ORGAN QUIZ

OVERALL TIME *Up to 1-hour lesson*

GROUPS *Three to four kids*

PROGRAMMING LEVEL *Advanced Block: Functions, Variables, Complex Controls (If Then), and Comparators*

CONTENT THEME *Science*

OBJECTIVE

- **I will name the nine vital organs and where they are located in the human body.**
- **I will create my own game by editing the provided code.**

OVERVIEW

Identify the organs in the human body and then create your own quiz!

MATERIALS

- **Organs PDF**
- **Butcher paper**
- **Markers or crayons**
- **Scissors**

EXPLORATION: THE ORGANS

Grab your stack of organs and begin to color each one. As you color them, take a moment to read the captions. You might learn something about an organ that you didn't know before.

https://sphero-media-sphero-prod. s3.amazonaws.com/cwist/picturesteps/c9/75/ Organ%20Quiz_Organs.pdf

When you are done coloring, carefully cut out each organ.

EXPLORATION: THE BODY

Where do all these parts go? They need a body, of course!

Work with a friend or a partner for this step. Grab some butcher paper and make sure it's a little taller than you. Lay the butcher paper down on the floor and lay down on top of it. Ask your partner to trace an outline of your body. You will use this outline to place the different organs as they are called out during the Organ Quiz.

Place your organs where they should go on the body outline you and your partner made.

EXPLORATION: TAKE THE QUIZ

Have you studied up? Do you know where all nine organs go in your body? I hope so because it's time to play the Organ Quiz!

Watch the video to learn how to play the game: Organ Quiz.

▶ *https://youtu.be/3LFTehM1alU*

Be sure to lay down the body outline and gather all the organs before you play. When you're done, use your camera to take a snapshot of your organs located on the body outline.

SKILLS BUILDING: ADD PARTS TO THE BODY

Attached to this activity is a program titled "Organ Quiz." Open the program - we're going to edit it to add an additional organ: the Pancreas!

- Go to the Function (green) tab, then select "edit", then, "evaluate."

- Find the Speak blocks that contain the 9 organs. Tap the first If/Then block and then copy. Scroll to the bottom of the program and tap the last If/Then block. Tap the paste button.

- Tap the Variables tab at the bottom (red), then Add New, then Number (check), then name the variable Pancreas (done), then 1 (check).

SKILLS BUILDING: VARIABLES

1. Now you can replace the If/Then Heart variable you copied earlier with the Pancreas variable. Do this for both variables in the block grouping.

2. Change the Organ = 9 block to Organ = 10 (because we added one more organ) and check. Now, edit the Speak block text by tapping on it and type in the new label "Pancreas" to be spoken and save. Select Done.

3. There are a few last things to change on you main canvas. Go to the Set Number block with organ = Random Int 1 to 9 located at the top of the program. Change from 9 to 10, indicating 10 organs to label.

4. Select the Operators tab, then add an "add (+)" to the If/Then block with other organ variable listed. Select Variables and move the Pancreas variable you made to 0 next to the + you just added.

5. Go to the bottom of your program, before the Main LED block and add a Set block from the Operators tab. Choose Number (check), change the 0 to 1 (check). Now add the Pancreas variable to the open blue circle in that block.

6. Run your program!

CHALLENGE: BUILD YOUR OWN QUIZ

Build your own quiz! Brainstorm ideas of other complex objects that could be labeled. Examples may include the parts of cell or parts of a flower.

By editing the Organs Quiz or beginning a blank program canvas, work with your partner or small group to:

1. Change the number of variables (parts you need to label)

2. The words spoken in the function.

3. Finally, include content materials for others to study as well as cut out they can use for your quiz.

4. Switch programs with another group and attempt their test. Good luck!