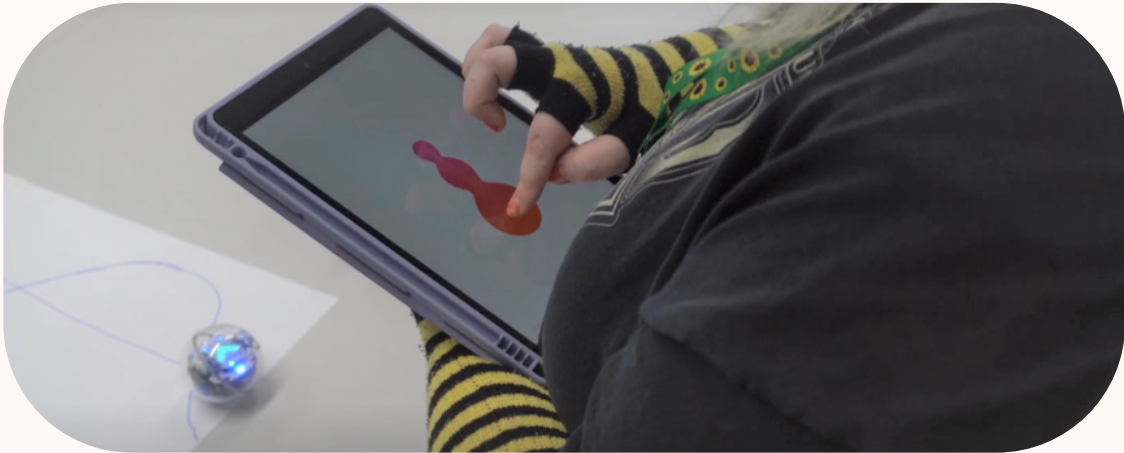


Makerspace Session: Sphero Driving Test



Session Length: 45mins-1hour

Aims:

- Introduce students to the Sphero BOLT – which promotes easy STEAM learning and allows students to express inventive ideas through technology.
- Aiming to encourage teamwork and innovation by harnessing expressive play whilst experimenting with using new technology and coding.

Set up:

Lay out three pages of A3 paper and tape together for each pair/group. As well as a variety of coloured pencils/felt tips. Give each team one Sphero and one iPad. For the further tasks in the session (football tasks) place two cups at either end of the table to form goals and place a ping pong ball in the centre of both 'pitches'.

Equipment:

- [Sphero BOLT Coding Robot](#) x1 per group participating—the battery time on the Sphero BOLT is 2 hours.
- iPad/smartphones able to download Sphero Play/Edu apps x1 device per device per Sphero.
- Sphero Play/Sphero Edu app – free to download on IOS and Android.
- A3 paper
- Various coloured felt tips.
- Plastic Cups (4 for each group)
- Ping pong balls (1 for each group)
- [Sphero Set Up Guide](#)
- Optional—[Intro](#) and [Exit](#) Forms

Structure:

Session Introduction (5mins):

Once the equipment and resources are set up and ready equip each group with one Sphero BOLT and iPad with the following free apps installed - Sphero Play, Sphero Edu. Allocate students into groups pre session and ensure they are standing at opposite ends of the table.

Optional - ask students to complete a digital intro form.

Show the students the Sphero and give a brief introduction to the Sphero Play app - after syncing the Spheros. The main modes they will be using in this session are: joystick, slingshot and tilt. Allow 5 minutes for students to further their understanding of the basic controls of the Sphero before moving onto the main task.

Task 1 (5mins):

Students will draw a straight line on the pieces of A3 paper between them. They will then be asked to take turns to drive the Sphero along the straight line they have drawn using the joystick mode on Sphero Play.

Task 2 (5mins):

Students will then draw a wavy line which will be more complicated to drive the Sphero down. They will then be asked to drive the Sphero along this - keeping on the line as much as possible to develop confidence.

Task 3 (5mins):

Students will then be asked to swap groups and drive the Sphero along the other times wavy line in order to see if this is easier than their own or more difficult.

Task 4 (10-15mins):

Introduce the students to the Sphero Edu app which will allow them to code the Sphero to move instead of driving it. This will give the students an introduction to basic block coding. After the introduction, see if the students can code the Sphero to go in circles, say words or display words on the LED screen.

Task 5 (10mins):

After this go back to the Sphero Play app and explain to the students the next task which is Sphero Football. Using the slingshot, joystick and tilt modes students will aim to drive a ping pong ball into their team mates goal. Using cups and goal posts. The first group to 3 goals wins.

Swap the teams around so that the students get to collaborate with other groups. Optional - students will now be asked to complete a digital exit form for feedback on the session.