

Space Science Unit

- Covers: Our Solar System, Stars, Galaxies, the Moon, and Space Exploration
- Lesson & Engaging Activities
- Daily Teaching Schedule



Space Science Unit

Unit - Earth Science

- 7 Lessons & 17 Activities

Space and our Solar System

- The Hugeness of Space
- Distances in Space
- Astronomical Units and Light Years
- The vast number of stars
- Voyager 1
- Space travel
- Our Solar System
- The Sun, the Inner Planets, and the Outer Planets
- Why Pluto was demoted?
- Observing Stars and Planets
- The Moon

Stars and Galaxies

- A Star's beginning
- Fusion
- Low-Mass and Intermediate-Mass Stars
- Red Giants
- High-Mass Stars
- Supernovas and Black Holes
- HR Diagram
- Main Sequence Stars
- Types of Galaxies
- Asteroids, Meteors, Meteoroids, Meteorites, and Comets
- The expansion of the Universe

Space Science Unit

Life in Space and Space Exploration

- Human space history
- The International Space Station
- Obtaining O₂ and removing CO₂
- Eating in space
- Sleeping in space
- Showering and using the bathroom in space
- Experiments in space
- Getting sick in space
- The negative effects of microgravity
- Long-term solutions to life in space
- What is Space Exploration and why is it important?
- Early Space Exploration Technologies
- Telescopes – Earth-bound, Hubble, and Webb

- Spacecrafts - shuttles, rovers, and space stations
- Satellites - their 6 main functions
- How Space Technology Helps Us Understand Space
- Space Technology on Earth
- The Future of Space Exploration

The Moon

- Moon Stats
- What if we had no Moon?
- The orbit and rotation of the Moon
- The Dark Side of the Moon
- The Phases of the Moon
- The Tides
- The Moon Illusion



Lessons Include Teacher and Student Versions - Videos Embedded in Lessons

Space

- What the Universe is
- Measuring Distance in Space
- Astronomical Unit and Light Years
- The Number of Stars
- Voyager 1 and 2
- Space Exploration

Google Slides and PowerPoint Versions Included
Google Classroom Ready

Our Solar System

- The Sun
- Mercury
- Venus
- Earth
- Mars
- Jupiter and its Great Red Spot
- Saturn
- Uranus
- Neptune
- Why Pluto Was Demoted

Google Slides and PowerPoint Versions Included
Google Classroom Ready

Space Exploration Technologies

- What is Space Exploration and why is it important?
- Early Space Exploration Technologies
- Telescopes – Earth-bound, Hubble, and Webb
- Spacecrafts - shuttles, rovers, and space stations
- Satellites
- How Space Technology Helps Us Understand Space
- Space Technology on Earth
- The Future of Space Exploration

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Google Classroom Ready One-Click Google Slides Access

Galaxies, Other Objects, and the Expansion of the Universe

- Types of Galaxies
- Asteroids
- Meteors, Meteoroids, and Meteorites
- Comets
- The expansion of the Universe

Google Slides and PowerPoint Versions Included
Google Classroom Ready

The Life and Death of Stars

- Protostars
- Fusion
- Low-Mass Stars
- Intermediate Mass Stars
- Life Cycle Of Our Sun
- High-Mass Stars
- Neutron Stars
- Black Holes
- H-R Diagrams

Google Slides and PowerPoint Versions Included
Google Classroom Ready

Phases of the Moon

• A common misconception is that the phases of the Moon are caused by the shadow of the Earth

• Instead, the phases of the Moon are the result of changing viewing angles throughout the month

Videos are embedded directly into the slides. One-click access.

The Moon

- Moon Facts
- Movement of the Moon
- Moon Formation
- Phases of the Moon
- Tides
- What if the Moon Disappeared?
- Misconception – Dark Side of the Moon
- The Moon Illusion

Google Slides and PowerPoint Versions Included
Google Classroom Ready

Life in Outer Space

How Humans Meet Their Needs in Space

- Human space history
- The ISS
- Obtaining O₂ and removing CO₂
- Eating in space
- Sleeping in space
- Showering and using the bathroom in space
- Experiments in space
- Getting sick in space
- The negative effects of microgravity
- Long-term solutions to life in space

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Space Exploration

- 77,000 years is a long time to journey in a spacecraft
- For space exploration to be possible outside of our solar system, we need a faster way to travel
- Research and test two faster means of space travel currently in development

Teacher and Student Versions of the presentation

Engaging Activities

Our Solar System Lab Station Activity



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

Our Solar System Crossword Puzzle

- 15 - Term Crossword
- Includes 2 Versions
 - Version 1 - No Word Bank
 - Version 2 - Includes a Word Bank



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Device-Based Scavenger Hunt
The International Space Station



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



Device-Based Scavenger Hunt
Our Solar System

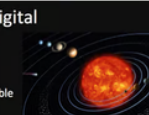


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- Word Scramble
- and more



Weather and Climate 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



Case Study - Voyager 1 and Voyager 2 Spacecraft



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Device-Based Scavenger Hunt
Stars

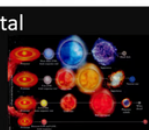


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The Moon and Its Phases Lab Station Activity



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

Our Solar System 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



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Planets
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

The Limitations of Space Travel
Scientific Reading Comprehension Article



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

Device-Based Scavenger Hunt
The Moon



Includes

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks and laptops

- 100% Digital
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- Word Scramble
- and more



Stars - The Element Factories
Scientific Reading Comprehension Article




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

The Life and Death of Stars Lab Station Activity



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

Stars, Galaxies, and the Universe Word Search and Scramble

THREE Activities in One! **TWF**

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



Case Study - The Importance of the Moon



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Life in Space Lab Station Activity



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

Scale Model Solar System Activity



- THREE VERSIONS - Great for any grade level
- Metric and Imperial measurements included

Daily Teaching Schedule

UNIT Space 25-26 DAYS TOTAL

Space and our Solar System – 8 days			
Number of Day(s)	Course Content	Teaching Resources	NGSS
1	- The hugeness of Space - Distances in Space - Astronomical Units - Light Years - The vast number of stars - Space facts - Voyager 1 - Space travel	Space Lesson: An Introduction - Lesson	HS-ESS1-1 HS-ESS1-2 HS-ESS1-4 HS-PS2-4
2-3	- Our Solar System - The Sun - The Inner Planets - The Outer Planets - Why was Pluto demoted? - Observing Stars and Planets - The Moon	Our Solar System - Lesson Also Includes: - Science Newsletter Assignment - Bill Nye Video worksheet	
1	Hands-on review activity	Our Solar System - Lab Station Activity	
1	Hands-on review activity	Our Solar System - Digital Scavenger Hunt Activity	
1	Review activity	Planets - Reading Article	
1	Review activity	Model Solar System Activity - Assessment	
1	Review activity	Our Solar System Word Search and Scramble Activity or Our Solar System Crossword Puzzle Activity	
Assessments	There are multiple assessments included throughout this unit portion.		

Stars and Galaxies – 6-7 days

Number of Day(s)	Course Content	Teaching Resources	NGSS
1	- A Star's beginning - Fusion - Low-Mass Stars - Intermediate-Mass Stars - Red Giants - High-Mass Stars - Supernovas - Black Holes - HR Diagram - Main Sequence Stars	The Life and Death of Stars - Lesson	HS-ESS1-1 HS-ESS1-2 HS-ESS1-3 HS-PS1-8 HS-PS3-3
1	Hands-on review activity	The Life and Death of Stars - Lab Station Activity	
1	Hands-on review activity	Stars – A Device-Based Scavenger Hunt Activity	
1	Review activity	Stars - The Element Factories of the Universe - Science Reading Article	
1-2	- Types of Galaxies - Asteroids - Meteors, Meteoroids, and Meteorites - Comets - The expansion of the Universe	Galaxies, Other Objects and the Universe - Lesson	
1	Review activity	Stars, Galaxies, and the Universe Word Search and Scramble Activity	
Assessments	There are multiple assessments included throughout this unit portion.		

The Moon – 5 days

Number of Day(s)	Course Content	Teaching Resources	NGSS
2	- Moon Stats - What if we had no Moon? - The orbit of the Moon - Rotation of the Moon - The Dark Side of the Moon - The Phases of the Moon - The Tides - The Moon Illusion	The Moon - Lesson	HS-ESS1-4 HS-ESS1-5 HS-ESS2-4 HS-PS2-4
1	Hands-on review activity	The Moon and its Phases - Lab Station Activity	
1	Hands-on review activity	The Moon – Device-Based Scavenger Hunt Activity	
1	Review activity	Space Case Study: The Importance of the Moon	
Assessments	There are multiple assessments included throughout this unit portion.		

Life in Space and Space Exploration – 6 days

Number of Day(s)	Course Content	Teaching Resources	NGSS
1	- Human space history - The International Space Station - Obtaining O2 and removing CO2 - Eating in space - Sleeping in space - Showering and using the bathroom in space - Experiments in space - Getting sick in space - The negative effects of microgravity - Long-term solutions to life in space	Life in Outer Space - How Humans Meet Their Needs - Lesson	HS-ESS1-2 HS-ESS1-6 HS-ETS1-1 HS-ETS1-2 HS-ETS1-3
1	Hands-on review activity	Life In Space - Lab Station Activity	
1	Hands-on review activity	The International Space Station – Digital Scavenger Hunt Activity	
1	- What is Space Exploration and why is it important? - Early Space Exploration Technologies - Telescopes – Earth-bound, Hubble, and Webb - Spacecrafts - shuttles, rovers, and space stations - Satellites - their 6 main functions - How Space Technology Helps Us Understand Space - Space Technology on Earth - The Future of Space Exploration	Space Exploration Technologies - Space Science Lesson	
1	Review activity	The Limitations of Space Travel - A Science Reading Article	
1	Review activity	Space Case Study: Voyager 1 and Voyager 2 Spacecraft	
Assessments	There are multiple assessments included throughout this unit portion.		
	UNIT TEST		

Who's It For?

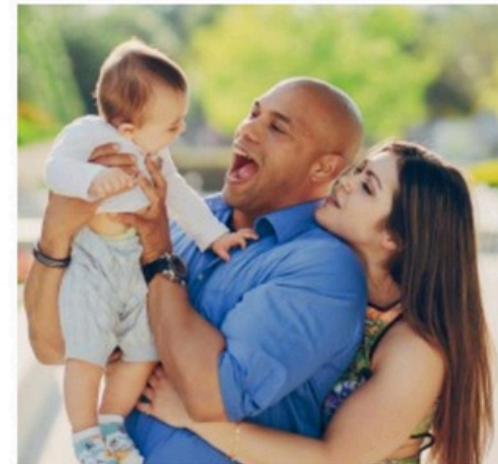
- **High School Physical Science Teachers**
- **Teachers using NGSS**
- **Teachers who want to increase their student's engagement and retention**
- **Teachers not looking to reinvent the wheel**

Save yourself the **STRESS AND TIME**



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Spend your time WISELY



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