

First Grade Science Grade Level Content Expectations (GLCEs) v.12.07

Content Statement / Content Expectation	Words to Know	Know –Nouns-Content	Be Able to Do –Verbs-Skills and Processes
SCIENCE PROCESSES: Inquiry Process <i>S.IP.E.1 Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.</i>			
S.IP.01.11 Make purposeful observation of the natural world using the appropriate senses.	Observe Senses		Unit: Life Science Unit: Earth Systems Unit: Solid Earth
S.IP.01.12 Generate questions based on observations.	Questioning		Unit: Heredity Unit: Properties of Matter Unit: Earth Systems
S.IP.01.13 Plan and conduct simple investigations.	Investigate		Unit: Properties of Matter
S.IP.01.14 Manipulate simple tools (for example: hand lens, pencils, rulers, thermometers, rain gauges, balances, non-standard objects for measurement) that aid observation and data collection.	Tools Data collection		All Units
S.IP.01.15 Make accurate measurements with appropriate (non-standard) units for the measurement tool.	Measure Unit		Unit: Earth Systems
S.IP.01.16 Construct simple charts from data and observations.	Charts Graphs		Unit: Earth Systems Unit: Properties of Matter Unit: Life Science
SCIENCE PROCESSES: Inquiry Analysis and Communication <i>S.IA.E.1 Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.</i>			
S.IA.01.12 Share ideas about science through purposeful conversation.			All Units
S.IA.01.13 Communicate and present findings of observations.	Findings		All Units
S.IA.01.14 Develop strategies for information gathering (ask an expert, use a book, make observations, conduct simple investigations, and watch a video).	Investigation		All Units
SCIENCE PROCESSES: Reflection and Social Implications <i>S.RS.E.1 Reflecting knowledge is the application of scientific knowledge to new and different situations. Reflecting knowledge requires careful analysis of evidence that guides decision making and the application of science throughout history and within society.</i>			
S.RS.01.11 Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.			All Units
S.RS.01.12 Recognize that science investigations are done more than one time.			All Units
PHYSICAL SCIENCE: Properties of Matter			

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<i>P.PM.E.1 Physical Properties- All objects and substances have physical properties that can be measured.</i>			
P.PM.01.11 Demonstrate the ability to sort objects according to observable attributes such as color, shape, size, sinking or floating.	Sort Attributes Properties	Color Shape Size Sinking Floating	Sort objects
<i>P.PM.E.2 States of Matter- Matter exists in several different states: solids, liquids and gases. Each state of matter has unique physical properties. Gases are easily compressed but liquids and solids do not compress easily. Solids have their own particular shapes, but liquids and gases take the shape of the container.</i>			
P.PM.01.21 Demonstrate that water as a solid keeps its own shape (ice).	Solid Matter Shape	Solids Matter Shape	Identify ice as a solid.
P.PM.01.22 Demonstrate that water as a liquid takes on the shape of various containers.	Liquid	Liquid	Identify water as a liquid. Demonstrate water changing shape in containers.
<i>P.PM.E.3 Magnets- Magnets can repel or attract other magnets. Magnets can also attract certain non-magnetic objects at a distance.</i>			
P.PM.01.31 Identify materials that are attracted by magnets.	Materials Magnetic Non-magnetic	Plastic Metal Wood Materials	Identify magnetic and non-magnetic materials.
P.PM.01.32 Observe that like poles of a magnet repel and unlike poles of a magnet attract.	Magnet Poles Attract Repel	Magnet Poles North South Attract Repel	Observe magnets with poles.
LIFE SCIENCE: Organization of Living Things			
<i>L.OL.E.1 Life Requirements- Organisms have basic needs. Animals and plants need air, water, and food. Plants also require light. Plants and animals use food as a source of energy and as a source of building material for growth and repair.</i>			
L.OL.01.13 Identify the needs of animals.	Needs	Animals Food Water Air	Identify needs of animals.
<i>L.OL.E.2 Life Cycles- Plants and animals have life cycles. Both plants and animals begin life and develop into adults, reproduce, and eventually die. The details of this life cycle are different for different organisms.</i>			
L.OL.01.21 Describe the life cycle of animals including the following stages: egg, young, adult; egg, larva, pupa, adult.	Life cycle Stages Egg Young Adult	Life cycle Stages Egg Young Adult	Order the stages of the life cycle.

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	Larva Pupa	Larva Pupa	
Heredity <i>L.HE.E.1 Observable Characteristics- Plants and animals share many, but not all, characteristics of their parents.</i>			
L.HE.01.11 Identify characteristics (for example: body coverings, beak shape, number of legs, body parts) that are passed on from parents to young.	Heredity Inherit/ Passed down Young Parent Characteristics	Inherit Characteristics: -body cover -# of legs -body parts (eg tail)	Identify characteristics of animals and their young.
L.HE.01.12 Classify young animals based on characteristics that are passed on from parents (for example: dogs/puppies, cats/kittens, cows/calves, chicken/chicks).	Classify	Characteristics: -color -size	Match parents and young by characteristics.
EARTH SCIENCE: Earth Systems <i>E.ES.E.1 Solar Energy- The sun warms the land, air and water and helps plants grow.</i>			
E.ES.01.11 Identify the sun as the most important source of heat which warms the land, air, and water of the Earth.	Sun Heat Land Air Water Earth	Sun Heat Land Air Water Earth	Tell that the sun heats the Earth.
E.ES.01.12 Demonstrate the importance of sunlight and warmth in plant growth.	Sunlight Warmth Plants Growth	Sunlight Warmth Plants Growth	Tell that sun and warmth are important for plants to grow.
<i>E.ES.E.2 Weather- Weather changes from day to day and over the seasons.</i>			
E.ES.01.21 Compare daily changes in the weather related to temperature (cold, hot, warm, cool); cloud cover (cloudy, partly cloudy, foggy) precipitation (rain, snow, hail, freezing rain); wind (breezy, windy, calm).	Temperature Weather Precipitation Cloud cover Wind	Temperature Weather Precipitation Cloud cover Wind	Compare and graph daily changes in weather as a class.
E.ES.01.22 Describe and compare weather related to the four seasons in terms of temperature, cloud cover, precipitation, and wind.	Seasons	Fall Winter Spring Summer Temperature Cloud cover Precipitation Wind	Sort characteristics by seasons.
E.ES.01.23 Describe severe weather events.	Severe	Thunderstorm Lightning Tornadoes	Describe severe weather events.

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		High winds Blizzards Hurricanes	
E.ES.01.24 Describe precautions that should be taken for human safety during severe weather conditions (thunderstorms, lightning, tornadoes, high winds, blizzards, hurricanes).	Precaution Safety Weather condition	Precaution Safety Weather condition	Tell what they would do in severe weather situations.
<i>E.ES.E.3 Weather Measurement- Scientists use tools for observing, recording, and predicting weather changes.</i>			
E.ES.01.31 Identify the tools that might be used to measure temperature, precipitation, cloud cover and wind.	Thermometer Weather vane Rain gauge	Thermometer Weather vane Rain gauge	Match tools to the aspect of weather that they measure.
E.ES.01.32 Observe and collect data of weather conditions over a period of time.			Graph daily weather as a class.
Solid Earth			
<i>E.SE.E.1 Earth Materials- Earth materials that occur in nature include rocks, minerals, soils, water, and the gases of the atmosphere. Some Earth materials have properties which sustain plant and animal life.</i>			
E.SE.01.12 Describe how Earth materials contribute to the growth of plant and animal life.	Compost Soil	Water Soil Plants	Tell that plants need water and soil from the earth and some animals need plants.

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