### Unit 1: Let's Get Physical!

**Lesson 1.1: Science as Inquiry**
- **1.1.1: Study – Summarizing**  
  Duration: 1 hr 15 min
- **1.1.2: Discuss - Searching for Truth**  
  Duration: 30 min _____ / 20
- **1.1.3: Quiz - Science as Inquiry**  
  Duration: 40 min _____ / 30

**Lesson 1.2: The Scientific Method**
- **1.2.1: Study - Representing Data Graphically**  
  Duration: 1 hr 15 min
- **1.2.2: Journal - Reflections on the Method**  
  Duration: 30 min _____ / 20
- **1.2.3: Lab - Wet Pennies**  
  Duration: 1 hr 15 min _____ / 40
- **1.2.4: Quiz - The Scientific Method**  
  Duration: 40 min _____ / 30

**Lesson 1.3: Let’s Get Physical! Wrap-Up**
- **1.3.1: Review - Let’s Get Physical!**  
  Duration: 50 min
- **1.3.2: Practice - Introduction to Physical Science**  
  Duration: 1 hr _____ / 50
- **1.3.3: Test (CST) - Let’s Get Physical!**  
  Duration: 40 min _____ / 50
- **1.3.4: Test (TST) - Let’s Get Physical!**  
  Duration: 40 min _____ / 50

**Lesson 1.4: Diagnostic**
- **1.4.1: Diag - Let’s Get Physical!**  
  Duration: 1 hr _____ / 25

### Unit 2: Get Your Motor Running

**Lesson 2.1: Introduction to Kinematics**
- **2.1.1: Study - Graphing Motion**  
  Duration: 1 hr 15 min
- **2.1.2: Discuss - Defining Distance and Displacement**  
  Duration: 30 min _____ / 20
- **2.1.3: Quiz - Introduction to Kinematics**  
  Duration: 40 min _____ / 30

**Lesson 2.2: Gravity and Free Fall**
- **2.2.1: Study - Catch Me — I’m Falling**  
  Duration: 1 hr 15 min
- **2.2.2: Lab - Falling Bodies**  
  Duration: 50 min _____ / 40
- **2.2.3: Quiz - Gravity and Free Fall**  
  Duration: 40 min _____ / 30

**Lesson 2.3: Motion in Two Dimensions**
- **2.3.1: Study – Vectors**  
  Duration: 1 hr 15 min
- **2.3.2: Discuss - Athletic Projectiles**  
  Duration: 30 min _____ / 20
- **2.3.3: Quiz - Motion in Two Dimensions**  
  Duration: 40 min _____ / 30

**Lesson 2.4: Get Your Motor Running Wrap-Up**
- **2.4.1: Review - Get Your Motor Running**  
  Duration: 1 hr
- **2.4.2: Practice - Motion**  
  Duration: 1 hr _____ / 50
- **2.4.3: Test (CST) - Get Your Motor Running**  
  Duration: 1 hr _____ / 50
- **2.4.4: Test (TST) - Get Your Motor Running**  
  Duration: 1 hr _____ / 50

**Lesson 2.5: Diagnostic**
- **2.5.1: Diag - Get Your Motor Running**  
  Duration: 1 hr _____ / 25

### Unit 3: May the Net Force Be with You

**Lesson 3.1: Newton’s Laws of Motion**
- **3.1.1: Study - Newton’s First Law of Motion**  
  Duration: 1 hr
- **3.1.2: Lab - Newton’s Laws**  
  Duration: 1 hr _____ / 40
- **3.1.3: Quiz - Newton’s Laws of Motion**  
  Duration: 40 min _____ / 30

**Lesson 3.2: Friction**
- **3.2.1: Study - Therein Lies the Rub**  
  Duration: 1 hr 15 min
- **3.2.2: Lab - That Rubs Me the Wrong Way**  
  Duration: 1 hr
- **3.2.3: Quiz - Friction**  
  Duration: 40 min _____ / 30

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### Lesson 3.3: Centripetal Force
- **3.3.1: Study - Motion in a Circle** Duration: 1 hr 15 min
- **3.3.2: Discuss - My World Is Spinning** Duration: 30 min _____ / 20
- **3.3.3: Quiz - Centripetal Force** Duration: 40 min _____ / 30

### Lesson 3.4: Buoyant Force
- **3.4.1: Study - Buoyant Force and Archimedes' Principle** Duration: 1 hr 15 min
- **3.4.2: Journal - What Floats Your Boat?** Duration: 30 min _____ / 20
- **3.4.3: Quiz - Buoyancy** Duration: 40 min _____ / 30

### Lesson 3.5: May the Net Force Be with You Wrap-Up
- **3.5.1: Review - May the Net Force Be with You** Duration: 1 hr
- **3.5.2: Practice - Forces** Duration: 1 hr _____ / 50
- **3.5.3: Test (CST) - May the Net Force Be with You** Duration: 1 hr _____ / 50
- **3.5.4: Test (TST) - May the Net Force Be with You** Duration: 1 hr _____ / 50

### Lesson 3.6: Diagnostic
- **3.6.1: Diag - May the Net Force Be with You** Duration: 1 hr _____ / 25

### Unit 4: Crash into Me

#### Lesson 4.1: Momentum
- **4.1.1: Study - Momentum and Newton's Second Law** Duration: 1 hr 15 min
- **4.1.2: Lab - Losing My Marbles** Duration: 1 hr _____ / 40
- **4.1.3: Quiz - Momentum** Duration: 40 min _____ / 30

#### Lesson 4.2: Work Simple Machines and Power
- **4.2.1: Study - Power** Duration: 1 hr 15 min
- **4.2.2: Discuss - Working Out** Duration: 30 min _____ / 20
- **4.2.3: Quiz - Work Simple Machines and Power** Duration: 40 min _____ / 30

#### Lesson 4.3: Energy
- **4.3.1: Study - Work-Energy Theorem** Duration: 1 hr 15 min
- **4.3.2: Discuss - Conserving Energy** Duration: 30 min _____ / 20
- **4.3.3: Quiz - Energy** Duration: 40 min _____ / 30

#### Lesson 4.4: Crash into Me Wrap-Up
- **4.4.1: Review - Crash into Me** Duration: 1 hr
- **4.4.2: Practice - Energy** Duration: 1 hr _____ / 50
- **4.4.3: Test (CST) - Crash into Me** Duration: 1 hr _____ / 50
- **4.4.4: Test (TST) - Crash into Me** Duration: 1 hr _____ / 50

#### Lesson 4.5: Diagnostic
- **4.5.1: Diag - Crash into Me** Duration: 30 min _____ / 25

### Unit 5: I'm Pickin' Up Good Vibrations

#### Lesson 5.1: Properties of Waves
- **5.1.1: Study - Types of Waves** Duration: 1 hr 15 min
- **5.1.2: Lab - Smile and Wave** Duration: 50 min _____ / 40
- **5.1.3: Quiz - Waves** Duration: 40 min _____ / 30

#### Lesson 5.2: Sound Waves
- **5.2.1: Study - Matching-Up Time** Duration: 1 hr 15 min
- **5.2.2: Quiz - Sound Waves** Duration: 40 min _____ / 30

#### Lesson 5.3: Electromagnetic Waves
- **5.3.1: Study - Light Spectrum** Duration: 1 hr 15 min
- **5.3.2: Quiz - Electromagnetic Waves** Duration: 40 min _____ / 30
# Physical Science Core

## Lesson 5.4: Optics
- **5.4.1: Study - Reflection and Mirrors**  Duration: 1 hr 15 min
- **5.4.2: Lab - Bend It Like Beckham**  Duration: 1 hr ____ / 40
- **5.4.3: Quiz - Optics**  Duration: 40 min ____ / 30

## Lesson 5.5: I’m Pickin' Up Good Vibrations Wrap-Up
- **5.5.1: Review - I'm Pickin' Up Good Vibrations**  Duration: 1 hr
- **5.5.2: Practice - Waves**  Duration: 1 hr ____ / 50
- **5.5.3: Test (CST) - I'm Pickin' Up Good Vibrations**  Duration: 1 hr ____ / 50
- **5.5.4: Test (TST) - I'm Pickin' Up Good Vibrations**  Duration: 1 hr ____ / 50

## Lesson 5.6: Diagnostic
- **5.6.1: Diag - I'm Pickin' Up Good Vibrations**  Duration: 50 min ____ / 25

## Unit 6: It's Electric!
### Lesson 6.1: Static Electricity
- **6.1.1: Study - Electric Charge**  Duration: 1 hr 15 min
- **6.1.2: Lab - A Shocking Tale**  Duration: 1 hr ____ / 40
- **6.1.3: Quiz - Static Electricity**  Duration: 40 min ____ / 30

### Lesson 6.2: Current and Circuits
- **6.2.1: Study - Ohm's Law**  Duration: 1 hr 15 min
- **6.2.2: Discuss - Current Events**  Duration: 30 min ____ / 20
- **6.2.3: Quiz - Current and Circuits**  Duration: 40 min ____ / 30

### Lesson 6.3: Magnetism
- **6.3.1: Study - Electromagnetism**  Duration: 1 hr 15 min
- **6.3.2: Journal - Surprise Science**  Duration: 30 min ____ / 20
- **6.3.3: Quiz - Magnetism**  Duration: 40 min ____ / 30

### Lesson 6.4: It's Electric! Wrap-Up
- **6.4.1: Review - It's Electric!**  Duration: 50 min
- **6.4.2: Practice - Electricity and Magnetism**  Duration: 1 hr ____ / 50
- **6.4.3: Test (CST) - It's Electric!**  Duration: 1 hr ____ / 50
- **6.4.4: Test (TST) - It's Electric!**  Duration: 1 hr ____ / 50

## Lesson 6.5: Diagnostic
- **6.5.1: Diag - It's Electric!**  Duration: 1 hr ____ / 25

## Unit 7: Physical Science Semester 1 Review and Exam
### Lesson 7.1: Physical Science Semester 1
- **7.1.1: Review - Physical Science Semester 1**  Duration: 5 hrs
- **7.1.2: Exam - Physical Science Semester 1**  Duration: 1 hr ____ / 90
- **7.1.3: Final Exam - Physical Science Semester 1**  Duration: 1 hr ____ / 90

## Unit 8: It’s Elementary
### Lesson 8.1: Structure and Components of the Atom
- **8.1.1: Study - It’s Elementary**  Duration: 1 hr 15 min
- **8.1.2: Study - Atomic Properties**  Duration: 1 hr 15 min
- **8.1.3: Lab - Braving the Elements**  Duration: 1 hr ____ / 40
- **8.1.4: Quiz - Structure and Components of the Atom**  Duration: 40 min ____ / 30

### Lesson 8.2: The Periodic Table
- **8.2.1: Study - Families**  Duration: 1 hr 15 min
- **8.2.2: Discuss - Periodic Updates**  Duration: 30 min ____ / 20
- **8.2.3: Quiz - The Periodic Table**  Duration: 40 min ____ / 30

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### Lesson 8.3: Trends and Patterns
- **Study - Trends**  
  Duration: 1 hr 15 min
- **Lab - Elements from Outer Space**  
  Duration: 1 hr ____ / 40
- **Quiz - Trends and Patterns**  
  Duration: 40 min ____ / 30

### Lesson 8.4: It's Elementary Wrap-Up
- **Review - Atomic Structure and the Periodic Table**  
  Duration: 1 hr 15 min
- **Practice - Atomic Knowledge**  
  Duration: 50 min ____ / 50
- **Test (CST) - It's Elementary**  
  Duration: 1 hr ____ / 50
- **Test (TST) - It's Elementary**  
  Duration: 1 hr ____ / 50

### Lesson 8.5: Diagnostic
- **Diag - It's Elementary**  
  Duration: 1 hr ____ / 25

### Unit 9: Bond. Molecular Bond.

#### Lesson 9.1: Bonding
- **Study - The Bond Family Tree**  
  Duration: 1 hr 15 min
- **Discuss - Bond and Determined**  
  Duration: 30 min ____ / 20
- **Quiz - Bonding**  
  Duration: 40 min ____ / 30

#### Lesson 9.2: Shapes of Molecules
- **Study - Hydrogen Bonding**  
  Duration: 1 hr 15 min
- **Lab - Edible Molecules**  
  Duration: 1 hr ____ / 40
- **Quiz - Shapes of Molecules**  
  Duration: 40 min ____ / 30

#### Lesson 9.3: Compounds
- **Study - Covalent Compounds**  
  Duration: 1 hr 15 min
- **Lab - How Do You Color Your Eggs?**  
  Duration: 1 hr ____ / 40
- **Quiz - Compounds**  
  Duration: 40 min ____ / 30

#### Lesson 9.4: Bond. Molecular Bond. Wrap-Up
- **Review - Bond. Molecular Bond.**  
  Duration: 1 hr
- **Practice - Bonding**  
  Duration: 1 hr ____ / 50
- **Test (CST) - Bond. Molecular Bond.**  
  Duration: 40 min ____ / 50
- **Test (TST) - Bond. Molecular Bond.**  
  Duration: 40 min ____ / 50

#### Lesson 9.5: Diagnostic
- **Diag - Bond. Molecular Bond: Wrap-Up**  
  Duration: 40 min ____ / 25

### Unit 10: Chemical Reactions

#### Lesson 10.1: Chemical Equations and Conservation Laws
- **Study - Balancing Equations**  
  Duration: 1 hr 15 min
- **Lab - I'm Having a Reaction**  
  Duration: 1 hr ____ / 40
- **Quiz - Chemical Equations and Conservation Laws**  
  Duration: 40 min ____ / 30

#### Lesson 10.2: Reaction Types
- **Study - Combustion Precipitates and Solutions — Oh My!**  
  Duration: 1 hr 15 min
- **Discuss - Discussing Chemical Reactions**  
  Duration: 30 min ____ / 20
- **Quiz - Reaction Types**  
  Duration: 40 min ____ / 30

#### Lesson 10.3: Acids and Bases
- **Study - Reactions**  
  Duration: 1 hr 15 min
- **Journal - Basic Hygiene**  
  Duration: 30 min ____ / 20
- **Quiz - Acids and Bases**  
  Duration: 40 min ____ / 30

#### Lesson 10.4: Chemical Reactions Wrap-Up
- **Review - Chemical Reactions**  
  Duration: 50 min
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<table>
<thead>
<tr>
<th>Lesson 10.5: Diagnostic</th>
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</thead>
<tbody>
<tr>
<td>10.5.1: Diag - Chemical Reactions Wrap-Up Duration: 30 min _____ / 25</td>
</tr>
</tbody>
</table>

### Unit 11: Jumpin' Jack Flash — It's a Gas

#### Lesson 11.1: Heat

| 11.1.1: Study - Phase Changes  Duration: 1 hr 15 min |
|-----------------------------|-----------------------------|
| 11.1.2: Lab - Can You Feel the Heat?  Duration: 1 hr _____ / 40 |
| 11.1.3: Quiz – Heat  Duration: 40 min _____ / 30 |

#### Lesson 11.2: The Gas Laws

| 11.2.1: Study - The Pieces of the Puzzle  Duration: 1 hr |
|-----------------------------|-----------------------------|
| 11.2.2: Discuss – Moonwalking  Duration: 30 min _____ / 20 |
| 11.2.3: Quiz - The Gas Laws  Duration: 40 min _____ / 30 |

#### Lesson 11.3: Thermodynamics

| 11.3.1: Study – Entropy  Duration: 1 hr |
|-----------------------------|-----------------------------|
| 11.3.2: Lab - Homemade Ice Cream  Duration: 1 hr _____ / 40 |
| 11.3.3: Quiz – Thermodynamics  Duration: 40 min _____ / 30 |

#### Lesson 11.4: Jumpin' Jack Flash — It's a Gas Wrap-Up

| 11.4.1: Review - Jumpin' Jack Flash — It's a Gas  Duration: 1 hr |
|-----------------------------|-----------------------------|
| 11.4.2: Practice - Gases and Thermodynamics  Duration: 1 hr _____ / 50 |
| 11.4.3: Test (CST) - Jumpin' Jack Flash — It's a Gas  Duration: 40 min _____ / 50 |
| 11.4.4: Test (TST) - Jumpin' Jack Flash — It's a Gas  Duration: 40 min _____ / 50 |

#### Lesson 11.5: Diagnostic

| 11.5.1: Diag - Jumpin' Jack Flash — It's a Gas  Duration: 1 hr _____ / 25 |

### Unit 12: Nuclear Energy Is Da Bomb

#### Lesson 12.1: Radio

| 12.1.1: Study - Decay Processes  Duration: 1 hr 15 min |
|-----------------------------|-----------------------------|
| 12.1.2: Lab - Nuclear Decay Chain  Duration: 50 min _____ / 40 |
| 12.1.3: Quiz – Radio  Duration: 40 min _____ / 30 |

#### Lesson 12.2: Nuclear Reactions

| 12.2.1: Study - Nuclear Transmutations  Duration: 1 hr |
|-----------------------------|-----------------------------|
| 12.2.2: Discuss - Conserving Your World  Duration: 30 min _____ / 20 |
| 12.2.3: Quiz - Nuclear Reactions  Duration: 40 min _____ / 30 |

#### Lesson 12.3: Energy of the Future

| 12.3.1: Study - Where Do We Go from Here?  Duration: 1 hr |
|-----------------------------|-----------------------------|
| 12.3.2: Journal - Not in My House?  Duration: 30 min _____ / 20 |
| 12.3.3: Quiz - Nuclear Energy  Duration: 40 min _____ / 30 |

#### Lesson 12.4: Nuclear Energy Is Da Bomb Wrap-Up

| 12.4.1: Review - Nuclear Energy Is Da Bomb  Duration: 50 min |
|-----------------------------|-----------------------------|
| 12.4.2: Practice - A Pound of This and a Pound of That  Duration: 50 min _____ / 50 |
| 12.4.3: Test (CST) - Nuclear Energy Is Da Bomb  Duration: 40 min _____ / 50 |
| 12.4.4: Test (TST) - Nuclear Energy Is Da Bomb  Duration: 40 min _____ / 50 |

#### Lesson 12.5: Diagnostic

| 12.5.1: Diag - Nuclear Energy Is Da Bomb  Duration: 1 hr _____ / 25 |

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# Unit 13: Physical Science Semester 2 Review and Exam

**Lesson 13.1: Physical Science Semester 2**

<table>
<thead>
<tr>
<th>Component</th>
<th>Duration</th>
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<tbody>
<tr>
<td>13.1.1: Review - Physical Science Semester 2</td>
<td>2 hrs</td>
</tr>
<tr>
<td>13.1.2: Exam - Physical Science Semester 2</td>
<td>50 min / 90</td>
</tr>
<tr>
<td>13.1.3: Final Exam - Physical Science Semester 2</td>
<td>50 min / 90</td>
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