- Understand the impact of engineering solutions in a global, economic, environmental, and societal context. In this unit, understand, anticipate, and minimize the negative impact of building design and construction on the public and on the environment.

Understandings

Students will understand that:

- Responsible designers maximize the potential of the property, minimize impact on the environment, and incorporate universal design concepts in order to create an attractive and functional space.
- Responsible designers anticipate the needs and requirements of the users.
- Codes are created to protect the health and safety of the public, dictate the minimum requirements that must be met in a building project, and constrain the location of structures, utilities, building construction, and landscape components placed on a site.
- Green or sustainable design reduces the negative impact of a project on the environment and human health and improves the performance of the project during its life-cycle.
- Appropriate flow rate, pressure, and water quality are necessary for effective water supply and use.
- Utilities and systems must be properly sized to minimize cost and appropriately serve the project and the structure occupants.
- When utilities are not available within a reasonable distance to be economically brought on site, substitutions must be designed and constructed.
- The design of electrical and plumbing systems must be carefully integrated into the architectural and structural design of a building.

Skills: Students will:

- Apply elements of good residential design to the design of a basic house to meet the needs of a client.
- Create a home design that complies with applicable codes and requirements.
- Incorporate sustainable building principles, energy conservation features, and universal design concepts into a residential design.
- Create bubble diagrams and sketch a floor plan.
- Choose

- Lead a class discussion via the teacher-led PowerPoint presentation called Water Supply
- Provide instructions for

- The teacher may ask students to demonstrate what was learned.
- Teacher and students may play Kahoot! (or some other type of game) to check for mastery.
- Student will share why