

Science - Grade 2

| Idaho Department of Education Content Standards | Objective | Sub Objectives | Task Analysis | Essential Vocabulary | Assessment |
|--|--|----------------|---|---|--|
| Cognitive level codes: • B: Memorize • C: Perform procedures • D: Demonstrate understanding • E: Conjecture, generalize, prove • F: Solve non-routine problems, make connections | Bloom's Equivalent • B = Knowledge • C = Comprehension • D = Comprehension • E = Application and Analysis • F = Synthesis | | | | |
| Standard 1: Nature of Science THE UNIFYING CONCEPTS AND PROCESSES STANDARD CAN BE A FOCUS OF INSTRUCTION BUT SHOULD ALWAYS BE CLOSELY LINKED TO OUTCOMES ALIGNED WITH OTHER CONTENT STANDARDS. (National Science Education Standards) | | | | | |
| Goal 1.1: Understand Systems, Order, and Organization | No objectives at this grade level. | | | | |
| Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations | 2.S.1.2.1 Make observations, record and interpret data. (558.01.a) | | <ul style="list-style-type: none"> Observe data Record data Interpret data | data • observation • record • interpret | <ul style="list-style-type: none"> Choose something that can be observed (e.g. clouds, simple machine, animal), record in an organized manner List at least three characteristics and interpret the data in a chart, table, or graph. |
| Goal 1.3: Understand Constancy, Change, and Measurement | 2.S.1.3.1 Measure in standard and non-standard units. (558.01.b) | | <ul style="list-style-type: none"> Identify different forms of standard measurement (U.S. and metric) For example: length, volume, time, weight, temperature Identify different forms of non-standard measurement For example: shoe size, pencil length, height Locate items to be measured with standard and non standard units Apply measurement using standard and non standard units. | standard measurement length • volume time weight temperature • non standard measurement • metric/U.S. | <ul style="list-style-type: none"> Measure the length of your pencil in inches and centimeters. Measure the length of your classroom using your feet. What item would it be necessary to use as a standard measurement? What item could be measured using a non-standard measurement? This assessment can be adapted to measure other units such a volume, time, weight, and temperature. |
| Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State | 2.S.1.4.1 Apply the concepts of past, present, and future. (558.03.a) | | <ul style="list-style-type: none"> Recognize that over time things change Describe how things have changed over time Show examples of how things have changed over time. For example: tools, technology, transportation | past • present • future • technology • transportation | <ul style="list-style-type: none"> Is a covered wagon an example of past, present, or future type of transportation? Why? How has your body changed since you were born? |
| Goal 1.5: Understand Concepts of Form and Function | 2.S.1.5.1 Identify shape and use of objects. (558.04.a) | | <ul style="list-style-type: none"> Describe how the shape and use of an object is related | | <ul style="list-style-type: none"> What kind of shape is a ball? What would happen is the earth was flat? What shape can you use to carry your toys? a. sphere b. cube c. triangle d. pyramid |
| Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills | 2.S.1.6.1 Identify questions to be investigated. (559.01.a) | | <ul style="list-style-type: none"> List topics List questions based on topics Identify questions which can be investigated and tested | standard measurement length • volume time weight temperature • non standard measurement • metric/U.S. | <ul style="list-style-type: none"> Which topic can be investigated? a. What makes plants green? b. What will be the rate of evaporation? c. Does gravity change? d. Are there aliens in space? |
| | 2.S.1.6.2 Make observations. (559.01.b) | | <ul style="list-style-type: none"> Make observations using sensory input | observation • five senses | <ul style="list-style-type: none"> Teacher chooses five items and students will list the observations using: sight, smell, touch. |

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| | 2.S.1.6.3 Analyze information and evidence. (559.01.d) | | <ul style="list-style-type: none"> Record and organize observations/information Discuss and summarize observations/information Classify observations/information Analyze observations/information | classify • organize • summarize • analyze • evidence | <ul style="list-style-type: none"> Using different objects around the classroom. Classify objects according to groups. |
| | 2.S.1.6.4 Communicate observations. (559.01.f) | | <ul style="list-style-type: none"> Report observation through verbal and/or written communication | | <ul style="list-style-type: none"> Organize findings after classifying them into a graphic and/or present to students' group or to the class. |
| Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors | 2.S.1.7.1 Practice cooperation and interaction skills. (568.01.a) | | <ul style="list-style-type: none"> List and model student generated skills for cooperation and interaction Practice cooperation and interaction skills | cooperation • interaction | <ul style="list-style-type: none"> List three skills needed to work successfully in a group. |
| Goal 1.8: Understand Technical Communication | 2.S.1.8.1 Follow multi-step instructions. (568.02.a) | | <ul style="list-style-type: none"> Listen attentively to oral and written instructions Follow one-step instruction Follow multi-step instructions | oral • multi-step | <ul style="list-style-type: none"> Verbally instruct students to follow one or multi-step tasks. |
| Standard 2: Physical Science REFER TO STANDARD 1 FOR ALL OBJECTIVES IN THIS AREA!!! | | | | | |
| Goal 2.1: Understand the Structure and Function of Matter and Molecules and Their Interactions | 2.S.2.1.1 List properties of an object. (560.01.a) | | <ul style="list-style-type: none"> Observe properties of an object Record properties of an object | properties • color • shape • size • weight • temperature • texture | <ul style="list-style-type: none"> Create a table such as this to observe and list properties of given objects Examples: size, shape, color, weight, texture Pencil Milk Steam |
| Goal 2.2: Understand Concepts of Motion and Forces | 2.S.2.2.1 Explain how force affects the position and motion of objects. (560.01.a) | | <ul style="list-style-type: none"> Discuss force Observe that force affects the position of an object Observe that force affects the motion of an object Describe how the amount of force affects the position of an object Describe how the amount of force affects the motion of an object | force (push and pull) • motion • position • friction • gravity • atmosphere | <ul style="list-style-type: none"> Clip art a picture of a child pushing something asked what will happen to that object? Why? If two similar objects are pushed with the same force what would happen? Why? If a ball is rolled down a slide will it go further than a ball pushed across the playground? Why? |
| Goal 2.3: Understand the Total Energy in the Universe is Constant | No objectives at this grade level. | | | | |
| Goal 2.4: Understand the Structure of Atoms | No objectives at this grade level. | | | | |
| Goal 2.5: Understand Chemical Reactions | No objectives at this grade level. | | | | |

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| Standard 3: Biology REFER TO STANDARD 1 FOR ALL OBJECTIVES IN THIS AREA!!! | | | | | |
| Goal 3.1: Understand the Theory of Biological Evolution | No objectives at this grade level. | | | | |
| Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems | 2.S.3.2.1 Identify four basic needs of all living things (food, shelter, water, space). (563.01.a) | | <ul style="list-style-type: none"> Distinguish the differences and similarities between living and non-living objects Observe and record the four basic needs of all living things. | living • non-living • food • water • shelter • space • food chain • predator/prey • environment | <ul style="list-style-type: none"> Circle the needs that are NOT one of the four basic needs of survival a. food b. TV c. space d. soda e. water f. shelter |
| | 2.S.3.2.2 Discuss how animals are suited to live in different habitats. (547.01.b) | | <ul style="list-style-type: none"> Define habitat Recognize personal habitat Describe various animal habitats Describe how animals are suited to their particular habitats Classify animals and their habitats Compare and contrast animals in their habitats | habitat | <ul style="list-style-type: none"> Draw a picture of an animal in its own habitat In your own words, what is a habitat? Why would a Polar Bear not survive in hot climate? Why can a shark live in water but a dog cannot? Using nature pictures of different habitats pictures of animals pick two animals that would live in each habitat? Why? |
| Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things | No objectives at this grade level. | | | | |
| Standard 4: Earth and Space Systems REFER TO STANDARD 1 FOR ALL OBJECTIVES IN THIS AREA!!! | | | | | |
| Goal 4.1: Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems | 2.S.4.1.1 Describe the characteristics of different weather conditions. (564.01.b) | | <ul style="list-style-type: none"> List characteristics of various weather conditions For example: rain, snow, sunny, cloudy, windy Describe the general weather conditions within the four seasons Explain how the water cycle affects the weather | precipitation • evaporation • condensation • temperature • weather (snow, rain, windy, sunny, cloudy) • seasons (winter, spring, summer, fall) • atmosphere • water cycle | <ul style="list-style-type: none"> Name four seasons If it is zero degrees F. outside will it rain or snow? Why? If it is 100 degrees F. outside, will it rain or snow? Why? If you closed you eyes how could you tell if the wind was blowing? |
| Goal 4.2: Understand Geo-chemical Cycles and Energy in the Earth System | No objectives at this grade level. | | | | |
| Standard 5: Personal and Social Perspectives; Technology REFER TO STANDARD 1 FOR ALL OBJECTIVES IN THIS AREA!!! | | | | | |
| Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced | 2.S.5.1.1 Compare and contrast man-made and natural environments. (566.01.a) | | <ul style="list-style-type: none"> Recognize a man-made environment Recognize a natural environment Describe items found in man-made environments Describe items found in natural environments Draw or construct an example of a man-made environment Draw or construct an example of a natural environment | environment • man-made environments • natural environment • compare and contrast | <ul style="list-style-type: none"> Draw or construct an example of a man-made environment Draw or construct an example of a natural environment using a graphic to record similarities and differences between man-made and natural environments. |
| Goal 5.2: Understand the Relationship between Science and Technology | 2.S.5.2.1 Identify tools people have invented for everyday life and for scientific investigations. (565.01.b) | | <ul style="list-style-type: none"> Define tools from the past, in the present, and in the future State the characteristics of a simple tool (few working parts). For example: pulley system, incline plane, gears State the characteristics of complex tools (numerous working parts). For example : computers, cars, etc | tools • simple machine • complex machines | <ul style="list-style-type: none"> Given a set of pictures of tools--identify tools that were invented for everyday life. Given a set of pictures of tools--identify which tools were invented for scientific investigation |

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| Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them | No objectives at this grade level. | | | | |