

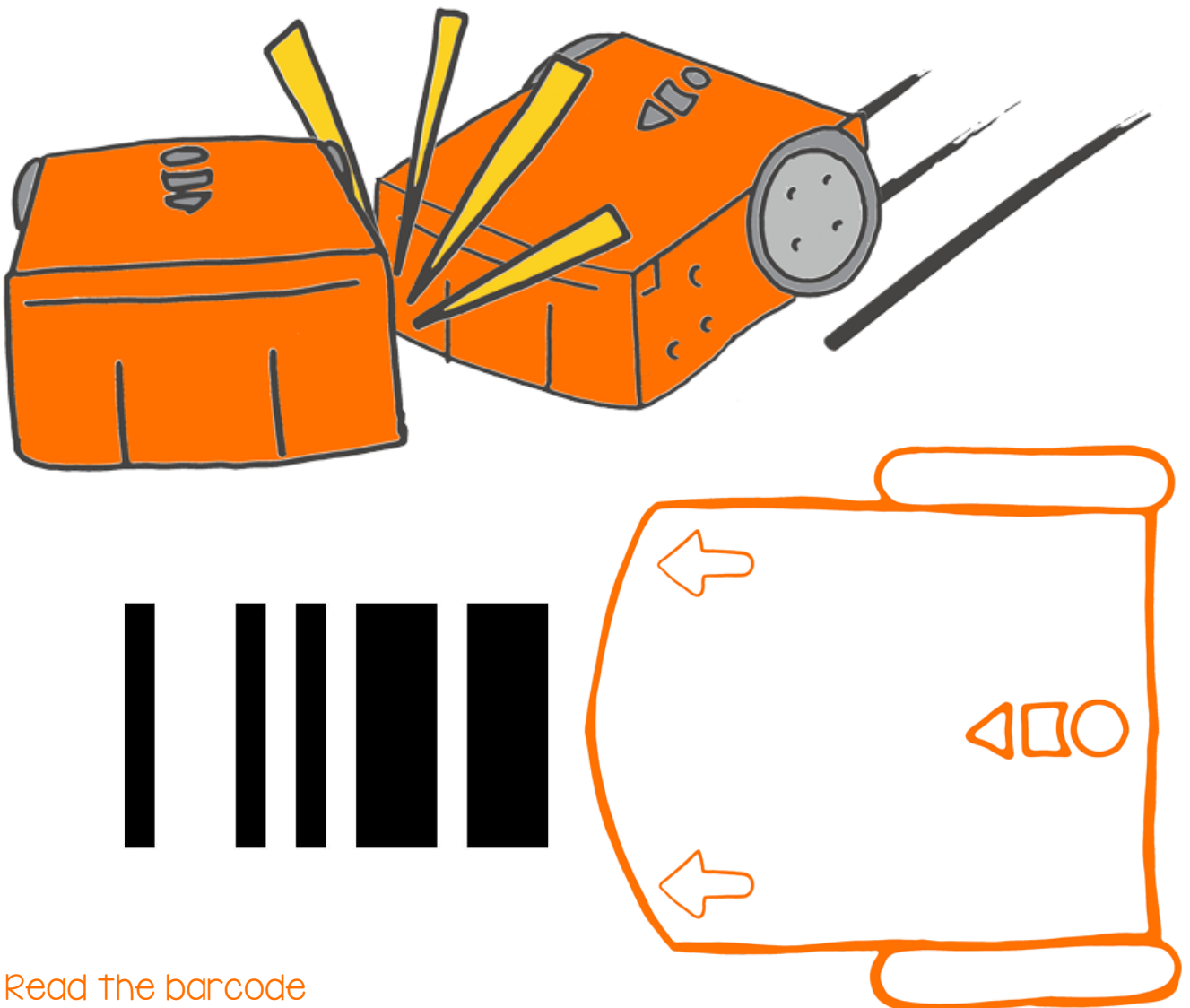
Sumo wrestle

The barcode below has a built-in program. The program combines two of Edison's other programs - bounce in borders and obstacle detection.

What does the combined program do?

It lets two Edison robots sumo wrestle!

The obstacle detection part of the program helps the robots find the other robots. The line detection helps Edison find a line to knock the other robot out of the ring.



Read the barcode

Put Edison on the outline above.

Press the record button (round button) three times.

Edison will quickly drive forward and scan the barcode.

What to do with Edison

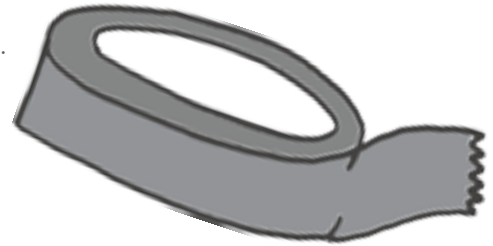
You will need to work together for this activity.

Scan the barcode with two Edison robots.

Next, make a ring for your Edison sumo match.

Use a dark coloured tape to make the sumo ring.

Be sure to make the ring big enough for both robots to drive around inside.



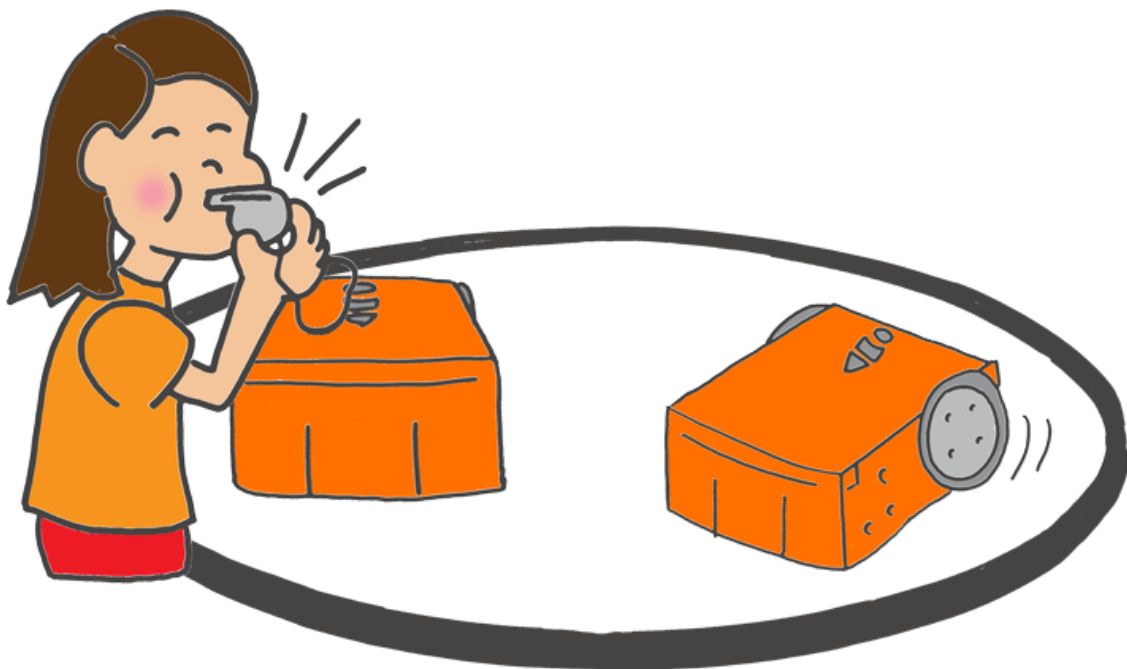
Activity

Put both Edison robots in the ring.

Press the play button (triangle button) on both robots at the same time.

Each Edison robot will start to drive around the inside of the circle slowly, looking for the other robot. When one Edison sees the other, it will speed up to hit it and try to push it out of the ring.

The Edison that stays in the ring wins!





Sumo Ring Fun With Legos!!!

STEM

(60 min)

Materials:

- Robots
- Legos
- 8-10 Robot Mats
- Bamboo Trays or plates

SUMO BATTLES WITH EDISON!

Set up:

You can choose to discuss the activity first and then have the students help set up or you can have things set up and have the students sit in a separate area to listen to instructions before starting the activity

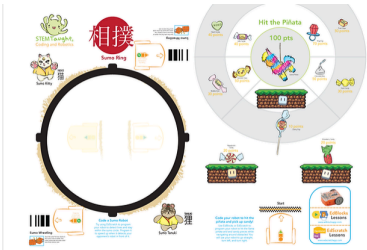
1. Set out 8-10 Robot mats in an open area. We suggest a multipurpose room but a classroom works great to. There can be 2-3 students per mat.
2. Fill 2-3 bamboo trays or plates with Legos and have them ready for students to get at the front along with the robots.



ROBOTICS DISCUSSION AND BUILD

Instructions to share before you pass out the robots:

1. Get the students excited for today's challenge! You could say: "Today you get to use your engineering design skills to build a robot! You will be designing a sumo wrestling robot and you can build your design idea for the ultimate sumo bot out of legos. Remember you can redesign and you see what designs works to help you win the sumo battles Who's ready for some fun Sumo battles?" "I can't wait to see all your creative sumo builds!"
 2. Instruct the students to take their robots down to one of the Robot Mats. Two to three students can be at one mat.
 3. The students will do a Lego build on top of their robot. Ask them how they think they should build on top of their robot to beat their opponent.
- IMPORTANT:** It is important to let the students know to not cover any of the buttons on top of their robot because they will need to access these buttons to barcode scan for the Sumo battles.
4. Students build for about 15-20 min. Some will build longer and that's okay.
 5. When they are finished building they will barcode scan where it says on the mat Sumo wrestling.





LETS BATTLE!

Instructions:

6. **Code:** Tell students to follow the direction on their mat by turning on their robot, placing it right next to the barcode. Next press the circle button on the top of the robot three times. The robot should move forward and pass the barcode. They will hear a happy sound when it has coded correctly. It will make a not so happy sound if it did not code correctly and that's okay, just try again.
8. **Battle:** On the count of three each student will then press the triangle (Go) button on their robot. They will see their robots start to battle. The last robot to stay in the ring Wins! They can battle as many times as they'd like.
9. **Redesign:** Let the students know that they can redesign their Lego build on top after their battles. They will start to notice what makes a successful design.
10. **Highlight:** Take time to highlight student builds as you go around the room and formally at the end. Before you clean up take five minutes to have volunteers come to the front and explain their design and why it was effective or not. This way students share ideas and get a public speaking chance. Compliment the students! Creating an atmosphere full of positive energy and team work is the goal. Remember to encourage the students , ask students to help other students and compliment their prototypes.

