# AMHERST PUBLIC AND PELHAM ELEMENTARY SCHOOLS – CURRICULUM MAP

| **ELEMENTARY SCIENCE**<br>**GRADE: 5** | **UNIT TITLE: MARVELOUS MACHINES** |
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| **SECTION** | **LENGTH** | **CONTENT** | **SKILLS** | **METHODS OF ASSESSMENT** | **FRAMEWORK STRANDS & STANDARDS**<br>**Grades 3-5** |
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| Prep Lesson | 1 session | • Almost all the objects we use everyday are examples of technology.<br>• Materials have varied properties that make them useful in different situations.<br>• Engineers design technology to solve problems<br>• A process is a kind of technology.<br>• Simple machines make work easier by reducing force or changing the direction a force is applied<br>• Simple machines are used in many contexts.<br>• Systems have parts that work together to accomplish a goal.<br>• Steps of the engineering design process are: Ask, Imagine, Plan, Create, Improve. | • Observe, draw, label<br>• Work cooperatively to solve a problem<br>• Apply understanding of simple machines to design a system<br>• Implement the steps of the engineering design process<br>Tools: spring scales, simple machines in use | Worksheets<br>Project rubrics<br>Quizzes<br>Teacher checklist<br>End of Unit assessment | T/E 1.1, 2.1 |
| Story: *Aisha Makes Work Easier* | 2-3 sessions | | | | T/E 1.3, 2.1, 2.2, 2.3 |
| Assembly Lines | 1-2 sessions | | | | T/E 2.1, 2.2, 2.3 |
| Using Simple Machines | 1-2 sessions | | | | T/E 1.3, 2.1, 2.2, 2.3 |
| Improving a Factory Subsystem | 2-3 sessions | | | | T/E 1.3, 2.1, 2.2, 2.3 |

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**Technology/Engineering (T/E), Grades 3-5**

**Materials and Tools**

**T/E 1.1** Identify materials used to accomplish a design task based on a specific property, e.g., strength, hardness, and flexibility.

**T/E 1.3** Identify and explain the difference between simple and complex machines, e.g., hand can opener that includes multiple gears, wheel, wedge, gear, and lever.

**Engineering Design**

**T/E 2.1** Identify a problem that reflects the need for shelter, storage, or convenience.

**T/E 2.2** Describe different ways in which a problem can be represented, e.g., sketches, diagrams, graphic organizers, and lists.

**T/E 2.3** Identify relevant design features (e.g., size, shape, weight) for building a prototype of a solution to a given problem.