

City of Angels School  
Independent Study – Los Angeles Unified School District  
INSTRUCTIONAL FRAMEWORK – **Physics B** Course # 361532  
Textbook: California HMH Science Dimensions: HS Physics in the Universe

The Next Generation Science Standards (NGSS) are covered in both A & B Courses. This course is also aligned with Reading and Writing Standards for Literacy in Science and Technical Subjects for Grades 6–12, part of the Common Core State Standards (CCSS) available at <http://www.cde.ca.gov/re/cc/>.

**Text:** Access the HMH website/eBook by clicking the app in the left column of your Schoology course.

- Launch the app
- Select **HMH Science**
- Click **discover**
- Make sure you are in the correct textbook: **California HMH Science Dimensions: HS Physics in the Universe**
- Select the **Student ebook**

**Assignments and Grades**

Final course grades will be based on the following suggested matrix:

Book work	40%
Labs	20%
Unit Performance Task	20%
Unit Practice and Review	20%

**Grading Rubric**

4	-Accurate analysis cites strong textual evidence for support. -Well developed communication of content ideas.
3	-Accurate analysis cites textual evidence for support -Good communication of content ideas
2	-Mostly accurate analysis which cites some textual evidence for support. -Basic communication of ideas
1	-Minimally accurate analysis which provides no textual evidence for support. -Poor communication of content ideas. -Only partially correct and partially complete answers, no evidence.
0	-Inaccurate or no textual analysis. -Very poor (or no) communication of ideas.

## **Weeks 1-2**

### **Unit 5: Electricity and Magnetism**

Read p. 239-240, answer the **Predict** question on p. 240

p. 241-242 **Language Development**: fill out at least two boxes for each term as you go through the unit.

#### **5.1 Electricity**

1. Answer **Explain** on p. 243

2. **Exploration 1**

- Read p. 244-246
- Answer all questions within the exploration (most can be checked using online HMH ebook)

3. **Exploration 2**

- Read p. 247-251
- Answer all questions within the exploration (most can be checked using online HMH ebook)

5. **Self-Check**, p. 252-254 – Check your answers online, take notes or create a study guide for Unit test

#### **5.2 Magnetism**

1. Answer **Explain** on p. 255

2. **Exploration 1**

- Read p. 256-260
- Answer all questions within the exploration (most can be checked using online HMH ebook)

3. **Exploration 2**

- Read p. 261-263
- Answer all questions within the exploration (most can be checked using online HMH ebook)

4. **Exploration 3**

- Read p. 264-266
- Answer all questions within the exploration (most can be checked using online HMH ebook)

5. **Self-Check**, p. 268-270 – Check your answers online, take notes or create a study guide for Unit test.

#### **5.3. Electrical Energy**

1. Answer **Explain** on p. 255

2. **Exploration 1**

- Read p. 271-276
- Answer all questions within the exploration (most can be checked using online HMH ebook)

3. **Exploration 2**

- Read p. 277-280
- Answer all questions within the exploration (most can be checked using online HMH ebook)

4. **Exploration 3**

- Read p. 281-284
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Self-Check**, p. 286-288 – Check your answers online, take notes or create a study guide for Unit test.

Labster Lab: **Conservation of Energy: maximize the mechanical energy of a rollercoaster**

Labster Lab: **Basic Electricity: Understand how electricity works**

Read Unit 5 Review, p. 289-296

Complete Performance Task on p. 294

Complete Unit Practice and Review p. 295-296

## **Weeks 3-4**

### **Unit 6: Nuclear Processes**

**Read** p. 297-298, answer the **Predict** question on p. 240

p. 299-300 **Language Development**: fill out at least two boxes for each term as you go through the unit.

#### **6.1 The Nucleus**

**1. Answer Explain on p. 301**

**2. Exploration 1**

- Read p. 302-305
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 306-311
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 312-316
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Self-Check**, p. 318-320 – Check your answers online, take notes or create a study guide for Unit test

#### **6.2 Radiometric Dating and Earth's History**

**1. Answer Explain on p. 321**

**2. Exploration 1**

- Read p. 322-328
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 329-332
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 333-336
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Self-Check**, p. 338-340 – Check your answers online, take notes or create a study guide for Unit test

Labster Lab: **Introduction to Radioactive Decay**

Read Unit 6 Review, p. 341-348

Complete Performance Task on p. 346

Complete Unit Practice and Review p. 347-348

## **Weeks 5-6**

### **Unit 7: Waves**

**Read** p. 349-350, answer the **Predict** question on p. 240

p. 351-352 **Language Development**: fill out at least two boxes for each term as you go through the unit.

#### **7.1 Waves and Matter**

**1. Answer Explain on p. 353**

**2. Exploration 1**

- Read p. 354-356
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 357-359
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 360-361
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Exploration 4**

- Read p. 362-366
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**6. Exploration 5**

- Read p. 367-368
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**7. Self-Check**, p. 370-372 – Check your answers online, take notes or create a study guide for Unit test

#### **7.2 Earthquakes and Seismic Waves**

**1. Answer Explain on p. 373**

**2. Exploration 1**

- Read p. 374-376
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 377-379
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 380-381
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Exploration 4**

- Read p. 382-384
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**6. Self-Check**, p. 386-388 – Check your answers online, take notes or create a study guide for Unit test

### **7.3 Electromagnetic Radiation**

**1. Answer Explain on p. 389**

**2. Exploration 1**

- Read p. 390-393
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 394-398
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 399-402
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Self-Check, p. 404-406** – Check your answers online, take notes or create a study guide for Unit test

### **7.4 Information and Energy Transfer**

**1. Answer Evaluate on p. 407**

**2. Exploration 1**

- Read p. 408-413
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**3. Exploration 2**

- Read p. 414-417
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**4. Exploration 3**

- Read p. 418-420
- Answer all questions within the exploration (most can be checked using online HMH ebook)

**5. Self-Check, p. 422-424** – Check your answers online, take notes or create a study guide for Unit test

Labster Lab: **What are waves?**

Read Unit 7 Review, p. 425-432

Complete Performance Task on p. 430

Complete Unit Practice and Review p. 431-432

## **Weeks 7-8**

### **Unit 8: Stars and the Universe**

Read p. 433-434, answer the **Predict** question on p. 434

p. 435-436 **Language Development**: fill out at least two boxes for each term as you go through the unit.

#### **8.1 Stars and Space**

1. Answer **Infer** on p. 437

##### **2. Exploration 1**

- Read p. 438-442
- Answer all questions within the exploration (most can be checked using online HMH ebook)

##### **3. Exploration 2**

- Read p. 443-445
- Answer all questions within the exploration (most can be checked using online HMH ebook)

##### **4. Exploration 3**

- Read p. 446-452
- Answer all questions within the exploration (most can be checked using online HMH ebook)

##### **5. Exploration 4**

- Read p. 453-456
- Answer all questions within the exploration (most can be checked using online HMH ebook)

6. **Self-Check**, p. 458-460 – Check your answers online, take notes or create a study guide for Unit test

#### **8.2 Evidence for the Big Bang**

1. Answer **Infer** on p. 461

##### **2. Exploration 1**

- Read p. 462-464
- Answer all questions within the exploration (most can be checked using online HMH ebook)

##### **3. Exploration 2**

- Read p. 465-470
- Answer all questions within the exploration (most can be checked using online HMH ebook)

##### **4. Exploration 3**

- Read p. 471-474
- Answer all questions within the exploration (most can be checked using online HMH ebook)

6. **Self-Check**, p. 476-478 – Check your answers online, take notes or create a study guide for Unit test

Read Unit 7 Review, p. 479-486

Complete Performance Task on p. 484

Complete Unit Practice and Review p. 485-486