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

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