

Arduino and LED Requirements for Derby Racers

Physical Science and Technology

Your derby racer needs to incorporate an Arduino with blinking LED lights. Here are the criteria your device needs to meet:

- 1) The Arduino should be powered by a 9V battery connected to the power input.
- 2) There will be two LED's of two different colors connected to two resistors and output pins on the Arduino (they can be connected to the same ground pin).
- 3) The LED's should blink in the following progression in a repeating loop:
 - a. Color 1 on for 0.25 seconds (250 ms)
 - b. Color 2 on for 0.1 seconds
 - c. Colors 1 and 2 on for 0.25 seconds
 - d. Both colors off for 0.1 seconds

You will need to wire, program, and test your Arduino while it is connected to a computer. Once it has been correctly programmed, it will automatically run the program you loaded whenever it receives power. When you are done with the cables please return them to the appropriate bin, neatly tied in an overhand knot.

After your device has been correctly observed by an instructor and your grade has been recorded, please clean up all of your materials as previously described in class.