**EV3 Lesson Ideas**

**Lesson 4**

Materials: EV3 robots- 2 per robot, Medium Motor video <https://www.youtube.com/watch?v=Srr0tHsDu44>

Objectives: Support students as they take their next steps in programing with the medium motor.

Duration: 1hour

Lesson: Intro

* Get students back into their pairs and ask them to get their robot kits out.

**Activity**

* For this lesson we will show the video on the medium motor build 16min. as well, students can follow along and build using their build books page 30.
* Get students to pull out their parts and build as the video moves along or follow the build book- the build book is straight forward and seems to work well.
* Once the medium motor is assembled, students are free to explore coding using the medium motor (located two control blocks to the left of the “Move Steering” block, it’s the first block). Note, to move the arms + (up) or – (down) the duration is less than 1. Over 1 will show error as it’s too far, get students to try 0.3 – 0.5 rotations to find the best rotation amount for their bot.
* Then get the students to move blocks around the floor using their bots’ arms. Ex. Use tape as a start spot, measure distance, move bot to location with lego block, lower arms and drag to new location.
* Once ready, they can try and move a block from alpha base to beta base or the top of a line to the bottom of a line.

**Conclusion**

* Review how the arms/medium motor works
* Ask students to clean up mat and put bots away.