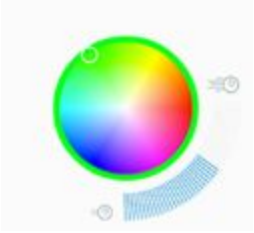
Sphero Challenge 1: Drive Mode

Instructions		Checkmark when done
• Bring both an ipad or chromebook and the shero together and keep them close so that the app recognizes the correct Sphero.		

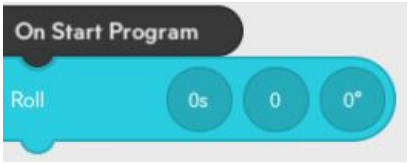
• Find the **Sphero EDU app**
• Click on Sign In
  ○ Username:
  ○ Password:		

• Place Sphero on the **ground** • **Connect** to Sphero (make sure the bluetooth is on)		
• Click on the **Drive Mode**		

• **AIM**
THIS IS A VERY IMPORTANT STEP
  ○ Touch and hold the AIM symbol
  ○ You will see that Sphero has a **blue tail light**
  ○ While holding AIM, rotate your finger until the blue light **points towards you**.
  ○ Sphero moves away from the blue light.
  ○ Note: You can use the AIM button at any time to **readjust the heading at any time.**		

• **Drive** Sphero around the classroom by moving the Blue dot in the gray circle ○ Try not to hit anything in the classroom!		
• Change Sphero's **color** by moving the white circle in the color wheel • Change Sphero's **Speed** by adding or removing the blue bars under the color wheel.		

Sphero Challenge 2: Program

Instructions	Checkmark when done
• **Create** a new program to make your sphero roll forward ○ Click on Programs then **+** (round green + symbol) ○ Change the name of your program to **divXX names**. ○ Make sure **Block** is selected, click **Create.** ○ This will open the programming interface.	
• Click on the **Actions** of the interface) category (at the bottom left • Drag a **Roll block** to the canvas (program area) • It will look like this command line: 	
There are 3 values you can edit: • First one = the duration = how long you want the sphero to roll for, in seconds. ○ Click on it and change it to **2 seconds.** • 2nd one = speed = how fast sphero is moving. ○ Click on it and choose a speed of **50** using the speed slider (or you can click on the number and input the number directly). • 3rd one = heading = the angle you want Sphero to roll at. ○ Click on it and choose **0 degrees** (either by rotating the arrow, or click on the number at the center and change it).	
Try to run your program… after orienting Sphero in the right direction! • Place the sphero on the ground. • Click on the **aim icon** and make sure the blue tail light on the sphero faces you. • Click start	
Make a program so that the sphero move forward, change color, then move back to you (backward). ○ Roll (seconds, speed-40, heading) ○ Set color ○ Roll (seconds, speed, heading) to come back *** Double tap a command for help on the command *** to delete a command, press on it, drag to the trash at the top	

Sphero Challenge 3: Travel a square

Instructions	Checkmark when done
● **Create** a new program to make sphero travel a square. ● Add in **colour** and **sound** effects ● You will need to add **Delay** blocks found in the **Controls** category Controls after each Roll commands so Sphero stops and has enough time to change direction. The delay should be of 1 second.	
● Once you are done, try making a triangle or another shape for bonus points!	

Sphero Challenge 4: Travel a Path

Instructions	Checkmark when done
● **Create a 4 to 6 leg path using masking tape, for another group to program their sphero so that their sphero follow the path you created.**	
● Once you are done, try going through the path faster by changing values in your program!	

Sphero Challenge 5: Sphero Dance

Instructions	Checkmark when done
● Create a program to make sphero "**dance**" **without stopping.** Include **light effects.** Dance party in the dark at the end of the class!	

Sphero Challenge 6: Light/Sound Show

Instructions	Checkmark when done
● Create a program to make sphero do a light/sound show, continuously, with alternating “happy” and “scary” effects. Light/sound show in the dark at the end of the class! ○ Do a sequence of 3 happy effects, 2 times ○ Do a sequence of 3 scary effects, 2 times ○ Use loop	

Sphero Challenge 7: Hot Potato

Instructions	Checkmark when done
● Create a program to make sphero become a “hot potato”! 1. Make sphero “ding” and “flash” when it is tossed 2. Add to that – make sphero turn red and play a sound after 5 tosses 3. Add to that – make sphero turn red and play a sound after a random number of tosses 4. Add to that – make sphero “vibrate” when the game is over 5. Instead of counting number of tosses to determine game end, count a number of seconds, then a random number of seconds 6. Like the games “catch phrase” and various others where timers are involved, to make it more exciting – make sphero start to blink or play different sounds to create a sense of urgency as the timer limit approaches.	