

QUEST NAME	SUBJECTS LEARNED	SKILLS LEARNED	TYPES OF OBJECTS CAPTURED	OPENSTAX ASTRONOMY ALIGNMENT	K-12 CURRICULUM CODES (NGSS, COMMON CORE MATH, K12 COMPUTER SCIENCE)
The Moon - Lunar Features	Lunar Surface Features	Data Collection, Pattern Recognition, Critical Thinking, Digital Citizenship	The Moon	Chapter 9: Cratered Worlds	
The Life & Death of Stars	Stellar Evolution	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Mathematics	Emission Nebulae, Stars, Planetary Nebulae, and Supernova Remnants	Chapter 23: The Death of Stars	CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, 5.G.A.2, 5.NBT.A.2, 6.EE.A.2, 6.EE.B.6
Stars Like Ours (NGSS)	Stellar Evolution	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Mathematics	Emission Nebulae, Stars, and Planetary Nebulae	Chapter 22: Stars from Adolescence to Old Age	NGSS: HS ESS1-1
Out With a Bang (NGSS)	Stellar Evolution	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Mathematics	Emission Nebulae, Stars, and Supernova Remnants	Chapter 23: The Death of Stars	NGSS: HS ESS1-1 CCM: MP.2, MP.4, HSN-Q.A.1, HSN-Q.A.2, HSA-SSE.A.1, HSA-CED.A.2, HSA-CED.A.4, 5.NBT.A.2, 6.EE.A.2, 6.EE.B.6, 6.RP.A.1
There Goes the Sun (NGSS)	Stellar Evolution	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Mathematics	The Sun, Emission Nebulae, Stars, Planetary Nebulae, and Supernova Remnants	Chapter 23: The Death of Stars	NGSS: HS ESS1-1 CCM: MP.2, MP.4, HSN-Q.A.1, HSN-Q.A.2, HSA-SSE.A.1, HSA-CED.A.4, 5.MD.A.1, 5.NBT.A.2, 6.EE.B.6, 6.RP.A.1
Exploring Star Clusters	Open & Globular Star Clusters	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Open Star Clusters and Globular Star Clusters	Chapter 22: Stars from Adolescence to Old Age	
Are We Alone?	The Drake Equation, Habitability of Planets, Exoplanets	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition, Mathematics	Spiral Galaxies and Stars	Chapter 30: Life in the Universe	CCM: MP.2, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-CED.A.2, HSA-CED.A.4, 1.MD.C.4, 5.NBT.A.2, 6.EE.B.6, 6.RP.A.1
Light: The Language of the Stars	Electromagnetic Radiation (Optical)	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Sun, The Moon, Stars, Star Clusters, Emission Nebulae, Dark Nebulae, Reflection Nebulae, Planetary Nebulae, Galaxies, Quasars, Supernova Remnants, and Planets	Chapter 5: Radiation and Spectra & Chapter 17: Analyzing Starlight	
Our Radiant Star (NGSS)	Solar Surface Features and Light Generation in the Core	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Sun	Chapter 15: The Sun: A Garden-Variety Star	NGSS: HS-PS3D.4, HS-PS4B.1, HS-PS4B.2
Our Rotating Star (NGSS)↔	Solar Surface Features and Differential Rotation	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition, Mathematics	The Sun	Chapter 15: The Sun: A Garden-Variety Star	NGSS: HS-PS3D.4, HS-PS4B.1, HS-PS4B.2 CCM: MP.2, MP.5, HSN-Q.A.1, HSN-Q.A.2
Earth's Place in the Cosmos↔	Gravity, the Dynamic Sky, Ecliptic Constellations, Midnight Culmination, Horizons	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition, Mathematics, Computer Science	The Sun, Emission Nebulae, Reflection Nebulae, and Dark Nebulae	Chapter 2: Observing the Sky: The Birth of Astronomy	NGSS: 5-ESS1-2 CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-CED.A.2, 1.MD.C.4, 5.G.A.2, 6.EE.A.2, 6.EE.B.6 K12CS: 3-5.Data and Analysis.Collection, 3-5.Data and Analysis.Visualization and Transformation, 3-5.Data and Analysis.Inference and Models, 3-5.Algorithms and Programming.Variables, 3-5.Algorithms and Programming.Control, 3-5.Algorithms and Programming.Modularity, 3-5.Algorithms and Programming.Program Development
The Solar System's Gravitat↔	Gravity, Orbital Diagrams, Orbital Period/Mass/Distance Relationships (without Kepler's Laws), Sum of the Forces	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition, Mathematics, Computer Science	The Sun and Stars	Chapter 3: Orbits and Gravity & Chapter 4: Earth, Moon, and Sky	NGSS: MS-ESS1-2, MS-PS2-2, MS-PS2-4 CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-CED.A.2, 1.MD.C.4, 5.G.A.2, 6.EE.A.2, 6.EE.B.6 K12CS: 6-8.Data and Analysis.Collection, 6-8.Data and Analysis.Visualization and Transformation, 6-8.Data and Analysis.Inference and Models, 6-8.Algorithms and Programming.Variables, 6-8.Algorithms and Programming.Control, 6-8.Algorithms and Programming.Modularity, 6-8.Algorithms and Programming.Program Development
Orrery Having Fun Yet?↔	Gravity, Orbital Diagrams, Orbital Period/Mass/Distance Relationships (with Kepler's Laws), Sum of the Forces	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition, Mathematics, Computer Science	The Sun, Jupiter, Saturn, Uranus, and Neptune	Chapter 3: Orbits and Gravity & Chapter 4: Earth, Moon, and Sky	NGSS: HS-ESS1-4 CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-CED.A.2, 1.MD.C.4, 5.G.A.2, 6.EE.A.2, 6.EE.B.6 K12CS: 9-12.Data and Analysis.Visualization and Transformation, 9-12.Data and Analysis.Inference and Models, 9-12.Algorithms and Programming.Variables, 9-12.Algorithms and Programming.Control, 9-12.Algorithms and Programming.Modularity
Charting the Cosmos (Oct-Dec)	Celestial Coordinates	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Open Star Clusters, Emission Nebulae, Planetary Nebulae, Galaxies	Chapter 2: Observing the Sky: The Birth of Astronomy & Chapter 4: Earth, Moon, and Sky	CCM: MP.4
Charting the Cosmos (Jan-Mar)	Celestial Coordinates	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Open Star Clusters, Globular Star Clusters, Emission Nebulae, Planetary Nebulae, Supernova Remnants, and Galaxies	Chapter 2: Observing the Sky: The Birth of Astronomy & Chapter 4: Earth, Moon, and Sky	CCM: MP.4
Mystery of the Island Universes	Hubble Tuning Fork	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition	Galaxies	Chapter 26: Galaxies	
Star Light, Star Bright (NGSS)	Distance/Magnitude Relationship	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Collaboration, Pattern Recognition	Stars	Chapter 2: Observing the Sky: The Birth of Astronomy	NGSS: 5-ESS1-1, ESS1.A, 5-ESS1A.1 CCM: MP.2, MP.4, MP.5, 5.G.A.2, 6.NS.C.5
Rulers of the Universe	Standard Rulers	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition, Mathematics	Globular Star Clusters	Chapter 6: Astronomical Instruments	CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, 5.MD.A.1, 6.EE.A.2, 7.EE.B.4
Can Anybody Hear Me?↔	The Drake Equation, Algebra, Units, Habitability Zone	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition, Mathematics	Star Fields and Galaxies	Chapter 30: Life in the Universe	CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-SSE.B.3, HSA-CED.A.2, 1.MD.C.4, 5.MD.A.1, 6.EE.A.2, 6.EE.B.6, 6.RP.A.1, 7.EE.B.4
Geometry of Jupiter↔	Geometry (spheres and ellipsoids), Differential Rotation, Distance/Physical Size Relationship	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition, Mathematics	Jupiter and The Sun	Chapter 11: The Giant Planets	CCM: MP.2, MP.4, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-SSE.B.3, HSA-CED.A.2, HSA-CED.A.4, 5.MD.A.1, 5.NBT.A.2, 6.EE.A.2, 6.EE.B.6, 7.EE.B.4
The Hunter	The Orion Nebula	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	The Orion Nebula, an Emission Nebula	Chapter 20: Between the Stars: Gas and Dust in Space	
Our Dynamic Star	Solar Surface Features	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Sun	Chapter 15: The Sun: A Garden-Variety Star	
Nifty Nebulae	Emission, Dark, Reflection, & Planetary Nebulae	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Emission Nebulae, Dark Nebulae, Reflection Nebulae, and Planetary Nebulae	Chapter 20: Between the Stars: Gas and Dust in Space	
Milky Way's Doppelganger	History of the Milky Way's Shape and Elliptical, Spiral, & Barred Spiral Galaxies	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Galaxies	Chapter 26: Galaxies	
Cosmic Explorer	Overview of the Sun, Moon, Red Supergiants, Planetary Nebulae, & Emission Nebulae, & Spiral Galaxies	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship	The Moon, The Sun, Galaxies, Planetary Nebulae, Stars, and Emission Nebulae		
How Big?	Physical Size	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition, Mathematics	The Sun, The Moon, Emission Nebulae, and Spiral Galaxies	Chapter 1: Science and the Universe: A Brief Tour	CCM: MP.2, MP.4, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, 5.MD.A.1, 5.NBT.A.2

How Far?	Distance & Unit Conversions	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition, Mathematics	The Sun, The Moon, Globular Star Clusters, and Galaxies	Chapter 1: Science and the Universe: A Brief Tour	CCM: MP.2, MP.4, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, 5.MD.A.1, 5.NBT.A.2
Solar System Explorer	The Solar System	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship	The Sun, The Moon, and Planets	Chapter 7: Other Worlds: An Introduction to the Solar System	
Milky Way Explorer	The Milky Way Galaxy	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Stars, Globular Star Clusters, Open Star Clusters, Emission Nebulae, Planetary Nebulae, Reflection Nebulae, and Dark Nebulae	Chapter 18: Stars: A Celestial Census, Chapter 20: Between the Stars: Gas and Dust in Space, and Chapter 25: The Milky Way Galaxy	
The Messier Challenge	Charles Messier and the Objects From His List	Data Collection Planning & Execution, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Emission Nebulae, Dark Nebulae, Reflection Nebulae, Planetary Nebulae, Open Star Clusters, Globular Star Clusters, and Galaxies		
Capture Four Giant Planets	Jupiter, Saturn, Uranus, and Neptune	Data Collection, Student-Centered Inquiry, Digital Citizenship	Jupiter, Saturn, Uranus, and Neptune	Chapter 11: The Giant Planets	
The Moon - Lunar Phases	Lunar Phases	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Moon	Chapter 4: Earth, Moon, and Sky	
Mystery of the Changing Moon (NGSS)	Lunar Phases	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Moon	Chapter 4: Earth, Moon, and Sky	NGSS: MS-ESS1-1
The Caldwell Challenge	Patrick Caldwell-Moore and the Objects From His Catalog	Data Collection Planning & Execution, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Emission Nebulae, Dark Nebulae, Reflection Nebulae, Planetary Nebulae, Open Star Clusters, Globular Star Clusters, and Galaxies		
Spring-Fall Celestial Gems	Celestial Objects from the Northern Hemisphere's Spring and Southern Hemisphere's Fall	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Emission Nebulae, Planetary Nebulae, Globular Star Clusters, Stars, and Galaxies	Chapter 2: Observing the Sky: The Birth of Astronomy	
Summer-Winter Celestial Gems	Celestial Objects from the Northern Hemisphere's Summer and Southern Hemisphere's Winter	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Emission Nebulae, Planetary Nebulae, Binary Stars, Open Star Clusters, Star Clouds, and Globular Star Clusters	Chapter 2: Observing the Sky: The Birth of Astronomy	
Winter-Summer Celestial Gems	Celestial Objects from the Northern Hemisphere's Winter and Southern Hemisphere's Summer	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Emission Nebulae, Reflection Nebulae, Open Star Clusters, and Galaxies	Chapter 2: Observing the Sky: The Birth of Astronomy	
In the Footsteps of Clyde Tombaugh	The Discovery of Pluto	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	Pluto	Chapter 12: Rings, Moons and Pluto	
In the Footsteps of Kepler - Planetary Motions	Geocentrism/Heliocentrism & Kepler's Laws	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition, Mathematics	Mars, Jupiter, Saturn, Uranus, and Neptune	Chapter 3: Orbits and Gravity	NGSS: HS-ESS1-4 CCM: MP.2, HSA-SSE.B.3, HSA-CED.A.2
In the Footsteps of Apollo Astronauts	The Apollo Lunar Landings	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	The Moon	Chapter 9: Cratered Worlds	
Ring-of-Fire Solar Eclipse 2020	Annular Solar Eclipse	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Sun	Chapter 4: Earth, Moon, and Sky	
The Opposition of Jupiter 2020	Jupiter's Opposition	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Jupiter	Chapter 3: Orbits and Gravity	
A Jovian Day	Jupiter's Differential Rotation	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Jupiter	Chapter 3: Orbits and Gravity	
The Opposition of Mars 2020	Mars' Opposition	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Mars	Chapter 3: Orbits and Gravity	
Howl at the Moon	Hunter Moon, Blue Moon, and Werewolves throughout History	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition	The Full Moon	Chapter 4: Earth, Moon, and Sky	
The Great Conjunction 2020	The Conjunction of Jupiter and Saturn	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	Jupiter and Saturn	Chapter 3: Orbits and Gravity	
Total Solar Eclipse 2020	Total Solar Eclipse	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Pattern Recognition	The Sun	Chapter 4: Earth, Moon, and Sky	
The Legend of Taurus	Historical Overview of Taurus and its Major Sites	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences	Hyades, an Open Star Cluster and Stars		
The Blinking Eye of the Gorgon	Eclipsing Binary Star Systems	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Pattern Recognition, Mathematics	Algol, a Star System	Chapter 18: Stars: A Celestial Census	CCM: MP.2, MP.5
Burnham's Labyrinth	Astronomy-Related Scavenger Hunt	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences	Hyades, an Open Star Cluster and Aldebaran, a Star	Chapter 4: Earth, Moon, and Sky	
The Midnight Culmination of the Pleiades	Cultural Overview of the Pleiades	Data Collection Planning & Execution, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences	The Pleiades, an Open Star Cluster		
The Landscape of Space	Artistic View of Astronomy	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Collaboration	Nebulae		
Hold the Universe	Cosmic Perspective, Holograms, & the Pepper's Ghost Phenomenon	Data Collection, Critical Thinking, Student-Centered Inquiry, Social Sciences, Collaboration	Emission Nebulae, Galaxies, and the Moon		
Destination: Earth	Cosmic Perspective, Sociology, Distance Modulus	Data Collection, Critical Thinking, Student-Centered Inquiry, Digital Citizenship, Social Sciences, Mathematics	Sirius, Andromeda Galaxy, Triangulum Galaxy		CCM: MP.2, MP.5, HSN-Q.A.1, HSN-Q.A.2, HSN-Q.A.3, HSA-SSE.A.1, HSA-CED.A.2, 6.EE.A.2, 6.EE.B.6, 6.NS.C.5
⇨=Upcoming Quest					