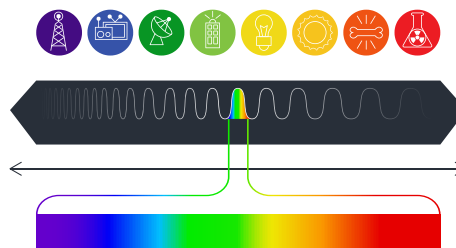
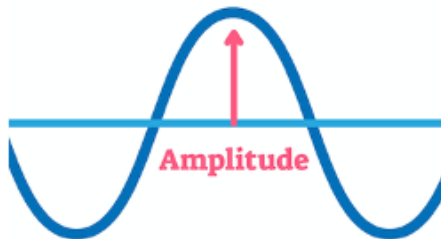


MS-PS4 California Grade 8 Science

- Full Standard

Preferred Integrated Model

- ✓ Waves and their Applications in Technologies for Information Transfer
- ✓ Complete Standard for California 8th Grade Preferred Integrated Science Instruction Model
- ✓ Save you over 75%



UPGRADE to the Bundle

California Grade 8 Science Full Year Science Curriculum

Preferred Integrated Model

- ✓ Complete Curriculum for California 8th Grade Preferred Integrated Science Instruction Model
- ✓ Over 150 Resources Included, Grouped into Standard and Presented in the Preferred Order According to the California Department of Education
- ✓ Save you over 75%



Everything You Need to Teach 8th
Grade Science in California using the
Preferred Model

- Lesson Bundles
- Lessons in PowerPoint and Google
- Homework and/or Worksheets Provided for Many Lessons
- Teacher and Student Versions of Each Lesson
- Many Activities, Projects, Review Activities, STEM Challenges



NGSS Included

- MS-LS3 Heredity: Inheritance and Variation of Traits
- MS-LS4 Biological Evolution: Unity and Diversity
- MS-ESS1 Earth's Place in the Universe
- MS-ESS3 Earth and Human Activity
- MS-PS2 Motion and Stability: Forces and Interactions
- MS-PS3 Energy
- MS-PS4 Waves and their Applications in Technologies for Information Transfer
- MS-ETS1 Engineering Design



CLICK HERE



Save 75% and get the FULL
Year Curriculum

Resources Included

MS-PS4-1

- Waves An Introduction – Lesson
- Experimenting with Waves – Activity
- Crash Course Traveling Waves - Video Worksheet
- Crash Course Sound - Video Worksheet
- Earthquakes - Reading

MS-PS4-2

- Light – Lesson
- Lasers, Absorption and Transmission – Lesson
- Why is the Sky Blue - Reading
- Crash Course Light - Video Worksheet
- Light and Optics Word Search and Scramble
- Bill Nye Light and Color - Video Worksheet

MS-PS4-2

- Digital vs Analog Signals for Communication – Lesson
- How Waves Are Used for Communication - Reading

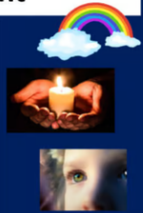
Crash Course Physics #18 Sound

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included



Light

- Overview of light
- Properties of light
- Luminous and non-luminous objects
- History of light
- The electromagnetic spectrum
- Prisms
- Colour & Colour Blindness



This digital presentation includes both Google and Office resources and is **Google Classroom Ready**

Why is the Sky Blue? An application of light waves Scientific Reading Comprehension Article



Improve your students **Scientific Literacy** and **Analysis Skills**, use as an **Emergency Substitute Plan** or create **Applicability** in your classroom

Digital vs Analog Signals for Communication 6th, 7th, 8th Grade Lesson

- ✓ Comprehensive Content Overview – Covers what a signal is and how digital and analog signals are different. It also talks about how signals are transmitted as well as which signal is preferred.
- ✓ Student-Friendly Format – Clear visuals and comparisons support understanding of complex concepts.



Everything You Need to Teach 8th Grade Science in California using the Preferred Model for MS-PS4

Complete Lessons

Waves Introduction

- What Waves Are
- Types of Waves
- Transverse vs. Longitudinal Waves
- Frequency, Hertz, Period
- Amplitude
- Crests, Troughs, and Wavelength
- Universal Wave Equation

$f = \frac{1}{T}$ $T = \frac{1}{f}$ $v = f\lambda$

TWF

This digital presentation includes both Google and Office resources and is Google Classroom Ready

Light

- Overview of light
- Properties of light
- Luminous and non-luminous objects
- History of light
- The electromagnetic spectrum
- Prisms
- Colour & Colour Blindness

TWF

This digital presentation includes both Google and Office resources and is Google Classroom Ready

Absorption, Reflection and Transmission of Light

- Light Rays
- Geometric Optics
- Reflection
- Transmission and Refraction
- Absorption
- Categories of light
- Lasers

TWF

This digital presentation includes both Google and Office resources and is Google Classroom Ready

Digital vs Analog Signals for Communication

6th, 7th, 8th Grade Lesson

- ✓ Comprehensive Content Overview – Covers what a signal is and how digital and analog signals are different. It also talks about how signals are transmitted as well as which signal is preferred.
- ✓ Student-Friendly Format – Clear visuals and comparisons support understanding of complex concepts.

TWF

Reading Comprehension Passage & Questions

Earthquakes

6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions

TWF

Why is the Sky Blue? An application of light waves

Scientific Reading Comprehension Article

Improve your students Scientific Literacy and Analysis Skills, use as an Emergency Substitute Plan or create Applicability in your classroom

TWF

Crash Course Physics #17

Traveling Waves

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

TWF

Activities

Light and Waves Word Search and Scramble

THREE Activities in One!

1. Basic 25-Term Word Search
2. Scrambled Words Word Search
3. Word Scramble and Define Activity

TWF

Crash Course Physics #18

Sound

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

TWF

Crash Course Astronomy #24

Light

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

TWF

Reading Comprehension Passage & Questions

How Waves Are Used for Communication

- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions

TWF

8th Grade and Up Science

Experimenting with Waves

You will be submitting this package to make sure you are being seen.

Part 1: Relationship Between Speed and Amplitude

Procedure: You will be using springs to make 3 different waves. Follow the procedure provided, making sure to record all relevant data.

Materials: Spring, string, meter stick, rubber band

Part 2: Relationship Between Speed and Frequency

Procedure: You will be using springs to make 3 different waves. Follow the procedure provided, making sure to record all relevant data.

Materials: Spring, string, meter stick, rubber band

Wave	Frequency (Hz)	Speed (m/s)	Distance (m)
1			
2			
3			

Analysis: Calculate the speed for each wave, and compare your three values.

Conclusion:

The Standard is Explained and the Resources it Incorporates are Outlined

California Preferred Integrated NGSS Course Model – Grade 8

MS PS4 Waves and their Applications in Technologies for Information Transfer

Note: There are resources that overlap between the standards. Simply choose the order that best fits your classroom. Also, there are more resources here than you will most likely decide to use. I have provided extra so you can make the best decision for your students on what is best to include.

MS PS4-1: Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.

Emphasis is on describing waves with both qualitative and quantitative thinking. *Assessment Boundary:* Assessment does not include electromagnetic waves and is limited to standard repeating waves.

- Waves An Introduction – Lesson
- Experimenting with Waves – Activity
- Crash Course Traveling Waves - Video Worksheet
- Crash Course Sound - Video Worksheet
- Earthquakes - Reading

MS PS4-2: Develop a model to describe that waves are reflected, absorbed, or transmitted through various materials.

Emphasis is on both light and mechanical waves. Examples of models could include drawings, simulations, and written descriptions. *Assessment Boundary:* Assessment is limited to qualitative applications pertaining to light and mechanical waves.

Resources:

- Light – Lesson
- Lasers, Absorption and Transmission – Lesson
- Why is the Sky Blue - Reading
- Crash Course Light - Video Worksheet
- Light and Optics Word Search and Scramble
- Bill Nye Light and Color - Video Worksheet

MS PS4-3: Integrate qualitative scientific and technical information to support the claim that digitized signals are a more reliable way to encode and transmit information than analog signals.

Emphasis is on a basic understanding that waves can be used for communication purposes. Examples could include using fiber optic cable to transmit light pulses, radio wave pulses in wifi devices, and conversion of stored binary patterns to make sound or text on a computer screen. *Assessment Boundary:* Assessment does not include binary counting. Assessment does not include the specific mechanism of any given device.

Resources:

- Digital vs Analog Signals for Communication – Lesson
- How Waves Are Used for Communication - Reading

Who is this Bundle for?

- **Teachers who teach grade 8 science in California and who use the ‘Preferred Integrated Model’**
- **Teachers who want a variety of resources at their fingertips in order to meet the standards**
- **Teachers who don’t have time to develop their own resources or organize what to teach and when**