

This Course: **Robotics**

Students engage in the study of computers and microprocessors and their applications to manufacturing, transportation, and communication systems. Topics include computer equipment and operating systems, robotics, programming, control systems, and social/cultural impact of these technologies. Problem-solving activities challenge students to design, program, and interface devices with computer systems. Learning activities include robotics, computer-aided design, computer-aided manufacturing and design, and control of electromechanical devices.

Course Questions:

1. What is Robotics?
2. Where are robots used in the world?
3. How do I program a robot using c programming language?
4. How do I build a robot to perform challenges?

Parent

Signature: _____

Parent Email: _____

Date: _____

Course Standards:

- Participation
- Robotics Software (C Programming)
- Robot Building (Vex Robots)
- Digital Portfolio
- Creativity

*Please see attached State Competencies List for Robotic Design

*Each Competency will be covered during this year long class.

Course Map

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Student:

includes

Community Principles

- Respect of each other
- Respect for equipment and materials
- Teamwork
- Responsibility
- Dedication

Learning Rituals

- Tutorials
- Design Process
- Computer Work
- Journaling
- Research
- Hands-On Activities
- Webpage Design

Performance Options

- Participation
- Digital Portfolio
- Projects
- Quizzes
- Tests

Critical Concepts

- Define Robotics
- History
- Technical Drawing Basics
- Engineering Design Process
- Careers
- Workplace Readiness

Learned in these "Units"

Digital Portfolio

History of Robotics

Autodesk
• Exploration of Different Software

Engineering Design Process Activities

Exploration Robot Building and Programming

Advanced Challenges
• Real World Applications

Robotic Career Investigation