


Grade 2 Unit 1: Property and Phases of Matter - Physical Science

Mystery Science: Material Magic

Timeline: September/October

Mystery	Supplies
Mystery 1: Material Properties, Engineering	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Aluminum Foil 19 feet</p> <hr/> <p>Clothespins ⓘ 50 clothespins</p> <hr/> <p>Paper Cups (8 oz) 7 cups</p> <hr/> <p>Paper Lunch Bags 25 bags</p> <hr/> <p>Paper Plates (9") 25 plates</p> <hr/> <p>Paper Towels 25 sheets</p> <hr/> <p>Plastic Spoons 14 spoons</p> <hr/> <p>Thin String ⓘ 75 feet</p> <hr/> <p>Hand-Held Mirror (Optional) Details</p> <hr/> <p>Hat Inspiration printout Print 7 copies</p> <hr/> <p>Mad Hatter's printout Print 25 copies</p>
Mystery 2: Material Properties, Classifying Materials	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Aluminum Foil 22 feet</p> <hr/> <p>Plastic Bottles (8oz) 14 bottles</p> <hr/> <p>Socks Details</p> <hr/> <p>Styrofoam Cups (6 oz) 26 cups</p> <hr/> <p>Feel the Heat Answer Key printout Print 1 copy</p> <hr/> <p>Feel the Heat printout Print 25 copies</p>

<p>Mystery 3: Material Changes & Phases of Matter</p>	<p>Each student needs:</p> <ul style="list-style-type: none"> • a ziplock bag (snack-size or sandwich-size) • a “push stick” — that is, a spoon, popsicle stick, or ruler • a “Testing Candy for Camp Way-Too-Hot” worksheet  <p>Each pair of students needs:</p> <ul style="list-style-type: none"> • a container with a lid (We use plastic food storage containers like these or these. You may be able to get some at your local deli.) • a styrofoam plate or thick paper plate (used for insulation to keep the water hot longer. Craft foam will also work, but a thin paper plate will not work.) • a dozen chocolate chips or a square of milk chocolate <p>You’ll also need:</p> <ul style="list-style-type: none"> • a source of hot water • a small bag of candy with a high melting point, such as jelly beans, gumdrops, OR Swedish fish • a small bag of candy with a low melting point, such as gummy bears (our favorite), Life Savers Gummies, OR gummy worms. Look for gelatin in the ingredient list. • a small bag of candy with an intermediate melting point, such as Starburst, caramels, OR butterscotch chips • (Optional — see below) a cooler (or a cardboard box and a bath towel) 																										
<p>Mystery 4: Material Inventions, Engineering</p>	<p>Printout</p>																										
<p>Mystery 5: Materials, Properties, & Engineering</p>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: right;">Number of students:</td> <td style="border: 1px solid gray; padding: 2px;">25</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Hardcover Books</td> <td style="text-align: right;">Details</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Ruler</td> <td style="text-align: right;">25 rulers</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Scissors</td> <td style="text-align: right;">25 pairs</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Index Cards (3x5)</td> <td style="text-align: right;">500 cards</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Smooth Paper Clips (#2)</td> <td style="text-align: right;">400 clips</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Paper Towers printout</td> <td style="text-align: right;">Print 25 copies</td> </tr> </table>	Number of students:	25	<hr/>		Hardcover Books	Details	<hr/>		Ruler	25 rulers	<hr/>		Scissors	25 pairs	<hr/>		Index Cards (3x5)	500 cards	<hr/>		Smooth Paper Clips (#2)	400 clips	<hr/>		Paper Towers printout	Print 25 copies
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Grade 2 Unit 2: Erosion and Earth's Surface - Earth Science


Mystery Science: Work of Water

November/December

Mystery	Supplies
Mystery 1: Mapping, Earth's Surface, & Landforms	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Blank Paper (8.5 x 11") Details</p> <hr/> <p>Markers Details</p> <hr/> <p>Dot Stickers ⓘ Details</p> <hr/> <p>Spray Bottles 7 bottles</p> <hr/> <p>Table Covering (Trash Bag) ⓘ 14 bags</p> <hr/> <p>"This is _____'s land" printout Print 13 copies</p>
Mystery 2: Erosion, Earth's Surface, & Landforms	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Colored Construction Paper 21 sheets</p> <hr/> <p>Draw the River Rocks printout Print 25 copies</p> <hr/> <p>River (5 sheets) printout Print 7 copies</p>

Mystery 3:
Erosion,
Earth's
Surface, &
Landforms

Each student needs:

- a spoon
- 2 3-oz Dixie® cups (or similar cups)
- ["How did water change your land?" handout \(2 pages\)](#) 

Each pair of students, or each homeschool student, needs:



- paper plate to build on
- plastic plate to catch the water
- 2 binder clips
- 2 Solo® plastic cups
- Solo® plastic cup filled with water
- a "shaker" (see Step 2 for details):
 - Solo® plastic cup with holes poked in the bottom (or a salt shaker)
 - cinnamon, or pepper, or flour (about 1 tsp)
- a "drip cup" (see Step 2 for details):
 - ruler
 - small plastic condiment cup [like this](#) (a paper cup will not work.)
 - a piece of sticky tack (available at a hardware store or through [Amazon](#))

Each table of 4 students, or each homeschool student, needs:

- newspaper or plastic for covering the table
- paper towels for mopping up spills
- food storage container big enough to hold about 1½ cups of cornmeal "land"
- 1½ cups of cornmeal "land" (see Step 2 for details):
 - cornmeal
 - salt
 - water

Mystery 4:
Erosion,
Earth's
Surface, &
Landforms

Each student needs:

- scissors
- paper towel
- paper plate
- plastic plate
- 1 3-oz Dixie® cup (or similar cup) for scooping up the "land"
- [Save the Hills worksheet](#) 
- [Plate Pocket worksheet](#) 

Each pair of students, or each homeschool student, needs:

- 10 toothpicks
- 10 cotton balls
- 4 paper-towel strips, each about 1" x 5"
- 2 pieces of aluminum foil, each about 1½" square
- 2 plastic cups (or Dixie cups) made into a "rainmaker" (see Step 2 for details)

Each table of 4 students, or each homeschool student, needs:

- newspaper or plastic for covering the table
- paper towels for mopping up spills
- food storage container big enough to hold about 1½ cups of cornmeal "land"
- 1½ cups of cornmeal "land" (see Step 2 for details)

If you saved the "shakers" from Mystery 3, you can reuse them in this lesson. If you did not, you will need:

- a pushpin


If you saved the "land" mixture from Mystery 3, you can reuse it in this lesson, adding a little cornmeal as needed to dry it out. If you did not, you will need:

- a few gallon ziplock bags or a mixing bowl
- measuring cups
- salt
- cornmeal
- water

Grade 2 Unit 3: Plant Adaptations - Life Science

Mystery Science: Plant Adventures

January/February/March

Mystery	Supplies
Mystery 1: Seed Dispersal	Each student will need: <ul style="list-style-type: none">• a copy of paper templates and instruction sheets for the Spinner , the Glider , or the Rotocopter . Each student will make one flyer.• scissors• a pen or pencil• a paper clip
Mystery 2: Roots, Water, & Minerals	Each student will need: <ul style="list-style-type: none">• a CD case. Ask each student to bring an empty CD case from home or buy some at an office supply store or Amazon.• 5 radish seeds. A 3-gram seed packet from your local garden/hardware store or Amazon contains about 240 seeds.• a pencil• a small piece of masking tape• a plastic sandwich bag (to hold the CD case)• a wet paper towel• a Root Viewer Worksheet
Mystery 3: Light, Leaves, & Competition	Each student will need: <ul style="list-style-type: none">• a Grass Head worksheet — print it here • a ruler• a ballpoint pen or Sharpie (water-soluble markers will not work)• a popsicle stick• 3 small rubber bands• 2 paper towels• a paper plate• a nylon knee sock, cut as described below (Available in boxes of 10 pairs at drugstores and on Amazon. Ten pairs is enough for 40 students.) In addition, you will need: <ul style="list-style-type: none">• about 2 cups (about one pound) of fast-sprouting grass seeds — check your hardware store for something like this from Home Depot or this from Amazon.• bowls or plates to hold ¼ cup of grass seed (one bowl for each group of 4 students)• cups of water (one cup for each group of 4 students)• a few ceramic coffee mugs and four plates (styrofoam, plastic, or ceramic) for the grass heads while they are sprouting. (Plates must have raised edges so they'll hold water.)

<p>Mystery 4: Adaptions & Habitat</p>	<p>Each student needs:</p> <ul style="list-style-type: none">• the Grass Head they made earlier• the Grass Head Worksheet from last week's lesson• a pencil• a paper plate to put their grass head on
<p>Mystery 5: Adaptations & Habitat</p>	<ul style="list-style-type: none">• a pencil• three Plant Cards

Grade 2 Unit 4: Animal Biodiversity - Life Science

Mystery Science: Animal Adventures

April/May/June

Mystery	Supplies
Mystery 1: Biodiversity, Classification, & Patterns	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Blank Paper (8.5 x 11") 52 sheets</p> <hr/> <p>Scissors 25 pairs</p> <hr/> <p>Animal Cards (2 pages) printout Print 13 copies Print on card stock if possible.</p> <hr/> <p>Challenge Cards printout Print 7 copies</p> <hr/>
Mystery 2: Biodiversity, Species, & Habitats	<p style="text-align: right;">Number of students: <input type="text" value="25"/></p> <hr/> <p>Who's Calling & Types of Frogs (2 pages) printout Print 25 copies</p> <hr/> <p>Who's Calling & Types of Frogs Answer Key (2 pages) printout Print 1 copy</p>

Mystery 3:
Biodiversity &
Engineering

Number of students: 25

Paper Punch	7 paper punches
Scissors	7 pairs
Aluminum Foil	13 feet
Dot Stickers ⓘ	Details
Paper Cups (8 oz)	25 cups
Paper Plates (9")	25 plates
Pipe Cleaners	50 pipe cleaners
Skewers ⓘ	25 skewers
Small Binder Clips (3/4") ⓘ	25 clips
Bird Feeder Inspiration printout	Print 7 copies
My Bird Feeder printout	Print 25 copies