INTRODUCTION TO PHYSICAL SCIENCE

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Introduction to Physical Science

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Licensing

*A detailed breakdown of this resource's licensing can be found in **Back Matter/Detailed Licensing**.*

CHAPTER OVERVIEW

1: What is Science?

Topic hierarchy

This lesson is based on Chapter 1 of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

1.1: Lecture 1 - What is Science?

The lesson is based on section 1.1 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

1.2: Lecture 2 - Physical Quantities and Units

The lesson is based on section 1.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

1.3: Lecture 3 - Accuracy, Precision, and Significant Figures

This lesson is based on sections 1.3 and 1.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

2: Motion in One Dimension

Topic hierarchy

This lesson is based on Chapter 2 (2.1-2.7) and Chapter 4 (4.1-4.4) and Chapter 6 (6.5) of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

2.1: Lecture 1 - Vectors and Scalars

The lesson is based on sections 2.1-2.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

2.2: Lecture 2 - Velocity and Acceleration

The lesson is based on section 2.3-2.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf formats.

2.3: Lecture 3 - Equations of Motion

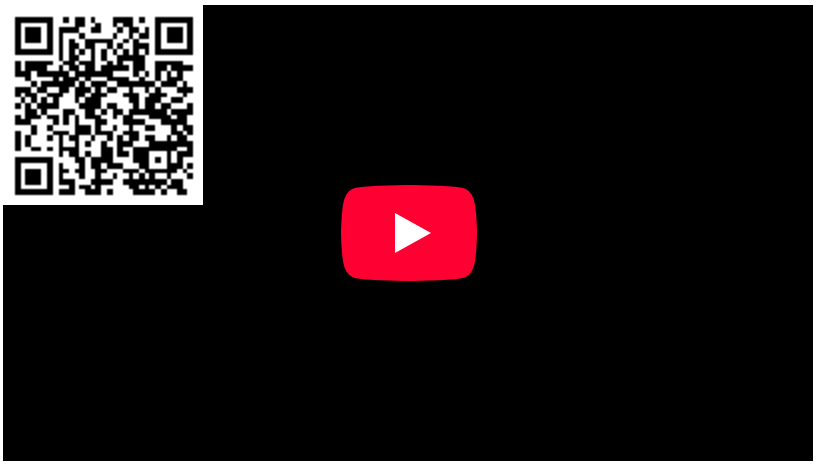
The lesson is based on sections 2.5-2.6 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

2.4: Lecture 4 - Falling Objects

The lesson is based on section 2.7 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

2.5: Lecture 5 - Newton's Laws and Gravity

The lesson is based on sections 4.1-4.4 & 6.5 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.



CHAPTER OVERVIEW

3: Work and Momentum

Topic hierarchy

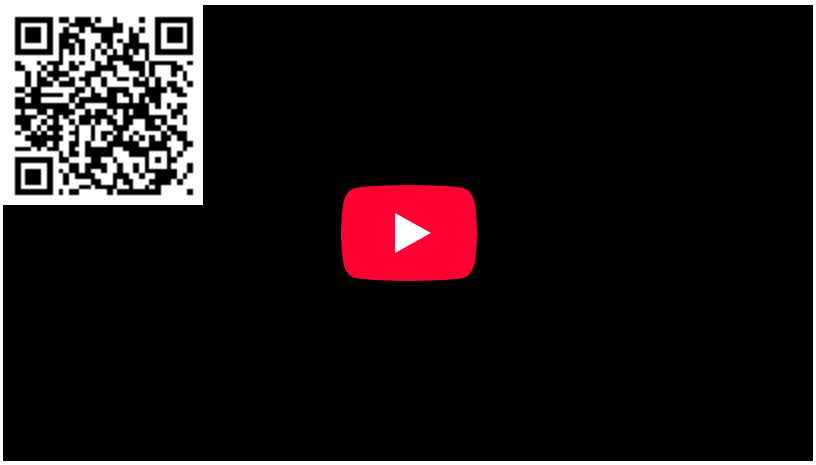
This lesson is based on Chapter 7 (7.1-7.7) and Chapter 8 (8.1-8.4) of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

3.1: Lecture 1 - Work and Kinetic Energy

The lesson is based on section 7.1-7.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

3.2: Lecture 2 - Potential Energy

The lesson is based on section 7.3-7.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.



3.3: Lecture 3 - Conservation of Energy

The lesson is based on section 7.5-7.6 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

3.4: Lecture 4 - Power

The lesson is based on section 7.7 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

3.5: Lecture 5 - Momentum and Impulse

The lesson is based on section 8.1-8.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

3.6: Lecture 6 - Conservation of Momentum

The lesson is based on section 8.3-8.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

4: Heat

Topic hierarchy

This lesson is based on Chapter 3 (13.1-13.3, & 13.5) and Chapter 14 (14.1-14.7) and Chapter 15 (15.1-15.3)of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

4.1: Lecture 1 - Temperature

The lesson is based on section 13.1-13.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

4.2: Lecture 2 - The Ideal Gas Law

The lesson is based on section 13.3 & 13.5 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

4.3: Lecture 3 - Heat Capacity

The lesson is based on section 14.1-14.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

4.4: Lecture 4 - Latent Heat

The lesson is based on section 14.3 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

4.5: Lecture 5 - Heat Transfer

The lesson is based on section 14.4-14.7 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

4.6: Lecture 6 - Thermodynamics

The lesson is based on section 15.1-15.3 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

5: Oscillations and Waves

Topic hierarchy

This lesson is based on Chapter 16 (16.1-16.4 & 16.8-16.10) and Chapter 17 (17.1-17.4) of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

5.1: Lecture 1 - Oscillations

The lesson is based on section 16.1-16.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

5.2: Lecture 2 - Simple Harmonic Motion

The lesson is based on section 16.3-16.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

5.3: Lecture 3 - Waves

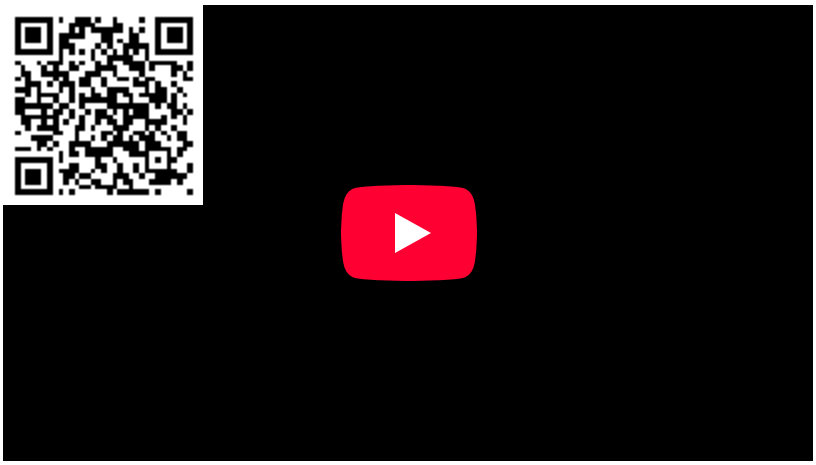
The lesson is based on section 16.8-16.10 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and PDF format.

5.4: Lecture 4 - Sound

The lesson is based on section 17.1-17.3 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

5.5: Lecture 5 - Doppler Effect

The lesson is based on section 17.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.



CHAPTER OVERVIEW

6: Electricity and Magnetism

Topic hierarchy

This lesson is based on Chapter 18 (18.1-18.3) and Chapter 19 (19.1) and Chapter 20 (20.1-20.4) and Chapter 21 (21.1 & 21.3) and Chapter 22 (22.1-22.3) of the OpenStax College Physics textbook.

6.1: Lecture 1 - Electric Fields and Coulomb's Law

The lesson is based on section 18.1-18.3 & 19.1 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf formats.

6.2: Lecture 2 - Electric Current and Ohm's Law

The lesson is based on section 20.1-20.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

6.3: Lecture 3 - Resistance and Electric Power

The lesson is based on section 20.3-20.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

6.4: Lecture 4 - Electric Circuits

The lesson is based on section 21.1 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

6.5: Lecture 5 - Kirchhoff's Rules

The lesson is based on section 21.3 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

6.6: Lecture 6 - Magnetism

The lesson is based on section 22.1-22.3 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

7: Electromagnetic Radiation

Topic hierarchy

This lesson is based on Chapter 24 (24.1-24.4) and Chapter 25 (25.1-25.6) and Chapter 26 (26.1-26.2 & 26.4-26.6) of the OpenStax College Physics textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

7.1: Lecture 1 - Electromagnetic Waves

The lesson is based on section 24.1-24.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

7.2: Lecture 2 - Electromagnetic Spectrum

The lesson is based on section 24.3-24.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

7.3: Lecture 3 - Optics- Reflection and Refraction

The lesson is based on section 25.1-25.4 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

7.4: Lecture 4 - Image Formation- Lenses

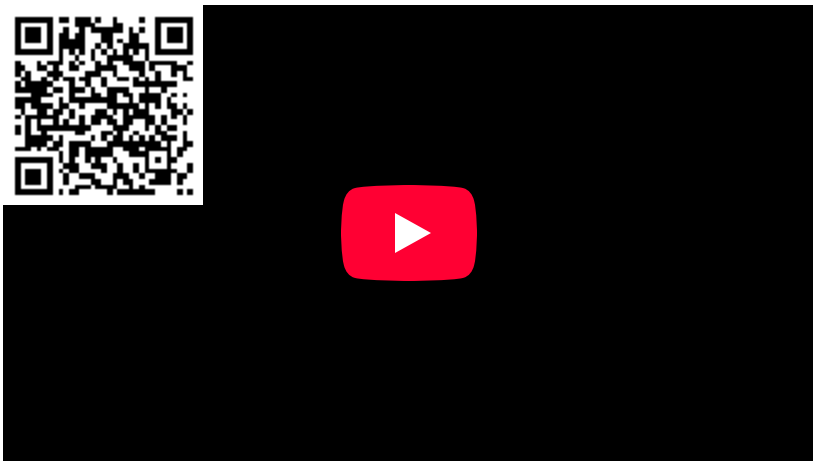
The lesson is based on section 25.5 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

7.5: Image Formation- Mirrors

The lesson is based on section 25.6 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

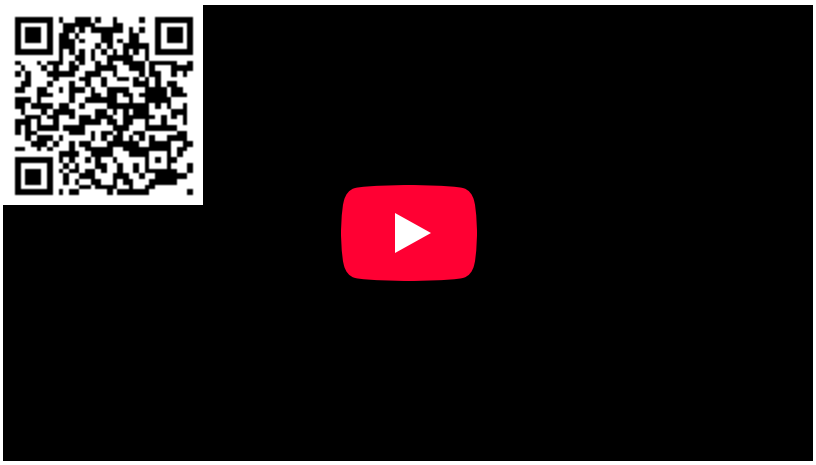
7.6: Lecture 6 - Vision

The lesson is based on section 26.1-26.2 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.



7.7: Lesson 7 - Microscopes and Telescopes

The lesson is based on section 26.4-26.6 in the OpenStax College Physics textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.



CHAPTER OVERVIEW

8: Midterm Exam

Topic hierarchy

This lesson is a placeholder for the midterm exam to keep the numbering correct.

8.1: Lecture 1 - Midterm Exam

This lesson is a placeholder for the midterm exam. This will keep the numbering correct. The lecture slides are available in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

9: Atoms and Periodic Properties

Topic hierarchy

This lesson is based on Chapter 2 of the OpenStax Chemistry textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

9.1: Lecture 1 - Atomic Theory

The lesson is based on section 2.1-2.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

9.2: Lecture 2 - Atomic Structure and Chemical Formulae

The lesson is based on section 2.3-2.4 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

9.3: Lecture 3 - The Periodic Table

The lesson is based on section 2.5 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

9.4: Lecture 4 - Compounds and Nomenclature

The lesson is based on section 2.6-2.7 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

10: Molarity and Chemical Equations

Topic hierarchy

This lesson is based on Chapter 3 (3.1-3.3) and Chapter 4 (4.1-4.2) of the OpenStax Chemistry 2e textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

10.1: Lecture 1 - Formula Mass and the Mole Concept

The lesson is based on section 3.1-3.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

10.2: Lecture 2 - Molarity

The lesson is based on section 3.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

10.3: Lecture 3 - Balancing Chemical Equations

The lesson is based on section 4.1 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

10.4: Lecture 4 - Classifying Chemical Reactions

The lesson is based on section 4.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

11: Models and Bonding

Topic hierarchy

This lesson is based on Chapter 6 (6.1-6.4) and Chapter 7 (7.1-7.3) of the OpenStax Chemistry 2e textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

11.1: Lecture 1 - Quantizations and the Bohr Model

The lesson is based on section 6.1-6.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

11.2: Lecture 2 - Quantum Theory

The lesson is based on section 6.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

11.3: Lecture 3 - Electron Configurations

The lesson is based on section 6.4 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

11.4: Lecture 4 - Ionic and Covalent Bonding

The lesson is based on section 7.1-7.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

11.5: Lecture 5 - Lewis Symbols

The lesson is based on section 7.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

12: Water and Solutions

Topic hierarchy

This lesson is based on Chapter 11 (11.1-11.3) and Chapter 14 (14.1-14.3) of the OpenStax Chemistry 2e textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

12.1: Lecture 1 - Solutions

The lesson is based on section 11.1-11.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

12.2: Lecture 2 - Solubility

The lesson is based on section 11.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

12.3: Lecture 3 - Acids and Bases, pH

The lesson is based on section 14.1-14.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

12.4: Lecture 4 - Strengths of Acids and Bases

The lesson is based on section 14.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

13: Organic Compounds

Topic hierarchy

This lesson is based on Chapter 20 of the OpenStax Chemistry 2e textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

13.1: Lecture 1 - Hydrocarbons

The lesson is based on section 20.1 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

13.2: Lecture 2 - Alcohols and Ethers

The lesson is based on section 20.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

13.3: Lecture 3 - Aldehydes, Ketones, Carboxylic Acids, and Esthers

The lesson is based on section 20.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

13.4: Lecture 4 - Amines and Amides

The lesson is based on section 20.4 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

CHAPTER OVERVIEW

14: Nuclear Reactions

Topic hierarchy

This lesson is based on Chapter 21 (21.1-21.4) of the OpenStax Chemistry 2e textbook. Each section of the chapter will include my lecture slides as well as an embedded link to my YouTube video for that lecture.

14.1: Lecture 1 - Nuclear Structure

The lesson is based on section 21.1 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

14.2: Lecture 2 - Nuclear Equations

The lesson is based on section 21.2 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

14.3: Lecture 3 - Radioactive Decay

The lesson is based on section 21.3 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

14.4: Lecture 4 - Nuclear Energy

The lesson is based on section 21.4 in the OpenStax Chemistry 2e textbook. The lecture slides are provided in PowerPoint, Keynote, and pdf format.

Chapter 15 - Question Test Banks

Test Banks in csv Format

This section contains the test banks in csv format. There is no test bank for Lesson 8 as that lesson is reserved for the midterm exam.

- Lesson 1.csv
- Lesson 2.csv
- Lesson 3.csv
- Lesson 4.csv
- Lesson 5.csv
- Lesson 6.csv
- Lesson 7.csv

No test bank for Lesson 8.

- Lesson 9.csv
- Lesson 10.csv
- Lesson 11.csv
- Lesson 12.csv
- Lesson 13.csv
- Lesson 14.csv

Test Banks in Pages Format

This section contains the test banks in Apple Pages format. There is no test bank for Lesson 8 as that is reserved for the midterm exam.

- Lesson 1 Questions.pages
- Lesson 2 Questions.pages
- Lesson 3 Questions.pages
- Lesson 4 Questions.pages
- Lesson 5 Questions.pages
- Lesson 6 Questions.pages
- Lesson 7 Questions.pages

No test bank for Lesson 8.

- Lesson 9 Questions.pages
- Lesson 10 Questions.pages
- Lesson 11 Questions.pages
- Lesson 12 Questions.pages
- Lesson 13 Questions.pages
- Lesson 14 Questions.pages

Test Banks in Word Format

This section contains the test banks in Word format. There is no test bank for Lesson 8 as that is my midterm exam and has no new content.

- Lesson 1 Questions.docx
- Lesson 2 Questions.docx
- Lesson 3 Questions.docx
- Lesson 4 Questions.docx
- Lesson 5 Questions.docx
- Lesson 6 Questions.docx
- Lesson 7 Questions.docx

No Questions for Lesson 8

- Lesson 9 Questions.docx
- Lesson 10 Questions.docx
- Lesson 11 Questions.docx
- Lesson 12 Questions.docx
- Lesson 13 Questions.docx
- Lesson 14 Questions.docx

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Glossary

Sample Word 1 | Sample Definition 1

Detailed Licensing

Overview

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Webpages: 92

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By Page