

Digital Electronics

Power Standards

Students will be able to:

- Use a digital electronics software package to design, build and trouble shoot any digital projects.
- Understanding science rules of electronics, ohm's law, kirchoff's law Boolean algebra DeMorgan's Theorems, and K-mapping.
- Develop presentations on major concepts and components used in digital electronics.
- Work in teams to design and build digital electronics projects.

Power Benchmarks

Students will be able to:

- Identify the attributes, uses, advantages, and disadvantages of the components used in electronics by using the suitcase trainer and using Multisim software.
- Develop power point presentation on major concepts and components used in digital electronics.
- Work effectively in an engineering team to design and trouble shooting digital electronics projects.
- Design and implement solutions to problems encountered in electronics by uses of laws of Boolean algebra.
- Identify the attributes, uses, advantages, and disadvantages of shift registers, asynchronous counters and synchronous counters.
- Write programs to control electronics by the use of Basic Stamp and Boolean algebra, to control servo robots, and automated control systems.
- Utilize state machines to enhance lessons on flip-flop circuits by programming a chip.
- Understand all background information necessary to use ohm's law and kirchoff's laws of electricity.
- Understand basic fluid power systems.
- Identify the attributes, uses, advantages, and disadvantages of seven segment displays, multiplexers and demultiplexers.

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