

Automation in Manufacturing

Materials

DoBot Magician
Internet

Standards

CSTA Standards:

- 6-8.AP.10: Develop programs that use conditionals
- 6-8.CS.01: Design a project combining hardware and software
- 6-8.CS.02: Collaborate with peers to create projects
- 6-8.IC.01: Understand how computer technology impacts the world

Objectives

Understanding the basics of automation and its role in manufacturing

Procedure

1. Introduce what automation is to your students including assembly lines, robotic arms, etc.
2. In groups have students come up with a simple product that can be assembled in set steps
3. Have students program the DoBot to perform tasks that would mimic the assembly line process such as picking up an object and moving it to another location, have the process repeat.
4. Have students present their automation programs and discuss the pros and cons of automation

Extension Activity

Have students optimize their process by trying to make it faster, more precise and more reliable and share their results.



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Lesson Plan Activity