





In the Classroom:
Grade Level: 3-8
Building Skills: Strength

Time: 45 min **Programming Skills**: Light sensors

Light at the Beginning of the Tunnel



Make a car that will change directions when it gets too dark.

Challenge

In this activity, design and construct an NXT car and program it to enter a tunnel, then reverse back out when it encounters a darker light reading.

Materials

NXT Car Light Sensor Tunnel

Skills Learned

Learn to program on loops with light sensors and movement in opposite directions.







Building

Starting with the origional one motor kit car, add a light sensor and lights to the car. Wire the motors and the lights to the outputs, and the light sensor to an input.



Programming

Choose whether to use ROBOLAB or the LEGO NXT Software to program (follow step 2 for ROBOLAB; follow step 4 for LEGO NXT Software).

1. In ROBOLAB INVENTOR 4, program a car to drive till it sees dark and then reverse.



2. Using the LEGO NXT Software, program the car to travel forward until the light sensor reads below a certain level, stop for 1 second, reverse out of the tunnel, and stop again.







