

Principles of Engineering PLTW Year-At-A-Glance

Week	Unit Title	Overview	Readiness TEKS	Supporting TEKS
Week 1	PLTW Unit 1.1 Mechanisms	Students will gain an understanding of mechanisms through the application of theory based calculations accompanied by lab experimentation.	K1-3, S1-10	
Week 2				
Week 3				
Week 4	Unit 1.2 Energy Sources	Students will learn the necessity of energy , work, and power in creating, using, or maintaining a technological system.	K1-5,S1-8	
Week 5				
Week 6	Unit 1.3 Energy Applications	Students will investigate thermal energy and alternative energy applications.	K1-4, S1-4	
Week 7				
Week 8	Unit 1.4 Renewable Electrical Energy	Students will work in teams to solve a design problem that focuses on energy and power.	K1-2 S1-5	
Week 9				
Week 10				
Week 11	Unit 2.1 Statics	Students will learn about engineering through materials properties and statics.	K1-7, S1-9	
Week 12				
Week 13				
Week 14	Unit 2.2 Materials Properties	Provides students with an opportunity to investigate the basic categories and properties of materials.	K1-3, S1-4	
Week 15				
Week 16	Review			
Week 17	Exams			
Week 18	Unit 2.3 Materials Testing	Students will learn the critical process that determines whether a product is reliable, safe, and predictable in function.	K1-4, S1-3	
Week 19				
Week 20	Unit 2.4 Structural Design	Students will work in teams to solve a materials design problem.	K1-2, S1-4	
Week 21				
Week 22	Unit 3.1 Machine Control	Students will learn how to control mechanical processes using computer software and hardware.	K1-4, S1-14	
Week 23				
Week 24				
Week 25	Unit 3.2 Fluid Power	Students will learn the basic components of pneumatic and hydraulic power and how they are designed to manipulate components through work and power.	K1-4, S1-7	
Week 26				
Week 27				
Week 28				
Week 29	Materials Sorter	Students will work in teams to solve a design problem that focuses on control systems.	K1-2, S1-5	
Week 30				
Week 31				
Week 32	Statistics	Students will learn the processes of gathering, organizing, interpreting, and formulating an understanding of data through probability and statistics.		
Week 33				
Week 34				
Week 35	Kinematics	Students will create a vehicle to learn important aspects of motion and freefall.	K1-3, S1-10	
Week 36				
Week 37				