Course at a Glance

Plan

The Course at a Glance provides a useful visual organization of the AP Physics 2 curricular components, including the following:

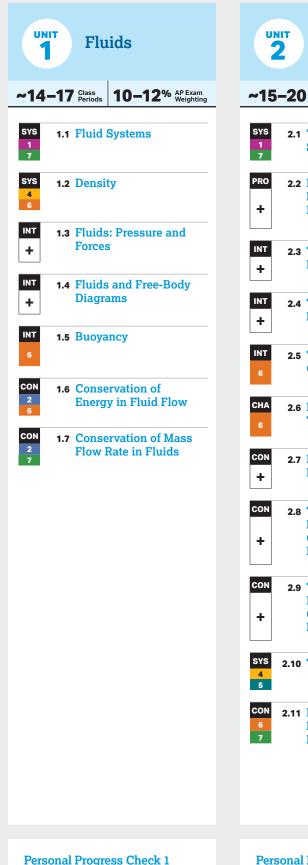
- Sequence of units, along with approximate weighting and suggested pacing.
 Please note, pacing is based on 45-minute class periods, meeting five days each week for a full academic year.
- Progression of topics within each unit.
- Spiraling of the big ideas and science practices across units.

Teach

SCIENCE PRACTICES Science practices spiral throughout the course. 1 Modeling 4 Experimental Methods 2 Mathematical Routines 5 Data Analysis 3 Scientific 6 Argumentation Questioning 7 Making Connections + Indicates 3 or more science pratices for a given topic. The individual topic page will show all the science practices. **BIG IDEAS** Big ideas spiral across topics and units. sys 1-Systems CON 5-Conservation wav 6-Waves FLD 2-Fields PRO 7-Probability INT 3-Force Interactions CHA 4-Change

Assess

Assign the Personal Progress Checks—either as homework or in class—for each unit. Each Personal Progress Check contains formative multiple-choice and free-response questions. The feedback from these checks shows students the areas where they need to focus.



Multiple-choice: ~40 questions Free-response: 2 questions

- Experimental Design
- Paragraph Argument Short Answer

15	-20	Class Periods 12–18% AP Exam Weighting
/S	2.1	Thermodynamic Systems
20	2.2	Pressure, Thermal Equilibrium, and the Ideal Gas Law
IT -	2.3	Thermodynamics and Forces
IT -	2.4	Thermodynamics and Free-Body Diagrams
T	2.5	Thermodynamics and Contact Forces
iA S	2.6	Heat and Energy Transfer
	2.7	Internal Energy and Energy Transfer
	2.8	Thermodynamics and Elastic Collisions: Conservation of Momentum
	2.9	Thermodynamics and Inelastic Collisions: Conservation of Momentum
/S	2.10	Thermal Conductivity
	2.11	Probability, Thermal Equilibrium, and Entropy

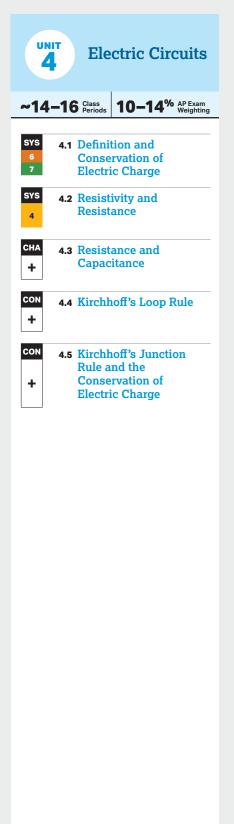
Thermodynamics

Personal Progress Check 2

Multiple-choice: ~60 questions Free-response: 2 questions

- Quantitative/Qualitative Translation
- Short Answer





Personal Progress Check 4

Quantitative/Qualitative Translation

Multiple-choice: ~40 questions

Free-response: 2 questions

Short Answer

Magnetism and UNIT **Electromagnetic** 5 Induction ~13-15 Class Periods 10-12% AP Exam Weighting SYS 5.1 Magnetic Systems 1 SYS **5.2 Magnetic Permeability** and Magnetic Dipole Moment FLD 5.3 Vector and Scalar Fields FLD 5.4 Monopole and **Dipole Fields** ÷ FLD 5.5 Magnetic Fields and Forces 1 2 INT 5.6 Magnetic Forces ÷ INT 5.7 Forces Review ÷ СНА 5.8 Magnetic Flux ÷.

Personal Progress Check 3

Multiple-choice: ~75 questions Free-response: 2 questions

- Experimental Design
- Paragraph Argument Short Answer

Personal Progress Check 5

Multiple-choice: ~35 questions Free-response: 2 questions • Experimental Design

Paragraph Argument Short Answer

6 Physical Optics	7 Atomic, and Nuclear Physic
-15-18 Class Periods 12-14% AP Exam Weighting	~13-15 Class Periods 10-12% AP Ex Weight
• 6.1 Waves	SYS 7.1 Systems and Fundamental Forces
 6.2 Electromagnetic Waves + 	CON 7.2 Radioactive Decay
6.3 Periodic Waves	CON 7.3 Energy in Modern Physics (Energy in Radioactive Decay and
• 6.4 Refraction, Reflection, and Absorption	$E = mc^2$
 4.5 Images from Lenses and Mirrors 	SYS 7.4 Mass-Energy CHA Equivalence +
• 6.6 Interference and Diffraction	SYS7.5 Properties of WavesWAVand Particles+
	WAV 6 7 7 7 7 7 7 7 7 7 7 7 7 7
	PRO 7.7 Wave Functions and Probability

Personal Progress Check 6

Multiple-choice: ~50 questions Free-response: 2 questions
 Experimental Design

Short Answer

Personal Progress Check 7

Multiple-choice: ~55 questions Free-response: 2 questions
Quantitative/Qualitative Translation

- Paragraph Argument Short Answer