

PLANETS QUIZ

OVERALL TIME 2- to 4-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 learn about the eight planets in our Solar System.
- I will execute a Blocks program.
- I will deconstruct the attached program.
- I will edit the attached Blocks program to make your own quiz.

OVERVIEW

Create your own quiz by editing this block program.

MATERIALS

- The Sphero BOLT
- Planet packet

EXPLORATION: LEARN ABOUT THE PLANETS

Review the attached Planet Quiz Research Guide to learn all about the 8 planets in our solar system. As you are reviewing the guide, highlight key facts that you believe to be important. Once you are done reviewing, work with a partner to share the most important attributes of each planet.

<https://sphero-media-sphero-prod.s3.amazonaws.com/cwist/picturesteps/dc/70/Planets%20Quiz%20-%20Research.pdf>

EXPLORATION: PLANET CARDS

Cut out each planet in the below Planet Pack PDF.

<https://sphero-media-sphero-prod.s3.amazonaws.com/cwist/picturesteps/74/ee/Planets%20Quiz.pdf>

On the back of each planet are three facts. These are the facts that you will learn about in this activity and that the Sphero BOLT will quiz you on.

SKILLS BUILDING - TAKE THE QUIZ

Have you cut out the planets? Have you studied up on each one? Are you ready for the quiz? Watch this video to see an introduction to the game.

► https://youtu.be/yID6KH_hFnc

This game works best in a group of 2-3 players. The goal of the game is to name the planet to match the spoken fact. Here's how to play:

- Connect the Sphero BOLT to the app and start the linked "Planets Quiz" program to hear the first fact. There are 3 possible facts for each planet.
- Pick up the planet you think matches the fact and check the back to see if you're right.
- Shake the Sphero BOLT to hear the next fact, and continue to see how many the group can answer.

- Restart the program and keep playing until you can get all 8 correct.

SKILLS BUILDING: DECONSTRUCTING A PROGRAM

We will now deconstruct the Planets Quiz program.

- Go to the Function (green) tab, then select “edit”, then planetPicker.
- Remove If/Then blocks (purple) for planets 5-8. Look for the planet number to help you locate them. Select Done.
- On you main canvas, go to the Set Number block with planet = Random Int 1 to 8 located at the top of the program. Change from 8 to 4, indicating only four planets to pick.
- Remove the last four planets variables (red, labeled with the planet name) from the If/Then block.
- Now when you run your program, you should only have 4 planets to choose from and only four facts per round.

CHALLENGE: WRITE YOUR OWN QUIZ

You will now create your own quiz about a different topic of your choosing (Animals, computers, video games, sports, etc.)

- Work with a partner to create 3 facts about 4 different related topics (*ex: Write 3 facts about each of the following: baseball, football, basketball and golf*).
- Open your edited Planets Quiz program. Find the Speak blocks by editing the planetPicker Function that contains the 12 facts.

- Edit each block of Speak block text to include facts you have created. Run the program again with your facts.

CHALLENGE - CREATE YOUR OWN QUIZ EXPERIENCE

Create your own quiz-style program by:

- Changing the number of facts.
- Changing how many facts are given each round.
- Adding your own variables and function.
- Changing what action is done to hear the next fact.

Add any idea you think would enhance the quiz, and be sure to include content materials for others to study prior to your quiz.