Sphero RVR: Animal Sounds Walk Lesson Plan

Students will program their Sphero RVR robot to travel in random directions and pause every few seconds to play an animal sound. They will work in partners, and if one student guesses the animal sound incorrectly, they trade roles. During this activity, they will alternatively act as the "Robot Tamer" or the "Robot Observer". This lesson will use the random sound blocks, movement and control blocks and the speak blocks from Sphero EDU.

Materials

- The video "20 Wild Animals - Animal Sounds for Kids to Learn"
    - https://www.youtube.com/watch?v=14LDUtA7G84
- Sphero RVR robot
- Sphero EDU program/app
- Floor Space

Student Objectives

- Students will study the sound that various animals make … from their Science lessons and the YouTube video listed above.
- They will learn about what "random" means in computer code, and use the random speak block from Sphero EDU.
- With Sphero EDU block code, students will use control, movement and sound blocks (among others) to make their RVR robot randomly move around, pause, and play a random animal sound.
- Students will think like programmers: they will debrief, debug and correct mistakes in their programming to make their project effective and interesting.

Teacher Technology Skills Needed

- Understanding of the Sphero RVR movement headings and the use of the random code blocks for speaking and heading movements
- Understanding of the control blocks to add delays and pauses in the speech blocks of the robot

Procedure

1. Go to https://www.youtube.com/watch?v=14LDUtA7G84 and play the video "20 Wild Animals - Animal Sounds for Kids to Learn". Review as necessary, but remind students that their RVR robot will speak most of these sounds and they will be challenged to remember them in a Partner Challenge.

2. Review with the Sphero RVR the movement blocks and the heading degree chart. Show them how to use the Sound block "Speak" and choose random animal sound. Show them the list of random animal sounds that **possibly** might be used in this Partner Challenge. https://docs.google.com/document/d/1nrbpcflC3ir9rhQckt84v0uh2mdLljbC3RidpUPiRys/edit?usp=sharing

3. In this lesson, students will program the robot to:

- move forward for a few seconds
- stop and flash its lights
- say "Which animal is this?"
- play a random sound and pause while the "Robot Observer" guesses
- If correct, switch roles --- Tamer becomes Observer, etc.
- have the robot spin randomly (random heading) and move on for a few seconds
- use a loop code block to repeat this procedure 5 times (or more)

4. After they have tested their program, they share it with their teacher and present it to the class with their RVR robot.

Extension Activities

This basic programming challenge can be enhanced by having students add the following ideas to their program (assuming it works and follows the teacher's criteria):

- ✓ Add more LED programming so the RVR flashes its lights when stopped or ready to move on.
- ✓ Add more speak blocks so that the robot prompts the students to tell more facts about this animal that they have learned. OR label the animal as a mammal, reptile, amphibian, fish, etc. to practice animal categories learned in class.
- ✓ Add backwards movements by changing the random headings code from a range of 0 to 355 to **-355 to 355**.