KCS @ home

Sixth Grade
Math

Week of May 11, 2020
knoxschools.org/kcsathome

Name _____

Represent Equations in Tables and Graphs

I Can represent a situation using a table, equation, or graph.

Spark Your Learning

PAIRS

A baby gorilla had a mass of 2,620 grams at birth, 2,960 grams after 10 days, and 3,300 grams after 20 days. What is the average number of grams that the baby gorilla grew each day during the first 10 days and during the next 10 days? Show your work.

Turn and Talk If the baby gorilla continued to grow at the same rate for the first month after birth, what would be the baby gorilla's mass 26 days after birth? Explain how you found your answer.

Name _____

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Spark Your Learning

PAIRS

A baby gorilla had a mass of 2,620 grams at birth, 2,960 grams after 10 days, and 3,300 grams after 20 days. What is the average number of grams that the baby gorilla grew each day during the first 10 days and during the next 10 days? Show your work.

Possible answer:

$\frac{(2{,}960 - 2{,}620) \text{ grams}}{(10 - 0) \text{ days}} = \frac{340 \text{ grams}}{10 \text{ days}} = 34 \text{ grams per day}$

$\frac{(3{,}300 - 2{,}960) \text{ grams}}{(20 - 10) \text{ days}} = \frac{340 \text{ grams}}{10 \text{ days}} = 34 \text{ grams per day}$

The average growth for the baby gorilla is 34 grams per day for both the first 10 days and the next 10 days.

Using a table:

	Age in days	Mass in grams	
	0	2,620	
+10			+340
+10	10	2,960	+340
	20	3,300	

Turn and Talk If the baby gorilla continued to grow at the same rate for the first month after birth, what would be the baby gorilla's mass 26 days after birth? Explain how you found your answer.

See possible answer at the right.

SUPPORT SENSE-MAKING • Three Reads

Tell students to read the question stem three times and prompt them with a different question each time.

1. What is the situation about?
   Possible answer: the mass of a growing baby gorilla
2. What are the quantities in the situation?
   2,620 grams at birth, 2,960 grams after 10 days, and 3,300 grams after 20 days
3. What are possible mathematical questions that you could ask about the situation?
   Possible questions: How much did the baby gorilla grow in the first 10 days? In the next 10 days?

1 Spark Your Learning

▶ MOTIVATE

Introduce the problem. **Ask students:** What do you know about the growth of baby animals? Tell students to discuss and share with their partner or team members in a small group.

SUPPORT SENSE-MAKING Three Reads
Have students read the problem three times. Use the questions in the Three Reads box below for a different focus each time.

▶ PERSEVERE

If students need support, guide them by asking:

- **Advancing • Use Tools** Which tool could you use to solve the problem? Why is this tool more strategic? Students' choices of strategies and tools will vary.
- **Assessing** What does 2,620 grams represent in the problem? The mass of the baby gorilla at birth, which is also the mass at 0 days.
- **Assessing** How could you organize the information to help you solve the problem? I could use a table to organize the information given in the problem.
- **Advancing** How can you determine what the average growth per day is in each time frame? I can subtract to find the total growth for each time frame and then divide by 10, the number of days.

Turn and Talk If some students are having trouble finding the mass of the baby gorilla 30 days after birth, ask other students who understand to explain their thinking. 3,504 grams; Possible answer: I could multiply the average growth rate per day, 34 grams per day, by 6. Then I would add that amount to 3,300 grams to get a total mass of 3,504 grams for 26 days after birth.

▶ BUILD SHARED UNDERSTANDING

Select students who used various strategies and tools to share with the class how they solved the problem. Have students discuss why they chose a specific strategy or tool.

Name _____ Date _____ Class _____

UNIT 5

Equations and Inequalities

Performance Task

Answer the questions.

1. Waheeda wants to buy a skateboard. She has $15 in savings. A skateboard costs $75. How much more money does she need? Write and solve an equation to represent the situation.

   a. equation: _____ b. solution: _____

2. Suppose Waheeda wants to have some money left over after buying the skateboard. Write an inequality to show how much Waheeda needs to earn.

   _____

3. To earn money for the skateboard, Waheeda decides to run a lemonade stand. If she sells each glass of lemonade for $1.50, how many glasses of lemonade will she need to sell? Write and solve an equation to find the answer.

   a. equation: _____ b. solution: _____

4. Waheeda mixes water with some lemon juice to make lemonade. Write an equation to represent how much lemon juice is needed when Waheeda uses 10 ounces of water.

   _____

Water in ounces	6	9	12	15
Lemon juice in ounces	2	3	4	5

5. The amount Waheeda earns is related to the number of glasses of lemonade she sells.
   a. Identify the independent and dependent variables in the situation.

      _____

   b. Write an equation representing the amount Waheeda earns in relation to the number of glasses of lemonade she sells.

      _____

   c. In which Quadrant of a graph would her data appear? Explain.

      _____

   d. Graph the equation on a separate sheet of graph paper. Be sure to choose an appropriate scale for the *x* and *y* axes.

Name **Answer Key** Date _____ Class _____

UNIT 5

Equations and Inequalities

Performance Task

Answer the questions.

1. Waheeda wants to buy a skateboard. She has $15 in savings. A skateboard costs $75. How much more money does she need? Write and solve an equation to represent the situation.

   a. equation: **x + 15 = 75** b. solution: **75 - 15 = $60**

2. Suppose Waheeda wants to have some money left over after buying the skateboard. Write an inequality to show how much Waheeda needs to earn.

   X > 60

3. To earn money for the skateboard, Waheeda decides to run a lemonade stand. If she sells each glass of lemonade for $1.50, how many glasses of lemonade will she need to sell? Write and solve an equation to find the answer.

   a. equation: **1.50g = 60** b. solution: **1.50(40) = $60**

4. Waheeda mixes water with some lemon juice to make lemonade. Write an equation to represent how much lemon juice is needed when Waheeda uses 10 ounces of water.

   y = 10/3 OR y = 1/3 x 10

Water in ounces	6	9	12	15
Lemon juice in ounces	2	3	4	5

5. The amount Waheeda earns is related to the number of glasses of lemonade she sells.

   a. Identify the independent and dependent variables in the situation.

      (x) glass of lemonade is independent / (y) earnings dependent

   b. Write an equation representing the amount Waheeda earns in relation to the number of glasses of lemonade she sells.

      $1.50(g) = e 1.50x = y

   c. In which Quadrant of a graph would her data appear? Explain.

      Quadrant 1 because you can sell negative glasses of lemondade

   d. Graph the equation on a separate sheet of graph paper. Be sure to choose an appropriate scale for the *x* and *y* axes.

      See video for answer

Sixth Grade
Social Studies

Week of May 11, 2020
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There will be a short video to accompany this assignment on the KCS YouTube CHannel and KCS TV.

6th Grade Social Studies

Read the directions below and complete the assignment.

Directions:

Using a separate sheet of paper or the back of this sheet, write a short three (3) paragraph essay about the following:

1. The unification of Greece
    a. Philip II
    b. Alexander
2. The spread of Greek culture
    a. Alexander's influence
    b. cultural diffusion
3. How Greek culture is relevant today
    a. literature we read
    b. entertainment, goods, foods

TN 6th Grade Social Studies Standard

6.50 Explain the unification of the Greek city-states by Macedonia, and analyze the impact of Alexander the Great and the diffusion of Hellenistic culture.

Sixth Grade
ELA

Week of May 11, 2020
knoxschools.org/kcsathome

Grade 6
ELA
Week 6

Unit 3 "Changing Perspectives- Why do we have controversy?"

Knowledge Quest: What are some intended goals for homework, and how can homework policy be changed to better align with these goals?

Monday: Reread the Week 5 text, "A High School Student's Perspective on Homework " by Amedee Martella and write a one word response for each paragraph. This may be a main idea, a key vocabulary word, or another important word. Use these words to craft a brief summary of the article.

Tuesday: On a piece of paper, answer the questions below in complete sentences.

- What are 2-3 words that convey the author's tone?
- What impact does the writer want to make on readers?

Wednesday: Complete the Sentence Expansion Strategy.
Directions- Expand the kernel sentence listed below by adding details that include the following: Where? When? How? *Challenge: Expand your sentence by answering the question words "who, what or why."

Kernel Sentence: **Homework is designed to build skills.**

Thursday: Complete one of the Sentence Starters below to begin
Directions- Choose one of the following sentence starters and write a sentence about Martella's article.

A. According to the passage_____.
B. The author argues _____.

Friday: Read "A High School Student's Perspective on Homework" by Amedee Martella. Complete the graphic organizer and the 3-2-1 activity below.
Select two quotations that are facts and two quotations that show the author's opinion. Respond to each of the four quota ons using the space on the right side of the page.

QUOTATION	Respond to each quote you chose by agreeing or disagree and explain why
FACT	
OPINION	
FACT	
OPINION	

3-2-1

Directions- Write down 3 things you learned in the article, 2 things you found interesting, and one lingering question that you may have after reading the text.

KCS @ home

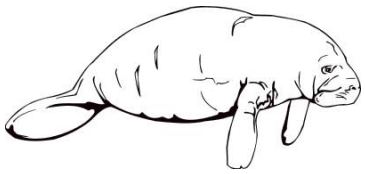
Sixth Grade
Science

Week of May 11, 2020
knoxschools.org/kcsathome

6th Grade Science: Week 6, May 11
How do human activities affect a manatee population?

Directions: This handout goes with a KCS Teacher Video. If you have access to the video, watch the video before doing this activity. You can find the videos here https://www.knoxschools.org/Page/21816

Pre Lab: Consequences of Human Activity



Reviewing Content

Manatees are an endangered species of aquatic mammal. They live in slow-moving shallow water. Within the United States, most manatees spend the winter months in Florida. Manatees eat plants, including sea grasses and fresh water plants. They can live in salt water, fresh water and brackish water (water that is a combination of salt and fresh water). Manatees cannot survive in cold water.

Some human activities can harm manatees and their ecosystems. For example, boat propellers, fishing hooks and fishing lines can injure manatees. Human activity can also destroy or break up the manatees' habitats. These activities can reduce the manatee population.

Other human activities have helped the manatee population. Laws and regulations have been passed to protect manatees. Efforts to educate the public about manatees and their environment have also helped protect manatee populations.

👎 Draw one human activity that harms manatees:

👍 Draw one human activity that helps manatees:

DIRECTED Inquiry

30 min

Consequences of Human Activity

Essential Question:

How can human activities affect a manatee population?

INQUIRY FOCUS

Make Models, Observe, Infer

Materials

notebook paper, 2 sheets

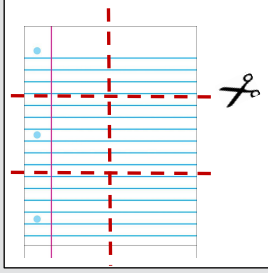
red and green pencil, pen, or crayon

39 index or playing cards

scissors

bowl

**you can make index cards by cutting sheets of paper into 6 equal pieces



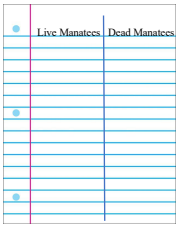
Procedure

1. Cut one sheet of notebook paper into 10 pieces. Label each piece with an action from the list below in the color suggested. Fold the pieces in half and place them in a large bowl.

   Red Actions:
   - New waterfront home development causes habitat loss.
   - An invasive species of algae kills off native sea grasses.
   - A factory releases cold water waste into the manatee's ecosystem.
   - New road construction drains water from an estuary.
   - Red tide releases deadly neurotoxins into the ocean.

   Green Actions:
   - Boat speeds are reduced in manatee habitats.
   - School programs teach students about the importance of protecting manatees.
   - Manatee sanctuary areas are established.
   - Fishing regulations are strengthened to prevent accidental injuries to manatees from lines and hooks.
   - Citizen groups are formed to restore estuaries.

2. Divide a sheet of notebook paper in half. Label one half "Live Manatees" and the other half "Dead Manatees."



3. Count out 39 index or playing cards and place them in a stack. These will represent the manatees in your model.

4. Make a separate stack of 25 manatee cards. This will be the "Year 0" population.

5. 

   Select an action slip from the bowl. If the action will increase the population (Green action), place a manatee card from the stack of 25 on the Live Manatee area of the notebook paper. If it will decrease the population (Red action), place a manatee card on the Dead Manatee area of the paper.

6. Replace the action slip in the bowl and mix up the slips.

7. Select another slip and repeat Step 5.

8. Repeat this procedure until all 25 of the manatee cards have been placed on either the Live Manatee or Dead Manatee pile on the paper.

6- *Share what you learned by tweeting @KCSScience.*

9. Count the number of live manatee cards on the paper (*add this number to the BEFORE reproduction column in the Data Table*). Take half that number of manatee cards from the remaining 39 cards and add it to the live manatee stack. This represents manatees added to the population by reproduction (*add this number to the AFTER reproduction column in the Data Table*). Remove the dead manatee cards and set them aside. Complete the Data Table for Generation 1.

10. The stack of live manatee cards now represents the beginning of the second generation of manatees. Repeat Steps 5-9 to find out what happens to the second generation of manatees. Complete the Data Table for Generation 2.

11. Repeat Steps 5-9 again to find out what happens to the third generation of manatees and record it in the Data Table for Generation 3.

Data Table

STARTING NUMBER OF MANATEE CARDS: 25		
Generation	**Number of live manatee cards at end of generation BEFORE reproduction**	**Number of manatee cards AFTER reproduction**
1		
2		
3		

Analyze and Conclude

1. **Observe** How did the manatee population change from Generation 1 to Generation 3?

_____

_____

2. **Make Models** How did this activity model the effect of human activities on an ecosystem?

_____

_____

3. **Interpret Data** In your model, did human activities overall have a negative or a positive impact on the manatee population? Support your answer with evidence from your data.

_____

_____

_____

4. **Predict** If you continued the modeling activity for three more generations, how do you predict your manatee population would change? Explain your prediction.

5 **Draw Conclusions** How might your results have been different if there were more negative (red) actions and less positive (green) actions?

Post Lab

1 **Infer** This lab investigation modeled the effect of human activity on a single population. How would the change in manatee population you observed affect the balance of the manatee's ecosystem?

2 **Draw Conclusions** If human activity continued to affect the manatee population as shown in your model for a long time, what changes might occur in the manatee's ecosystem?

3 **Summarize** Summarize what you learned about the ways that human activities affect the balance of ecosystems. List any questions that you still have.

What I learned

What I still want to know