

Civil Engineering & Architecture

Power Standards

Students will be able to:

1. Demonstrate the ability to use three-dimensional modeling software.
2. Demonstrate the ability to problem-solve civil engineering and architecture mathematical calculations.
3. Experience the creative thinking process through the use of vertical and lateral thinking. Students will communicate and collaborate in teams to design a commercial structure and communicate their design solutions in written and verbal formats.

Power Benchmarks

Students will be able to:

1. Discuss the history of civil engineering and architecture.
2. Utilize concept mapping, bubble diagrams, and visualization techniques.
3. Practice effective technical documentation through the use of architectural software.
4. Calculate energy related architectural problems.
5. Calculate water related civil engineering problems.
6. Calculate structural related civil engineering problems.
7. Demonstrate surveying and soil testing lab problems.
8. Develop a portfolio and presentation skills to organize and display evidence of work.
9. Communicate conceptual ideas through written and verbal formats.
10. Practice effective oral communication techniques.

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