

Civil Engineering and Architecture--PLTW

September/October

- Career opportunities and historical impacts
- Overview of project design
 - Common practices
 - Team problem solving
 - Project—shed
- Begin residential structure—on-going
- Architecture
 - Styles
 - Floor plans
 - Energy systems
 - Elevations
 - Sections and details
 - Schedules—door and window



November/December

- Project planning-- Introduction to commercial project
 - Client needs
 - Site selection
 - Regulations
 - Viability analysis
 - Development options
 - Guest speakers
- Site planning
 - Layout
 - Public ingress/ egress
 - Site grading
 - Utilities
- Finish residential structure



January/February

- Water Supply
- Wastewater management
- Introduction to structural engineering

May/June

- Presentations and reviews/critiques
- Final presentation to community panel
 - Peers
 - School panel
 - Parents
 - Engineers
 - Architects
- Prepare for Rochester Institute of Technology final exam

Key Ideas / Concepts

- Understand and differentiate between the roles of Civil Engineers and Architects
- Demonstrate an understanding of residential structures and how they differ from commercial structures
- Plan a commercial building project including site planning, utilities, floor plans, structural, documentation etc.
- Present commercial building project to a panel of local industry experts

March/April

- Mechanical, electrical and protection systems
- Structural engineering
 - Roof systems
 - Columns and beams
 - Foundations
- Landscaping

