

A-Maze-ing Robotics



STEM
(40 min)

Materials:

- Robots
- 6-8 Robotics Maze Mats
- Chrome Book or lap top
- TV Remote Control
- Candy (optional)



A FUN FILLED JOURNEY TO THE MAGICAL CASTLE!

Set up:

1. Lay out 6-8 Robotics Maze mats. We suggest using an open room for this activity like the multipurpose room or outdoors in a shady area. There can be up to 4 students per mat.
2. Hand out a Robot, laptop or remote control to each student.

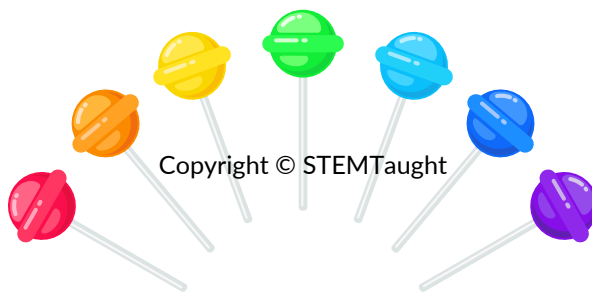
KINDER-2ND GRADE

Instructions:

1. First, get the students excited for today's challenge! You could say, "We have some A-Maze-Ing challenges today for some great prizes!"
2. Instruct the students take their robots and remote control down to one of the Robotics Maze Mats. Three to four students can be at one mat.
3. Demonstrate how to Barcode scan the remote to the robot. The instructions to do this are on the mat. If the students want to try themselves that's okay as well. Have students that know how go around and help others.
4. Now it's time for the challenges!! Once they finish all 4 challenges or earn a certain amount of points they can get their prize!

CHALLENGES:

1. From the star start position get to the Wizard's Hat and the Dark Crystals for a total of 150 points!
2. Now from the star start position go visit the pet rock worth 300 points! Here the students get to name their pet rock!
3. The next challenge is to get through the maze from star start position to the magical castle worth 1,000 points without going through any barriers.
4. Now the teachers or students can make up one more challenges!





3RD - 4TH GRADE

Instructions:

1. First, get the students excited for today's challenge! You could say, "We have some A-Maze-Ing challenges today for some great prizes!"
2. Instruct the students take their robots and their laptops down to one of the Robotics Maze Mats. Three to four students can be at one mat.
3. The students will open their laptops and go to EdBlocks at: <https://www.edblocksapp.com/>
4. In the Drive tab in the upper left part of the screen they will use the first four blocks Forwards, Backwards, turn left and turn right. They can change the numbers in the bubbles underneath the blocks. These numbers are for how many seconds the robot will move. In the turn left and right bubble they can change the clock to how far they want to turn.
5. They will click and drag these blocks to the yellow block with a green triangle in it. They can stack however many blocks they want for the different challenges.

CHALLENGES:

1. From the star start position get to the Wizard's Hat for 50 points! The first 5 to do this get 2 prizes (candy).
2. Now from the star start position go visit 2 objects. For example it could be the Wizard's Hat and the Glowing Gem or the Wizard's Hat and the Dark Crystals. They will get one prize when achieved.
3. The next challenge is to get through the maze from star start position to the magical castle worth 1,000 points without going through any barriers. This will also be for 1 prize.
4. This challenge they will need to pick up 1,000 points then end at the pixie dust fairy. This challenge receives 3 prizes!

HOLLIE'S HELPFUL HINTS!

1. Feel free to come up with your own challenges!
2. If you see a student not engaging go help them or ask a student to help them through a challenge. Its okay to hint to them on ways to do this.



5TH - 8TH GRADE

Instructions:

1. First, get the students excited for today's challenge! You could say, "We have some A-Maze-Ing challenges today for some great prizes!"
2. Instruct the students take their robots and their laptops down to one of the Robotics Maze Mats. Three to four students can be at one mat.
3. The students will open their laptops and go to EdScratch at: <https://www.edscratchapp.com/>.
4. In the Drive tab in the upper left part of the screen the students can use all of these blocks.
5. They will click and drag these blocks to the yellow start block. They can stack however many blocks they want for the different challenges. In the forwards and backwards blocks they can change it to cm, inches or seconds. For the spin left and right they can change it to seconds or degrees. They can also change the speed of the robot.

CHALLENGES:

1. From the start go to the Wizard's Hat for 50 points. The first 5 get a prize!
2. Now from the start position go visit 2 objects of the student's choice. Students get one prize when achieved.
3. The next challenge is from the start to go through the maze to the magical castle worth 1,000 points without going through any barriers for 1 prize.
4. From the start pick up 1,000 points then end at the pixie dust fairy. This challenge receives 3 prizes!
5. If you want to rule the kingdom then you will need to program your robot to collect everything on the mat and then finish at the castle. This challenge receives 3 prizes and the Title to the Kingdom Certificate!

HOLLIE'S HELPFUL HINTS!

1. Feel free to come up with your own challenges!
2. If you see a student not engaging go help them or ask a student to help them through a challenge. It's okay to hint to them on ways to do this.

