

Science Achievement Indicators Grade Span K-2

Content Standard N2A

Students understand that science is an active process of systematically examining the natural world.

Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.	use limited written language, spoken language, numbers, or labeled drawings to describe observed objects and phenomena with assistance. (N.2.A.1)	use limited written language, spoken language, numbers, or labeled drawings to describe observed objects and phenomena. (N.2.A.1)	describe objects and phenomena through written and spoken language, numbers, and labeled drawings. (N.2.A.1)	describe objects and phenomena and use data gathered to support claims, draw conclusions, or make predictions. (N.2.A.1)
N.2.A.2 Students know how tools can be used safely to gather data and extend the senses.	safely use, with assistance, tools to collect data and explore the natural world. (N.2.A.2)	safely use correct tools to collect data and explore the natural world. (N.2.A.2)	select and safely use correct tools to collect data and explore the natural world. (N.2.A.2)	select and safely use tools to conduct an investigation in a safe and appropriate manner. (N.2.A.2)
N.2.A.3 Students know observable patterns can be used to predict future events or sort items.	name, with assistance, observable properties of objects. (N.2.A.3) recognize, with assistance, a group sorted by a particular property. (N.2.A.3)	name observable properties of objects. (N.2.A.3) recognize a group sorted by a particular property. (N.2.A.3) record patterns in nature. (N.2.A.3)	sort objects into two distinct groups based on observable properties. (N.2.A.3) predict future events based on a pattern in nature. (N.2.A.3)	sort objects based upon observable patterns, and to make predictions based upon observed patterns. (N.2.A.3)

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Content Standard N2B Students understand that many people contribute to the field of science.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
<p>N.2.B.1 Students know that science engages men and women of all ages and backgrounds.</p> <p>N.2.B.2 Students know that, in science, it is helpful to work in a team and share findings with others.</p>	<p>recognize that people can learn new things by working together. (N.2.B.2)</p>	<p>identify scientists as people. (N.2.B.1)</p> <p>explain that scientists work together. (N.2.B.2)</p> <p>explain that scientists share what they learn. (N.2.B.2)</p>	<p>recognize that everybody can be a scientist. (N.2.B.1)</p> <p>explain that scientists work together and share what they find out. (N.2.B.2)</p>	<p>state that scientists may come from any culture, gender, or ethnicity. (N.2.B.1)</p> <p>identify benefits of working with a team or sharing scientific findings. (N.2.B.2)</p>

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Content Standard P2A Students understand that matter has observable properties.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
P.2.A.1 Students know matter can exist as solids and as liquids.	identify a given material as either a solid or a liquid. (P.2.A.1)	name a material that is a solid. (P.2.A.1) name a material that is a liquid. (P.2.A.1)	compare solids and liquids using observable properties. (P.2.A.1)	describe properties of solids and/or liquids. (P.2.A.1)
P.2.A.2 Students know some properties of materials can be changed by heating, freezing, mixing, cutting, or bending.	recognize, with assistance, that properties of materials can be changed. (P.2.A.2)	recognize that properties of materials can be changed. (P.2.A.2)	describe how properties of materials can be changed. (P.2.A.2)	identify and list examples of changes in properties of materials (i.e., bending, cutting, freezing, mixing or heating. (P.2.A.2)
P.2.A.3 Students know that matter can be categorized by observable properties, such as color, size, shape, and weight.	identify, with assistance, a group that has been sorted according to a property. (P.2.A.3, P.2.A.4)	identify a group that has been sorted according to a property. (P.2.A.3, P.2.A.4)	sort objects according to properties (i.e., color, size, weight, shape, texture). (P.2.A.3, P.2.A.4)	sort objects using more than one property. (P.2.A.3, P.2.A.4)
P.2.A.4 Students know different objects are made of may different types of materials.				

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Content Standard P2C Students know heat, light, and sound can be produced.				
Content Benchmark	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
P.2.C.1 Students know sound is produced by vibrating objects.	identify sounds. (P.2.C.1)	make sounds with objects. (P.2.C.1)	explain that sound is produced by vibrating objects. (P.2.C.1)	describe how changes in vibration result in change in characteristics of sound (e.g., pitch, volume). (P.2.C.1)
P.2.C.2 Students know objects can be described as hot or cold relative to another object.	identify, with assistance, that an object is either hot or cold. (P.2.C.2)	identify that an object is either hot or cold. (P.2.C.2)	describe that an object is hot or cold compared to other objects. (P.2.C.2)	record and compare temperatures of different objects over time. (P.2.C.2)

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Content Standard L2A Students understand that offspring resemble their parents.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
L.2.A.1 Students know that animals and plants have offspring that are similar to their parents.	recognize that animals and plants have parents.	recognize that animals and plants look like their parents. (L.2.A.1)	explain that animals and plants look like their parents, but can have some differences. (L.2.A.1)	give examples of similarities and differences of parent and offspring. (L.2.A.1)
L.2.A.2 Students know differences exist among individuals of the same kind of plant or animal.	recognize that animals and plants have differences.	describe differences among animals and plants. (L.2.A.2)	describe differences among individuals of the same kind of animal or plant. (L.2.A.2)	provide examples of differences among individuals of the same kind of plant or animal. (L.2.A.2)

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Content Standard L2B Students understand that living things have identifiable characteristics.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
L.2.B.1 Students know humans and other animals use their senses to know their world.	explore senses. (L.2.B.1)	identify senses used by humans and other animals. (L.2.B.1)	use their senses to collect data about the environment. (L.2.B.1) explain how animals use their senses. (L.2.B.1)	explain which senses would be best used to investigate specific parts of the environment. (L.2.B.1) provide examples of how different senses are used to provide for the needs of animals. (L.2.B.1)

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Content Standard L2C Students understand that living things live in different places.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
L.2.C.1 Students know plants and animals need certain resources for energy and growth.	identify plants and animals as living things. (L.2.C.1)	explain that plants and animals have needs. (L.2.C.1)	explain that plants and animals need certain resources for energy and growth. (L.2.C.1)	generate examples of specific resources needed by plants and animals for energy and growth. (L.2.C.1)
L.2.C.2 Students know a habitat includes food, water, shelter, and space.	state that a habitat is where plants and animals live. (L.2.C.2, L.2.C.3)	recognize some of the characteristics of a habitat. (L.2.C.2)	describe the characteristics of a habitat (food, water, shelter, and space). (L.2.C.2)	describe a specific habitat and identify some of the organisms that could survive in that habitat. (L.2.C.2)
L.2.C.3 Students know living things are found almost everywhere in the world.		state that different plants and animals live in different places. (L.2.C.3)	explain that plants and animals live everywhere in the world. (L.2.C.3)	list plants and animals that could survive in a specific ecosystem. (L.2.C.3)

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Content Standard L2D Students understand that there are many kinds of living things on Earth.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
L.2.D.1 Students know plants and animals can be sorted by observable characteristics and behaviors.	observe and record characteristics of plants and animals. (L.2.D.1)	identify characteristics of plants and animals. (L.2.D.1)	sort plants and animals by observable characteristics and behaviors. (L.2.D.1)	explain characteristics and/or behaviors used to sort plants and animals. (L.2.D.1)
L.2.D.2 Students know some plants and animals are extinct.		recognize that plants and animals die. (L.2.D.2)	explain that some plants and animals no longer live on Earth, and are never coming back. (L.2.D.2)	list examples of plants and animals that are extinct. (L.2.D.2)

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Content Standard E2A Students understand that changes in weather often involve water changing from one state to another.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
E.2.A.1 Students know the Sun is a source of heat and light.	recognize that the Sun affects Earth. (E.2.A.1)	state that the Sun provides light for Earth. (E.2.A.1) state that the Sun warms the land on Earth. (E.2.A.1) state that the Sun warms the water on Earth. (E.2.A.1)	explain how the Sun provides light and warms the land and water on Earth. (E.2.A.1)	provide examples that illustrate how the sun is the major source of energy for the Earth. (E.2.A.1)
E.2.A.2 Students know water on Earth can be a liquid (rain) or a solid (snow and ice), and can go back and forth from one form to the other.	explain that there is water on Earth. (E.2.A.2)	give an example of liquid water on Earth (rain, rivers, lakes, or oceans). (E.2.A.2) give an example of solid water on Earth (snow or ice). (E.2.A.2)	describe water on Earth as liquid (rain, rivers, lakes, oceans), or solid (snow and ice). (E.2.A.2) explain that ice can melt into water, and water can freeze into ice. (E.2.A.2)	list examples in the environment of liquid water changing to solid and back to liquid again. (E.2.A.2)
E.2.A.3 Students know weather changes from day to day and seasonally.	observe daily weather. (E.2.A.3, E.2.A.4)	identify changes in daily weather. (E.2.A.3, E.2.A.4)	record weather changes (such as temperature, wind direction and speed, and precipitation) daily. (E.2.A.3, E.2.A.4)	describe and contrast patterns in weather data recorded over time. (E.2.A.3, E.2.A.4)
E.2.A.4 Students know weather can be described by measurable quantities such as temperature, wind, direction and speed, and precipitation.		identify and list seasonal weather changes. (E.2.A.3, E.2.A.4)	compare weather changes (such as temperature, wind direction and speed, and precipitation) seasonally. (E.2.A.3, E.2.A.4)	

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Content Standard E2B				
Students understand that there are objects in the sky, which display patterns.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
E.2.B.1 Students know objects in the sky display patterns in how they look, where they are located, and how they move.	identify an object in the sky. (E.2.B.1)	list objects in the sky. (E.2.B.1)	describe various objects in the sky. (E.2.B.1)	compare characteristics of objects in the sky. (E.2.B.1)
E.2.B.2 Students know the Sun rises every day and the Moon can rise during the day and/or the night.	identify the Sun and Moon. (E.2.B.2, E.2.B.3, E.2.B.4)	state that the Sun appears in the sky every day. (E.2.B.2) state that the Moon can be seen during the night and/or the day. (E.2.B.2)	explain that the Sun appears in the sky every day, and that the Moon can be seen during the night and/or the day. (E.2.B.2)	describe when and where the Sun and Moon appear in the sky daily. (E.2.B.2)
E.2.B.3 Students know the Sun and Moon appear to move across the sky.		state that the Sun appears to move across the sky. (E.2.B.3) state that the Moon appears to move across the sky. (E.2.B.3)	describe how the Sun and Moon appear to move across the sky. (E.2.B.3)	predict where the Sun or Moon will appear at specific times, using recorded data. (E.2.B.3)
E.2.B.4 Students know the Moon appears to change shape over the course of a month.		recognize that the Moon does not always look the same in the sky. (E.2.B.1, E.2.B.4)	identify and record the cyclical pattern in the appearance of the Moon. (E.2.B.1, E.2.B.4)	predict the appearance of the Moon, using patterns found in recorded data. (E.2.B.1, E.2.B.4)

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Content Standard E2C Students understand that Earth materials include rocks, soils, and water.				
Content Benchmarks	Work at the Emergent/Developing level may indicate ability to...	Work at the Approaches level may indicate ability to...	Work at the Meets level demonstrates ability to...	Work at the Exceeds level demonstrates ability to...
E.2.C.1 Students know Earth is composed of different kinds of materials (e.g., rocks, soils, and water).	explore the different materials (rocks, soil, water) from which Earth is made. (E.2.C.1, E.2.C.2)	name a material from which Earth is made. (E.2.C.1)	describe the different materials (rocks, soil, water) from which Earth is made. (E.2.C.1)	describe one way that materials from which the Earth is made can change over time. (E.2.C.1)
E.2.C.2 Students know rocks come in many sizes and shapes, with various textures and colors.		identify properties of rocks and soils. (E.2.C.2, E.2.C.3)	sort rocks and soils according to size, shape, texture, and color. (E.2.C.2, E.2.C.3)	analyze rocks and soils based on composition and/or location. (E.2.C.2, E.2.C.3)
E.2.C.3 Students know soils have different colors or textures depending on their composition.				