

Veronica E. Connor Middle School

7th Grade Technology

Units of Study

Unit: Engineering Design – Catapult

Terms: Force, Direction, Trajectory, Preliminary Testing.

Assessment: Sample Investigation & Planning of Device, Construction Rubric, Teacher Assessed Performance of Device during Formal Testing.

Resources: Teacher generated Information Sheet, Sample Rockets, Sample Investigation/Planning Sheet, Target and Wall Obstacle, Construction Machines & Materials.

NYS Standards: 5.1 Technology – Engineering Design,
5.2 Technology – Tools, Resources, & Technical Processes,
5.4 Technology – Technological Systems,
5.5 Technology – History & Evolution of Technology,
3.4 Mathematics – Modeling/Multiple Representation,
3.5 Mathematics – Measurement

Unit: Construction – Bridge Design

Terms: Bridge, Truss, Symmetry, Efficiency, Load, Mass.

Assessment: Teacher Evaluated Student Design/Planning, Teacher Evaluated Final Drawings, Construction Rubric, Final Bridge Efficiency using Formula and Rubric.

Resources: Teacher generated Information Sheet, Planning Sheets, Final Drawing Grids, Construction Machines & Materials, Digital Scale and Bridge Testing Machine.

NYS Standards: 5.1 Technology – Engineering Design,
5.2 Technology – Tools, Resources, & Technical Processes,
5.5 Technology – History & Evolution of Technology,
5.6 Technology - Impacts
3.4 Mathematics – Modeling/Multiple Representation,
3.5 Mathematics – Measurement

Unit: Transportation – CO² Dragster

- Terms:** The Design Process, Thumbnails, Rough Sketch, Limitations, Wheelbase, Circle Template, Finishing.
- Assessment:** Teacher Evaluated Student Design/Planning (Thumbnails, Rough Sketch, Final Drawings), Construction/Limitations Rubric, Final Dragster Results in Class Competition.
- Resources:** Teacher generated Design and Construction Booklet, Final Drawing Sheets, Construction Machines & Materials, CO² Dragster Track. Bracket Maker for Class Competition.
- NYS Standards:**
- 5.1 Technology – Engineering Design,
 - 5.2 Technology – Tools, Resources, & Technical Processes,
 - 5.4 Technology – Technological Systems,
 - 5.5 Technology – History & Evolution of Technology,
 - 3.4 Mathematics – Modeling/Multiple Representation,
 - 3.5 Mathematics - Measurement