Unit 10: Elevation Drawings

Content Area: **Science**
Course(s): **CAD Architect**
Time Period: **Semester 2**
Length: **4 weeks**
Status: **Published**

Standards

HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
HS-ETS1-3	Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.
HS-ETS1-4	Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.

Enduring Understandings

- Elevation drawings give unique information to the viewer, including details about the exterior finishing of a building.
- Roof details, exterior finishes, trim details, height information, etc can be found in an eleveation drawing.
- Level lines, dimensions and other annotations can be added to a drawing to help communicate information.
- Information from established architectural drawings can aid in the creation of another technical drawing.

Essential Questions

- How can different perspectives of an object convey otherwise uknown information to the viewer?
- What details are included on an elevation drawing?
- What kind of visual elements can be added to a drawing to communicate information about a design?
- What methods can be used to help in determining the height of windows, doors, and other details in a drawing?

Knowledge and Skills

- Provided specific examples, each student will be able to create elevation drawing of each side of their home.
- Students will use a projection plane to determine the heights of details on projected views.
- Following a demonstration each student will create detailed elevation symbols for the windows and doors of their home.
- After following a lesson on roof pitch, students will be able to determine the angles and heights of each part of their roof.
- Given a detailed demonstration each student will be able to create hatched areas on their elevations.

Assessments

https://docs.google.com/document/d/1wR7bQF-8AQoRrt0g4C3hKja0yjwDjC9_BiAmONWbTcI/edit

Modifications

https://docs.google.com/document/d/1ODqaPP69YkcFiyG72fIT8XsUIe3K1VSG7nxuc4CpCec/edit

Resources

- Review the correct techniques for creating accurate elevations - examples, demonstration
- Create new layers to project the front of your home - examples, demonstration
- Identify the details of windows and doors - examples, demonstration
- Follow demonstration on how to use the Hatch Feature
- Follow demonstration on how to create and use a projection plane to create elevation drawings (using the sectional drawing and other elevation views)