PLTW | Launch

Robotics and Automation: Challenge Key Terms

Please note the following Key Terms are provided as a reference. Vocabulary terms are embedded within the curriculum and are addressed within that context. Students are not expected to commit the list of terms to memory.

Term	Definition
Automated Systems	Control devices with minimal human intervention.
Blocks	The instructions used to build code.
Blocks Palette	A work area where available programming blocks are located.
Blocks View	A work area where the programmer will create a program in the Modkit environment.
Broadcasts	An event which triggers code to execute.
Bug	Part of a program that causes an error or undesired output.
Categories	The groups into which blocks are arranged on the blocks palette.
Code	Instructions in a program.
Constraints	A limitation or a restriction. Constraints might include limits on time, materials, or size.
Criteria	Guidelines or rules used to judge or make a decision about something.
Design Process	A step-by-step way to solve problems that is used to develop many possible solutions to a problem and then narrow down the possible solutions to one final choice.
Engineer	A person who is trained to use technology, mathematics, and science to solve problems.
Engineering	The use of technology, mathematics, and science to solve problems.
Event	A trigger from the user or from a program that causes a specific part of the program to execute.

Event-Driven Programming	Programming that organizes code into event handlers. An event handler is triggered by an event such as a mouse click, a sensor input, or a trigger from another part of the program.
Execute	To run a program or a single instruction.
Input	Information fed into a system. In robotics, sensors detect inputs such as color.
Output	Information or action coming out of a system. In robotics, motors are an example of an output that creates movement.
Point Turn	A turn during which wheel(s) on one side of a robot rotate forward or backward while wheel(s) on the other side rotate in the opposite direction at the same speed.
Program	Sequence of instructions.
Robot	A mechanical device that can be programmed to carry out instructions and perform complicated tasks. Robots often perform tasks that would normally be done by a human.
Robot Palette	A work area where robot input and output options are available to be added to the robot area.
Robot View	A work area where the programmer will configure the inputs and outputs to be used on the robot in the Modkit environment.
Robotic Systems	Programmed to complete specific tasks with or without human interaction.
Roboticist or Robotics Engineer	Design and maintain robots; develop new applications; conduct research to expand the potential of robotics.
Robotics	A type of engineering and computer science that deals with designing, constructing, and /or the applications of robots.
Sensor	A device that detects information from the surrounding environment and sends it to the robot in electronic form. Sensors provide input to automated and robotic systems which can be used to adjust the behavior of outputs.
Swing Turn	A turn during which wheel(s) on one side of a robot are stopped while wheel(s) on the other side rotate forward or backward.
Turning Point	A point around which a robot turns.