

03_Plumbing and Electrical Repairs

Content Area: **Special Education**
Course(s):
Time Period: **Semester**
Length: **2 Weeks**
Status: **Published**

General Overview, Course Description or Course Philosophy

Do-It-Yourself (DIY) Tech is a one semester course at the high school. This class enables students to understand how to address basic household repairs while students safely use and maintain appropriate tools, machinery, equipment, and resources to accomplish project goals.

OBJECTIVES, ESSENTIAL QUESTIONS, ENDURING UNDERSTANDINGS

Objective:

- Learn how to do simple plumbing and electrical repairs yourself. These fixes are completely DIY with basic tools and skills.

Essential Questions:

- Can students readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem(s)?
- Are individuals aware of problems when they occur and do they take action to address them quickly?

Enduring Understandings:

- Students understand how to fix common plumbing problems like leaky toilets, low water pressure and more.
- Students will understand what plumbing jobs they can tackle themselves and when to call a pro.
- While major electrical work should be left to the pros, there are smaller projects that beginners can tackle.
- Students understand the obligations and responsibilities of being a member of a household and community.

CONTENT AREA STANDARDS

9.4.2.CT.1: Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem.

9.4.2.CT.2: Identify possible approaches and resources to execute a plan.

9.4.2.CT.3: Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

RELATED STANDARDS (Technology, 21st Century Life & Careers, ELA Companion Standards are Required)

CAEP.9.2.12.C

Career Preparation

STUDENT LEARNING TARGETS

Declarative Knowledge

Students will understand that:

- Your home's plumbing and electrical systems may seem as different as any two things could be. But there are significant parallels.
- Water enters your home through a pipe under pressure, and, when you turn on a tap, the water flows at a certain rate (gallons per minute).
- Electricity enters your home through wires, also under pressure (called voltage, measured in volts).
- When you turn on an electrical device, the electricity flows at a certain rate (current, measured in amperes, or amps).

Procedural Knowledge

Students will be able to:

- Locate and read a water meter.
- Locate and read an electric meter.
- How to reset a tripped circuit breaker.
- How to safely use a power generator when the power goes out.
- Tackle simple plumbing and electrical jobs around the house.

EVIDENCE OF LEARNING

Formative Assessments

do nows, exit slips, performance / participation in various class activities, homework, virtual or in-person experiences to demonstrate completion of tasks

Summative Assessments

final projects (class presentations, videos, etc), interviews, quizzes, and tests

RESOURCES (Instructional, Supplemental, Intervention Materials)

- Youtube.com
- Homeadvisor.com
- eHow.com
- Howcast.com
- <https://www.familyhandyman.com/list/the-top-10-plumbing-fixes/>
- <https://www.thespruce.com/plumbing-repairs-and-tutorials-4127789>
- <https://www.thespruce.com/electrical-repairs-and-tutorials-4127796>
- <https://home.howstuffworks.com/home-improvement/repair/how-to-do-home-electrical-repairs.htm>

INTERDISCIPLINARY CONNECTIONS

While major plumbing repairs and electrical work should be left to the pros, there are smaller projects that beginners can tackle.

ACCOMMODATIONS & MODIFICATIONS FOR SUBGROUPS

See link to Accommodations & Modifications document in course folder.