Activity Book

created by the students of Case Western University
EPISODE 1

Crossword Puzzle

Across

4. A common symptom of low blood sugar is feeling
6. The organ that secretes insulin
8. The organ that digests food
10. Glucose provides _______ for the body's cells
11. Blurred _______ is a common symptom of high blood sugar
14. Energy source that the body can use
15. The basic building block of living things

Down

1. The organs that filter waste out of the blood
2. One common symptom of diabetes is feeling _______
3. The disease that Kara has
5. The key that allows cells to take in glucose
7. (hypo/hyper)glycemia means high blood sugar
9. (hypo/hyper)glycemia means low blood sugar
12. Nutrients in the body are transported through the _______
13. The type of disease where your body attacks its own cells

Bonus Question!

Instructions: Find the hidden word by filling in the blanks. Use the shaded letter from the answer to the designated question.

What did Kara say when her blood sugar was high?

“I guess I’m just N ______ Y ______ W ______!”
What did Kara say when her blood sugar was high?

“I guess I’m just NATURALLY SWEET!”
Diabetes Word Search

H O N Y S A B H M O H R M S
L N U O E L I Y S I A S S T
N E S A O N H P H S I H I O
I M A O I T E O L M N L M
P N D A A D H R C L E P O A
M N S T G S A G E E C P B C
N C M U N L K L O C Y A A H
O M T G L Y I Y D U L N T L
I S I L Y I D C P O G C E E
S H S U G D N E N C R O M I
I A R C R E E M S R P E R H
V K S O E R Y I S N Y A L D
O Y E S N A S A P G H S Y I
T A C E E T H I R S T Y S S

INSULIN
HYPERGLYCEMIA
PANCREAS
KIDNEYS
CELLS
HYPOGLYCEMIA
METABOLISM
BLOOD
SHAKY
VISION
STOMACH
THIRSTY
ENERGY
GLUCOSE
EPISODE 2

Building Blocks of a Balanced Diet

Supplies

- Sticker paper
- Tumbling blocks game (Jenga)

Preparation

1. Download the sticker PDF on the next page.
2. Print out the sticker PDF on sticker paper. If you are unable to purchase sticker paper, use printer paper and tape.
3. Cut out the stickers and put each individual sticker on a building block piece.
4. Let’s play Jenga! 😊

Gameplay

1. Each player removes a single block until the tower falls over.
2. Hold on to the blocks that you pull! Each block has a corresponding food item and glucose value.
3. At the end of the game add up your glucose points and see what range you are in! Normal is the goal!

Tips

Remember a well rounded diet includes fruits, vegetables, whole grains, and plenty of water! Talk to your doctor about what foods are best for you!

<table>
<thead>
<tr>
<th>Glucose Ranges</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Very low glucose</td>
<td>0-50</td>
</tr>
<tr>
<td>Below average glucose</td>
<td>51-79</td>
</tr>
<tr>
<td>Normal glucose</td>
<td>80-130</td>
</tr>
<tr>
<td>Above average glucose</td>
<td>131-159</td>
</tr>
<tr>
<td>Very high glucose</td>
<td>160-200</td>
</tr>
<tr>
<td>Stickers to Print Out!</td>
<td>-35</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----</td>
</tr>
<tr>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>156</td>
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</tr>
<tr>
<td>0</td>
<td>76</td>
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<tr>
<td>4</td>
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</table>
EPISODE 3

Help Kara Find the Right Key

Directions

- Print out the Clue Cards (front and back) and the game card.
- Answer the Clue Cards based on Episode 3 of Kara and the Dire Beastie.
- Each question answered correctly will reveal a clue helping Kara to get closer to finding the right key.

Easy

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
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<td>5</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Front

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
<th>Question 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the name of the knight that they were looking for?</td>
<td>How did Kara find the right key for the Beastie?</td>
<td>What happened to Beastie after he got the key?</td>
<td>What does the key represent?</td>
</tr>
</tbody>
</table>

Answer: Sir Rynge
Clue: A small key is NOT the right key

Back

The correct key is key #4

Intermediate

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>5</td>
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<td>10</td>
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<td>12</td>
</tr>
<tr>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
</tbody>
</table>

Front

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Question 2</th>
<th>Question 3</th>
<th>Question 4</th>
<th>Question 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>What does the White Knight represent?</td>
<td>What does the key represent?</td>
<td>What happens to the body after it gets insulin?</td>
<td>What happened to Beastie after he got the key?</td>
<td>What is the name of the knight that they were looking for?</td>
</tr>
</tbody>
</table>

Answer: White blood cells (immune system)
Clue: The right key is not red

Back

The correct key is key #1
EPISODE 5

Color by Number – Hyperglycemia

Instructions:
1. To determine the color of each space, match the missing word to the clue
2. Every space with that number will be the color associated with the missing word!

Clues:
1. Eating _______ your blood sugar
2. High blood sugar is also called _______
3. You can lower your blood sugar by taking _______
4. Without insulin, glucose can’t enter cells and stays in the _______
5. Without glucose, your cells use other forms of energy like _______, which can make you feel like breathing heavily or vomiting
6. If you feel like you have to _______ a lot, this could be a sign of hyperglycemia
7. Other symptoms of hyperglycemia include headaches and stomach aches: True/False
8. If your blood sugar is high, you can lower it by not eating: True/False
9. Sometimes, doctors have to check your _______ to see how much sugar has been in your blood
10. Fruits, breads, and potatoes are examples of foods high in _______

Word Bank
Carbohydrates - Green
Pee - Dark Grey
Bloodstream - White
Ketones - Red
Hemoglobin - Yellow
Insulin - Blue
Raises - Red
Hyperglycemia - Black
True - Grey
False - Light Grey
Color By Number – Hypoglycemia

Instructions:
1. To determine the color of each space, match the missing word to the clue
2. Every space with that number will be the color associated with the missing word!

Clues:
1. If you skip a meal, this can cause _______ blood sugar
2. Low blood sugar is also called _______
3. In type 1 diabetes, the body does not make enough _______
4. Insulin helps move _______ from your blood into the cells
5. The organ that produces insulin is the _______
6. When your blood sugar is low, _______ is something you can do to raise it
7. It’s important to keep _______ with you, in case you experience hypoglycemia
8. The best foods for quickly raising blood sugar contain _______
9. Feeling shaky, dizzy, confused, tired, or hungry are possible signs of hypoglycemia: True/False
10. Exercise raises your blood sugar: True/False

Word Bank
Hypoglycemia - Black
Glucose - White
Snacks - Grey
Sugar - Pink
Pancreas - Red
Low - Purple
Insulin - Blue
Eating - Brown
False - Green
True - Dark grey
EPISODE 6
My Plate, Your Plate, and a Carbohydrate?

Preparation
1. Download the Category Cards PDF on the next few pages or use the QR code.
2. Print out the PDF. Cut out the individual foods and categories. Place in a container (bowl or basket).
Note: You may color in the images for some extra FUN!
3. Place the categories (carbohydrate, protein, and fat) in different corners of the room.
4. Let’s play! 😊

Gameplay
1. Start the timer
2. Match the foods to their respective categories! First begin matching the foods to the following categories: carbohydrate, protein, and fat.
3. Stop the timer once matching is complete.
4. Check the table for the correct answers and deduct 5 seconds for every wrong answer.
5. The person who finished in the least amount of time wins!
6. Let’s increase the difficulty level! Start the timer.
7. Match the foods to the following categories: simple carbohydrate, complex carbohydrate, protein, and fat.
8. Stop the timer once matching is complete.
9. Check the table for the correct answers and deduct 5 seconds for every wrong answer.
10. The person who finished in the least amount of time wins!

Tips
Complex carbohydrates are found in foods such as whole grains, fruits, and vegetables. Don’t confuse them with simple carbs found in sugary foods!

Supplies
- Paper
- Container (basket, bowl)
- Timer

Ready in 15 minutes
Game Time 10-20 minutes
Players 2+ people
<table>
<thead>
<tr>
<th>Category Cards to Print, Cut, and Place in Corners of the Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
</tr>
<tr>
<td>Proteins</td>
</tr>
<tr>
<td>Fats</td>
</tr>
<tr>
<td>Simple Carbohydrates</td>
</tr>
<tr>
<td>Complex Carbohydrates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrient Cards to Print, Cut, and Sort</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Bread</td>
</tr>
<tr>
<td>Chicken</td>
</tr>
<tr>
<td>Butter</td>
</tr>
<tr>
<td>Soda</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td><img src="image" alt="Soda" /></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Cereal</th>
<th>Turkey</th>
<th>Apple</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cereal" /></td>
<td><img src="image" alt="Turkey" /></td>
<td><img src="image" alt="Apple" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cake</th>
<th>Pork</th>
<th>Potatoes</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cake" /></td>
<td><img src="image" alt="Pork" /></td>
<td><img src="image" alt="Potatoes" /></td>
</tr>
<tr>
<td>Doughnut</td>
<td>Corn</td>
<td>Banana</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td><img src="image1.png" alt="Image" /></td>
<td><img src="image2.png" alt="Image" /></td>
<td><img src="image3.png" alt="Image" /></td>
</tr>
<tr>
<td>Whole Grain Bread</td>
<td>Oatmeal</td>
<td>Broccoli</td>
</tr>
<tr>
<td><img src="image4.png" alt="Image" /></td>
<td><img src="image5.png" alt="Image" /></td>
<td><img src="image6.png" alt="Image" /></td>
</tr>
<tr>
<td>Carrots</td>
<td>Brown Rice</td>
<td>Coconut</td>
</tr>
<tr>
<td><img src="image7.png" alt="Image" /></td>
<td><img src="image8.png" alt="Image" /></td>
<td><img src="image9.png" alt="Image" /></td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>Protein</td>
<td>Fat</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>--------</td>
</tr>
<tr>
<td>White Bread</td>
<td>Chicken</td>
<td>Butter</td>
</tr>
<tr>
<td>Soda</td>
<td>Fish</td>
<td>Olive Oil</td>
</tr>
<tr>
<td>Candy</td>
<td>Beans</td>
<td>Cheese</td>
</tr>
<tr>
<td>Cookies</td>
<td>Steak</td>
<td>Mayo</td>
</tr>
<tr>
<td>Pasta</td>
<td>Shrimp</td>
<td>Ice Cream</td>
</tr>
<tr>
<td>Muffin</td>
<td>Bacon</td>
<td>Coconut</td>
</tr>
<tr>
<td>Cereal</td>
<td>Turkey</td>
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<tr>
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<td>Pork</td>
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<td>Whole Grain Bread</td>
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<td>Carrots</td>
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<td>Broccoli</td>
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<td>Apple</td>
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<td>Potatoes</td>
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<td>Corn</td>
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<tr>
<td>Oatmeal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown Rice</td>
<td></td>
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</tbody>
</table>

**HARD**

<table>
<thead>
<tr>
<th>Simple Carbs</th>
<th>Complex Carbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Bread</td>
<td>Whole Grain Bread</td>
</tr>
<tr>
<td>Soda</td>
<td>Carrots</td>
</tr>
<tr>
<td>Candy</td>
<td>Broccoli</td>
</tr>
<tr>
<td>Cookies</td>
<td>Apple</td>
</tr>
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<td>Pasta</td>
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<tr>
<td>Muffin</td>
<td>Banana</td>
</tr>
<tr>
<td>Cereal</td>
<td>Corn</td>
</tr>
<tr>
<td>Cake</td>
<td>Oatmeal</td>
</tr>
</tbody>
</table>
EPISODE 7

Blood Sugar: It’s a Balancing Act

4. Do 30 more jumping jacks!
5. Grab your two items again and hold your arms straight out to the side for as long as you can
   a. Was it more difficult this time?

Advanced Mode

1. Balance on one foot, grab your two items and hold your arms straight out to the side for as long as you can
2. Do 30 jumping jacks!
3. Once again, balance on one foot, grab your two items and hold your arms straight out to the side for as long as you can
   a. Was it more difficult this time?
4. Do 30 more jumping jacks!
5. Once again, balance on one foot, grab your two items and hold your arms straight out to the side for as long as you can
   a. Was it more difficult this time?

Things to Think About

- Why do you think you lost your balance?
- What role did tiredness play in your ability to balance? What could it represent?

Big Takeaway

- Exercise lowers your blood sugar; make sure to eat after you exercise to keep your blood sugar balanced!
EPISODE 7

Coloring Page: Joust like Kara!
EPISODE 8

Better Together

What is the name of the main character in these videos that you watched?
If you said Kara, draw two lines connecting dots 1, 2, and 3 on either print-out!

Don’t forget to ask for help or look up information if you need it!

Questions to Work On Together:

Connect three dots for answering any of the following:

☐ In an emergency when you’re feeling sick, who do you call?
☐ Where do we keep extra insulin?
☐ When do you need your insulin?
☐ Name 3 carbohydrate food items (Hint: Activity 6)
☐ What should you do after you exercise?
☐ What is your favorite snack to raise your blood sugar?
☐ How do you feel when you have low blood sugar?

Connect four dots for answering any of the following:

☐ How do you feel when you have high blood sugar?
☐ How often should you check your blood sugar?
☐ Can you eat sugar when you have diabetes?

Game Time 20 minutes
Players You and a Trusted Adult

Supplies
- A pen, pencil, or marker (anything you can write with is fine!)
- Either or both of the print-out(s) on the following pages

Preparation
1. Print the connect-the-numbers activity on the following page
2. Grab your favorite trusted adult

Gameplay
Work together to answer the following questions in any order. Each time you work together to answer a question, draw the corresponding number of lines connecting the dots on the print-out. For example:
Connect five dots for answering any of the following:

- Why is daily exercise important?
- What does insulin do?
- What does glucose bind to in your body?
- What is the difference between simple and complex carbohydrates?
- Describe the job of your favorite character
- What was beastie's role in the videos?
- What is a normal blood sugar level range? (Hint: Activity 2)

Connect six dots for answering any of the following:

- What animal did Kara fly on in the videos?
- How does the White Knight contribute to diabetes?
- What is the importance of monitoring what you eat?
Better Together Activity 1:

THIS DOMAIN IS YOURS.

ALL HAIL QUEEN KARA!
**Better Together Activity 2:**

 WHEN WE FIRST STARTED, I HAD NO IDEA WHAT WAS GOING ON. I WAS NERVOUS AND SCARED, BUT WITH YOUR HELP, AND KNOWING WHAT IS HAPPENING...

 ...I BELIEVE THAT I AM UP TO THE CHALLENGE OF TAKING CARE OF MY "NOT SO DIRE BEASTIE".
Special Thanks
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