Big Idea: Machines are used for many purposes in our daily lives when we need to transfer energy into motion or move materials in a controlled way.	**Our Unit Questions:** How is energy transferred in mechanical devices? How do mechanical devices provide for controlled application of energy in ways that are efficient, effective and responsible?

Content vocabulary to know and use:	**Skill vocabulary to know and use:**
mechanical devices, structures, functions, machines, subsystems, component parts, system, force, energy, transmission, mechanical system, social contexts, environmental contexts	initiate, plan, variables, investigating, researching, data, qualitative, quantitative

	Unit Goals: Curricular Language		**Student Friendly Language**
STS Outcomes	<u>Illustrate</u> the **development of science and technology** by <u>describing, comparing, and interpreting</u> **mechanical devices** that have been **improved over time**	**STS Outcomes**	I know how science and technology has impacted the development of **mechanical devices** I know how **mechanical devices** have improved over time
	Analyze **machines** by describing the **structures and functions** of the **overall system, the subsystems** and the **component parts**		I know the **structures** and **functions** of different **machines** I know how **subsystems** and **component parts** work together in an overall **system**
	Investigate and describe the **transmission of force** and **energy** between parts of a **mechanical system**		I know how the **force** and **energy** moves (**transmission**) between the different parts of a **mechanical system**
	Analyze the **social and environmental contexts** of **science and technology**, as they apply to the development of **mechanical devices**		I know how the development of **mechanical devices** impacts **social** and **environmental contexts**
Targeted Skill Outcomes	**Initiating and Planning**: **Ask questions** about the relationships between and among observable variables, and **plan investigations** to address those questions	**Targeted Skill Outcomes**	I can **initiate** and **plan** by: • asking questions about how things (**variables**) are related to each other • **investigating** and **researching** into questions I ask
	Analyzing and Interpreting: Analyze **qualitative and quantitative data,** and develop and assess possible explanation		I can **analyze** and **interpret** by: • using my senses to understand and explain **data** (**qualitative**) • using amounts, numbers and values to understand and explain **data** (**quantitative**)
Targeted Attitudes	Interest in Science: **Show interest** in science-related questions and issues, and **pursue personal interests** and **career possibilities** within science-related fields	**Targeted Attitudes**	I can be interested in science by: participating, engaging in discussion, willing to complete assignments and tasks, asking questions, learning about science for fun, finding ways to connect to science topics, getting creative in science, knowing why science could be useful to life in the future/ possible careers in science)