Science A–Z

WATER (5–6)

Correlation of Resources to National Science Standards

Use the chart below to discover how selected Science A–Z resources in the Water 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	*The Water Cycle* (3 reading levels)	**4-ESS2-1; 5-ESS2-1; 5-ESS2-2; 5-ESS3-1; MS-PS1-4; MS-LS2-5; MS-ESS2-2; MS-ESS2-4; MS-ESS2-5; MS-ESS3-2; MS-ESS3-3**
Project-Based Learning Pack	*A Working Water Cycle*	**5-ESS2-1; MS-ESS2-4**
Interactive Science Lesson	*The Water Cycle* Part 1: What Is Evaporation?	**5-ESS2-1; MS-ESS2-4**
Interactive Science Lesson	*The Water Cycle* Part 2: What Is Condensation?	**5-ESS2-1; MS-ESS2-4**
Interactive Science Lesson	*The Water Cycle* Part 3: What Is Precipitation?	**5-ESS2-1; MS-ESS2-4**
Interactive Science Lesson	*The Water Cycle* Part 4: Completing the Water Cycle	**5-ESS2-1; MS-ESS2-4**
Process Activity	*Settling and Sedimentation*	**3-5-ETS1-3; MS-ESS2-1; MS-ESS2-2**
Process Activity	*Water Collage*	**MS-ESS3-4**
Process Activity	*Water Cycle Model*	**5-ESS2-1; MS-PS1-4; MS-ESS2-4**
FOCUS Book	*Water for the People*	**5-ESS2-2; 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS-3; MS-LS2-5; MS-ESS3-1; MS-ESS3-3; MS-ESS3-4; MS-ETS1-1**
FOCUS Book	*Hailstorms*	**3-ESS2-1; 3-ESS3-1; 5-ESS2-1; MS-ESS3-2; MS-ESS2-5**
FOCUS Book	*Life in the Current*	**5-ESS2-1; MS-LS2-3; MS-LS2-5; MS-ESS2-6; MS-ESS3-5**
FOCUS Book	*The Cryosphere*	**5-ESS2-2; 5-ESS3-1; MS-ESS3-3; MS-ESS3-4; MS-ESS3-5**

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Resource Type	Resource Title	Performance Expectations
FOCUS Book	*Tsunami!*	**3-ESS3-1; 4-ESS3-2; 3-5-ETS1-2; 3-5-ETS1-3; MS-ESS3-2; MS-ETS1-1; MS-ETS1-2**
Investigation Pack	Topic: Properties of Watersheds I. Files: *Mississippi Watershed; Amazon Watershed; Nile Watershed; Yangtze Watershed* Mystery File: *Caspian Sea*	**4-ESS3-1; 5-ESS2-2; 5-ESS3-1; MS-LS2-3; MS-ESS2-2; MS-ESS2-4; MS-ESS3-1; MS-ESS3-4**
Debate	*Water Rationing*	**5-ESS3-1; MS-ESS3-3**
Science Video	*In the Zone*	**3-LS4-3; 3-LS4-4; 5-LS1-1; MS-LS2-3; MS-LS2-5; MS-ESS3-3**
Science Video	*Melting Ice* (no audio)	**4-ESS2-2; 5-ESS2-2**
Science Video	*Show Me the Water*	**5-ESS2-2**
Science Video	*Tsunami Strike: Japan*	**3-ESS3-1; 4-ESS2-2; 4-ESS3-2; MS-ESS3-2**
Science Video	*Water Harvesting*	**5-ESS3-1**
Science Video	*Water, Water, Everywhere!*	**5-ESS2-1; 5-ESS2-2; MS-ESS2-4**
Career Files	*Hydrologist; Irrigation Specialist; Water Treatment Plant Operator*	**4-ESS3-2; 5-ESS3-1; MS-ESS2-1; MS-ESS2-2; MS-ESS3-3;**
Quick Read	*Dams, Levees, and Dikes* (3 reading levels)	**4-ESS3-2; MS-ESS3-4**
Quick Read	*Glaciers* (3 reading levels)	**5-ESS2-2; MS-ESS2-2**
Quick Read	*Groundwater* (3 reading levels)	**5-ESS2-2; MS-ESS3-1**
Quick Read	*Ice Sheets and Ice Caps* (3 reading levels)	**5-ESS2-2; MS-ESS3-4; MS-ESS3-5**
Quick Read	*Icebergs* (3 reading levels)	**5-ESS2-2**
Quick Read	*Rainy Places* (3 reading levels)	**3-ESS2-1; MS-ESS2-5**
Quick Read	*Water Around the House* (3 reading levels)	**4-ESS3-1; 5-ESS3-1; MS-ESS3-3**
Quick Read	*Water Pollution* (3 reading levels)	**5-ESS3-1; 5-ESS3-4; MS-ESS3-3**
Science Diagram	*Cloud Types*	**MS-ESS2-5**
Science Diagram	*Common Types of Precipitation*	**5-ESS2-2; MS-ESS2-5**

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Science Diagram	*Freezing and Boiling Points of Water*	**MS-PS1-4**
Science Diagram	*The Water Cycle*	**5-ESS2-1; 5-ESS2-2; MS-ESS2-4**
Science Diagram	*Water Molecule*	**5-PS1-1; MS-PS1-1**

Performance Expectations Key

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.

4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.

4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.

4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.

5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.

5-ESS2-2. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

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-PS1-1. Develop models to describe the atomic composition of simple molecules and extended structures.

MS-PS1-4. Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed.

MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

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MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.

MS-ESS2-6. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates.

MS-ESS3-1. Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

MS-ESS3-2. Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

MS-ESS3-5. Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century.

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.