

In the following Gantt chart, each column represents five 45-minute classes and each bar is an estimated number of classes per task. This chart also lists the corresponding text chapters to the tasks in the last column.

Project 3.0: 45-Minute Class Periods	5	10	15	20	25	30	35	40	Text Chapter
Task 3.1: Putt-Putt Boats and Patents Students see a putt-putt boat in action and receive the project assignment.	■								
Task 3.2: Manufacture a Putt-Putt Boat Students follow instructions and plans to make a replica of a toy boat.	■ ■								17
Task 3.3: Investigate Fluid Systems Students learn about the basic properties of air and water.		■							18
Task 3.4: Develop a Manufacturing Press Students consider the properties of hydraulic and pneumatic systems in designing a syringe system that can operate a machine press.			■						19 20
Task 3.5: Investigate Heat Engines Students learn how heat engines are heated and cooled to produce motion.			■						21
Task 3.6: The Rocket Effect Students use a model of the boiler engine to understand how pressure difference, resistance, velocity, and volume flow rate are related.				■					22
Task 3.7: Investigate Resistance in Pipes Students blow through different types of straws of different lengths, areas, and angle bends, in series and parallel, to learn about fluid resistance.				■					23
Task 3.8: Redesign the Putt-Putt Boat Students design a change to some aspect of the boat, justify the change, and implement it.				■ ■					
Task 3.9: Present Your Patent Students write a patent application describing how the putt-putt boat works, their changes to the design, and the results. Finally, students present their results to the class.					■ ■				