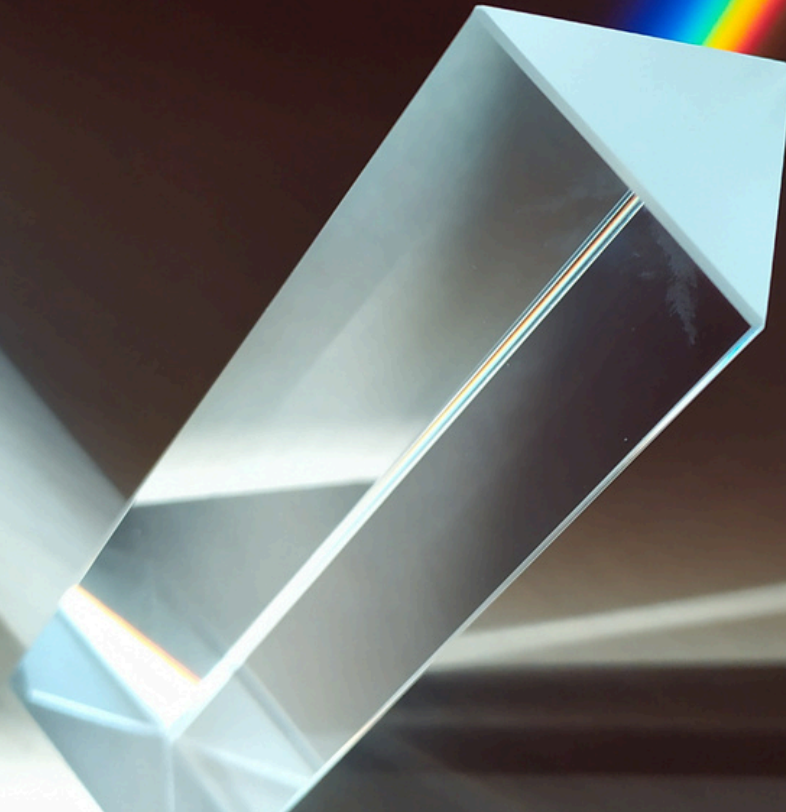


Optics Unit - The Behavior of Light Unit Bundle

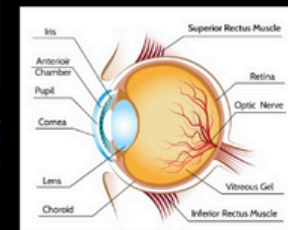
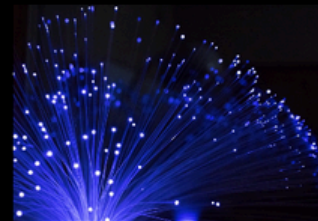
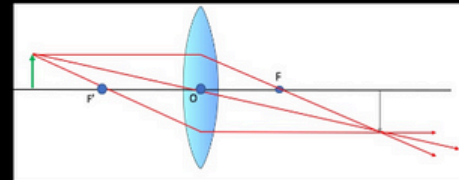
- ✓ Complete Unit with a Daily Teaching Schedule
- ✓ 9 Lessons, 12 Activities, 3 Projects, 1 Quiz, 1 Unit Test
- ✓ Google & Print Ready



Optics – The Behaviour of Light

- 5 weeks of teaching material
- 11 Presentations
- Activities and Projects

- 1) Light
- 2) Lasers, Absorption and Transmission
- 3) The Production of Light
- 4) Ray Diagrams, Reflections and Plane Mirrors
- 5) Reflection in Curved Mirrors
- 6) Refraction and Optical Devices
- 7) Snell's Law and the Index of Refraction
- 8) Lenses and Focal Point
- 9) Lenses - Ray Diagrams
- 10) Thin Lens Equation and Magnification
- 11) The Eye



PLUS Full Unit Teaching Timeline so you know what to teach and when and video lessons if you want.

Complete Teaching Schedule

Optics Unit - Daily Teaching Schedule

This teaching schedule is created in a way that lets your students watch the lesson at home before coming to class so that you can spend more time doing activities, etc. Clicking the hyperlink will take you to the video lesson. It can also be altered so that you teach the lessons using the included presentations. The worksheets can be found inside the lesson folder unless otherwise stated.

Day 1:

- Prism Activity
 - Students shine a ray of light through a prism to observe the splitting of white light into a rainbow.
- Day 1 - Pinhole Camera - Located in Bonus folder
- HW:
 - Watch - [Lesson 1 - Light](#)
 - Complete Student Notes

Day 2:

- Review - Lesson 1 - Light
- Day 2 - Pinhole Camera
- HW
 - Watch - [Lesson 2 - Lasers, Absorption, and Transmission](#)
 - Complete Student Notes

Day 3:

- Review - Lesson 2 - Lasers, Absorption, and Transmission
- Teacher laser demonstration reiterate ideas about lasers from PP compared with light from a ray box
 - Use a flashlight to show light rays in all directions ($1/4\text{m}^2$) and Laser
- Laser Maze
 - Make teams - each team must point their laser from one of the room to the other to hit a target. To reach the target, the laser light must reflect off each participant's mirror while one group member holds the laser.
- Day 2 - Pinhole Camera - Planning and Drawings
- HW:
 - Watch - [Lesson 3 - The Production of Light](#)
 - Complete Student Notes

Day 4:

- Review - Lesson 3 - The Production of Light
- Lab Station Activity - Light Optics and its Production
- HW:
 - Watch - [Lesson 4 - Ray Diagrams, Reflection and Plane Mirrors](#)
 - Complete Student Notes

Day 5:

- Review Lesson 4 - Ray Diagrams, Reflection, and Plane Mirrors
- Day 2 - Pinhole Camera - Planning and Drawings

Day 6:

- Teach - Lesson 5 - Reflection in Curved Mirrors
 - Students Complete Notes
- Day 3 - Pinhole Camera - using the camera

Day 7:

- Quiz Lesson 1-5, NEXT DAY
- Day 4 - Pinhole Camera ($1/2$ day)
- Mirrors Ray Diagram Practice - Walkthrough video included

Day 8:

- Quiz Lesson 1-5
- Day 4 - Pinhole Camera ($1/2$ day)
- Mirrors Ray Diagram Practice - Walkthrough video included
 - Review diagrams on board
- Curved Mirrors Practice Problems

Day 9:

- Complete your pinhole camera project - due next day
 - Upload your completed project to the submission box
- HW:
 - Watch - [Lesson 6 - Refraction](#)
 - Complete Student Notes

Day 10:

- Review - Lesson 6 - Refraction
- Refraction Demonstrations
 - Empty vs beaker with water
 - Water beaker with pencil
 - Single rays shining through prism to see refraction of light

Day 11:

- Teach Lesson 7 - Snell's Law
 - Video - [Lesson 7 - Snell's Law](#)
- Snell's Law Worksheet

Day 12:

- Completion / Review Day
- Take up Snell's Law Worksheet
- Finish Pinhole Camera
 - Parts 1, 2, and 3 all need to be submitted
- Index of Refraction and Snell's Law

Day 13:

- Teach - Lesson 8 - Lenses and Focal Point
- Bill Nye - Optics - Located in Lesson 9 folder
- HW:
 - Watch - [Lesson 9 - Lenses - Ray Diagrams](#)
 - Complete Student Notes

Day 14:

- Review - Lesson 9 - Lenses - Ray Diagrams
- Ray Diagram Lenses Worksheet
- HW:
 - Watch - [Lesson 10 - Thin Lens Equation and Magnification](#)
 - Complete Student Notes

Day 15:

- Review - Lesson 10 - Thin Lens Equation and Magnification
- Thin Lens and Magnification Worksheet

Day 16:

- Teach - Lesson 11 - The Eye
- Start reviewing for Optics test

Day 17:

- Optics Test Review Day

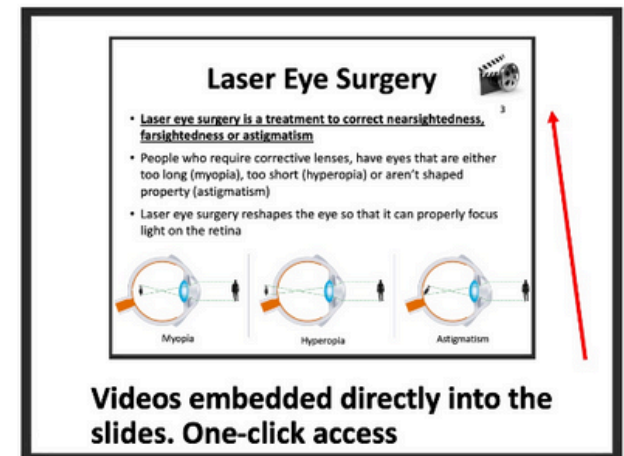
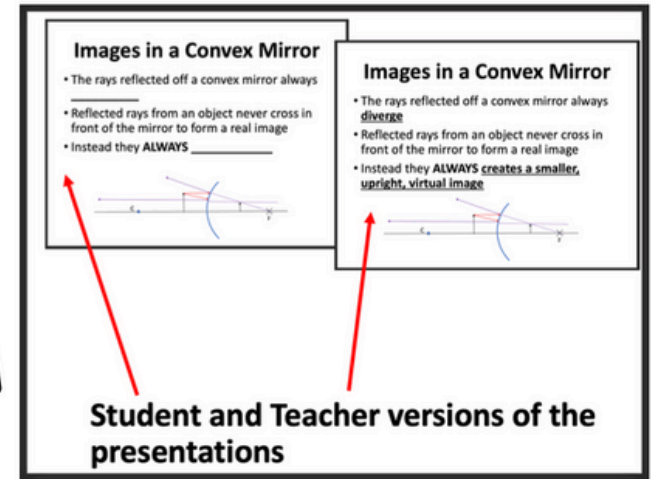
Day 18:

- Optics Test

What You Get

Inside the Unit

- 5 weeks of teaching material
- 11 lessons
- Office and Google versions of EACH lesson
- Teacher and student versions for each lesson
- Many videos and simulations embedded into the slides
- Student notes in word



What You Get

Also inside the Unit

- 2 Lab Station Activities
- 1 Digital Scavenger Hunt
- 1 Test and 4 Quizzes
- Digital Interactive Notebook
- Speed Quizzing Activities
- Optical Phenomena Reading

Speed Quizzing

What is the name for light emitted from a source that strikes an object?
Incident light

What kind of wave is light?
Electromagnetic wave

A fast-moving review activity where students quiz each other, swap cards, then move on to someone new.

Optics Unit

Device-Based Scavenger Hunt Refraction

Includes

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- 100% Digital
- Simulations
- Quizzes
- Videos
- Games
- Word Scramble

Optics Digital Interactive Notebook

Chapter 1 – Light
Chapter 2 – Absorption, Reflection, and Transmission
Chapter 3 – The Production of Light
Chapter 4 – Ray Diagrams, Reflections, and Plane Mirrors
Chapter 5 – Reflection in Curved Mirrors

100% Digital and Interactive

Light Optics and The Production of Light Lab Station Activity

7 Lab Station Activities to get your kids out of their seats

Refraction Lab Station Activity

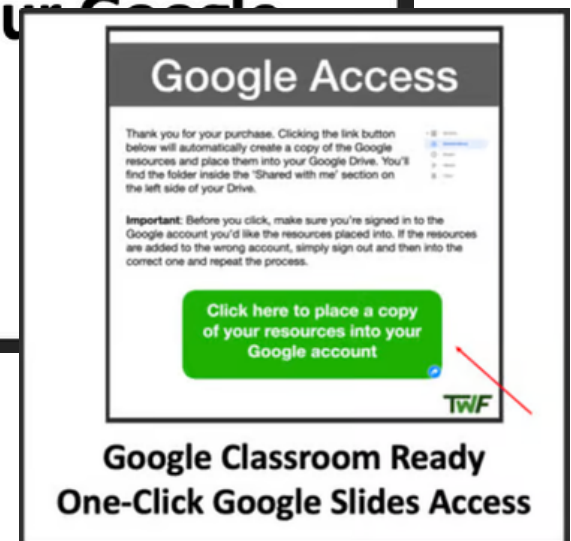
7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Optical Phenomena Scientific Reading Comprehension Article and Extension Activity

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

Office and Google Versions

- This unit includes both Office and Google formats for ALL resources
- The lessons are in PowerPoint and Google Slides format while all documents contain Word and Google Doc versions
- Your resource is perfect for distance learning and integrates seamlessly with Google Classroom as I've included a link that will automatically create a copy of the resources and put them directly into your Google Drive with one click



**Google Classroom Ready
One-Click Google Slides Access**