

### 3<sup>rd</sup> Grade Science Teacher Guidelines

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In 3<sup>rd</sup> Grade Science, students take an integrated approach to learning science. Topics covered include rapid changes to Earth’s surface, the solar system, plants and animals, ecosystems, and matter and energy. Labs and activities are included in every Unit. Please make sure all activities and investigations are completed safely.

- Unit 1: Scientific Method and Solar System
- Unit 2: Weather
- Unit 3: Earth’s Surface
- Unit 4: Ecosystems
- Unit 5: Plants
- Unit 6: Animals
- Unit 7: Matter
- Unit 8: Forces
- Unit 9: Energy
- Unit10: Sound and Light

Unit	Activity Name	Activity Description	Materials Needed	Finished Before
1	Make a Science Journal	Activity: Students create a science journal.	Composition notebook, permanent ink pen or marker, crayons or colored pencils, ruler, pencil	Quiz 1
1	Solar System Model	Model: Students create a model of the solar system and write a report about it.	Student choice: Materials could include crayons or markers, poster board, colored paper, Styrofoam balls, pipe cleaners, ribbons, beans, etc.)	Quiz 3
2	Observing and Measuring Weather Data	Investigation: Students make tools to measure and record weather data for two weeks.	plastic 2-liter bottle, ruler, scissors, stones or large gravel, clear tape, water, poster board, 2 paper plates, plastic straw, straight pin, pencil with a new eraser, clay, glue, compass, crayons, thermometer	Making tools: Quiz 1 Lesson 3 Observations: Quiz 2 Lesson 9 Observations: Quiz 3
2	Water Cycle	Activity: Students draw and label the water cycle.	Paper, pencils, or crayons	Quiz 2
2	Graph and Compare	Investigation: Students will graph their weather data.	Journal	Quiz 3

3	Create Landforms	Model: Students will create several landforms out of clay.	Clay, paper, scissors, toothpicks, tape, flat piece of cardboard	Quiz 1
3	Classify Rocks	Investigation: Students classify rocks.	Five different rocks, scale	Quiz 2
3	Turning Trash into Soil	Investigation: Students investigate to see which types of trash turn into soil.	6 mason jars, apple core, piece of plastic, 2 leaves from outside, piece of bread, piece of aluminum foil, piece of paper, soil from outside (not store), disposable gloves, paper, tape	Quiz 3
4	Ecosystem Research	Activity: Students create a poster about the ecosystem of the their choosing.	Poster board, markers	Quiz 1
4	Ecosystem Food Chain	Activity: Students research and draw a food chain for the ecosystem they chose in the first activity.	Paper, marker, computer (with internet), printer (optional)	Quiz 2
4	Design a Terrarium	Investigation: Students design a terrarium to observe the ecosystem inside it.	Terrarium setup (includes glass container, soil, different types of plants (and maybe animals), decorations, water	Quiz 2
4	Reduce, Reuse, Recycle	Activity: Students will make a poster board about the different ways to reduce, reuse, and recycle at home.	Poster board, markers, or crayons	Quiz 3
5	Grow Tomato Plants	Investigation: Students will observe and measure a tomato plant grown from seed. * This activity is for 10 weeks and spans four Units.	Tomato seeds, Styrofoam cup, potting soil, water ruler, journal	Quiz 1 (the seeds planted)
5	Grow Tomato Plant Week 1	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 2
5	Grow Tomato Plant Week 2	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 3
6	Animal Investigation	Activity: Students will create a poster about an animal of their choosing.	Poster board, markers, printer, computer with internet	Quiz 1

6	Grow Tomato Plant Week 3	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 1
6	Animal Investigation: Animal Life Cycle	Activity: Students continue research on their animals' life cycle.	Paper, pencils or markers, computer with internet	Quiz 2
6	Grow Tomato Plant Week 4	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 2
6	Animal Investigation: Survival traits	Activity: Students research their animal's adaptations. They will also finish and present their poster.	Poster board, markers, printer, computer with internet	Quiz 3
6	Grow Tomato Plant Week 5	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 2
7	Measuring Matter	Investigation: Students take measurements of a gummy bear before and after soaking it in water.	Gummy bear, scale, 100 mL graduated cylinder, large Styrofoam cup, metric ruler, thermometer, paper towel	Quiz 1
7	Grow Tomato Plant Week 6	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 1
7	Float or Sink	Investigation: Students design, build, and test three different boats to see which design is better at floating.	4 rubber bands, 2 pieces of sponge (3 x 10 cm), 4 straws, 6 popsicle sticks, 1 piece of clay (2 x 15 cm), 1 piece of foil (1 x 2 feet), 50-100 marbles	Quiz 2
7	Grow Tomato Plant Week 7	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 2
7	Physical Change	Investigation: Students predict, observe, and record physical changes in water.	Safety goggles, hot plate, freezer, 2 beakers (100-200 mL), graduated cylinder, water, masking tape, pencil, stopwatch, thermometer	Quiz 3
7	Grow Tomato Plant Week 8	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 3

8	Magnetism	Investigation: Students will test the force of magnetism on paper clips.	Three different types or sizes of magnets, 50 metal paper clips	Quiz 1
8	Grow Tomato Plant Week 9	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 1
8	Advertising	Activity: Students evaluate the claims of 5 different advertisements.	5 product advertisements	Quiz 2
8	Grow Tomato Plant Week 10	Investigation: Students measure and record observations on the tomato plant.	Ruler, journal	Quiz 2
9	Kinetic Energy	Investigation: Students will test how weight affects kinetic energy.	2 small balls or marbles, top of a paper milk carton, board that can be used like a ramp, books, meter stick	Quiz 1
9	Energy Report	Activity: Students research energy in their city and make a poster board.	Poster board, markers or crayons, computer with internet, printer	Quiz 3
10	Sound and Light	Investigation: Students will test and prove that sound is a form of energy.	Safety goggles, small plastic bowl, plastic wrap, salt, 2 metal pots or pans	Quiz 1
10	Make a Guitar	Investigation: Students will make a guitar and test how different changes make the pitch higher or lower.	Sound recording device, shoebox, rubber bands (different lengths and thicknesses), scissors, glue, empty paper-towel tube, unsharpened pencil, 2 craft sticks, OPTIONAL: markers, crayons, stickers (for decoration), copper wire, clothesline string, yarn (to replace rubber bands), marker, empty toilet-paper tube (to replace unsharpened pencil)	Quiz 2
10	Lenses	Investigation: Students will use a variety of lenses for different observations.	Collecting net, hand lens, digital camera, microscope	Quiz 3