

Course Title:	Physics A	
<u>Michigan High School Content Expectations for Chemistry</u>		
Unit 1 Big Idea:	Introduction to Physics	
Essential Questions	1. How does the field of physics relate to the study of science in general?	
Standards	Assignment	Description
P1.1A, P1.1D, P1.1i, P1.2A, P1.2E, P1.2h, P1.2i.	Lesson 1.2: What is Physics? Lesson 1.3: Measurement Lesson 1.4: Units Lesson 1.5: Language of Physics	1.2 Future Careers 1.3 Scientific Measurements 1.4 Units quiz 1.5 Diameter and Circumference
Unit 2 Big Idea	Motion	
Essential Questions	1. What is motion?	
Standards	Assignment	Description
P1.1B, P1.1C, P1, P2.1A, P2.1B, P2.1C, P2.1D, P2.1E, P2.1g, P2.2A, P2.2B, P2.B, P2.2e, P2.2g, P2.3a, P3.4e	Lesson 2.1: Describing Motion With Words Lesson 2.2: Describing Motion With Graphs Lesson 2.3: Describing Motion With Equations Lesson 2.4: Kinematic Equations Lesson 2.5:	2.1 Quiz on Scalar, Vector, Distance, Displacement, Speed, Velocity, Acceleration 2.2 Motion Diagram 2.3 Acceleration Argument 2.4 How Fast Can You Throw Up? 2.5 Quiz on Slope 2.6 Measuring Speed with a Ruler

	Interpreting Graphs Lesson 2.6: Two-Dimensional Motion	
Unit 3 Big Idea	Forces	
Essential Questions	1. What makes object move the way they do?	
Standards	Assignment	Description
P1.1h, P1.2D, P3.1A, P3.1c, P3.1d, P3.2A, P3.2C, P3.2d, P3.3A, P3.3c, P3.4A, P3.4B, P3.4C	Lesson 3.1: Forces in Nature Lesson 3.2: Net Force Lesson 3.3: Force and Acceleration Lesson 3.4: Friction	3.1 Friction 3.2 Free Body Diagrams 3.3 Lab Activity - Fan Cart Physics 3.4 Real-Life Free Fall Experiment
Unit 4 Big Idea	Mechanics	
Essential Questions	1. Here are energy and motion related?	
Standards	Assignment	Description
P1.2B, P3.2B, P3.3b, P3.3d, P3.4f, P3.4g, P3.5a, P4.1A, P4.1B, P4.1c, P4.1d, P4.1e, P4.2A, P4.2B, P4.2C, P4.2D, P4.2e, P4.2f, P4.3A, P4.3B, P4.3C, P4.3d, P4.3e, P4.3f	Lesson 4.1: Energy Lesson 4.2: Work and Potential Energy Lesson 4.3: Kinetic Energy Lesson 4.4: Momentum Lesson 4.5: Collisions	4.1 Energy Transfer Diagrams 4.2 Lab Activity - Pulley Lab 4.3 Lab Activity - Pendulum 4.4 Quiz on Momentum and Impulse 4.5 Quiz on Conservation of Momentum

Unit 5 Big Idea		
Rotation		
Essential Questions 1. What makes objects rotate the way they do?		
Standards	Assignment	Description
P2.1F, P2.1h, P2.2D, P3.1b, P3.4D, P3.6A, P3.6B, P3.6C, P3.6d P3.6e	Lesson 5.1: Uniform Circular Motion Lesson 5.2: Circular Tracks Lesson 5.3: Universal Gravitation Lesson 5.4: Orbital Motion	5.1 Lab Activity - Circular Motion 5.2 Quiz on Circular Tracks 5.3 Quiz on Gravitation 5.4 Lab Activity - Orbital Motion
Unit 6 Big Idea		
Thermal Physics		
Essential Questions 1. Where does heat come from and where does it go?		
Standards	Assignment	Description
P1.1f, P4.11a, P4.11b	Lesson 6.1: Temperature Lesson 6.2: Heat Lesson 6.3: Specific Heat Lesson 6.4: Phase Changes Lesson 6.5: Thermodynamics	6.1 Quiz on Temperature, Fahrenheit, Celsius 6.2 Lab Activity - Energy Conversion 6.3 Lab Activity - Specific Heat 6.4 Joules and Phase Changes