

## SHOP & PREP LIST

i wonder...

### DAY 1

#### ACTIVITY | Straw-ry Rockets

- Straw-ry Rockets printable
- [plastic pipettes](#)
- straws
- tape or glue dots
  - WHAT TO PREP:** *Print and cut the printable into quarters, so that there are enough rockets for your group. Cut off the stem of the plastic pipettes and keep only the bulbs, cutting them wide enough so a straw could fit inside.*

#### ACTIVITY | STEM Self-Portraits

- 4x6 picture frames
- 4x6 cardboard rectangles (or the frame backing)
- Small, random objects (e.g., Legos, buttons, yarn, beans, popsicle sticks, rocks, bottle caps, etc.)
- hot glue or [craft glue](#)
  - WHAT TO PREP:** *Remove the glass or acrylic panes out of each frame. Add a sturdy piece of cardboard inside the frame or use the backing that comes with the frame.*

#### BIG IDEA | I wonder what makes my story unique?

- Crayons, colored pencils, or markers
- WHAT TO PREP:** *Print the Big Idea printable (1 copy per kid).*

#### BIBLE STORY | Created and Saved by God

- lab coat
- safety goggles
- nitrile or latex gloves
- chalkboard (or digital image)
- [robot helmet](#) (or make your own)
- Bible

**OBJECT LESSON | Created for Good Works**

- everyday household items (e.g., framed painting, broom, hanger, plunger, frying pan, hair dryer, shoehorn, etc.)

**SNACK | STEM Appétit!**

- mini marshmallows
- gummy worms
- Tootsie Rolls
- [Sociable crackers](#) (just the butterfly ones)
- piece of parchment paper
- tongs or disposable gloves
  - WHAT TO PREP:** Sort out all the butterfly crackers from the Sociable crackers box. Put all the ingredients in separate containers and provide tongs or gloves for kids to use.

**REFLECTION | What Makes My Story Unique**

- quarter-page sized slips of paper
- [6-inch plastic test tubes](#)
- pencil
  - WHAT TO PREP:** Cut paper into quarter-page pieces.

**RESPONSE | God's Laboratory**

- God's Laboratory printable
- pencil
- crayons, colored pencils, or markers
- hole punch
- yarn
  - WHAT TO PREP:** Print enough copies of the printable for the group. You could choose to laminate the finished products before hanging them up to make them glossy and sturdier.

**MEMORY VERSE | STEM-ory Stack**

- [punch cups](#)
- sharpies
- grabbing tool (e.g., [grabbers](#), tongs, clamps, clothespins, etc.)

**ACTIVITY | God's Handiwork**

- God's handiwork printable
- washable paint in various colors
- paper plates
- optional: baby wipes
- optional: paint, crayons, colored pencils, or markers
  - WHAT TO PREP:** Print the printable on cardstock or craft paper. Pour out different colored washable paint onto paper plates.

DAY 2

**ACTIVITY | There's an App for That**

- There's an App for That printable
- optional: device to present slideshow
  - WHAT TO PREP:** *Print out each image or create a slideshow using the images provided.*

**ACTIVITY | Build-a-Bot**

- bins (1 per team)
- straws
- popsicle sticks
- modeling clay
- string
- paper
- balloons
- plastic spoons
- LEGO pieces
  - WHAT TO PREP:** *Put the same amount of each item from the list into each bin. Feel free to add to the list with other useful objects.*

**BIG IDEA | I wonder what gifts God gave me?**

- Crayons, colored pencils, or markers
  - WHAT TO PREP:** *Print the Big Idea printable(1 copy per kid).*

**BIBLE STORY | Using Gifts from God**

- lab coat
- safety goggles
- nitrile or latex gloves
- chalkboard (or digital image)
- [robot helmet](#) (or make your own)
- Bible

**VIDEO | "The Present "**

- WHAT TO PREP:** *Cue up the video, "[The Present](#)" on a device connected to a screen.*

**OBJECT LESSON | Use It or Lose It**

- tea candle
- lighter or matches
- small piece of cardboard

### SNACK | STEM Appétit!

- 3 cups - rice cereal
- 3 cups - mini marshmallows
- 4 tbsp - butter
- 1 pinch - [salt](#)
- 1/4 tsp - vanilla extract
- 1/4 cup - mini chocolate chips
- 1/4 cup - M&M's other candies, or more chocolate chips
- pan
- rubber spatula
- cooking spray or oil to coat the pan
- portable camp burner
  - WHAT TO PREP:** Test out [this recipe](#) and make adjustments as needed. You could choose to prepare the snack in advance and just layer the dry ingredients in a glass baking dish as a demonstration.

### REFLECTION | What Gifts God Gave Me

- LEGO Duplo [blocks](#), [bristle blocks](#), or wooden blocks
- optional: LEGO Duplo [baseplate](#) or paper plates
- marker
- paper
- tape
  - WHAT TO PREP:** Write the following words in large print on its own piece of paper: leading, giving, serving, encouraging, and searching. Spread them out on a table and tape it down. You could choose to put out LEGO baseplates or paper plates for kids to stack their blocks on.

### RESPONSE | Gift Guide

- 4 poster papers
- sticky notes
- pencils or thin markers
  - WHAT TO PREP:** On each poster paper, write one of the following words: leading, serving, giving, encouraging.

### MEMORY VERSE | Memorable Gifts

- 5 copies of memory verse graphic
- 5 boxes
- [STEM-themed wrapping paper](#) or grid paper
- scissors
- tape
  - WHAT TO PREP:** Cut the memory verse graphic (provided in your Programming folder) and cut out each of the words and the Scripture reference so that you have 17 separate pieces of paper. Repeat this four more times. Put the five sets of memory verse pieces into five different boxes then gift-wrap them.

**ACTIVITY | Gifts Shouldn't Be Hidden**

- lemons
- water
- cotton swabs
- Gifts shouldn't be Hidden printable (printable with a STEM themed border and the words I WONDER at the top-kids will use their cotton swab to write the rest of the big idea in invisible ink)
- sun light or lightbulb

DAY 3

**ACTIVITY | Numbers Game**

- 12 small pieces of paper
- container to hold paper
- 6 dice
- WHAT TO PREP:** Write the numbers 1-12 on small strips of paper, fold them up and put them in the container.

**ACTIVITY | Bubbling with Love**

- measuring spoon (1 teaspoon)
- small cup (for mixing ingredients)
- baking soda
- dish soap
- food coloring
- vinegar
- coffee filters
- [test tubes](#)
- [pipettes](#)
- drip tray
- optional: tarp or trash bags
- WHAT TO PREP:** Set up stations where kids can get the ingredients for their mixture. You might want to lay out tarps to protect your surfaces from spills.

**BIG IDEA | I wonder what I can learn from others?**

- Crayons, colored pencils, or markers
- WHAT TO PREP:** Print the Big Idea printable (1 copy per kid).

**BIBLE STORY | Loving Like God**

- lab coat
- safety goggles
- nitrile or latex gloves
- chalkboard (or digital image)
- [robot helmet](#) (or make your own)
- Bible

### ACTIVITY | Stop Motion Movie

- Smart phone, touchpad, or iPad.
- Tripod or stand to hold your device steady
- [Stop Motion Studio app](#) (free or Pro version)
- Two pieces of [foam core](#)
- index cards
- sticky notes
- paper
- markers or crayons
- scissors
- Play-Doh
- toys (cars, figures, LEGOs)
  - WHAT TO PREP:** *Notify the leaders who will help you with this activity beforehand. Have them watch [this tutorial](#) (or a similar one) for a brief look at how to use the Stop Motion app and also have them check out [this sample](#) Stop Motion video to get a vague idea of what the finished product might look like.*

### OBJECT LESSON | Loving Others Silly

- cans of silly string

### SNACK | STEM Appétit!

- marshmallows (big, regular, mini)
- dried spaghetti
- chocolate bars
- graham crackers
- sandwich bags
  - WHAT TO PREP:** *Create [s'mores kits](#) or set up stations for kids to assemble their s'mores.*

### REFLECTION | What I Can Learn from Others

- [magnetic doodle boards](#)

### RESPONSE | Many Faces to Love

- [small box](#)
- [sticky notes](#) in 6 different colors
- optional: glue stick (to secure sticky note to box)
  - WHAT TO PREP:** *Assemble all the paper boxes beforehand and tape them closed. Make piles containing all 6 colors of sticky notes before hand so that they're easier to distribute to kids.*

### MEMORY VERSE | Coded Verse

- Coded Verse printable
- pencils
  - WHAT TO PREP:** *Print the printable.*

**ACTIVITY | Animated Action**

- sticky notes
- crayons, colored pencils, or markers
- optional: masking tape
  - WHAT TO PREP:** Create stacks of sticky notes (around 20 pages) for each kid, secure with masking tape across the top.

DAY 4

**ACTIVITY | Cloud Soap**

- [Ivory soap](#)
- microwave-safe dish
- microwave
- mixing bowl
- optional: [cloud-shaped cookie cutters](#)
- optional: [cellophane bags](#)

**ACTIVITY | Upgrade an Invention**

- Upgrade an Invention printable
- crayons, colored pencils, or markers
  - WHAT TO PREP:** Print the printable.

**POLL | Spending Time**

- [pretend dollar bills](#) (or currency of choice)
- 5 bins
- marker
- index cards
  - WHAT TO PREP:** Label 5 bins using index cards or a piece of paper: Reading, Singing, Exploring, Sharing, Praying. Prepare even stacks of play money (e.g., \$8, \$12, \$24, etc.) to give each kid. That way, kids will be forced to choose how to unevenly distribute their "time" (play money).

**BIG IDEA | Living for God**

- Crayons, colored pencils, or markers
  - WHAT TO PREP:** Print the Big Idea printable (1 copy per kid).

**BIBLE STORY | Loving Like God**

- lab coat
- safety goggles
- nitrile or latex gloves
- chalkboard (or digital image)
- [robot helmet](#) (or make your own)
- Bible

**VIDEO | “How Do I Pray?”**

- **WHAT TO PREP:** Cue this video: [“How Do I Pray?”](#) by Harvestark Studios.

**OBJECT LESSON | Let It Sink**

- 2 [beakers](#) (or tall glasses)
- 2 raw eggs
- 1-2 cups of salt
- spoon
- pitcher filled with water
- **WHAT TO PREP:** Test this experiment beforehand to measure out the ratio of water and salt needed. Take the eggs out of the refrigerator and allow it to warm to room temperature. Be sure to always wash your hands after handling uncooked eggs because they may carry salmonella.

**SNACK | STEM Appétit!**

- snack mix ingredients (Goldfish, pretzels, etc.)
- paper and pencils
- recyclables ( paper towel tubes, milk cartons, card board, etc.)
- small dowel rods
- rope or twine
- Screws and screwdriver
- small wood wedges
- cups or bowls
- tape and/or glue
- scissors

**REFLECTION | How I Can Spend Time with God**

- [pizza pans](#)
- [gear cut-outs](#)
- [number stickers](#)
- [long garden labels](#)
- [short garden labels](#)
- glue dots or glue sticks
- optional: [adhesive foam sheets](#) to make their own clock parts

**RESPONSE | Periodic Table of Evidence**

- colored paper
- markers
- tape

**MEMORY VERSE | Towering Verse**

- [Jenga game](#)
- paper
- thin marker
- optional: giant Jenga blocks or empty soda can boxes

## DAY 5

### EVENT | Museum Day

- purchase tickets to science museum
- optional: snacks, child line keepers, event t-shirts
  - WHAT TO PREP:** *Purchase tickets, check out group discounted rates. Organize chaperones. Collect release forms from parents. Arrange transportation.*

### EVENT | Space Day

- WHAT TO PREP:** *Choose which of [these activities](#) you want to set up and gather all the supplies needed. Designate a volunteer for each station.*

### EVENT | Engineering Day

- WHAT TO PREP:** *Choose 5 engineering challenges by searching online or using this [Family Engineering Book](#) (see also [Spanish](#) version). Gather all the supplies needed. Designate a volunteer for each station.*

### EVENT | H2O Day

#### ● Build A Waterslide

- straws
- painter's tape
- paper towel tubes
- aluminum foil
- bowls
- water
- Lego mini figure or small person figurines

#### ● Marble Maze

- pool noodles (cut in half and into various length pieces)
- marbles

#### ● [Water Balloon Launcher](#)

- (1) 3/4 inch x 10 foot white PVC pipe cut into the following sizes (you'll have a little bit of extra)
- (4) 12 inch pieces
- (6) 6 inch pieces
- (4) [3/4 inch elbow connectors](#)
- (4) [3/4 inch tee connectors](#)
- [PVC pipe cutter](#)
- [launcher](#)
- water balloons

#### ● Water Bottle Flip

- plastic water bottles

#### ● Drops on a Coin

- coins (preferably pennies)
- plastic pipettes

## PLAY STATIONS

### STATION 1 | Build-a-Thing

- [popsicle sticks](#) (various sizes)
- [rubber bands](#) (various sizes)
- [clothes pins](#)
- bowls or buckets

### STATION 2 | Cup O' Lego

- [punch cups](#)
- [Lego bricks](#) (various shapes, sizes)
- Lego mini figures
- [a piece of paper with water drawn on it](#) (or line up two rows of Lego bricks on a Lego baseplate and fill the middle with real water)

### STATION 3 | Run, Marble, Run!

- [cardboard sheets](#)
- bendy straws (cut to various sizes and lengths)
- painter's tape
- [marbles](#)

### STATION 4 | Magnetic Makers

- [Magnetic tiles](#)

### STATION 5 | Paper Plane Challenge

- variety of paper (copy paper, newspaper, card stock, scrapbook paper, etc.)
- tape or glue
- optional: print out some [instructions](#) of different airplanes for kids to try making

### STATION 6 | STEM Library

- [Beautiful Oops](#)
- [Look at That Building](#)
- [Iggy Peck, Architect](#)
- [If I Built a House](#)
- [The Three Little Pigs: An Architectural Tale](#)
- [The Boy Who Loved Math: The Improbable Life of Paul Erdos](#)
- [The Girl With a Mind for Math: The Story of Raye Montague \(Amazing Scientists\)](#)
- [Counting on Katherine](#)
- [The Big Book of Invisible Technology](#)
- [Astrophysics for Young People in a Hurry](#)

**STATION 7 | Fort the Love of STEM**

- bed sheets
- blankets
- various size chip clips or binder clips
- twine or string
- PVC pipe and connectors
- optional: [Fort Building Kit](#)

**STATION 8 | On Your Mark, Get STEM, GO!**

- kitchen sponges
- drinking straws
- plastic sandwich bags
- packing tape
- toy cars (poms poms would work too)