LEGO Robot Exercise – Notes for Teacher

This exercise is based upon the student's hands-on experimentation with one or more simple robots.

In my most recent version of this exercise, I built two robots.

Symm was a Braitenberg inspired robot that used positive contralateral connections between light-sensors and motors (Braitenberg's "aggression") combined with a negative contralateral connection between ultrasonic sensors and motors for wall avoidance.

Asymm is a less situated/embodied approach. It rotates CCW in place for a few seconds keeping track of when it encountered the brightess light stimulus, then rotates back to that position and moves straight forward for N seconds.

You can adapt the included instructions to your particular robots to guide the students investigation of the robots. A more difficult exercise (that might also take more time to implement) might involve an evolved CTRNN-controlled robot.