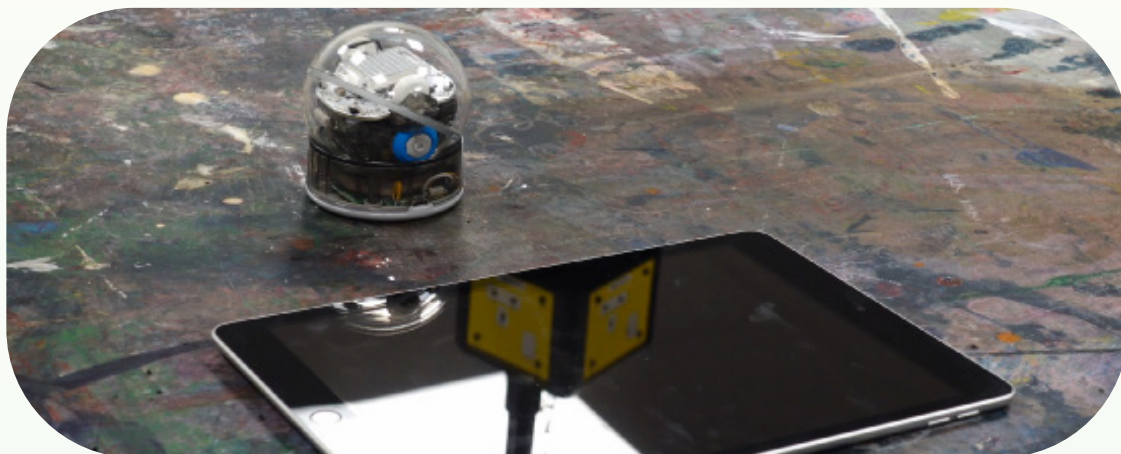


## Academic Tutorial: Musical Spheros



**Session Length: 30mins-45mins**

### **Aims:**

- Introduce students to the Sphero BOLT - STEAM resource, and encourage students to express emotions felt when listening to music through expressive painting using technology.
- Experiment with natural and sustainable dyes. Encourage creativity, teamwork and innovation by harnessing expressive play using new technology.

### **Set up:**

Natural dyes can stain clothing and surfaces - ensure students and staff are aware and the space is prepped before hand. In this instance students used the floor with lining paper laid out and the floor was mopped afterwards. Place a radio/bluetooth speaker out of the way.

### **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.
- Natural dye materials (eg. beetroots, red cabbage, turmeric, baking powder, lemon juice, berries, corn starch)
- Any additional media—eg, pens, felt tips, paintbrushes.
- Radio/Bluetooth Speaker
- Cleaning wipes for participants and Spheros.
- [Making and Using Natural Dyes Resource](#)
- [Sphero Set Up Guide](#)
- Optional—[Intro](#) and [Exit](#) Forms

## Structure:

### Session Introduction (5mins):

Once the equipment and resources are set up and ready, lay out the selection of natural dyes and wipes in reach of the students. Allocate students into groups pre session and ensure they are seated together when entering the room. Each group will need at least one Sphero and one iPad/device. Optional - ask students to complete a digital intro form.

Show the students the Sphero and give a brief introduction to the Sphero Play app. The main mode they will be using in this session is joystick, however there are multiple other modes that could be explored.

Allow 5 minutes for students to further their understanding of the basic controls of the Sphero before moving onto the main task.

### Task 1 (10mins):

Students select a colour from the dyes available and draw with the Spheros to the music freely on the white lining paper. Creating any form of abstract design or pattern.

### Task 2 (2mins):

Students choose another colour from the dyes available and do a full colour wash using paintbrushes provided. Dyes can be watered down if the students wish.

### Task 3 (4mins):

Students choose another colour from the dyes available and draw freely alongside the music with the Spheros onto the colour wash background. This should inform their line work.

### Task 4 (4mins):

Students groups switch and choose another colour from the dyes available and draw freely with the Spheros onto the other team's design.

### Task 5 (10mins):

Return students to their original creation and allow 10 minutes for them to add details to their final piece. This may include drying their design and adding details using wet or dry media. To further enhance the piece. Consider looking at the design created and asking students to highlight any particular patterns in the piece to add an extra layer of dimension to the final piece. At this point students can reveal their final product to the class and reflect on the session.

Optional - students will now be asked to complete a digital exit form for feedback on the session.