

Say Hello! Outline (Part I)

Things to bring/do:

- Laptops
- Pre-built and programmed robots with our two programs (Touch Sensor and Say Hello!)
- extra brick and batteries to swap out for malfunctioning/dead ones
- e-mail emily taintor about how to add our outlines to the activity database
- create a new activity for the activity base!

Vocabulary

- sensors (touch, light, sound, ultrasound)
- lego Mindstorm programming

Intro (On the Rug) 5-10 mins

Last week we discussed programming on the brick. Today we are going to start with simple programming using the computer.

Last weeks robots were programmed to go forward. What happened when your robot ran into a wall? It kept trying to go forward without and change in “behavior”.

The Challenge: Build a robot (or modify your robot from last week) that “says hello” to you. This means that it acknowledges your existence in some way. This can be it actually saying hello as in our example program, or can merely have it react (back up, turn, make a noise, display a picture, etc.) to a certain stimulus (light, sound, etc). This week we are going to show you how to program, but will probably not get to computer programming until next week. The main focus of today is to build your robot WITH some sort of sensor. If you finish early and want to begin programming, that’s great.

(Split into 4 groups of 5. I get 5, Jake gets 5, Ms Aguayo gets 10 and they get to present their robots to half of the class while she videotapes it. Go Back to desks)

15-20 Minutes

Show the kids our example robots, running both Touch Sensor and Say Hello!

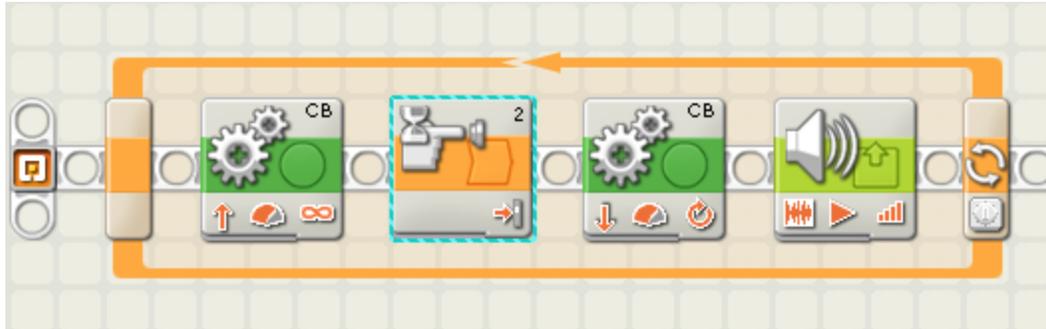
Pull up LEGO Mindstorms on laptops and slowly walk through how one would make the programs we did. Green Circle→ Move. Chose which ports the motors are plugged into. Chose what direction you want it to go, speed, and duration of movement.

Orange “Flow” → wait for. chose what sensor you want it to react to, what port it is in, and what loudness/brightness/distance/press/release

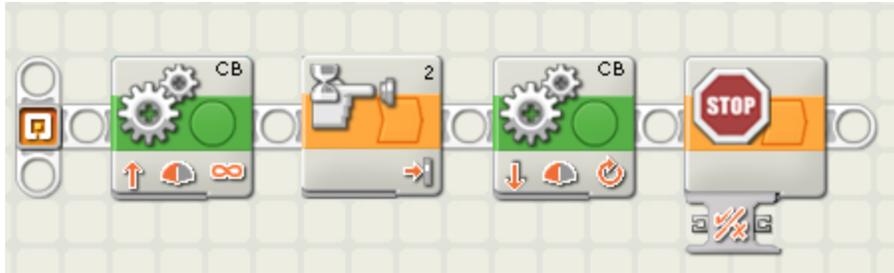
Action Sound→ choose what you want it to say, volume, etc.

Stop button→ will make your program stop after occurring once.

Loop→ make sure all for the actions are within the arrows and it will occur over and over again until you hit the grey button on the brick to stop it from running.



Say Hello:



Touch Sensor:

Swap groups. Aguayo's group comes to us, other half goes to present with Aguayo.

*Hand out kits, allow them to build. **20-30 Minutes to Build***

We showed you the basics of computer programming. You can add on to your Silly Walks robot, or you can start from scratch. Remember to attach your sensors and motors to the brick.

Allow students to build

*Wrap Up (Back to the Rug) **5 minutes***

Have some volunteers bring robots to the rug. Has anyone started programming? Have some kids tell us their plans with what they have built.

Next week we will continue with this assignment. You will be able to build or program your robots to say hello to you.