

# Second Grade Science

| Strand | Big Idea | Concept | GLE code | GLE   |
|--------|----------|---------|----------|---|
| ME     | 1        | A       | a.       | Describe and compare the physical properties of objects by using simple tools (i.e., thermometer, magnifier, centimeter ruler, balance, magnet)     |
| ME     | 1        | A       | b.       | Classify objects/substances as "one kind of material" or a mixture  |
| ME     | 1        | B       | a.       | Observe and describe how mixtures are made by combining solids  |
| ME     | 1        | B       | b.       | Describe ways to separate the components of a mixture by their physical properties (e.g., sorting, magnets, screening)                              |
| ME     | 2        | A       | a.       | Recognize that sound travels through different mediums (i.e., air, water, solids)   |
| ME     | 2        | A       | b.       | Describe different ways to change the pitch of a sound (i.e., changes in size, such as length or thickness, and in tightness/tension of the source) |
| ME     | 2        | A       | c.       | Describe how the ear serves as a receiver of sound (i.e., sound vibrates eardrum)   |
| ME     | 2        | A       | d.       | Describe how to change the loudness of a sound (i.e., increase or decrease the force causing vibrations)  |
| FM     | 1        | B       | a.       | Describe Earth's gravity as a force that pulls objects on or near the Earth toward the Earth without touching the object                            |
| FM     | 2        | A       | a.       | Recognize magnets attract and repel each other and certain materials  |
| FM     | 2        | A       | b.       | Describe magnetism as a force that can push or pull other objects without touching them   |

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| FM | 2 | A | c. | Measure (using non-standard units) and compare the force (i.e., push or pull) required to overcome friction and move an object over different surfaces (i.e., rough, smooth)                     |
| FM | 2 | B | a. | Describe Earth's gravity as a force that pulls objects on or near the Earth toward the Earth without touching the object   |
| FM | 2 | D | a. | Describe the direction and amount of force (i.e., direction of push or pull, strong/weak push or pull) needed to change an object's motion (i.e., faster/slower, change in direction)            |
| FM | 2 | D | b. | Describe and compare the distances traveled by heavier/lighter objects after applying the same amount of force (i.e., push or pull) in the same direction  |
| FM | 2 | D | c. | Describe and compare the distances traveled by objects with the same mass after applying different amounts of force (i.e., push or pull) in the same direction                                   |
| FM | 2 | F | a. | Compare and describe the amount of force (i.e., more, less, or same push or pull) needed to raise an object to a given height, with or without using inclined planes (ramps) of different slopes |
| FM | 2 | F | b. | Compare and describe the amount of force (i.e., more, less, or same push or pull) needed to raise an object to a given height, with or without using levers                                      |
| FM | 2 | F | c. | Apply the use of an inclined plane (ramp) and/or lever to different real life situations in which objects are raised   |
| LO | 1 | B | a. | Recognize that animals progress through life cycles of birth, growth, and development, reproduction, and death   |
| LO | 1 | B | b. | Record observations on the life cycle of different animals (e.g., butterfly, dog, frog, chicken, snake)  |
| LO | 3 | D | a. | Identify and relate the similarities and differences among animal parents and their offspring  |
| ES | 1 | A | a. | Observe and describe the physical properties (e.g., odor, color, appearance, relative grain size, texture, absorption of water) and different components (i.e., sand, clay, humus) of soils      |
| ES | 1 | A | b. | Observe and describe the physical properties of rocks (e.g., size, shape, color, presence of fossils)  |

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| ES | 2 | A | a. | Observe and recognize examples of slow changes in the Earth's surface and surface materials (e.g., rock, soil layers) due to processes such as decay (rotting), freezing, thawing, breaking, or wearing away by running water or wind |
| ES | 3 | A | a. | Observe and describe ways humans use Earth's materials (e.g., soil, rocks) in a daily life  |
| IN | 1 | A | a. | Pose questions about objects, materials, organisms, and events in the environment   |
| IN | 1 | A | b. | Plan and conduct a simple investigation (fair test) to answer a question  |
| IN | 1 | B | a. | Make qualitative observations using the five senses   |
| IN | 1 | B | b. | Make observations using simple tools and equipment (e.g., magnifiers/hand lenses, magnets, equal arm balances, thermometers)  |
| IN | 1 | B | c. | Measure length and mass using non-standard units  |
| IN | 1 | B | d. | Compare amounts/measurements  |
| IN | 1 | C | a. | Use observations as support for reasonable explanations   |
| IN | 1 | C | b. | Use observations to describe relationships and patterns and to make predictions to be tested  |
| IN | 1 | C | c. | Compare explanations with prior knowledge   |
| IN | 1 | D | a. | Communicate simple procedures and results of investigations and explanations through: oral presentations, drawings and maps, drawings and maps, data tables, graphs (bar, pictograph), writings                                       |
| ST | 1 | A | a. | Design and construct a musical instrument using materials (e.g., cardboard, wood, plastic, metal) and/or existing objects (e.g., toy wheels, gears, boxes, sticks) that can be used to perform a task (Assess Locally                 |

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| ST | 1 | B | a. | Describe how tools have helped scientists make better observations, measurements, or equipment for investigations (e.g., magnifiers, balances, stethoscopes, thermometers)  |
| ST | 3 | A | a. | Identify a question that was asked, or could be asked, or a problem that needed to be solved when given a brief scenario (fiction or nonfiction of individuals solving everyday problems or learning through discovery) |
| ST | 3 | A | b. | Work with a group to solve a problem, giving due credit to the ideas and contributions of each group member (Assess Locally)  |