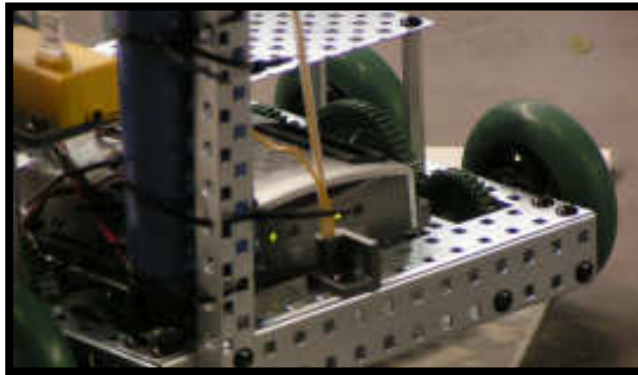
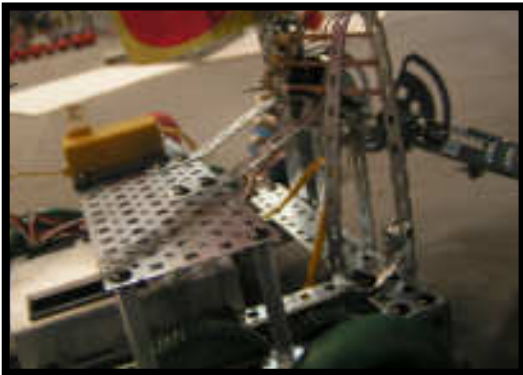




We Love Robots



We are high school students. We love robots! We want to build a robot. We want to have fun.



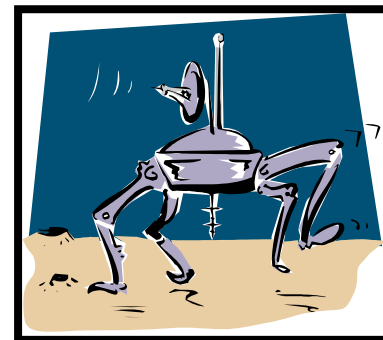
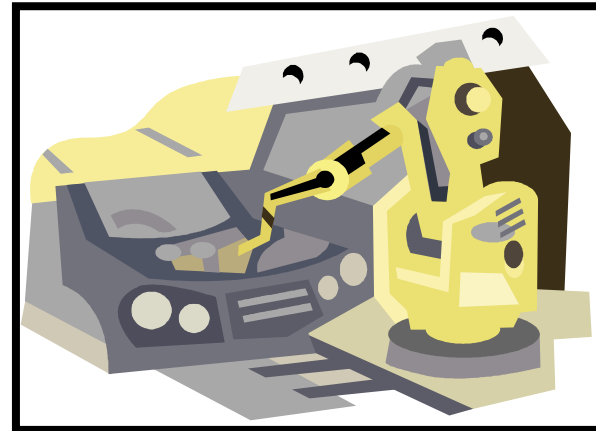
We want to build a robot to play a game.
How will we start?



How do robots work? How do they know what to do? We need to learn more, so we read books about robots. Then we talk to an *engineer* who builds and designs robots.



Robots are machines that make work easy for people. All robots do three things: sense, plan, and act.



You have five senses.



You have senses that tell you about the world. You see and hear. You touch, taste and smell the things around you.

A robot has senses, too.

Our robot has to find its way around the game field without help. It needs *vision sensors* to follow a black line and *touch sensors* to move along the wall.

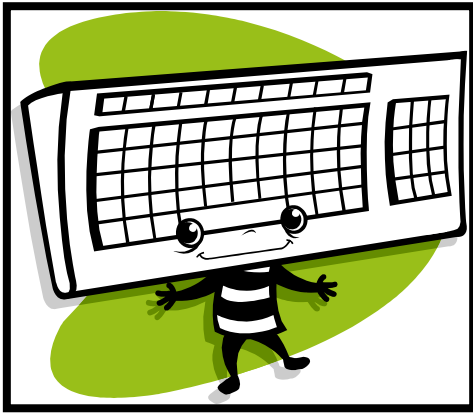


You can plan.



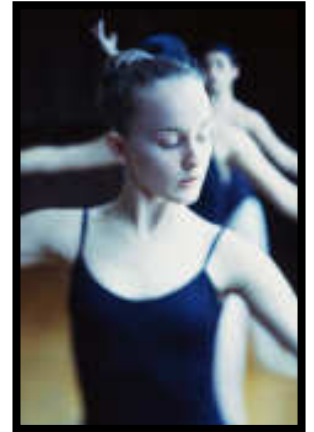
You have a brain to help you plan your movements. You know what to do when you see or hear danger. It helps you know what to do when you are playing a game.

Can robots plan like you?



No. Robots have *computer programs* that plan what to do to solve a problem. We need to teach our robot. We plan and write a program to play the game.

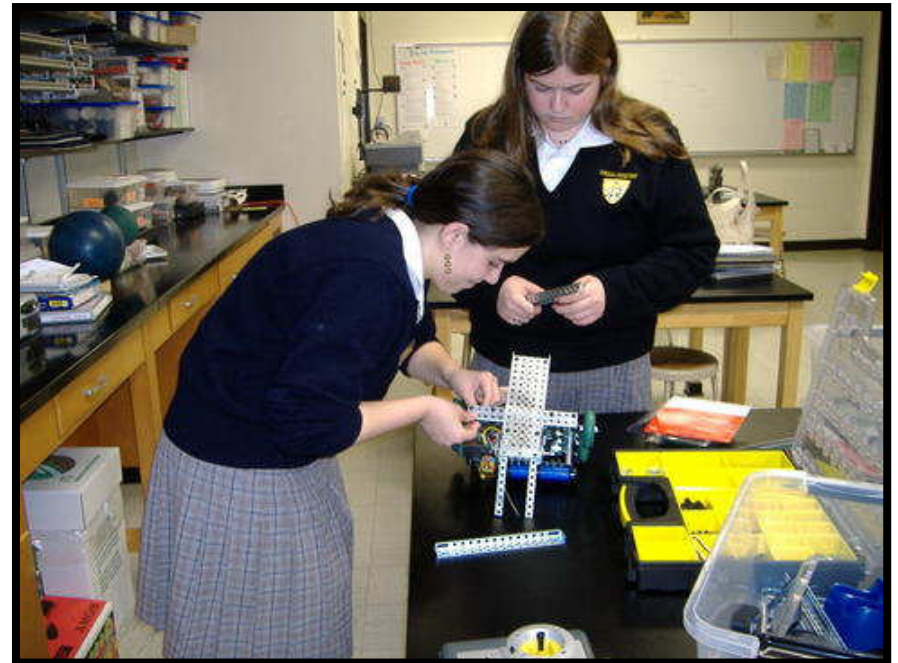
You can act, too!



You act by using your muscles and bones to move and work and play. Food gives you energy.

Our robot can act.

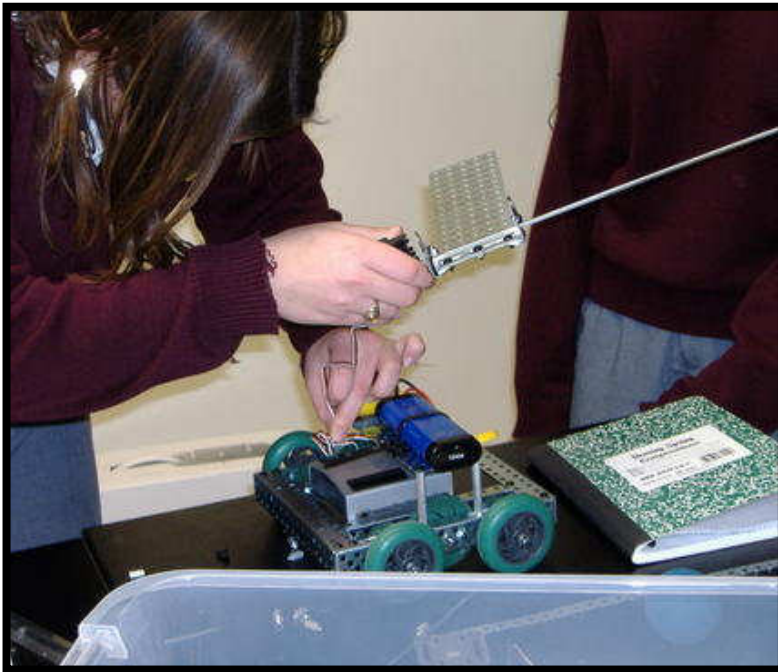
Our robot's body has *gears* and *motors*. It moves on wheels. Its energy is *electricity*, which comes from a battery. Wires connect the battery to its motors.





A special *transmitter* helps us tell the robot what to do. The robot's *receiver* “hears” our message. We tell it how to play the game.

The robot is ready! It is time to practice playing the game. Soon we will compete in the FIRST VEX Challenge



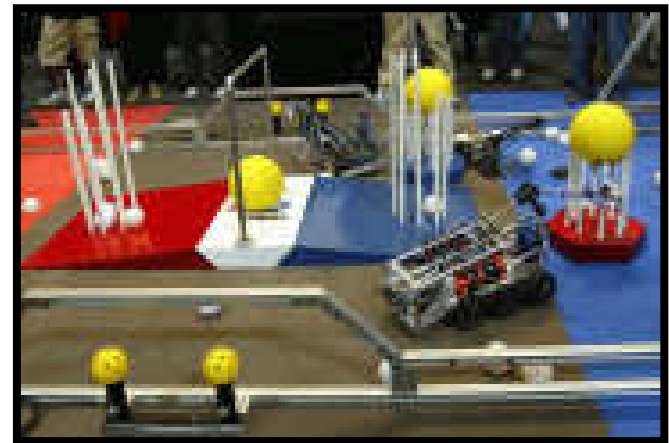
Competition day is here. We are excited!



There are so many teams!



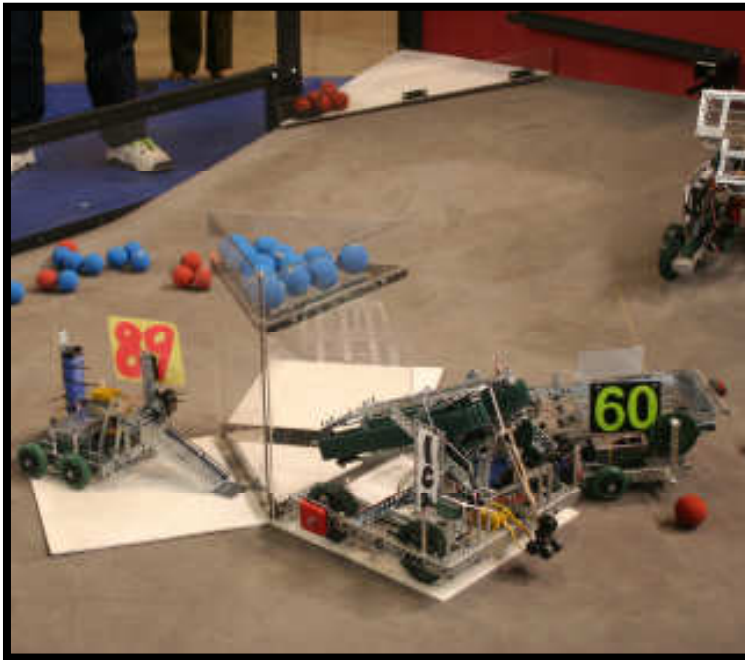
The announcer calls our team. It's our turn to play the game.



Something doesn't work. We make changes to the robot. Hurry! The next game is about to start!



Hurray! Our robot does a great job.



We did it! Our team worked together. We learned a lot and we built a great robot. We had fun, too!





Do you want to learn more about robots? Do you want to join a *robotics* team? You can learn more from FIRST. You can learn more from www.moe365.org and usfirst.org. Good luck and have fun!