

KAS AGENDA 2026

JANUARY 9

MAKE:

- Marshmallow + toothpicks tower challenge
- Solar System color and hang one or two planets (bring painted box, instant glue, black thread, scissors, planet templates, instruction book)
- **For Mamie:** How to zoom out to solar system from Google Earth:
<https://www.tiktok.com/@wathmal/video/7400163389252668690>

SCIENCE:

- Salt crystals + watercolor (bring salt, petri dishes, coffee filter, watercolors, cards)
- Observe under microscope
- Bring printout
- Bring science prompts
- **For Mamie:** Salt crystal zoom video:
<https://www.tiktok.com/@macrofying/video/7012260337755983110>

GIFT:

- Small treasure box

JANUARY 16

MAKE:

- Marble Run (bring cardboard, box cutter, craft sticks, glue gun and glue stick – install last three sticks together)

ART:

- Marble + paint in box

SCIENCE:

- Cup and string sound experiment (cups, string, bluetooth speaker – try vibrations with water bowl first)
- Bring printout
- **For Mamie:** 10 min Video of fundamental science behind sound:
<https://www.youtube.com/watch?v=24yESm63tSY>

GIFT:

- Small music box

JANUARY 23

Make:

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Science:

- Rock crystal growing (string, saucepan, clean jar, ample sugar, print instructions)
- For Mamie 2:48 video <https://www.youtube.com/watch?v=3AapQLWc9cU>

January 30

Make:

- Rudolf (bring Rudolf on cardboard battery, battery holder, quick glue)
- Finish rocket ship (glue fins, trim nosecone)

Science:

- Vinegar and Baking Soda Volcano

Steps

1. Place $\frac{1}{4}$ cup of baking soda in a small cup or the crater of your volcano . Prepare separate bowls if you want multiple colors.
2. In a small bowl, mix a drop of food coloring into a tablespoon of water . Add the colored water to the baking soda and mix .
3. Add a drop of dish soap on top of the baking soda mixture .
4. Fill a squeeze bottle or cup with half vinegar and half water .
5. Pour or squeeze a little of the vinegar solution onto the baking soda mixture and stir with a popsicle stick. The mixture will foam and erupt like a volcano .
6. Add more vinegar to sustain the eruption. To repeat, add more baking soda and try different color combinations .

Science behind it

Baking soda (sodium bicarbonate) is a **base**, while vinegar (acetic acid) is an **acid**. When they combine, they form carbonic acid, which quickly decomposes into carbon dioxide gas and water. The gas bubbles make the liquid foam and overflow, producing the volcano-like eruption . Adding dish soap traps the gas in bubbles, intensifying the foamy “lava.”

Tips for Parents & Caregivers

- Encourage your child to make predictions before each experiment and discuss whether the results matched their expectations. This fosters critical thinking.
- Use descriptive language (e.g., heavy/light, sink/float, absorbent/not absorbent) to build vocabulary.

Read

- Robot adventure graphic novel

February 6

Make

- Craft Stick Stegosaurus

Science

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Read

- Robot adventure?

Play

- Alphabet Bingo
 1. Make a five-by-five grid on your white paper roll.
 2. Add a star in the middle for a free space.
 3. Pick letters you know your child can recognize.
 4. Pick letters in your child's name.
 5. Add a few new letters to the mix.
 6. Write the letters you picked on the paper.
 7. Add the magnetic letters you picked into an empty tissue box.
 8. Invite your child to reach into the tissue box to pick the letter and match it on the bingo card.

February 13

Make

- Balloon-powered car

Science

- Sugar crystals: <https://crystalverse.com/sugar-crystals/#part2>
- 3 cups sugar to one cup water. Heat covered until dissolved, turn off heat, leave covered. Turn off heat when clear. Pour when cool. Dip sticks in mixture then sugar. Food coloring, flavoring.

Read

- Robot adventure?

February 27

Play

- Ball shooting gallery

Science

- Craft stick lever lifter

Art

- Space paint book

Read

- Robot adventure?

March 6

Make

- Dinosaur clay

Science

- Dinosaur Crystals

Read

- Robot adventure?

March 13

Make

- Craft sticks and clothespins

Science

- Dinosaur Crystals

Read

- Robot adventure?

March 20

Make

- Handprint parrot

Learn-Play

- Alien Word Rescue Game

Read

- Robot adventure?

March 27

- Alien Word Rescue Game

Science

- Unwettable Paper Towel

Read

- Science comics: Dinosaurs

April 10

Make

- Kaleidoscope

Science

- Dinosaur Crystals
- Scaffold the cycle: **Wonder** → **Predict** → **Test** → **Observe** → **Explain** → **Try again**
(change one thing)

Read

- Science comix: Solar System
- Kas' 3 Brains

Ask:

- If you could only eat one food forever, what would it be?

April 17

Make

- Bubble wands/bubble mixture (Mason Jar Science p 34)
- Bring kaleidoscopes

Science

- Prism
- Bring beans to plant

Read

- Robot 3 brains

Play

- 3 Brain cards – lego tower challenge

Ask:

- What was your favorite part of today?

April 24

Make

- Zoetrope

Science

Paper Bridge

Read

- Kas and the Magic Box

Ask:

- What do you think your life will look like when you grow up?

May 1

Make

- Craft stick challenge

Science

- **Invisible ink**

What it shows: Heat can cause chemical changes that make hidden writing visible.

You need: Lemon juice, cotton swab, paper, lamp or hair dryer

Do

1. Dip swab in lemon juice and write a message
2. Let it dry (it disappears!)
3. Gently warm the paper (adult helps)

Prediction prompt:

"The message will appear when we heat it because ____."

Observe:

Where does the writing show first? What color appears?

Explain:

The lemon juice changes when heated and turns brown—like toast.

Read

- Kas and 3 brain adventure
- Kas and the thinking hat

May 8

Make



Science

- Germinate beans: petri dish, coffee filters
- Using just a couple of small LED flashlights wrapped with colored cellophane filters and a white surface, you can create overlapping beams that produce a dazzling array of colored shadows in minutes. When two different colored lights overlap on the wall, the parts where both hit create a third color — and as you block or move them you watch shadows change from single-hue to mixed hues right before your eyes (this is additive color mixing in action).

Materials (cheap + safe)

- 2–3 small flashlights or phone lights
- 2–3 translucent color gels: colored plastic wrap, report covers, cellophane, or markers on clear tape
- White wall or big sheet of paper

- Paper + thick marker for tracing shadow outlines
- Tape

Setup (2 minutes)

1. Tape the white paper to a wall or lay it flat on a table.
2. Make quick “color caps”: wrap each light with a different color (red, green, blue work great, but any two distinct colors will do).
3. Dim the room.

Part 1 — Make color shadows (5–8 minutes)

1. Aim two colored lights at the same spot on the paper. Place your hand (or a toy) between lights and paper to cast overlapping shadows.
2. Slowly move one light: watch the shadows split, merge, and change color.
3. Add a third light if you have it: notice even stranger mixes.

What’s happening (kid-friendly science bite):

White paper reflects many colors. When colored lights overlap, some wavelengths add together (additive color).

Caregiver / facilitator prompt (say it out loud)

- “What do you *notice* when the lights move?”
- “What do you *wonder* about that weird new color?”
- “If this shadow could talk, what would it say?”
- “How could we *test* our idea? (Try turning one light off, or swapping colors.)”
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Read

- Kas and the Silly Answers
- Scientific Method

Ask:

- What do you think your life will look like when you grow up?

May 22

Make

Craft-Stick Harmonica (ages 4–5)

What it teaches (in simple words): Sound is made by **vibrations**. Tighter bands vibrate faster → **higher pitch**. Looser bands vibrate slower → **lower pitch**. Moving the “bridges” (straw bits) changes how the band vibrates, so the **note** changes.

Time: 10–15 minutes

You’ll need (everyday stuff):

- 2 jumbo craft/popsicle sticks
- 1 wide, flat rubber band (loom band works)
- 2 small rubber bands
- 2 short drinking-straw pieces (about 1–1.5 in / 2.5–4 cm)
- Scissors (adult only)
- Optional: marker for decoratin

Safety (read first): Small rubber bands and straw pieces are choking hazards—keep out of mouths. An adult handles scissors and tight rubber bands. Supervise blowing so it’s not right next to ears.

Build steps (4–6):

1. **ADULT:** Cut two straw pieces ~1–1.5 in long.
2. Stretch the **wide** rubber band lengthwise along one craft stick, about 1/3 inch in from one long edge.
3. Slide one straw piece **under** the band on the left, the other under the band on the right—these are your tiny “bridges.”
4. Place the second stick on top to make a sandwich.
5. Wrap a **small** rubber band around each end to hold the sticks together—snug, but the wide band must still vibrate.
6. To play: blow **across** the gap over the rubber band (like across a bottle). Try gentle hums too.

How to explore sound:

- **Move a bridge:** Slide a straw piece a little left/right. Listen—did the pitch change?
- **Pinch & pluck:** Lightly pinch the wide band near a bridge and pluck—compare spots.
- **Breath experiments:** Soft vs strong breath; long vs short puffs.

Two easy variations:

- **A) Band thickness:** Swap the wide band for a thinner one (or stack two). Thicker/tighter → higher pitch; thinner/looser → lower pitch.
- **B) Buzzy “kazoo”:** Slip a thin strip of wax paper under the band to add a raspy buzz (timbre).

Quick kid-friendly science lines:

- “We hear **vibrations**.”
- “**Tighter = higher, looser = lower**.”
- “Moving the bridges changes the **note**.”

Science

- Encourage children to predict which items [dissolve in water](#). Test sugar, flour, oatmeal, and sprinkles.

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Read

- Kas and tricky thinking

May 22

Make

- Paper rocket <https://www.sciencebuddies.org/stem-activities/paper-rocket>

Science

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Read

- Kas and dinosaur challenge

May 29

Make: straw and pipe cleaner construction

Materials

- Straws
- Pipe cleaners
- Tape

Steps

1. Connect straws with pipe cleaners.
2. Build shapes and structures.
3. Test strength.

Maker Challenge

Can you build:

- A triangle?
- A tower?
- A robot?
- A bridge?

Science

- Scientific method comic coloring

Read

- Kas and silly robot
- Metacognition comix

June 12

Make

- Paper rocket <https://www.sciencebuddies.org/stem-activities/paper-rocket>

Science

- Make a compass

Read

- Science: solar system
- Kas thinking hat with prompts

June 25

Make

- Tinker Toys

Science

- Pour some milk onto a plate Add drops of food coloring, leaving a little space in the center Sprinkle baby powder over the milk Add a drop of dish soap in the middle. Watch the colors swirl, mix, and dance across the plate!

Read:

- Science: Solar System