and how organisms are interacting with their nonliving surroundings.
      ii. Here is an example:

      My block has 10 trees, one in front of every other building. There are six cars parked on my side of the street. There are some patches of grass that look brown, I think it’s dead. I see a squirrel up in the tree. The alley has some weeds near the trash cans. I hear birds but I can’t see them. There are 3 people walking down the block. There is an empty lot where the grass is tall.

   d. Once you are prepared and have parental permission, begin your 15 minute observation of the ecosystem in your neighborhood.
   e. After you complete your observations and have captured your data, respond to the following questions on your paper:
      i. Where did you see most of the living things? Why do you think they were there?
      ii. What are the nonliving things that make up your neighborhood ecosystem?
      iii. How do the living things and nonliving things interact with each other?
D. Using the data you collected, develop an initial diagram of your neighborhood ecosystem.
   a. Your diagram should include:
      i. Living (organisms) and nonliving things from your neighborhood
      ii. Symbols, images, and a key
      iii. A description of the relationship between different organisms and between those organisms and their environment.
   b. After you complete your diagram:
      i. Share it with one person. Be sure to explain how organisms interact with each other and the resources around them.

E. Revisiting our Sidewalk Scientist Table:
   a. Update columns 1 and 2 with any new noticing and questions you may have as a result of your 15 minute neighborhood ecosystem observation.

Activity 2: The Great Lakes Ecosystem (40 minutes)
Chicago is a part of a larger ecosystem known as the Great Lakes Basin. This lake system contains the largest supply of freshwater in the world.

Source: https://www.noaa.gov/education/resource-collections/freshwater-education-resources/great-lakes-ecoregion

A. Read the text “Great Lakes Ecoregion” and respond to the following questions on your paper:
   a. What type of ecosystems are the Great Lakes a part of?
   b. How do we interact with the Great Lakes ecosystem?
   c. What are impacts of human activity on other organisms in other ecosystems, such as fish populations in Lake Michigan?

The Great Lakes system includes five large lakes, one small lake, four connecting channels, and the St. Lawrence Seaway. The large lakes are Superior, Michigan, Huron, Erie, and Ontario. They hold about 90% of the freshwater in the United States and approximately 20% of the world's freshwater supply. Forty million residents of the United States and Canada depend on this system for clean drinking water.

How the Great Lakes formed
During the last ice age, the mile-thick Laurentide ice sheet covered most of Canada and the northern contiguous United States. The massive weight and movement of this glacier gouged out the earth to form the lake basins. About 20,000 years ago, the climate warmed and the ice sheet retreated. Water from the melting glacier filled the basins, forming the Great Lakes. Approximately 3,000 years ago, the Great Lakes reached their present shapes and sizes. Today, the Great Lakes ecoregion contains a variety of habitats, including aquatic, forest, marsh, wetland, and dune ecosystems. Widely varying climate, soils, and topography support more than 3,500 species of plants and animals.

Humans and the Great Lakes
Humans are also part of the Great Lakes system. Commercial and sport fishing, agriculture, recreation, tourism, manufacturing, and shipping are all important to the region. These activities create jobs and provide goods and services. The fishing industry extracts millions of pounds of fish per year from the lakes. Farmers within this watershed produce corn, soybeans, hay, milk, and other
food products. The area is also known for its industry that produces steel, chemicals, and other products. The shipping opportunities in the Great Lakes played a critical role in settlement of the region and development of industry. Today more than 200 million tons of cargo pass through its waters each year.

**Threats to the Great Lakes**

Threats to the Great Lakes' ecosystems include invasive species, climate change, pollution, and habitat destruction. Climate change affects water temperatures, weather patterns, and lake levels. Pollutants from residential, agricultural, and industrial areas reduce water quality. Land development decreases the amount of wildlife habitat. Fish populations have been declining in recent years as a result of these threats and increased fishing pressure.

B. Review the following food web in Lake Michigan. Organisms higher in the food chain rely on those organisms below them for energy (food). The arrows represent the direction that energy flows in the food web.

C. Respond to the following questions on your paper:
   a. What connections do you notice between the organisms?
   b. What organisms depend on mollusks, zooplankton, and the phytoplankton?
   c. Which organism is at the top of the food web?
D. Taking a closer look at the Rainbow Smelt, Alewife, and Bloater fish.
   a. The data table below shows the population of the three different fish from 2003 to 2008.

<table>
<thead>
<tr>
<th>Year</th>
<th>Alewife</th>
<th>Rainbow Smelt</th>
<th>Bloater</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>144</td>
<td>15</td>
<td>32</td>
</tr>
<tr>
<td>2004</td>
<td>51</td>
<td>25</td>
<td>42</td>
</tr>
<tr>
<td>2005</td>
<td>43</td>
<td>65</td>
<td>83</td>
</tr>
<tr>
<td>2006</td>
<td>39</td>
<td>36</td>
<td>46</td>
</tr>
<tr>
<td>2007</td>
<td>61</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>2008</td>
<td>46</td>
<td>5</td>
<td>12</td>
</tr>
</tbody>
</table>

E. Develop a line graph representing the data from the table above. Your line graph should include: a title, labels for both the x and y axis, and a different color or line for each species of fish.
F. After completing your line graph, respond to the following questions on your paper:
   a. What are some trends or patterns that you notice in the data?
   b. Is it easier to visualize the population trends in the data table or the line graph? Why?
   c. Why do you notice the patterns you see in the data?

G. Use the food web and the data from the table or graph to develop an explanation for why the population of the three fish species has changed the way it has over time. Be sure to cite specific information from the data we have.
   a. You can use these sentence stems to help structure your explanation:
      i. “The population of these three fish has ___ over time because…”
      ii. “On the food web, the ___ fish is ___. If ____, then ____.”
      iii. “According to the data…”
      iv. “This data leads me to conclude…”

Activity 3: Invaders from another ecosystem (30 minutes)

An invasive species can be any type of living organism that is not native to an ecosystem and, when introduced, causes harm.

A. Asian Carp have long been recognized as a threat to the Great Lakes region ecosystem. They compete with native fish for food and habitat. An Asian Carp’s diet consists of mollusks and types of plankton, such as phytoplankton and zooplankton. Asian Carp are not known to be eaten by any other organisms in the Great Lakes ecosystem.

B. Respond to the following questions on your paper:
   a. Which native species is the Asian Carp competing against these for resources?
   b. How would the presence of the Asian Carp in the Great Lakes impact the population levels of the native fish species (the fish that already live there)?

C. Making a prediction.
   a. Using the food web and data from the table in Activity 2, develop a prediction with an explanation about what will happen to the Rainbow Smelt, Alewife, and Bloater fish population if the Asian Carp successfully makes it into Lake Michigan.
      i. Think about the following:
         1. Immediate changes to the ecosystem
         2. Population over time
            a. For native species
            b. For invasive species, Asian Carp
      ii. Be sure to include your rationale for your explanation.
      iii. You may use some of the sentence starters below to help with your prediction.
If carp were introduced to the Great Lakes, the __________________________ population would _____________________.

Evidence from the food web shows that ______________________________. Adding carp to the food web would ____________________ causing ___________________. This would result in _____________________.

Based on the data of fish population, native species ____________________. The addition of carp to this ecosystem would ___________________. This would cause _____________________.

As more carp enter the Great Lakes, the overall fish population would ___________________. This would happen ___________________ because _____________________.

Invasive species can ____________________ in ecosystems because ________________.

**Activity 4: Reflection - Connecting Back to My Neighborhood (20 minutes)**

Sudden changes to resources in an ecosystem can have a large impact on the organisms in those ecosystems.

A. On your Sidewalk Scientist Table, complete column 3.
   a. Think about what you learned with respect to how organisms interact in an ecosystem and the impacts that resource availability has on populations of organisms.

B. As you reflect on what you have learned about the fish population in the Great Lakes, think about how this helps you understand your own neighborhood ecosystem.
   a. Respond to the following prompt on your paper:
      i. What changes would you need to make to your neighborhood ecosystem diagram if a new species was introduced to the area?
         1. For example, what would your diagram look like if there were suddenly hawks in your neighborhood?
      ii. What change would you need to make to your neighborhood ecosystem diagram if all the trees were removed? What impact would this have on other organisms?

C. Take Action!
   a. Draft a letter to a local newspaper company, like the Chicago Tribune, or a government official explaining why it is important to protect the Great Lakes Basin ecosystem. Use evidence to support your claims.

**Cross-content connections:**
- Social Studies - Take Action! Developing a letter to a local government official about the importance of protecting local ecosystems and the impact they have across other ecosystems.
# 6th Grade Social Science Project: Together When Apart

<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. SS.IS.5.6-8.MdC. Identify evidence from multiple sources to support claims, noting its limitations. SS.IS.6.6-8.MdC. Construct explanations using reasoning, correct sequence, examples, and details, while acknowledging their strengths and weaknesses.</th>
</tr>
</thead>
</table>

| Caregiver Support Option | Notes on the structure:  
- Activities are designed to be done in order - each one builds on the other so you should not skip activities  
- Activities are an average of 15-20 mins each. More than one can be done in a day.  
  
Before giving the activities to students, caregivers might:  
- Spend time reading and discussing the “student directions” together. Encourage your child to ask any clarifying questions.  
- When reading the texts, students should circle or underline any unfamiliar words so you both can define them together.  
  
In this particular lesson, it’s important to note that:  
- Student(s) are developing coded messages, you might want to review the directions and the “Coding Code of Conduct” on p. 10.  
- Consider making your own coded message for them and ask your student to decipher it.  
- Ask your child to share and explain their codes to you - on p. 9 students will review and revise their message. Consider using the examples provided to discuss and reflect on what can be better. |
|------------------------|-------------------------------------------------------------------------------|

<table>
<thead>
<tr>
<th>Materials Needed</th>
<th>Writing tool, paper</th>
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</table>

<table>
<thead>
<tr>
<th>Question to Explore</th>
<th>How can we communicate with others to share our thoughts and ideas?</th>
</tr>
</thead>
</table>

| Student Directions | When we are separate, we have to find ways to communicate ideas, thoughts, and feelings. During certain periods of history, people have wanted to communicate with each other in ways that only friends and allies would understand. So they developed codes! In this inquiry, students examine codes used in history, from the Culper Spy Ring to the use of Morse Code. Throughout the week, they’ll use their learning to develop their own code to communicate with friends near and far. |
Day 1 (Activity 1): Examining Historical Codes (15-20 min)

This week we’re thinking about the question: “How can we communicate with others to share our thoughts and ideas?”

Your challenge this week: Connect to someone using a “Coded Message.”

Today you will:
- Examine historical codes
- Decode a message

You will need:
- Paper or notebook
- Writing tool

Let’s Get Started!

A. THINK

Do you know what these mean?

Guess what? You just cracked a code!

B. EXPLORE

Many amazing codes have been used throughout history.

Code:
a system of signals, letters, numbers, or symbols used to send messages, sometimes secretly
Culper Spy Ring Code from the American Revolution

It may be hard for us to read this writing, but in 1778 this code was used to send secret messages to George Washington during the Revolutionary War. It has 763 numbers that are code for different words, names, and places.

International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

Morse Code

This code was created to send messages by telegraph, which is a way to send sound messages far away through a wire. It uses short and long sounds (called dots and dashes) to represent letters, numbers, and punctuation. It was used more often in the 1800s and 1900s, including in World Wars I and II. It is not commonly used anymore.

Binary Code

This is a way for computers and electronics to communicate. It is made up of two numbers: "1" and "0." Using these numbers in different combinations, computers can talk to each other and represent data. Ever heard of a bit or a byte? A single "0" or "1" is a bit, and a group of eight "0s" and "1s" together make a byte!
Your challenge this week: Connect to someone using a “Coded Message.”

Today, you will read some coded messages!

<table>
<thead>
<tr>
<th>Use this key...</th>
<th>...and try to solve these codes!</th>
</tr>
</thead>
<tbody>
<tr>
<td>A B C D E F G</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>H I J K L M N</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>O P Q R S T U</td>
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<td></td>
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<tr>
<td>V W X Y Z</td>
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</table>

DIG DEEPER

Want to learn more about codes?
You can read about the pigpen cipher, which turns a tic-tac-toe board into an easy-to-use and memorable code! [https://en.wikipedia.org/wiki/Pigpen_cipher](https://en.wikipedia.org/wiki/Pigpen_cipher)

Day 2 (Activity 2): Developing Your Code (15-20 min)

This week we’re thinking about the question: "How can we communicate with others to share our thoughts and ideas?"

Your challenge this week: Connect to someone using a “Coded Message.”

Today you will:
- Learn about Morse code
- Create your “Coded Message”

You will need:
- Paper or notebook
- Writing tool
- “Drafting Template” handout (optional)
  - make sure to print as separate pages, single-sided
Let's Get Started!

A. THINK

Before telephone, television, or internet, how do you think people might have sent messages across a great distance?

B. EXPLORE

Read on to learn more about Morse code.

International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between words is seven units.

A telegraph is a machine that turns Morse code into electrical signals and sends them across a wire. The machine on the receiving end turns these signals back into messages.

Morse code is a system of sending messages that uses combinations of short (the dot) and long (the dash) sound signals to spell out messages.

- a "dot" is a short signal
- a "dash" is a long signal
Morse code is used across languages and around the world. Anyone can use it by simply writing symbols, flashing a light, or making sounds to represent dots and dashes. Modern technology has largely replaced Morse code, but it is still used for remote or emergency situations, radio communication, and in the military.

Check out this video about Morse code. https://www.youtube.com/watch?v=iy8BaMs_JUI&feature=emb_logo

Then read the “Creation of Morse Code Helped Open Communications Around Globe” article to learn even more about it! https://newsela.com/read/lib-morse-code-overview/id/2000001052/?collection_id=339

C. DO

Keep in mind your challenge this week: Connect to someone using a “Coded Message.”

Today, you will create your first draft of your “Coded Message.”

Your “Coded Message” should:

● Tell who you would like to communicate with
● Explain why it’s important to communicate with this person at this moment in time
● Include a message that can be decoded using the suggested code below, Morse code (pictured above), or by making up your own code! (If you like, you may use the “Drafting Template” handout to write out your idea.)
Day 3 (Activity 3): Evaluating the Work (15-20 min)

This week we’re thinking about the question: "How can we communicate with others to share our thoughts and ideas?"

Your challenge this week: Connect to someone using a “Coded Message.”

Today you will:
- Reflect on your progress
- Make a plan to improve your work

You will need:
- Your work from previous activities
- Paper or notebook
- Writing tool

Let’s Get Started!

A. THINK

You’ve already created the first draft of a “Coded Message.”

Pause to look at your work.

B. EXPLORE

Look at this student’s “Coded Message” and ask:
- Is it clear who the message is for?
- Does the plan explain why it is important to communicate with that person at this moment?
- Is the coded message accurate?

C. DO
Keep in mind your challenge this week: Connect to someone using a “Coded Message.”

You already have a first draft, and today you will complete the next step of the challenge!

1. Pencils down! This is a thinking exercise!
2. Look at your work and ask:
   - Is it clear who my message is for?
   - Did I explain why it is important to communicate with this person at this moment?
   - Is my coded message accurate?
3. Wait, still don’t touch your work! First, make a work plan! Complete one of these sentences:
   - I will add…
   - I will try…
   - I will adjust…

**DIG DEEPER**

Test your code!

Share your message and key with someone else.

Can they decode your message?

<table>
<thead>
<tr>
<th>Day 4 (Activity 4): Finalizing the Work (15-20 min)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>This week we’re thinking about the question:</strong></td>
</tr>
<tr>
<td>“How can we communicate with others to share our thoughts and ideas?”</td>
</tr>
<tr>
<td><strong>Your challenge this week:</strong></td>
</tr>
<tr>
<td>Connect to someone using a “Coded Message.”</td>
</tr>
<tr>
<td><strong>Today you will:</strong></td>
</tr>
<tr>
<td>Finalize your “Coded Message”</td>
</tr>
<tr>
<td><strong>You will need:</strong></td>
</tr>
<tr>
<td>Your work from previous activities</td>
</tr>
<tr>
<td>Writing tool</td>
</tr>
</tbody>
</table>

**Let’s Get Started!**

**A. THINK**
It’s time to take steps to finalize your work based on your work plan.
Remember your work plan? That’s when you said:

- I will add...
- I will try...
- I will adjust...

Decide or discuss:
What will you do next to finalize your work?

B. EXPLORE

Check out some “Coded Messages” by other students.

What changes did this person make to their work?

How do these changes help to make the message clearer?

First Draft
Create a coded message to communicate across a distance:

I want to communicate with: Ben
Because: I like him
I will give this message to him by: pigeon
I want my message to say: (Write your message using regular words. Remember to leave a space between words!)

Hey Ben, Nick Foles got traded to the Bears!

My message in code: [remember to leave a space between words!]:
Today, you will work to finalize your “Here and Now Snapshot” to best represent your setting.

1. Get out your first draft and any other materials from previous activities.
2. Think about your work plan.
3. Decide: Do you need a fresh piece of paper to start over? Or will you just edit your first draft to make your final draft?
4. Get to work finalizing your "Coded Message"!

**Day 5 (Activity 5): Reflecting and Sharing (15-20 min)**

<table>
<thead>
<tr>
<th>This week we’re thinking about the question: &quot;How can we communicate with others to share our thoughts and ideas?&quot;</th>
<th>Your challenge this week: Connect to someone using a “Coded Message.”</th>
</tr>
</thead>
</table>
| Today you will:  
  - Reflect on your “Coded Message”  
  - Share your “Coded Message” and its code key | You will need:  
  - Your finished “Coded Message” and copy of its code key  
  - “Sharing” handout (optional) |

**Let’s Get Started!**

**A. THINK**

Like spies of the past, could you and other people in your life communicate through more coded messages?

**B. EXPLORE**

Anytime we share messages, we need to be thoughtful about how they will be received.

The Coding Code of Conduct:

- Be Responsible, Respectful, and Safe when sending and sharing messages.
- For more about mindful messaging, check out this important video.  
  [https://www.commonsense.org/education/videos/mindful-messaging](https://www.commonsense.org/education/videos/mindful-messaging)

**C. DO**
Now that you’ve completed your “Coded Message” it’s time to share your work with others!

Here are some ideas for connecting with others:

- Share your “Coded Message” and its code key with the person who it was intended for (or use the “Sharing” handout to get a written response)
- Share your code key with others and continue sending messages back and forth!
- Share your code key and a new message with your classroom community (if this is an option).
- Ask an adult to help you share your code key and a new message online with the #inquirEDtogether hashtag.
- Keep your “Coded Message” and its code key as a historical record that you and others can look back on later.

Additional Activities:

By examining codes used in history, from the Culper Spy Ring to the use of Morse code, and by developing your own code to communicate with friends near and far, you are using many social science skills, but also so much more! There are so many connections to language arts, math and science that you can continue to explore. Here a few ways to extend your learning and make connections to other subjects.

Math: As we’ve learned this week, coding is all about identifying patterns. “Patterns” are models and/or designs that help us identify things in common with one another. To get a better understanding of patterns try thinking about all the different patterns you notice in your home. Rugs and blankets often have different patterns that repeat. What about kitchen or bathroom tiles? Maybe the bricks on the outside of your home?

Science: Think about the world we live in and the different ways we can decode and find patterns in nature. Go for a walk around the block with your family and pick a couple of leaves from different types of trees on your way. Study the veins of the leaves? What do you notice among the different leaves? Similarities? Differences? Consider journaling your findings.