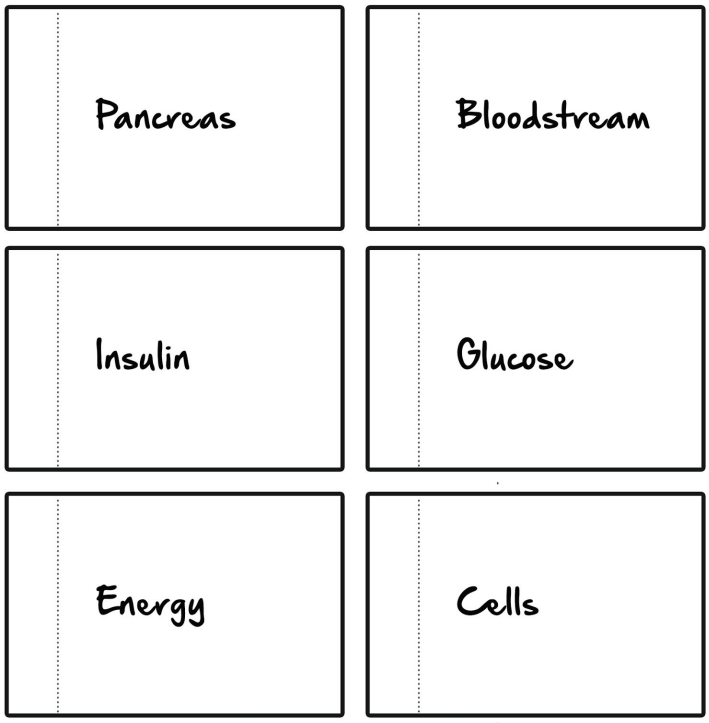
Diabetes Lesson 1: "The Solve"

Student Handout

I. Vocabulary Warmup

1. Using the materials at your table, cut out your vocabulary cards along the **solid blank lines**.
2. Using the definitions on the back of the cards, match the vocabulary word with the correct picture on the "Diabetes Mind Map." When you're ready to glue, raise your hand so you can check your Mind Map with your teacher.
3. Fold along the dotted line on each vocabulary card to create a flap. Put glue **ONLY** on the hinge of your vocabulary cards (the word should be on top). **You should be able to open the flap to see the definition and the picture underneath.**
4. Discuss with your group:
    a. What word comes before "glucose", which allows "cells" to make "energy"? Why?
    b. Why do you think "glucose" is important in this whole process?
    c. What do you already know about diabetes? How could you relate it to your mindmap?

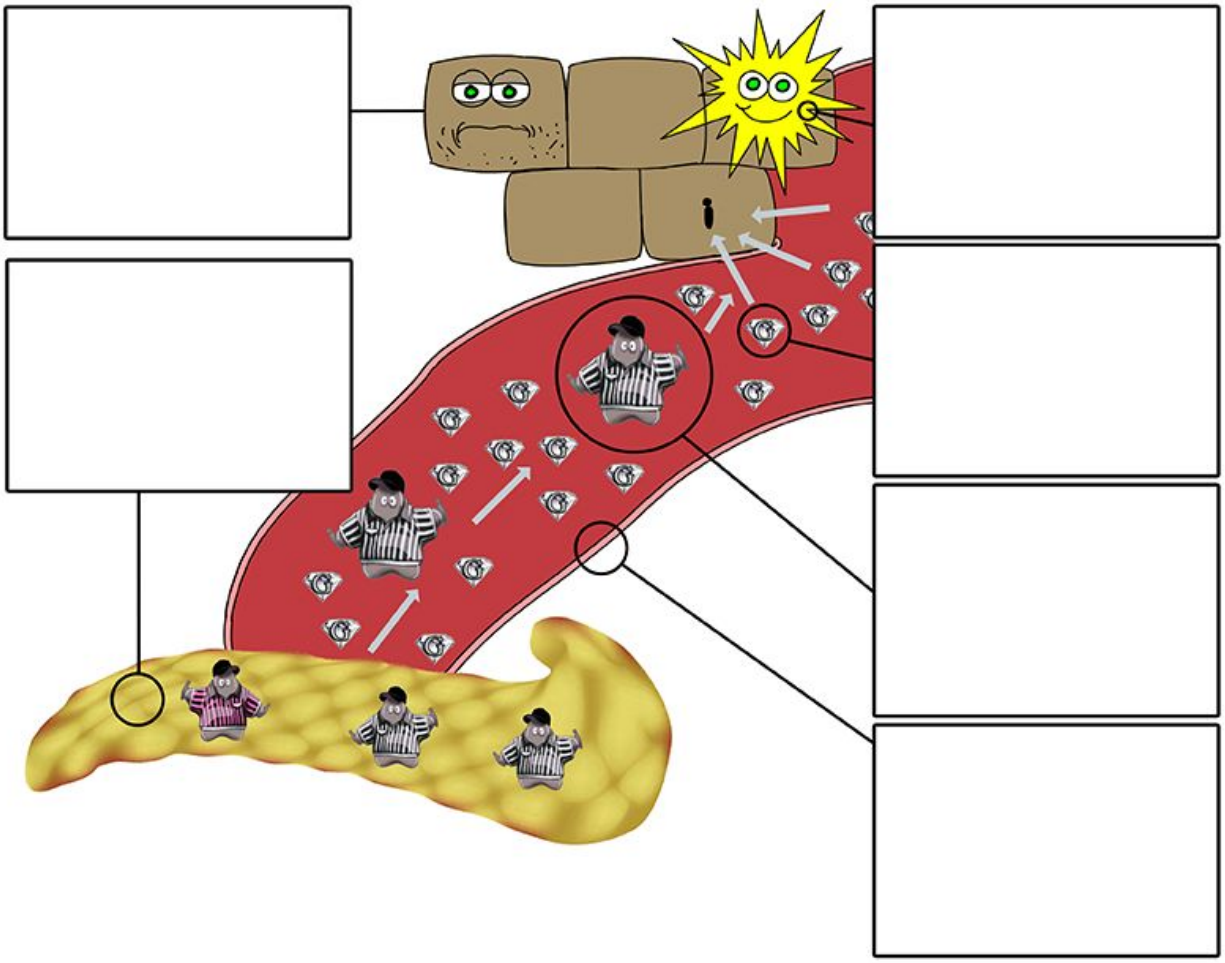
Diabetes Vocabulary Cards



Diabetes Vocabulary

cells: the basic structural unit of all living things
energy: the ability to do work
glucose: a simple sugar that can be converted into usable energy
insulin: a hormone that controls the amount of glucose in the blood
pancreas: an organ that makes insulin
bloodstream: the pathway for blood to move throughout the body

Diabetes Mind Map



MOSA MACK SCIENCE
STUDENT GUIDE

II. Watch Mosa Mack.
Either on your own, in a small group or as a class (your teacher will let you know), watch Mosa Mack's episode on Diabetes. Then, fill out the questions below. Include a time code in your answer as evidence of where you found your answer.

Name: _____ **Date:** _____

Episode Questions

1. Why is it odd that Jaylene is hungry?

2. Why are the esophagus cells grumbling and complaining?

3. Why don't the cells care about all the foods Jaylene lists off? What do cells really need to make energy?

4. Where is glucose absorbed?

5. Who regulates the amount of glucose the cells in the body get?

6. Where does insulin come from?

7. What are the insulin doing in the bloodstream? Describe the scene.

8. What did Mosa figure out? Why has Jaylen been so hungry?

III. Exit Ticket: Check for Understanding

Complete the exit ticket below *or* you can take the quiz online!

Name: _____ **Date:** _____

1. What do cells need to make energy?
    a. Food
    b. Carbon Dioxide
    c. Burgers
    d. Glucose
2. How does glucose from food travel from the small intestine to cells that need it?
    a. Nerve cells
    b. White blood cells
    c. The bloodstream
    d. Absorption
3. What do cells need in order to absorb glucose?
    a. Insulin
    b. DNA
    c. Glycogen
    d. Oxygen
4. Where is insulin produced?
    a. Small intestine
    b. Esophagus
    c. Blood Cells
    d. Pancreas
5. In the video, what unlocks the cell's door to let glucose in?
    a. Red blood cells
    b. Insulin
    c. Small Intestine cells
    d. Glucose
6. What is wrong with Jaylene? Why is she so hungry?
    a. Her body is not creating insulin, so no glucose can absorb into cells.
    b. There is no insulin in the bloodstream, so no glucose can absorb into cells.
    c. The insulin "key" does not work for the cell "lock," so no glucose can absorb into cells.
    d. She isn't eating enough.