

Correlation of Resources to National Science Standards

Use the chart below to discover how selected Science A–Z resources in the Outside the Solar System unit support certain Next Generation Science Standards* (NGSS). While a single reading resource, science activity, comprehension support, or lesson cannot satisfy an entire Performance Expectation, using these resources together can help students develop the understandings and abilities they will need in order to satisfy each standard listed below. Most standards cited align with the grade level of this Science A–Z unit. For a reverse correlation tool that connects the standards to resources, visit our NGSS correlations page: www.sciencea-z.com/main/NextGenerationScienceStandards.



Check the Performance Expectations Key below this chart for the complete text of the standards cited for each resource.

Resource Type	Resource Title	Performance Expectations
Unit Nonfiction Book	<i>Outside the Solar System</i> (3 reading levels)	5-PS2-1; 5-ESS1-1; MS-ESS1-2; MS-ESS1-3
Process Activity	<i>Deep-Space Model</i>	MS-ESS1-2
FOCUS Book	<i>The Voyager Program</i>	MS-ESS1-2; MS-ESS1-3; MS-ETS1-1; MS-ETS1-4
FOCUS Book	<i>Galaxies Far, Far Away</i>	5-ESS1-1; MS-ESS1-2
FOCUS Book	<i>Nebulae</i>	5-ESS1-1; MS-ESS1-2; MS-PS4-2
FOCUS Book	<i>Powerful Telescopes</i>	5-ESS1-1; MS-PS4-2; MS-ESS1-3
FOCUS Book	<i>Exoplanets</i>	MS-ESS1-2
Investigation Pack	<u>Topic:</u> Properties of Stars <u>I. Files:</u> <i>Red Giant; Blue Supergiant; Red Dwarf; White Dwarf; Yellow Dwarf; Neutron Star</i> <u>Mystery File:</u> <i>Black Hole</i>	5-ESS1-1; MS-ESS1-2; MS-ESS1-3
Debate	<i>New Space Telescope</i>	5-ESS1-1; 3-5-ETS1-1; MS-ESS1-3
Science Video	<i>A Supernova Produces a Black Hole</i> (no audio)	MS-ESS1-2
Science Video	<i>Evolution of the Universe</i>	MS-ESS1-2; MS-ESS1-3
Science Video	<i>Fifty New Exoplanets</i>	MS-ESS1-2; MS-ESS1-3
Science Video	<i>Interstellar Voyager</i>	MS-ESS1-3
Science Video	<i>Kepler Discovers Its First Rocky Planet</i>	MS-ESS1-3
Science Video	<i>NASA for Kids: Introduction to Engineering</i>	3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3; MS-ETS1-1; MS-ETS1-2; MS-ETS1-3; MS-ETS1-4

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Resource Type	Resource Title	Performance Expectations
Science Video	<i>Planetary Evolution</i>	MS-ESS1-2; MS-ESS1-3
Science Video	<i>Planetary Studies</i>	MS-ESS1-2; MS-ESS1-3
Science Video	<i>Radio Telescopes Zoom into a Black Hole's Jets</i>	MS-ESS1-3
Science Video	<i>The Andromeda Galaxy</i>	MS-ESS1-2; MS-ESS1-3
Science Video	<i>The Big Bang</i> (no audio)	MS-ESS1-2; MS-ESS1-3
Science Video	<i>The Milky Way Galaxy</i>	MS-ESS1-2
Career Files	<i>Astronomer; Astrophysicist; Planetarium Curator</i>	5-ESS1-1; MS-ESS1-2; MS-ESS1-3
Quick Read	<i>Seasonal and Circumpolar Constellations</i> (3 reading levels)	5-ESS1-2
Quick Read	<i>Space Products</i> (3 reading levels)	3-5-ETS1-1; 3-5-EST1-2
Quick Read	<i>Understanding the Universe</i> (3 reading levels)	MS-ESS1-3
Science Diagram	<i>Electromagnetic Spectrum</i>	MS-PS4-2
Science Diagram	<i>Formation of the Solar System</i>	MS-ESS1-2
Science Diagram	<i>Inside a Star</i>	5-ESS1-1
Science Diagram	<i>Types of Stars</i>	5-ESS1-1; MS-ESS1-2

Performance Expectations Key

5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.

5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.

5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

3-5-ETS1-3. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

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

MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

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MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system.

MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

MS-ETS1-3. Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.

MS-ETS1-4. Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.