

Summer Playbook

Summer 2020



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GAK Lab

Materials:

- Large bowl
- Glue
- Water
- Borax solution
- Plates or trays
- 1 cup measuring cup
- Markers (red, yellow, blue)

Set up:

Create the Borax solution by mixing 1 cup warm (not hot) water to 1/2 TBSP Borax. Borax can typically be found in most cleaning aisles. Wear gloves when mixing the solution as to not get Borax directly on hands.

Instructions:

- Explain that you will be using liquids and mixing them together to form a solid. Talk to your children about the difference between liquids and solids and to name some examples.
- The ratio is 1 cup of glue, 1 cup of water, 1 cup of the borax solution. This will make enough GAK for 7 kids. Multiply until you reach the desired number.
- Pour in the glue first, then the water. Mix the glue and water together, and then add the borax solution. Have the kids make observations and hypotheses about what they notice throughout the process.
- Mix the GAK slowly and move your hand up and down so they can see the chemical reaction happening and the new solution come together.

Questions to Ask:

What do we know about glue?

Do you think this glue and water mixture will still be sticky?

What has changed?
What is different?

- Squeeze, stir and press the GAK together as it takes its new form. Mix until there is no more liquid.
- Allow children to pick out two marker colors they would like to use to color their GAK.
- Pass out a small amount of GAK to each plate (or tray) and let them begin to add color. As they add color and then experiment with the GAK, talk about what changes they see. More color can be added in until they reach the desired color.

Extras:

- Use a ruler to measure how far you can stretch your GAK.
- Push and pull your GAK through small containers with holes, such as fruit containers.
- Cut your GAK with child scissors or cookie cutters.

More Questions to Ask:

- How does the Gak feel?
- Our gak is white, and our markers are _____. What happens when you mix white and ____ together? What happens when you mix BOTH colors of markers?

Clean up:

- GAK cannot go down the sink. If there is any GAK left in the bowl, try to scrape it into the garbage can.
- Do not allow glue or borax to go down the sink at the same time, because it will react and become a solid in the drain. Scrape GAK off plates and throw away.

Window Art

Set Up:

Tear or cut up the tissue paper into various shapes and sizes. Using the painter's tape, create the outline of various shapes or objects on your window. This makes a frame for the tissue paper pieces.

Tip: have the kids help you create the tissue paper pieces. Ripping paper or practicing scissor safety promotes fine motor skills!

Materials:

- Tissue Paper pieces
- Painter's Tape
- Water
- Small cup
- Paint brushes
- Spray bottle (optional)

Instructions:

- Using a paint brush or the spray bottle, get a section of the window wet. Then place pieces of the tissue paper on the wet area of the window, allowing the tissue paper to stick.
- If more water is needed to help the tissue paper stick, paint or spray more water on top of the tissue paper instead of the window.
- Pieces of tissue paper can be overlapped, creating different shades or colors.
- Let the tissue paper dry. Look at the artwork at different times of the day, depending on the lighting. Talk with the kids about how it looks different in the day time versus the night time.

Questions to Ask:

- What shape is this? What colors do you see?
- What happens when you layer colors together?
- Can we add other paper too?

Clean Up:

- After the tissue paper dries, it should easily peel off the windows.
- Using a damp sponge or cloth can also easily wipe off the tissue paper pieces.
- *Note: this is a temporary art project and will not stay on for a long time after the water dries. It does not stain windows.*

Tiny House (Re)Build

Set Up:

- Collect recycled materials such as: paper towel tubes, toilet paper tubes, yogurt cups, cardboard, plastic lids, plastic containers, etc.
- You can also use blocks, Legos, lincoln logs, or something similar along with or instead of the recycled materials.

Materials:

- Recyclable Materials
- Blocks or Legos (optional)
- Masking Tape
- Scissors
- Markers

Instructions:

- Before your child begins to build, take a moment to work together to come up with a purpose for your tiny house. Think about who would be living in it and what they would need.
 - For example: if you are building a house for a fairy, they would not need stairs because they can fly.
- Encourage children to create a plan for building with the goal of solving a problem for someone else.
- While building, encourage problem solving skills and independence to try to different methods.

Questions to Ask:

- How does this object help the person/thing you are building for?
- What do they need to live in the house?

Clean Up:

- Materials can be broken down to re-use for future creative projects.
- If materials are unusable for future projects, please recycle them appropriately.

Indoor S'mores

Recipe From Gale Gand via the Food Network

Materials:

- 32 miniature graham crackers or 8 regular size graham crackers, broken in 1/2
- 2 milk chocolate bars, the kind that can be broken into squares
- 8 marshmallows

- Makes: 16 miniature servings or 8 regular

Instructions:

- Preheat oven to 400 degrees F.
- Lay 1/2 of the graham crackers on a cookie sheet.
- Top with chocolate pieces to cover.
- If using miniature graham crackers:
 - Use kitchen scissors to snip the marshmallows in 1/2 horizontally. Place 1/2 a marshmallow on top of each graham cracker.
- If using regular size crackers use a whole marshmallow.
- Bake until the marshmallows are puffed and golden brown, about 3 to 5 minutes.
- Remove from the oven and top with the remaining graham crackers, pressing down slightly to make a sandwich.
- Enjoy while warm!

Next: Create Your Own Recipe!

Materials:

Makes: _____

Instructions:

- _____

- _____

- _____

- _____

- _____

Family Flags

Materials:

- Construction Paper
- Colored pencils, crayons, or markers
- Other art materials to decorate (stickers, sequins, glue, etc.) - optional
- Scissors
- Tape

Set Up:

- Work with your child to determine what shape they would like their Family Flag to be. Example shapes: rectangle, square, triangle
- Cut out the flag.
- Show your child an image of a flag or a real-life flag!

Instructions:

- Talk to your child about activities that the family does together, things or places that are important to the family, and different characteristics of each person in the family.
- Encourage your child to think of symbols, pictures, and colors that can represent the activities, things, places, and characteristics.
- Use the chart on the next page to write down ideas.
- Draw, color and decorate the Family Flag with the symbols, pictures, and colors.
- When finished, have the child present the flag to you, another family member, or friend.
- Tape up the flag somewhere visible, such as a window or wall.

Questions to Ask:

- What is a favorite memory of being with your family?
- What is something your family does together?
- Why did you choose that symbol? Color?

Activities, things, places, characteristics of your family	Symbols, pictures, & colors

Paper Airplane Challenge

Materials:

- Paper
- Markers or colored pencils (optional)
- Props for challenges

Instructions:

- Using one of the provided templates, work with your child to create one of the paper airplanes.
- Focus on folding precisely and neatly with your child to practice fine motor skills.

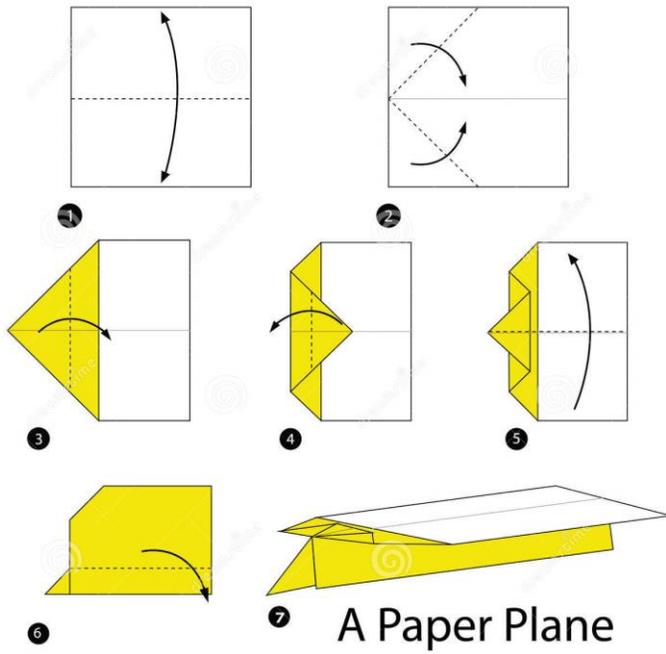
Challenge Ideas:

- Accuracy challenge – get the paper airplane in the bin
- Obstacle challenge – get the paper airplane around the obstacle (such as a chair) and to the target spot

Additional Resources:

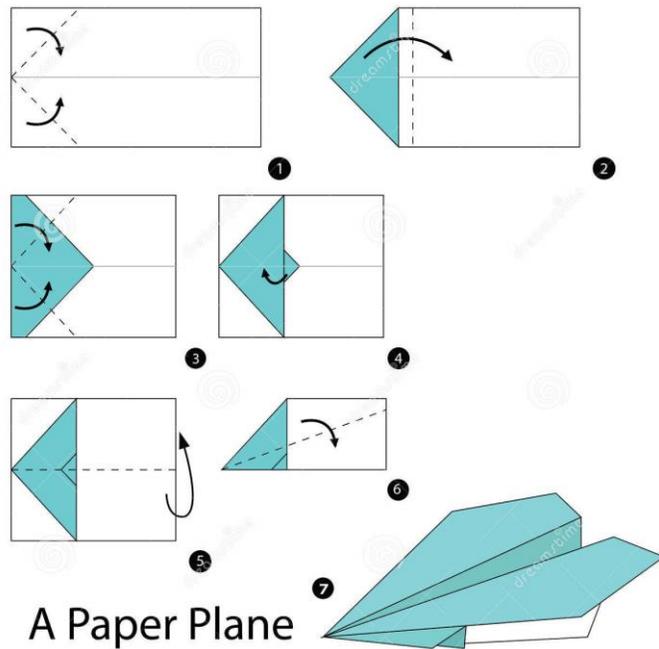
- Exploratorium Roto-Copter:
https://www.exploratorium.edu/science_explorer/roto-copter.html
- DIY Straw and Paper Airplanes:
<https://www.diynetwork.com/how-to/make-and-decorate/crafts/how-to-make-straw-and-paper-airplanes>

Templates Courtesy of Dreamstime



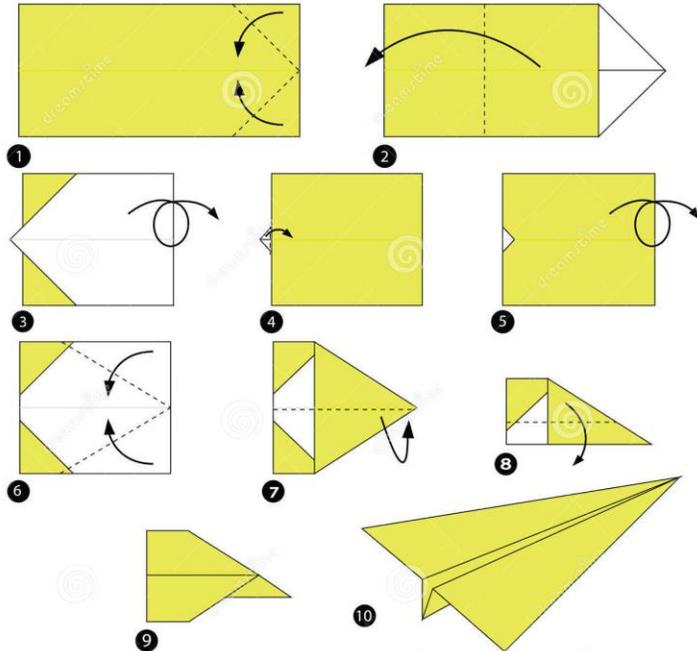
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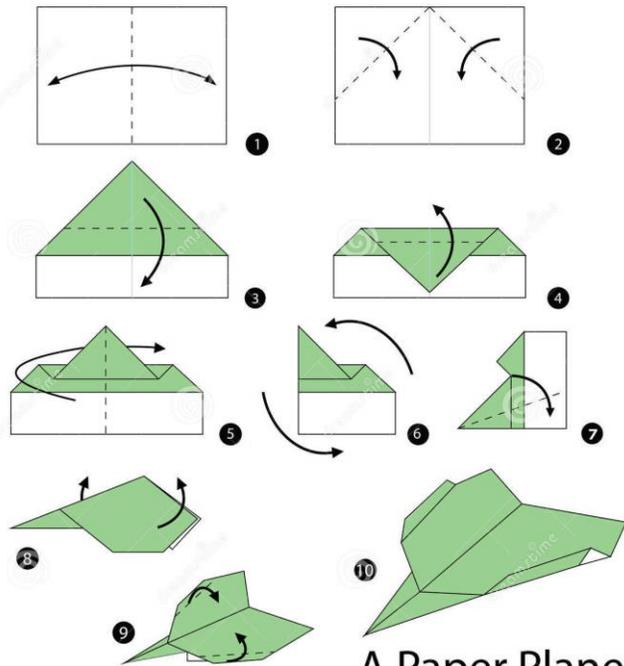
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Indoor Bowling

Set Up:

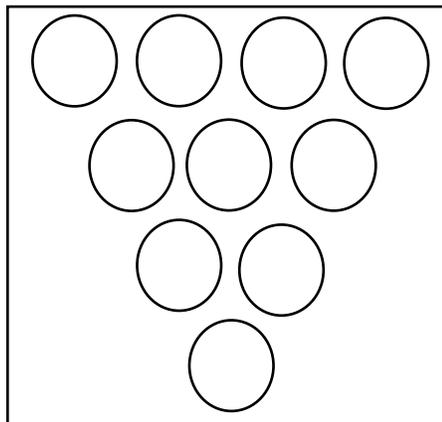
- If using water bottles, place a small amount of sand, rice, or dirt in the bottom of an emptied water bottle. This will give the “bowling pin” some weight. Tape or glue the lid on the water bottle.
- If using paper towel tubes or toilet paper tubes, seal off one end of the tube using tape. Place a small amount of sand, rice, or dirt in the bottom of the tube to add weight. Tape off the other end of the tube to prevent spilling.

Materials:

- A small ball
- 10 Plastic water bottles, paper towel tubes, or toilet paper tubes
- Sand, rice, or dirt
- Tape or glue

Instructions:

- Place the bowling pins in a triangle, as shown in the picture below.



- Roll the ball, aiming to knock down all 10 bowling pins.
- If only some bowling pins were knocked down, remove them. Keep the bowling pins that were standing up.
- Continue rolling the ball until all pins are knocked down.
- Once all bowling pins have been knocked down, reset all 10 bowling pins for the next player.

Questions to Ask:

- Can you count how many bowling pins were knocked down?
- How many bowling pins are still standing?

Tips:

- Number the bowling pins from 1-10 using a marker, stickers, etc.
- Let children practice setting up the pins in order.
- Set up the bowling pins using only odd numbers or only even numbers.
- Other options to create bowling pins: milk cartons, cereal boxes, plastic cups

Nature Scavenger Hunt

For this activity you will be exploring the great outdoors! Bring a bag with you to collect materials from that you can use to make art when you get home.

Animals	On the Ground
<ul style="list-style-type: none"><input type="checkbox"/> A flying animal<input type="checkbox"/> An animal with four legs<input type="checkbox"/> A bug<input type="checkbox"/> An animal making sound<input type="checkbox"/> Animal tracks<input type="checkbox"/> A bird's nest	<ul style="list-style-type: none"><input type="checkbox"/> Different sized rocks*<input type="checkbox"/> Twigs & small branches*<input type="checkbox"/> Trash (Help clean up!)<input type="checkbox"/> Squishy mud<input type="checkbox"/> Sand<input type="checkbox"/> A puddle to jump in

Plants	Along the Trail
<ul style="list-style-type: none"><input type="checkbox"/> A tree taller than you<input type="checkbox"/> Leaves & pine needles*<input type="checkbox"/> Pinecones & acorns*<input type="checkbox"/> A flower with a lovely smell<input type="checkbox"/> A mushroom<input type="checkbox"/> Blades of grass*	<ul style="list-style-type: none"><input type="checkbox"/> Water<input type="checkbox"/> A grassy area<input type="checkbox"/> A hill<input type="checkbox"/> A helpful sign<input type="checkbox"/> A spider web<input type="checkbox"/> A person on a bike

Questions to Ask:

- What was your favorite thing you saw on the walk?
Why?
- What do we know about (insert nature object here)?
- What do we want to learn about (insert object here)?
- What was something that surprised you that we found on our walk?

Explore Further with Art!

Now that you have collected your natural materials, you can use them to create art. You can try one or all these activities to use natural materials in new and exciting ways!

Painting with Nature

Materials: Natural Materials, Paint, Paper, Paint Brush

Use your natural materials to paint! Use a brush to apply paint to your materials or just dip the materials in the paint. Roll, press, lay, and use your materials in all sorts of creative ways to paint on your paper. What kind of patterns can you make? See what happens when you lay a flatter material, like a leaf, on your paper and paint over it with a brush. What is left when you pick the leaf up?

Rock Painting

Materials:

- Different sized rocks from your Nature Scavenger Hunt (p. 18)
- Paint Brushes
- Cups for water
- Acrylic Paint (optional)

Tips: Smooth rocks work the best! Find rocks of different shapes and sizes.

Set Up:

- If planning to paint rocks with acrylic paint, give rocks a quick rinse under water to remove any excess dirt and debris. Allow them to dry, preferably in the sun.
- If planning to keep the rocks outside after using acrylic paint, use a foam brush to paint a layer of acrylic sealant, outdoor acrylic sealant, or use an acrylic spray varnish to help protect the paint. (optional)
- Note: Acrylic paint is water-resistant but not waterproof and can stain clothing.

Instructions:

- Set up the rocks, paint brushes, and cups of water outside. Place newspaper under painting space.
- If painting with water, dip the brushes in the cups and paint on the rocks.
- Examine how the water changes the color of the rocks.

- Allow to dry. Re-examine how the color changes as the water dries on the rocks.
- Rocks can be re-used to paint with water multiple times.
- If painting with acrylic paint, you can paint directly on the rocks or add a single-color base layer. Allow to dry.
- Use the paint brushes and paint to add designs, drawings, or to add abstract color.
- Allow acrylic painted rocks to dry overnight.

Night at the Museum

This exciting group game can be played with 3 or more people. A great daytime game, but can also be played at night with flashlights or glow sticks!

Game Rules:

- One person is chosen to be the museum guard.
- All other plays are statues or dinosaurs in the museum – they come alive when the museum guard isn't looking!
- The museum guard turns around, closes their eyes and counts to 10. During this time the other plays can move around the area and freeze in a statue pose.
 - Blinking, sneezing, breathing does not count as moving!
- As soon as the museum guard turns around, all of the statues and dinosaurs have to freeze. They can only move again if the museum guard cannot see them or has their back to them.
- The museum guard goes around to each player and is the only one that can move.
- If the museum guard spots any movement, the player is out.
- Once there is only one person left, restart the game with that player as the new museum guard!

Tips:

- If playing indoors, encourage players to be quiet while moving around. You don't want the museum guard to hear you moving!
- Talk to players about statues: Do they move? Do they touch each other? How do they pose? Do they come alive at night?!

Game Variations:

- Players that have been spotted moving become Security Cameras! Security Cameras should have a designated place to stand. They help the Museum Guard by pointing silently when they see a statue move. The Museum Guard can look at the Security Camera to see where they are pointing!

Wonders of Water

Will it Sink or Float?

- Grab a plastic bin, large kitchen bowls or other containers and fill with water.
- Test out different items, such as a plastic toy, a wooden block, or a metal spoon, to see if they sink or float!
- Tip: Have your child guess what will happen before placing the item in the water. A great bathtub activity!

Homemade Boats

- Design a boat using household materials such as tinfoil, plastic cups or bowls. Get creative with recyclable materials!
- Challenge kids to make the boat move without using their hands or to count how many pennies they can put in the boat before it sinks!

Frozen Color Mixing

- Fill an ice cube tray with water and liquid watercolor to create red, yellow, and blue ice cubes. Food color coloring can be used but does stain.
- Once frozen, put the ice cubes into 3 different containers.

- Kids can use their hands, tongs, and spoons to explore mixing the ice cubes on paper. They can also mix on plates or bowls!
- What happens if you put two different color ice cubes in a bowl filled with water?
- Extra: Grab a squirt bottle filled with water to melt the cubes faster.
- Tip: Talk to kids about the three primary colors (red, yellow, and blue) and how they can mix together to create the secondary colors of green, purple, and orange.

Toy Rescue

- Play with different temperatures of water and ice for a fun sensory activity!
- Freeze small toys or nature objects, such as legos or pinecones, in an ice cube tray or muffin tin.
- After frozen, place frozen toys in a larger bin.
- Provide another container with warm water and tools such as squirt bottles, small cups, spoons or sponges.
- Kids need to then use the tools to melt the ice and rescue the toy or object!

Fill the Cups

- A simple measuring and water transfer activity!
- In a bin, put sponges and measuring cups.
- See how much water you can get into the cups only using sponges!Tip: Another fun bathtub game!

Car Wash

Materials:

- Washable paints
- Paint Brushes
- Toy Cars & Trucks
- Plastic bin or large bowls for water
- Dish Soap
- Sponges or cloth for cleaning
- Small bowls or cups for paint

Set Up: Depending on where the kids will be painting, determine if you need to set down newspaper or an old sheet to catch any spilled paint. Put paint into small bowls or cups ahead of time.

Instructions:

- Encourage children to paint the cars with different colors.
- While they are painting, mix a small amount of dish soap in the bin or bowl of water.
- Have kids dunk their painted toys into the soapy water bin to clean the cars. Add in some sponges for additional scrubbing fun!

Tips:

- Legos, plastic dolls, balls or other plastic toys can also be used.
- Grab some paper or canvas and use the toys to paint. Wheel tracks make a cool design!

Bubble Bonanza

Materials:

- 6 cups water
- 3/4 cup Dawn dish soap
- 6 tablespoons glycerin
- Large container with lid
- Smaller container with lid

Instructions:

- Mix all ingredients together in a large container. Pour into smaller containers to make it easier for the children to access.
- You can find many different things to use to blow bubbles. A few favorites are the green strawberry baskets, spatulas with holes, metal hangers, pipecleaners, or cookie cutters!

Tips:

- For the best success blow bubbles on cloudy days (which we have a lot of in the Northwest), humid, muggy days, right after a rain shower (we have these too) or at dusk.
- You can often purchase glycerin at stores that sell beauty products or craft supplies!

Homemade Sidewalk Chalk

Version #1

Try your hand at making homemade sidewalk chalk! This version requires a few more ingredients and steps, but creates more traditional sticks of chalk.

Tip: Plaster of paris can typically be found at a craft store! Be careful that it does not go down your sink drain. Disposable mixing tools and placing down newspaper or an old towel are recommended to protect your space.

Materials:

- Plaster of paris (dry powder)
- Tempera Paint
- Silicon mold – any shapes
- Water
- Disposable bowl or cup
- Plastic spoons

Instructions:

- Mix two parts plaster of paris to one part water in your disposable bowl or cup. For example, mix two cups of plaster of paris with one cup of water.
- Add in paint – less for lighter colored chalk and more paint for deeper colored chalk. Stir until fully combined.
- Pour the mixture into the silicon molds.

- Let sit at room temperature until dry, approximately three hours.
- Gently remove shapes from mold.

Version #2

Materials:

- 3 cups cornstarch
- Food coloring
- 3 cups of water
- Large mixing bowl
- Disposable bowls/cups or a 6-cup muffin tin
- Paint brushes
- Jars with lids (optional)

This 3 ingredient version makes liquid paint sidewalk chalk. Grab some paint brushes and use this unique formula to add some color to your sidewalks!

Instructions:

- In the your mixing bowl, add the cornstarch and water. Mix well until all clumps are gone.
- Divide equal amounts of the mixture into the disposable bowls/cups or in the muffin tin cups.
- Add 2-4 drops of food coloring to each separate bowl/cup of mixture. The more drops you add, the deeper the color will be. Mix well.
- While painting, the cornstarch may settle on the bottom so mix periodically.

Tip: Leftover mixture can be placed in jars with lids for a few days. Shake well before use! Be careful with food coloring as it can stain clothing.