

JBC Level 1: Teaching your robot to move

Math: Angles, Estimation, Metric system **Physics:** Polarity, Speed & Velocity

Computer Science: motor, msleep, printf, set_servo_position, enable_servos



CALIFORNIA
MATH & SCIENCE
CHALLENGE

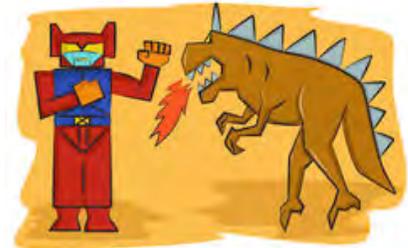
Final Challenge : Capture the Monster!

Use your navigation skills to safely traverse the city and capture the giant monster with your super robot!

Use all of your skills to solve this challenge.

Challenge 5: Collect resources 5

Learn to create and manipulate an effector(arm) to collect at least 20 robotic resources throughout the city. Your effector must move from a raised position and touch the resource circle in order to collect it.



What's the difference between a **motor** and a **servo**?

Challenge 4: Cloak and Dagger 4

Using your new cloaking technology, navigate around the monster and our spy tower in a figure 8 pattern. Return to base with information about it's weaknesses. **Flying Colors:** Complete your round trip with the fastest time to earn the **master spy** title.

Combine your computer science & **science** skills!!



Challenge 3: 360 photo shoot 3

We need images of the monster from all sides! Travel 360 around the monster and return to base as fast as you can with your pictures!

Flying Colors: Complete your round trip with the fastest time to earn the **speed racer** award!

Which turn works best in a particular situation?

Challenge 2: Piloting our robot 2

We need to learn to pilot our giant robot safely through the streets of the city. Learn to veer, pivot and spin in order to safely park the robots in their repair hangers.

Use the **motor** command to learn 3 different kinds of turns



Challenge 1: Reconnaissance 1

Your team needs information about our monster before we can capture it. Drive your robot forward to investigate by just touching the monster. Don't awaken the monster by moving it!!

