

# Science Curriculum

K-6

## Kindergarten:

- Name changes that have occurred over time. (A.4)
- Investigate and find the answer to a science question. (B.1)
- Ask questions, investigate, and make predictions. (C.2)
- Use balances, hand lenses, and thermometers to collect information. (C.3)
- Use a chart or drawing to answer a question. (C.5)
- Talk about what has been learned after an investigation. (C.6)
- Understand physical properties like weight, size, shape, and color. (D.1)
- Observe and describe a change that takes place over time. (D.8A)
- Investigate rocks. (E.1)
- Show materials have physical properties. (E.2)
- Develop descriptions for land forms and water masses. (E.3)
- Identify the stars, moon, sun, and planets. (E.5)
- Describe clouds, temperature, precipitation and seasons. (E.7)
- Find patterns related to days, years, and seasons. (E.9)
- Learn about weather using a thermometer. (E.10)

## Grade 1:

- Decide what has changed over time in a science experiment. (A.4)
- Investigate and find the answer to a science question with the help of a teacher, book, or computer. (B.1)
- Ask questions, investigate, and make predictions. (C.2)
- Use balances, hand lenses, and thermometers to collect information. (C.3)
- Use a chart, drawing, or written description to answer a question. (C.5)
- Talk about what has been learned after an investigation or draw a picture about what has been learned. (C.6)
- Understand physical properties like weight, size, shape, and color and chemical reactions. (D.1)
- Observe and describe a change that takes place over time. (D.8A)
- Investigate light, heat, sound, magnetism, and gravity. (D.9)
- Investigate rocks and soil using the correct vocabulary. (E.1)
- Show materials have physical and chemical properties. (E.2)
- Develop descriptions for land forms, rocks, minerals, and water masses. (E.3)
- Identify the stars, moon, sun, and planets noting changes in patterns. (E.5)
- Describe the different constellations. (E.6)
- Describe clouds, temperature, precipitation and seasons. (E.7)
- Identify tornadoes, hurricanes, storms. (E.8)
- Find patterns related to days, years, and seasons. (E.9)
- Learn about weather using a thermometer, weather vane, and rain gauge. (E.10)
- Classify plants and animals. (F.2B)
- Explore the life stages of seed bearing plants. (F.6A)
- Illustrate ways vertebrates and invertebrates change as they grow. (F.9)

# Science Curriculum

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## Grade 2:

- List changes that have occurred over time. (A.4)
- Use different resources to answer a science-related question. (B.1)
- Ask questions, investigate, observe, predict and explain. (C.2)
- Use rulers, balances, and thermometers to collect information. (C.3)
- Write, draw, and make charts to answer scientific questions. (C.5)
- Explain what has been learned orally or on paper. (C.6)
- Ask a scientific question. (C.7)
- Explore physical properties like weight, size, shape, and color. (D.1)
- Observe and then explain what has been seen. (D.8A)
- Record changes in properties. (D.8B)
- Investigate light, heat, sound, magnetism, and gravity. (D.9)
- Investigate rocks, minerals, and soil. (E.1)
- Explore physical and chemical properties. (E.2)
- Learn correct vocabulary for earth science topics. (E.3)
- Identify patterns in celestial objects. (E.5)
- Introduction to the constellations. (E.6)
- Describe different types of clouds, precipitation, and seasonal changes. (E.7)
- Identify tornadoes, hurricanes, storms. (E.8)
- Find patterns related to days, years, and seasons. (E.9)
- Describe tools used to measure weather. (E.10)
- Classify plants and animals. (F.2B)
- Explore the life stages of seed bearing and non-seed bearing plants. (F.6A)
- Examine vertebrates and invertebrates as they grow. (F.9)

# Science Curriculum

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## Grade 3:

- Give evidence of change over time. (A.4)
- Use resources such as books, computers, encyclopedias, and magazines to answer a science question. (B.1)
- Ask questions, investigate, observe, predict and explain. (C.2)
- Collect information using magnifying glasses, scales, and microscopes. (C.3)
- Communicate results of investigations using charts, graphs, drawings, and descriptions. (C.5)
- Support your conclusions both orally and in writing. (C.6)
- Be able to ask a question that can be investigated. (C.7)
- Learn that things are made of more than more type of matter by exploring physical properties. (D.1)
- Observe and describe activity compared to speed, friction, momentum, and acceleration. (D.8A)
- Record changes in position and motion. (D.8B)
- Discover the differences between substances that can be touched and those that can't. (D.9)
- Investigate and name rocks, minerals, and soil. (E.1)
- Explore physical and chemical properties. (E.2)
- Describe erosion, currents, and tides. (E.3)
- Identify patterns in celestial objects and note how they change over time. (E.5)
- Explore constellations, meteorites, and asteroids. (E.6)
- Describe weather in terms of temperature, humidity, and air pressure. (E.7)
- Identify tornadoes, hurricanes, and storms as natural destructive forces. (E.8)
- Find patterns and cycles on earth related to days, years, and seasons. (E.9)
- Talk about tools used to measure weather. (E.10)
- Classify plants and animals. (F.2B)
- Explore cells, organs, tissues, organ systems, and whole organism. (F.3)
- Explore the life stages of seed bearing and non-seed bearing plants. (F.6A)
- Illustrate ways vertebrates and invertebrates change and grow. (F.9)

# Science Curriculum

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## Grade 4:

- Give evidence of change over time. (A.4)
- Use resources (books, computers, encyclopedias, magazines) to answer a science question. (B.1)
- Ask questions, investigate, observe, predict and explain. (C.2)
- Collect information using magnifying glasses, scales, and microscopes. (C.3)
- Communicate investigation results using charts, graphs, drawings, and descriptions. (C.5)
- Support your conclusions both orally and in writing. (C.6)
- Be able to ask a question that can be investigated exploring models and theories. (C.7)
- Learn that things are made of more than more type of matter by exploring physical properties. (D.1)
- Observe and describe activity compared to speed, friction, momentum, and acceleration. (D.8A)
- Record event changes in position and motion. (D.8B)
- Discover the differences between substances that can be touched and those that can't. (D.9)
- Investigate and name rocks, minerals, and soil. (E.1)
- Show that earth materials have physical and chemical properties. (E.2)
- Develop a description for erosion, currents, and tides. (E.3)
- Identify patterns in celestial objects and note how they change over time. (E.5)
- Explore and describe the structure of constellations, meteorites, and asteroids. (E.6)
- Describe weather in terms of precipitation, humidity, wind, and air pressure. (E.7)
- Identify tornadoes, hurricanes, and storms as natural destructive forces. (E.8)
- Explore patterns and cycles on earth related to days, years, and seasons. (E.9)
- Talk about tools used to measure weather. (E.10)
- Understand the classification of plants and animals. (F.2B)
- Examine the structure of function of cells, organs, tissues, organ systems, and whole organism. (F.3)
- Illustrate the life stages and reproduction of seed bearing and non-seed bearing plants. (F.6A)
- Examine ways vertebrates and invertebrates change, grow, and reproduce. (F.6B)

# Science Curriculum

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## Grade 5:

- Give evidence of scientific changes over time(A.4)
- Use resources such as text, theme books, computer, encyclopedias and periodicals to answer science-related questions(B.1)
- Ask questions, perform investigation, make observations, predict and explain outcomes about topic being introduced (C.2)
- Use science equipment safely and effectively to include rulers, balances, cylinders hand lenses, thermometers and microscopes (C.3)
- Communicate data from investigations using charts, graphs, drawings and written description(C.5)
- Logically support conclusions orally, with drawings and in written form(C.6)
- Further investigations by using models, theories and prior scientific knowledge(C.7)
- Measure properties of matter using size, weight, shape, or color; temperature, chemical reaction, density and solubility(D.1)
- Observe and describe speed, velocity, acceleration, friction, momentum and change over time of objects.(D.8A)
- Develop record-keeping systems to measure events of motion over time, position due to force, and position in space(D.8B)
- Observe; light, heat, sound, electricity, magnetism, and gravity as to ability to touch(D.9)
- Investigate and identify earth materials such as rocks, soil, and minerals(E.1)
- Show how Earth materials have different physical and chemical properties(E.2)
- Use term identifying soil movement, erosion; rocks and minerals; oceans and currents and tides(E.3)
- Note change of patterns of stars, sun, moon, and planets over time(E.5)
- Develop models of constellations, meteorites/asteroids/comets to explain the nature of the universe(E.6)
- Describe weather by clouds, temperature, humidity, precipitation forms, seasonal changes, air pressure and wind speed and direction(E.7)
- Identify tornadoes, hurricanes and storms as destructive forces of weather(E.8)
- Use day, year, and seasons to find patterns and cycles in the earth(E.9)
- Explore community resources to measure weather using maps, barometer, thermometer, anemometer, vane and rain gauge(E.10)
- Classify organisms as plants and animals(F.2B)
- Understand the structure of cells, organs, tissues, organ systems and organisms(F.3)
- Illustrate the seed bearing and non-seed life stages of plants(F.6A)
- Illustrate the stages of life of vertebrates and invertebrates(F.6B)

# Science Curriculum

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## Grade 6:

- Give evidence of scientific changes over time(A.4)
- Use resources such as text, theme books, computer, encyclopedias and periodicals to answer science-related questions(B.1)
- Ask questions, perform investigation, make observations, predict and explain outcomes about topic being introduced (C.2)
- Use science equipment safely and effectively to include rulers, balances, cylinders hand lenses, thermometers and microscopes (C.3)
- Communicate data from investigations using charts, graphs, drawings and written description(C.5)
- Logically support conclusions orally, with drawings and in written form(C.6)
- Further investigations by using models, theories and prior scientific knowledge(C.7)
- Measure properties of matter using size, weight, shape, or color; temperature, chemical reaction, density and solubility(D.1)
- Observe and describe speed, velocity, acceleration, friction, momentum and change over time of objects.(D.8A)
- Develop record-keeping systems to measure events of motion over time, position due to force, and position in space(D.8B)
- Observe; light, heat, sound, electricity, magnetism, and gravity as to ability to touch(D.9)
- Investigate and identify earth materials such as rocks, soil, and minerals(E.1)
- Show how Earth materials have different physical and chemical properties(E.2)
- Use term identifying soil movement, erosion; rocks and minerals; oceans and currents and tides(E.3)
- Note change of patterns of stars, sun, moon, and planets over time(E.5)
- Develop models of constellations, meteorites/asteroids/comets to explain the nature of the universe(E.6)
- Describe weather by clouds, temperature, humidity, precipitation forms, seasonal changes, air pressure and wind speed and direction(E.7)
- Identify tornadoes, hurricanes and storms as destructive forces of weather(E.8)
- Use day, year, and seasons to find patterns and cycles in the earth(E.9)
- Explore community resources to measure weather using maps, barometer, thermometer, anemometer, vane and rain gauge(E.10)
- Classify organisms as plants and animals(F.2B)
- Understand the structure of cells, organs, tissues, organ systems and organisms(F.3)
- Illustrate the seed bearing and non-seed life stages of plants(F.6A)
- Illustrate the stages of life of vertebrates and invertebrates(F.6B)