Pandemic Preparedness Action Plan

Home Academic Resources

Christina School District Families;

As the global outbreak of the Coronavirus (COVID-19) continues to evolve, the Christina School District, working with other districts in Delaware, as well as the Division of Public Health, is taking steps to prepare for the possibility of transmission to our community. As part of the Christina School District’s Pandemic Preparedness Action Plan we are providing the following academic resources in the event of an extended school closure.

The attached resources are meant to provide students with an opportunity to practice previously learned skills while schools are closed. These resources are also available on our website www.christinak12.org for downloading and printing. We ask that your child practice their skills by working on these resources daily. Students should complete the packet to the best of their ability. Students should work at their own pace and can receive support from family members. If students reach a point of frustration, please stop and move on. We also encourage our students to read daily for a minimum of 30 minutes per day. Completion of these activities will help maintain your child’s academic progress until school reopens. Please stay tuned to the Christina School District website for the most recent news and announcements regarding potential school closures.

Grade Level: 5
<table>
<thead>
<tr>
<th></th>
<th>Math Problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Find all the different ways you can divide a deck of cards into equal amounts with no cards left over. Write division sentences to show all the different ways.</td>
</tr>
<tr>
<td>2</td>
<td>Using the GLOBE or weather.com record the forecasted high temperatures for the next 5 days. Make a bar graph of the forecasted high temperatures over these 5 days.</td>
</tr>
<tr>
<td>3</td>
<td>Over the next 5 days, record the actual high temperature. Make a line graph of the actual high temperature over these 5 days.</td>
</tr>
</tbody>
</table>
| 4 | Solve:  
   - 12x11  
   - 9x6  
   - 8x7  
   - 7x6  
   - 12x13  
   - 24x9 |
| 5 | If the movie actually began at 7:05 and finished at 8:45, how much time elapsed? If you left home at 6:35 and returned at 9:05, how long were you out?  
   - Create your own number riddle. |
| 6 | What number am I? I am > 3,449 and I am < 3,502. I have a 1 in my ones place and a zero in my tens place. Create your own number riddle. |
| 7 | Lou picked 282 limes from the orchard, and gave 167 limes to Sara. How many limes does Lou have now? Show how you solved this problem. |
| 8 | Find the perimeter and area of your front or back door. Record and explain.  
   - Sandy decided to sell her old books. She collected 33 to sell. She sold 22 books. How many books does Sandy have now? |
| 9 | Flip a coin 25 times. Write a fraction to show how many times it was heads and another to show how many times it was tails.                               |
| 10| At the grocery store estimate how many bananas total will weigh one pound. Check your estimate. What's the cost to buy 2 lbs. of bananas?  
   - Name some capital letters that when printed have at least one pair of parallel lines. Did you find any that have two pair of parallel lines? |
| 11| If you get up at 7:14 and need to be at your friend's at 8:56, how much time do you have to get ready if it takes you 13 min. to walk there? |
Determine the place value of the underlined digit.

1. $894 = \underline{\hspace{1cm}}$
2. $6,088 = \underline{\hspace{1cm}}$
3. $4,009 = \underline{\hspace{1cm}}$
4. $82 = \underline{\hspace{1cm}}$

Find the sum.

5. $90 + 54 = 144$
6. $59 + 28 = 87$
7. $59 + 94 = 153$
8. $76 + 16 = 92$
9. $89 + 43 = 132$
10. $64 + 31 = 95$
11. $64 + 31 = 95$
12. $78 + 82 = 160$
13. $78 + 84 = 162$
14. $26 + 42 = 78$
15. $26 + 20 = 46$

Find the pattern.

15. $92, 85, 78, 71, 64, 57, 50,$

16. $5, 9, 15, 23, 33, 45, 59,$

Draw the clock hands to show the passage of time.

17. What time will it be in 3 hours 5 minutes?

18. What time will it be in 1 hour 17 minutes?

19. What time was it 2 hours 3 minutes ago?

Compare the fractions.

20. $\frac{1}{3} \underline{\hspace{1cm}} \frac{1}{4}$
21. $\frac{3}{6} \underline{\hspace{1cm}} \frac{5}{6}$
22. $\frac{1}{4} \underline{\hspace{1cm}} \frac{3}{4}$
23. $\frac{1}{3} \underline{\hspace{1cm}} \frac{2}{4}$
24. $\frac{1}{4} \underline{\hspace{1cm}} \frac{1}{3}$
25. $\frac{2}{3} \underline{\hspace{1cm}} \frac{2}{6}$
26. $\frac{1}{3} \underline{\hspace{1cm}} \frac{2}{3}$

Complete the equivalent fractions.

27. $\frac{12}{36} = \frac{1}{3}$
28. $\frac{3}{9} = \frac{1}{3}$
29. $\frac{4}{10} = \frac{2}{5}$
30. $\frac{3}{5} = \frac{6}{10}$
31. $\frac{36}{54} = \frac{2}{3}$
32. $\frac{5}{8} = \frac{10}{16}$

33. $\frac{3}{4} = \frac{27}{36}$
34. $\frac{27}{72} = \frac{3}{8}$
35. $\frac{2}{3} = \frac{6}{9}$
36. $\frac{2}{3} = \frac{6}{9}$
37. $\frac{18}{27} = \frac{2}{3}$
38. $\frac{10}{25} = \frac{2}{5}$

Identify the fraction.

39. $\frac{1}{2}$
40. $\frac{5}{6}$
41. $\frac{3}{4}$
42. $\frac{1}{3}$
43. $\frac{2}{5}$
44. $\frac{3}{2}$
45. $\frac{4}{6}$
46. $\frac{4}{5}$
47. $\frac{3}{3}$
48. $\frac{5}{5}$
Identify the fraction.

49.

50.

51.

Simplify the fractions.

52. \( \frac{24}{40} = \) ______
53. \( \frac{4}{16} = \) ______
54. \( \frac{4}{6} = \) ______
55. \( \frac{9}{45} = \) ______
56. \( \frac{18}{27} = \) ______
57. \( \frac{28}{35} = \) ______
58. \( \frac{49}{56} = \) ______
59. \( \frac{16}{24} = \) ______
60. \( \frac{8}{32} = \) ______
61. \( \frac{4}{32} = \) ______
62. \( \frac{10}{12} = \) ______
63. \( \frac{4}{10} = \) ______
64. \( \frac{28}{56} = \) ______
65. \( \frac{9}{36} = \) ______
66. \( \frac{18}{24} = \) ______
67. \( \frac{8}{12} = \) ______

Find the sum.

68. \( \frac{1}{6} + \frac{6}{71} = \) ______
69. \( \frac{1}{3} + \frac{3}{70} = \) ______
70. \( \frac{6}{3} + \frac{2}{71} = \) ______
71. \( \frac{3}{6} + \frac{1}{73} = \) ______
72. \( \frac{4}{6} + \frac{3}{74} = \) ______
73. \( \frac{4}{4} + \frac{1}{75} = \) ______
74. \( \frac{2}{4} + \frac{3}{75} = \) ______

Find the difference.

76. \( \frac{4}{8} - \frac{2}{77} = \) ______
77. \( \frac{5}{6} - \frac{1}{78} = \) ______
78. \( \frac{7}{8} - \frac{6}{79} = \) ______
79. \( \frac{7}{8} - \frac{3}{80} = \) ______
80. \( \frac{3}{8} - \frac{5}{81} = \) ______
81. \( \frac{6}{8} - \frac{2}{82} = \) ______
82. \( \frac{6}{8} - \frac{3}{83} = \) ______
83. \( \frac{4}{5} - \frac{3}{83} = \) ______

Find the greatest common factor.

84. \( \frac{49}{28} = \) ______
85. \( \frac{39}{93} = \) ______
86. \( \frac{95}{30} = \) ______

Find the lowest common multiple.

87. \( \frac{9}{12} = \) ______

Convert the given measures to new units.

88. \( 15 \text{ cm} = \) ______\( \text{ mm} \)
89. \( 91 \text{ mm} = \) ______\( \text{ cm} \)
90. \( 62 \text{ cm} = \) ______\( \text{ mm} \)
91. \( 63 \text{ cm} = \) ______\( \text{ mm} \)

Convert the given measures to new units.

92. \( 25 \text{ ft} = \) ______\( \text{ yd} \)
93. \( 79 \text{ in} = \) ______\( \text{ ft} \)
94. \( 80 \text{ in} = \) ______\( \text{ yd} \)
Find the perimeter and area.

95.  

96.  

97.  

Solve.

<table>
<thead>
<tr>
<th>hot dog = $1.40</th>
<th>cola = $1.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>order of French-fries = $1.35</td>
<td>ice cream cone = $1.95</td>
</tr>
<tr>
<td>hamburger = $2.35</td>
<td>milk shake = $2.00</td>
</tr>
<tr>
<td>deluxe cheeseburger = $3.80</td>
<td>taco = $2.80</td>
</tr>
</tbody>
</table>

98. ______ What is the total cost of a milk shake, a hamburger, and a deluxe cheeseburger?

99. ______ If Michele wanted to buy a hamburger, a hot dog, and a taco, how much would she have to pay if the items were on sale for ten percent off the regular price?

100. ______ Marin purchases a hot dog and a taco. How much change will she get back from $10.00?

Solve the following.

101. ______ If Sandra earns $23.75 after working five hours what is the hourly rate?

102. ______ How much will Carlos earn if he earns $15.80 per hour and works 11 hours?

Find the product.

103.  

104.  

105.  

106.  

107.  

108.  

109.  

110.  

111.  

112.  

113.  

114.  

115.  

116.  

117.  

118.  

119.  

120.  

121.  

122.  

Find the quotient.

103. \( \frac{86}{31} \)  

104. \( \frac{72}{91} \)  

105. \( \frac{31}{95} \)  

106. \( \frac{95}{20} \)  

107. \( \frac{80}{62} \)  

108. \( \frac{93}{17} \)  

109. \( \frac{22}{74} \)  

110. \( \frac{12}{95} \)  

111. \( \frac{48}{63} \)  

112. \( \frac{72}{189} \)  

113. \( \frac{242}{170} \)  

114. \( \frac{18}{243} \)  

115. \( \frac{188}{138} \)  

116. \( \frac{175}{144} \)
Complete the bar graph.

123.

<table>
<thead>
<tr>
<th>Fruits</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Peaches</td>
<td>88</td>
</tr>
<tr>
<td>Apples</td>
<td>47</td>
</tr>
<tr>
<td>Pears</td>
<td>29</td>
</tr>
<tr>
<td>Oranges</td>
<td>10</td>
</tr>
<tr>
<td>Plums</td>
<td>41</td>
</tr>
</tbody>
</table>

Complete the line graph.

124.

<table>
<thead>
<tr>
<th>Month</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>35</td>
</tr>
<tr>
<td>February</td>
<td>38</td>
</tr>
<tr>
<td>March</td>
<td>47</td>
</tr>
<tr>
<td>April</td>
<td>52</td>
</tr>
<tr>
<td>May</td>
<td>52</td>
</tr>
<tr>
<td>June</td>
<td>70</td>
</tr>
<tr>
<td>July</td>
<td>73</td>
</tr>
<tr>
<td>August</td>
<td>68</td>
</tr>
<tr>
<td>September</td>
<td>62</td>
</tr>
<tr>
<td>October</td>
<td>53</td>
</tr>
<tr>
<td>November</td>
<td>50</td>
</tr>
<tr>
<td>December</td>
<td>25</td>
</tr>
</tbody>
</table>
Recycling is a process where something is reused rather than thrown away. Common items that are recycled include aluminum and steel cans, glass, and newspapers. Recycling can be time-consuming and dirty work. For example, recyclable objects have to be sorted from trash. Then the objects have to be cleaned. Afterwards, the objects are turned into materials that can be used by people and companies. Why should people bother to recycle even though it takes a lot of work?

Recycling helps protect the earth. Recycling means less garbage in landfills. These are places where garbage is taken and buried. Recycling also helps conserve the earth's resources. For example, factories use less energy by recycling steel cans than by making new ones. Recycling paper saves trees from being cut down. Trees are used to make paper.

Every time you are about to drop a plastic bottle in the garbage, stop and think. Is it worth harming the earth? Your actions now can help preserve the environment for generations to come. All you have to do is throw that bottle into a recycling bin.

Get in the habit. Be proud of recycling. Encourage others to recycle. You can make a difference!
1. What is recycling?
   A. a process where something is reused
   B. a process where something is thrown away
   C. a process where something is taken and buried
   D. a process where something harms the earth

2. How does the author organize the information in this passage?
   A. The author explains the problems with recycling and suggests different solutions.
   B. The author describes similarities and differences between recycling and throwing things away.
   C. The author lists information about recycling in order of importance, from most to least important.
   D. The author describes recycling and shares an argument about why it's important.

3. Read these sentences.
   "... recyclable objects have to be sorted from trash. Then the objects have to be cleaned."

   These sentences can be used to support which conclusion below?

   A. "... the objects are turned into materials that can be used by people and companies."
   B. "Recycling can be time-consuming and dirty work."
   C. "Recycling helps protect the earth."
   D. "Be proud of recycling."

4. What can be concluded from this passage?
   A. The author works for a recycling plant.
   B. The author does not believe in recycling.
   C. The author believes that all you have to do to save the environment is throw a bottle in a bin.
   D. The author believes that everyday people can help the earth.
5. What is the main idea of this passage?
   A. Recycling helps protect the earth and conserve its resources.
   B. Many people avoid recycling because it is too difficult.
   C. People must make decisions what to recycle.
   D. Only certain things can be recycled.

6. At the end of paragraph one, the author asks, "Why should people bother to recycle even though it takes a lot of work?" Why does the author include this question?
   A. to transition the reader to the next paragraph, which answers the question
   B. to question the reader's knowledge about recycling
   C. to summarize the major points in paragraph one
   D. to allow the reader to demonstrate understanding

7. Choose the answer that best completes the sentence below.

   Recycling takes work, __________ it is good for the environment.
   
   A. instead
   B. before
   C. so
   D. but

8. What does the author suggest you do when you are about to throw a plastic bottle in the garbage?
9. What examples does the author provide to show that recycling helps conserve the earth's resources?


10. Read these sentences from the text.

"Get in the habit. Be proud of recycling. Encourage others to recycle."

How can these actions make a difference? Use evidence from the text to support your answer.
Take Me Out to the Ball Game

By ReadWorks

Corinne skipped through the parking lot. She couldn’t hold back her excitement. Her family was going to the baseball stadium for the first time!

“Corinne, chill out,” said her brother, Jake. Jake was only two years older than Corinne, but he thought that gave him the authority to boss her around. Corinne slowed to a walk and waited for her family to catch up.

“I can’t help it,” she said. “I’ve never been to a baseball game before.”

Corinne had watched countless baseball games on television. Baseball was her favorite sport, and she had been a Chicago Cubs fan as long as she could remember. Corinne thought that the best moment of her life would be when the Cubs finally broke their curse and won the World Series. The team had been losing for decades, but she knew that sooner or later, they had to win.

But tonight her family wasn’t going to see the Cubs. They were going to see the Cougars, a new minor league team that had come to their town. Jake wasn’t excited about the game. He thought the minor leagues didn’t count. “The minor league is for players who aren’t good enough for the major league,” Jake always said. But Corinne liked the idea that these players weren’t famous yet. They were still training and learning, just like her. Maybe she’d see baseball’s next big star. Maybe he’d even sign a baseball for her.

“Mom,” Corinne said, “Can we wait outside the dugout after the game? I want to get some autographs.”

“Sure, we can,” said Corinne’s mother. “But let’s enjoy the game first.”

They pulled out their tickets and walked into the stadium. The stadium security guard checked Corinne’s mother’s purse and waved them through. “Mmmm,” Corinne breathed in deeply. The air smelled like a delicious mix of popcorn and soda. Corinne looked at the tickets and saw that they were sitting on the upper level, just past third base. They walked up the concrete stairs and found their seats as the first inning was beginning.

Corinne couldn’t decide whether to watch the field itself or the enormous screen behind the outfield. Her eyes darted back and forth between the two. The Cougars were pitching first. She cheered at the top of her lungs for every strike and booed when anyone on the other team, the Cyclones, got a hit. Even Jake looked like he was having fun, cheering just as loudly as Corinne.
The game was close. The Cougars would score, and then the Cyclones would score. Back and forth, the two teams battled. The Cyclones had a better pitcher, but the Cougars were quicker. Corinne especially liked the shortstop. He was short, like her, and he was really agile. No matter where the ball was, he was there first. He seemed to have a magic ability to predict its path.

“Mom,” said Corinne, tugging on her mother’s sleeve. “What’s the shortstop’s name?”

Her mother looked through the program, searching. “Cory Alvarez,” she said. “Cory!” thought Corinne. “Just like me.”

By the end of the ninth inning, the teams were still tied, and the Cougars were up to bat. “This is it,” Corinne said to Jake. “If the Cougars can manage to score just one run, then we’ll win!”

“Don’t be such a baby,” said Jake. “It doesn’t really matter. It’s just the minor leagues.”

Corinne noticed, though, that Jake was leaning forward in his seat and watching the batter with interest. Jake could pretend to be cool as a cucumber, but inside he was just as excited as Corinne.

The batter turned, and Corinne saw that it was her favorite player, Cory Alvarez. “Come on Cory,” she thought, “You can do it!”

Cory walked up to the home plate and tapped the bat on the ground twice. Then he lifted the bat and waited. The pitcher wound up and then threw a ball so fast, Corinne didn’t even see it. She heard the crack when the bat hit the ball, though, and saw the ball flying through the air toward third base. The ball sailed past the base, then over the stands and straight toward Corinne’s family. Corinne climbed up on her seat and put her hands out. She felt a sting and tumbled backwards as the baseball slammed into her palms. She tumbled out of the chair, and her parents knelted over her. “Corinne! Corinne! Are you okay?”

Corinne held up the baseball and smiled. “I’m much more than okay,” she said.
1. Which team is Corinne hoping will win this baseball game?

2. Where does this story take place?

3. Corinne is completely enjoying herself at the baseball game. What evidence from the story supports this conclusion?

4. Why is Corinne so very excited about this baseball game?
5. What is the main idea of this story?


6. Read the sentences and answer the question.

"Corinne noticed, though, that Jake was leaning forward in his seat and watching the batter with interest. Jake could pretend to be cool as a cucumber, but inside he was just as excited as Corinne."

What does the phrase “cool as a cucumber” mean in this text?


7. What word or phrase best completes the sentence?

Corinne especially likes Cory Alvarez ________ he seems to have the ability to predict where the ball will go and get there first.
8. What happens to the baseball that Cory Alvarez hits?


9. At the end of the story, Corinne says, “I’m much more than okay.” What does Corinne mean by this? Use evidence from the text to support your answer.


10. Why might Corinne be feeling “much more than okay” at the end of the story? Use evidence from the text to support your answer.


The Legend of Ol’ Greeny
By ReadWorks

Kevin pulled the flannel blanket tighter around his body as the cool lake breeze drifted off the soft waves toward the shore. The burning warmth coming from the bonfire was becoming weaker, and Kevin finally felt the cold of the night. He gazed at the faces that huddled around the glowing embers—his grandfather off to his right, his father directly across from him, and his younger sister, Kali, to his left. The only sound they heard was the gentle crash of the waves on the rocky shore. Kevin could just make out the lights of the cottages that sat on the opposite side of the lake, a couple miles away. He wondered if they were also bonfires that were flickering to their dark ends.

Cayuga Lake, one of the biggest Finger Lakes in upstate New York, isn’t very wide but stretches to almost 40 miles, or 64 kilometers, in length. Kevin always wanted to swim across, since he thought he could manage a couple of miles. But he could only dream of swimming its length. He figured he would get too tired early on, even though he was a very strong swimmer. But as he stared at the fire, he fantasized about completing the feat, climbing onto the opposite shore to the massive crowd that had gathered to cheer him on. He would be wrapped up in a blanket like the one he was wearing now, and his photograph would be taken and put on the front page of the newspaper the next day with the headline: “Local Boy Swims the Length of Lake, Now Champion.”

“Kevin! Hello... Earth to Kevin!” Kevin snapped his head up. His grandfather had been calling his name, but he had been too busy daydreaming to hear him.

“What are you thinking about over there?” Grandpa Joe asked.

“Oh, nothing,” Kevin mumbled, still smiling to himself. Maybe one day he would live the dream.

“Okay, well it’s time for a story,” his grandfather said. “So gather around, close.”
Kevin and Kali glanced at each other and rolled their eyes. Grandpa Joe always had crazy stories to tell around the bonfire, stories that were too far-fetched to believe. But the two siblings each grabbed a long stick, stuck marshmallows on their ends, started to roast them over the fire, and waited for their grandfather to begin.

"More than a century ago, my grandfather was out fishing on a night like this," Grandpa Joe said in a hushed voice. "No one was out on the lake, and his was the only boat in sight. He and his buddy stayed out for a while, but then left because the fish weren't biting."

Kevin smashed his marshmallow between two graham crackers and a piece of chocolate. He took a messy bite, and Grandpa Joe continued, "On their way home, they drove to Lake Shore Drive, so they could see the lake in full view from up high. My grandpa said that he noticed something dark in the water—it looked like a log, but it was almost too big to be a piece of driftwood. He kept his eye on it for a while, and eventually..."—he paused for effect—"it moved."

Kali let out a gasp. Her mouth and fingers were sticky from the gooey marshmallows. Kevin laughed, and then he asked, "Come on, are you saying that there's some Cayuga Lake monster out there?"

"It's Ol' Greeny!" Granda Joe exclaimed. "Check the old papers in the early 1900s; the Ithaca Journal reporters wouldn't even go near the lake for fear of being snatched up by the monster."

"Were there other sightings?" Kali asked.

"Sure there were!" said Grandpa Joe. "In the 1970s, a kid claimed that he was bitten by Ol' Greeny, and a boater said that he and his friends spotted something they thought was a huge log, but then it dived beneath the surface of the water."

"Wow!" Kali exclaimed. Her eyes had grown twice in size, and her jaw dropped. Kevin giggled at the thought of her believing in these lake monster stories, but as he looked out over the water, he wondered if something strange was out there hiding in the deep.
1. What does Kevin dream of doing?

2. Where does the story take place?

3. Read these sentences from the story.

"'Okay, well it's time for a story,' his grandfather said. 'So gather around, close.' Kevin and Kali glanced at each other and rolled their eyes. Grandpa Joe always had crazy stories to tell around the bonfire, stories that were too far-fetched to believe."

Based on this evidence, what can you conclude about Kevin and Kali?
4. Read these sentences from the story.

"'My grandpa said that he noticed something dark in the water—it looked like a log, but it was almost too big to be a piece of driftwood. He kept his eye on it for a while, and eventually...'—he paused for effect—'it moved.'"

What "effect" is Grandpa Joe trying to produce?

5. What is the main idea of this story?

6. Read the sentences and answer the question.

"Kevin and Kali glanced at each other and rolled their eyes. Grandpa Joe always had crazy stories to tell around the bonfire, stories that were too far-fetched to believe."

What does the word "far-fetched" mean as used in this text?
7. What word or phrase best completes the sentence?

Kevin and Kali roll their eyes when Grandpa Joe announces he's going to tell a story, _____ they listen to him anyway.

8. What does Kevin wonder as he looks at the water at the end of the story?


10. Explain how Kevin feels about Grandpa Joe's story by the end of the text. Support your answer using evidence from the text.
Web of Life
Mystery 1: Why would a hawk move to New York City?

End of Mystery Assessment

1. How would you describe a food chain to someone who hasn’t thought about that idea before?

2. When you go “down” the food chain by continuing to ask “What does it eat?” at what category of living things do you always end up?
3. Rather than showing just one food chain, the images below show a habitat, where several food chains are linked to each other. Draw arrows connecting each of these living things by what they eat, then answer question #4.

- hawk
- falcon
- cat
- lizard
- snake
- caterpillar
- gopher
- garden plant (parsley)

4. When you connect all the different food chains within one habitat, like you did above, what words or phrase do you think best describe how this diagram looks? Why?
**Underwater Plants (Producers)**

These plants take all their carbon dioxide from the water.

**Underwater Plants (Producers)**

These plants take all their carbon dioxide from the water.

**Underwater Plants (Producers)**

These plants take all their carbon dioxide from the water.

**Bacteria (Decomposers)**

Bacteria break down fish waste to make carbon dioxide and nutrients.

**Phytoplankton (Producer)**

These microscopic plants take carbon dioxide from the water.

**Phytoplankton (Producer)**

These microscopic plants take carbon dioxide from the water.

**Phytoplankton (Producer)**

These microscopic plants take carbon dioxide from the water.

**Fungi (Decomposers)**

Fungi break down fish waste to make carbon dioxide and nutrients.

**Fungi (Decomposers)**

Fungi break down fish waste to make carbon dioxide and nutrients.

**Fungi (Decomposers)**

Fungi break down fish waste to make carbon dioxide and nutrients.

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**BIG FISH**

A Big Fish needs:
- at least 3 Big Fish Foods
- at least 2 Decomposers
- a healthy carbon dioxide level

**Ecosystem Cards**

Page 1
**BIG FISH**

Ecosystem Cards

**Algae (Producers)**
-3 carbon dioxide points
Algae take all their carbon dioxide from the water.

**Algae (Producers)**
-3 carbon dioxide points
Algae take all their carbon dioxide from the water.

**Aquatic Sowbugs (Big Fish Food)**
+1 carbon dioxide points
Your pond needs plants, algae, or phytoplankton for these aquatic sowbugs to eat.

**Snails (Big Fish Food)**
+2 carbon dioxide points
Your pond needs plants, algae, or phytoplankton for these snails to eat.

**Tadpoles (Big Fish Food)**
+2 carbon dioxide points
Your pond needs plants, algae, or phytoplankton for these tadpoles to eat.

**Guppies (Big Fish Food)**
+2 carbon dioxide points
Your pond needs plants, algae, or phytoplankton for these guppies to eat.

**Freshwater Shrimp (Big Fish Food)**
+2 carbon dioxide points
Your pond needs plants, algae, or phytoplankton for these shrimp to eat.

**Duckweed (Producer)**
-1 carbon dioxide points
This floating plant takes carbon from the air as well as the water.

**Duckweed (Producer)**
-1 carbon dioxide points
This floating plant takes carbon from the air as well as the water.

**Duckweed (Producer)**
-1 carbon dioxide points
This floating plant takes carbon from the air as well as the water.

**Sludge Worms (Big Fish Food)**
+1 carbon dioxide points
Your pond needs fish waste for these worms to eat.
Here's how to play:

- When it's your turn, pick a card. Then play any card from your hand. You can:
  - Put a card in your pond and adjust the carbon dioxide level, OR
  - Read an Action Card if you have one, follow its instructions, then put it in the discard pile, OR
  - Throw a card away in the discard pile.

- You cannot add something to your pond if it will move the carbon dioxide into the unhealthy range.

- When your pond will support a Big Fish, say "Big Fish!" The Pond Checker will use the worksheet to make sure your pond has everything your Big Fish needs.

- Note: If you run out of cards in the pick-a-card pile, shuffle the discard pile and make it into the pick-a-card pile.
BIG FISH

Action Cards
(and two more big fish!)

ACTION CARD

(READ THIS ALOUD)

Every player passes one card to the player on their right.

ACTION CARD

(READ THIS ALOUD)

The tadpoles in all the ponds grow up into toads and leave.

ACTION CARD

(READ THIS ALOUD)

Trade cards with any player. You choose which card from your hand you will trade, and the other player does the same.

ACTION CARD

(READ THIS ALOUD)

Migrating ducks land in all the ponds and feast on duckweed. All players remove duckweed from their ponds and adjust the pond’s carbon dioxide levels.

ACTION CARD

(READ THIS ALOUD)

Steal one card from anyone’s pond and put it in your pond.

ACTION CARD

(READ THIS ALOUD)

Every player passes one card to the player on their left.

ACTION CARD

(READ THIS ALOUD)

Steal one card from anyone’s pond and put it in your pond.

ACTION CARD

(READ THIS ALOUD)

A neighbor sprays to kill mosquito larvae. The spray gets into ponds and kills all the guppies. All players remove guppies from their ponds and adjust the pond’s carbon dioxide levels.

Big Fish

+6 carbon dioxide points

A Big Fish needs:
- at least 3 Big Fish Foods and 2 Decomposers
- a healthy carbon dioxide level

Big Fish

+6 carbon dioxide points

A Big Fish needs:
- at least 3 Big Fish Foods and 2 Decomposers
- a healthy carbon dioxide level
Big Fish Holding Tank
Keep your Big Fish card here until the pond has everything a Big Fish needs:

FISH-O-METER

BIG FISH'S FOOD
At least three

PRODUCERS
As many as you want

DECOMPOSERS
At least two

CARBON DIOXIDE TRACKER
HEALTHY ZONE

<table>
<thead>
<tr>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
</tr>
</thead>
</table>

Start here

Bad for plants

Bad for fish/animals
Check the Pond!

To make sure the pond is ready for a big fish, answer the questions below.

1) Are there at least three foods for the big fish?   Yes  No
2) Are there at least two decomposers to clean up the waste?   Yes  No
3) Use this chart and the carbon dioxide double-checker at the bottom of this page to make sure the pond is healthy:

<table>
<thead>
<tr>
<th>Big Fish Food</th>
<th>Add up the carbon dioxide number on the cards write them in this column.</th>
<th>Move the pointer to track the carbon dioxide points.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Producers</td>
<td></td>
<td>Start at 15. Move the pointer to add these points.</td>
</tr>
<tr>
<td>Decomposers</td>
<td></td>
<td>Move the pointer to subtract these points.</td>
</tr>
<tr>
<td>Big Fish</td>
<td>6 points</td>
<td>Move the pointer to add these points.</td>
</tr>
</tbody>
</table>

What's the final carbon dioxide level? (add the above numbers)
Is that a healthy level?   Yes  No

Carbon Dioxide Double-Checker:

HEALTHY ZONE

| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|

Mystery Science
Web of Life | Mystery 5
1. How many squares of salt water are on your map?
   _____ squares

2. How many squares of frozen fresh water are on your map?
   _____ squares

3. How many squares of fresh water are on your map?
   _____ squares

4. I have _____ squares of salt water. Divide by 50.
   Stickers: ____ Remainder: ____

5. I have _____ squares of frozen fresh water. Divide by 50.
   Stickers: ____ Remainder: ____

6. I have _____ squares of fresh water. Divide by 50.
   Stickers: ____ Remainder: ____
Map 2

How many squares of salt water are on your map?
_____ squares

How many squares of frozen fresh water are on your map?
_____ squares

How many squares of fresh water are on your map?
_____ squares

I have _____ squares of salt water.
Divide by 50.
Stickers: ____ Remainder: ____

I have _____ squares of frozen fresh water.
Divide by 50.
Stickers: ____ Remainder: ____

I have _____ squares of fresh water.
Divide by 50.
Stickers: ____ Remainder: ____