

Merrimack School District
Essential Learning Competencies

School	Merrimack Middle School
Discipline	Unified Arts
Course Title	STEAM – Tech Ed

Seventh Grade

Essential Learning Competencies	Links to the Rubrics/Standards/Competency	Formative Assessments	Summative Assessments
1. Science	Standards: STEAM Standards Bridge Building- Bridge Building Rubric Paper Tower – Skyscraper of Paper	Instant Challenge, create a paper bridge prototype. Draw/Design Bridge InstantChallenge Using 2-3 pieces of paper work to understand paper strength	Design/construct a bridge project that holds the most weight with the best efficiency. Using only paper, cardboard and tape, create a “skyscraper” that can hold significant weight.
2. Technology	Standards: STEAM Standards My Bucket List: My Bucket List Rubric Paper Circuit greeting card	Preliminary storyboard for a Stop Motion PSA Create a card design/message that incorporates copper tape/lights	Create a Stop Motion PSA that is at least 30 seconds long, including fluid movement, a Beginning/middle/end, a story line that is easily followed and possibly sound. Follow through on design and implement copper tape and lights into final card stock design so lights actually light up.
3. Engineering	Standards: STEAM Standards Bridge Building- Bridge Building Rubric	Explore different types of bridge designs and their efficiency. Bridge Designs	Design/construct a bridge project that holds the most weight with the best efficiency.
4. Arts	Standards: STEAM Standards Paper Circuit greeting card	Create a card design/message that incorporates copper tape/lights	Follow through on design and implement copper tape and lights into final card stock design so lights add to overall message.
5. Math	Standards: STEAM Standards Marble Ramp – Marble Ramp Rubric	Explore the forces that affect object movement relative to gravity	Design/construct a ramp that allows for optimal movement of a marble down the ramp and into the air.

Eighth Grade

Essential Learning Competencies	Links to the Rubrics/Standards/Competency	Formative Assessments	Summative Assessments
1. Science	Standards: STEAM Standards Bridge Building- Bridge Building Rubric	Instant Challenge, create a paper bridge prototype. Draw/Design Bridge InstantChallenge	Design/construct a bridge project that holds the most weight with the best efficiency.
2. Technology	Standards: STEAM Standards My Bucket List: My Bucket List Rubric Standards	Create a list of goals to achieve in your lifetime with photos, practice blending in photoshop (Lady Leaves) My Bucket List Rubric	Create an 11x17 poster to show your knowledge of Photoshop to merge/blend images together that may have similar themes.
3. Engineering	Standards: STEAM Standards Bridge Building- Bridge Building Rubric C02 Car Design C02Design.docx Adopted from: C02 Dragster Project	Explore different types of bridge designs and their efficiency. Bridge Designs Sketch Designs Uncover what it means for a race car to be aerodynamic.	Design/construct a bridge project that holds the most weight with the best efficiency. Design a C02 dragster to compete with other classmates for the fastest time.
4. Arts	Standards: STEAM Standards C02 Car Design Process: C02Design.docx Adopted from: C02 Dragster Project	Plan out the design and build process of the dragster.	Design a C02 dragster to compete with other classmates for the fastest time.
5. Math	Standards: STEAM Standards C02 Car Design Specifications: Dragster Specs Adopted from: C02 Dragster Project	Dragster Specifications	Design a C02 dragster to compete with other classmates for the fastest time.