

**Hands-On  
Learning**

**Week 8**

**4<sup>th</sup>  
Grade**

# **Independent Study Packet**



**Educational Activities  
to Create, Problem Solve,  
Move, and Have Fun**

# Table of Contents

This Activity Packet is a collection of open-ended learning challenges that encourage your child to create, build, design, and move. For these activities, you will need materials like paper, tape, markers, and scissors. You will also need other materials, but feel free to substitute with what is around your home.

We recommend allowing your child to choose 2-3 activities per day. Each packet contains a selection of "choice boards," and these can be used over

multiple days. You may also want to review the packet together and make a week long plan using the planner included, or your own.

Brain Breaks can be used throughout the week to support your child in moving their body when they need to take a break from focusing on academic work. The STEM Design Challenge: Brainstorm and Reflection Sheet can be used to help your child dig deeper into the open-ended learning challenges.

<b>Weekly Planner</b>	<b>Page 3</b>
<b>Brain Breaks</b>	<b>Pages 4 - 5</b>
<b>STEM Design Challenge: Brainstorm and Reflection Sheet</b>	<b>Pages 6 - 7</b>
<b>At-Home Activity Choice Board</b>	<b>Page 8</b>
<b>Building Brick Challenge: Make a Tic-Tac-Toe Grid</b>	<b>Pages 9 - 10</b>
<b>Create a Home Challenge Course</b>	<b>Page 11</b>
<b>Chest &amp; Back Circuit</b>	<b>Pages 12 - 13</b>
<b>Find the Perfect Fit</b>	<b>Page 14</b>
<b>Chalk Walk Choice Board</b>	<b>Page 15</b>
<b>Build a Tunnel</b>	<b>Pages 16 - 17</b>
<b>Design Challenge: Make a Rube Goldberg Machine</b>	<b>Pages 18 - 19</b>
<b>Design Challenge: Making Floating Sea Creatures</b>	<b>Pages 20 - 22</b>
<b>Tin Can Lantern</b>	<b>Page 23</b>
<b>Monster Bookmark</b>	<b>Page 24</b>

# WEEKLY PLANNER



Name: \_\_\_\_\_

Month: \_\_\_\_\_ Days: \_\_\_\_\_ - \_\_\_\_\_ Year: \_\_\_\_\_

MONDAY

Course activities:

To do list:

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

TUESDAY

Course activities:

To do list:

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

WEDNESDAY

Course activities:

To do list:

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

THURSDAY

Course activities:

To do list:

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

FRIDAY

Course activities:

To do list:

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

WEEKEND ACTIVITIES:

<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____
<input type="checkbox"/>	_____

# Brain Breaks

**What are brain breaks?** Young learners often struggle to stay focused for long periods of time. Brain breaks are short periods of time when we take a step away from the routine work we are doing. They are quick and effective ways to energize and refresh our thinking.

★ Research indicates that brain breaks improve concentration and relieve stress. They increase productivity and provide children with opportunities to develop their social skills and creativity through kinesthetic activities. They also boost brain function! Use these short brain breaks to help refocus before getting back to work.

- 1. Dance Party:** Put on some fun music and dance!
- 2. Keep It Up:** Get a beach ball and keep it from hitting the ground. Add an additional ball to make it even more fun!
- 3. Jump Counting:** Have your child count while jumping with each count. Challenge them by counting by twos, fives, or tens!
- 4. “Head, Shoulders, Knees, and Toes”:** Use a movement song like this one to get your child moving. For added fun, see how fast you can go! This is a great one for young learners.
- 5. Freeze Dance:** Similar to the Dance Party brain break, this one incorporates listening skills. When the music stops, your child must freeze and hold their position until the music begins again.
- 6. Physical Challenges:** Engage your child in the classic challenge of rubbing their belly, and patting their head. Another version to try is to grab your nose with your left hand, and grab your left ear with your right hand.

# Brain Breaks

7. **Race in Place:** Have your child stand up and run in place. On your signal, your child will get back to work.
8. **Simon Says:** Play this oldie but goodie to see how well your child can follow specific directions...but only if Simon Says!
9. **Rock, Paper, Scissors:** Teach your child to play this fun, quick game and see who wins! Best out of three.

For another approach to brain breaks, try these:

- **Drawing or coloring**
- **Mental math:** Give a sequence of instructions for learners to follow while doing math in their head.
- **Invisible pictures:** Have your child draw an invisible picture in the air and try to guess what it is.
- **Story starters:** Begin a story for one minute and let your child finish the story on their own.

# STEM Design Challenge

## Brainstorm and Reflection Sheet



STEM design challenges are prompts that encourage learners to build something new for a specific reason or purpose. They include ideas from science, technology, engineering, and mathematics.

**Directions:** Complete this worksheet to help you think about your creation during your design process. Write down information or use check marks to show you have finished the step.

1. <b>Plan:</b> Sketch or write about what you will create.	<b>What is the challenge?</b>	
	<b>Materials:</b>	<b>Ideas:</b>
	<b>Blueprint:</b> Sketch what your creation will look like.	
2. <b>Create:</b> Build your creation based on your plan.		
3. <b>Play:</b> Try out your creation. Swap with another person so they can try it too. Ask them what they would change to make your creation better.		

# STEM Design Challenge

## Brainstorm and Reflection Sheet



4. **Adjust:** Make changes to your creation if you need to.

What changes did you make? Why?

5. **Share:** Show off your creation! Draw a picture of your finished design.

**... and Reflect:** Jot down notes about what you will share.

What worked for you? What was a challenge you had during your design process? What did you learn? How did you make changes based on what you learned?

---

---

---

---

---

---

---

---

# At-Home Activity Choice Board

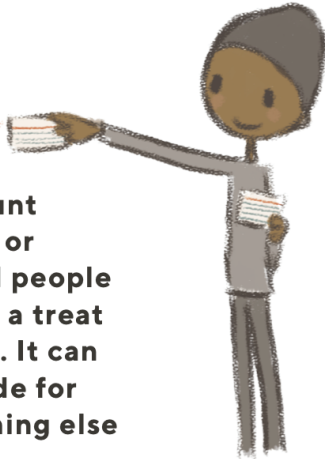
**Directions:** Choose one or more activities to complete at home.



Take a walk around the block and imagine what is a bird's view of your neighborhood. Look on Google Maps in Satellite mode to envision the bird's view. Then draw a map of your neighborhood, from a bird's perspective.



Create an indoor competition. How many events will you have? What tools do you need? How long will it last? Establish the rules and expectations of the competition, gather the supplies, and set-up the fun. Take pictures or a video to capture the competition!



Design a scavenger hunt where you use riddles or rhyming words to lead people to the next clue. Have a treat at the end of the hunt. It can be something you made for the players, or something else they would enjoy.



Make a game to play with other family members with objects you have around the house. Write down the directions for the game, and be sure to include how to win!



Make a travel brochure for an imaginary city. What will people want to see or do? It can be realistic or a fantasy place you would like to visit.

Draw a chalk game board outside. It can be as simple or as complicated as you can imagine. How many players will you have, and what are some tricks to win faster?





# Building Brick Challenge: Make a Tic-Tac-Toe Grid



Did you know tic-tac-toe has been played since the times of the Roman Empire? Tic-tac-toe is played on a grid of 3 by 3, where opponents take turns marking boxes with either an "x" or an "o" while trying to get three of their markings in a row.

In this activity, your learner will be challenged to create their own tic-tac-toe grid out of building blocks. The best part is that when they are done, they have their own homemade game to play. During this activity, your child will work on developing problem-solving and spatial awareness skills.

## What You Need:

- Building bricks of any size and shape

## What You Do:

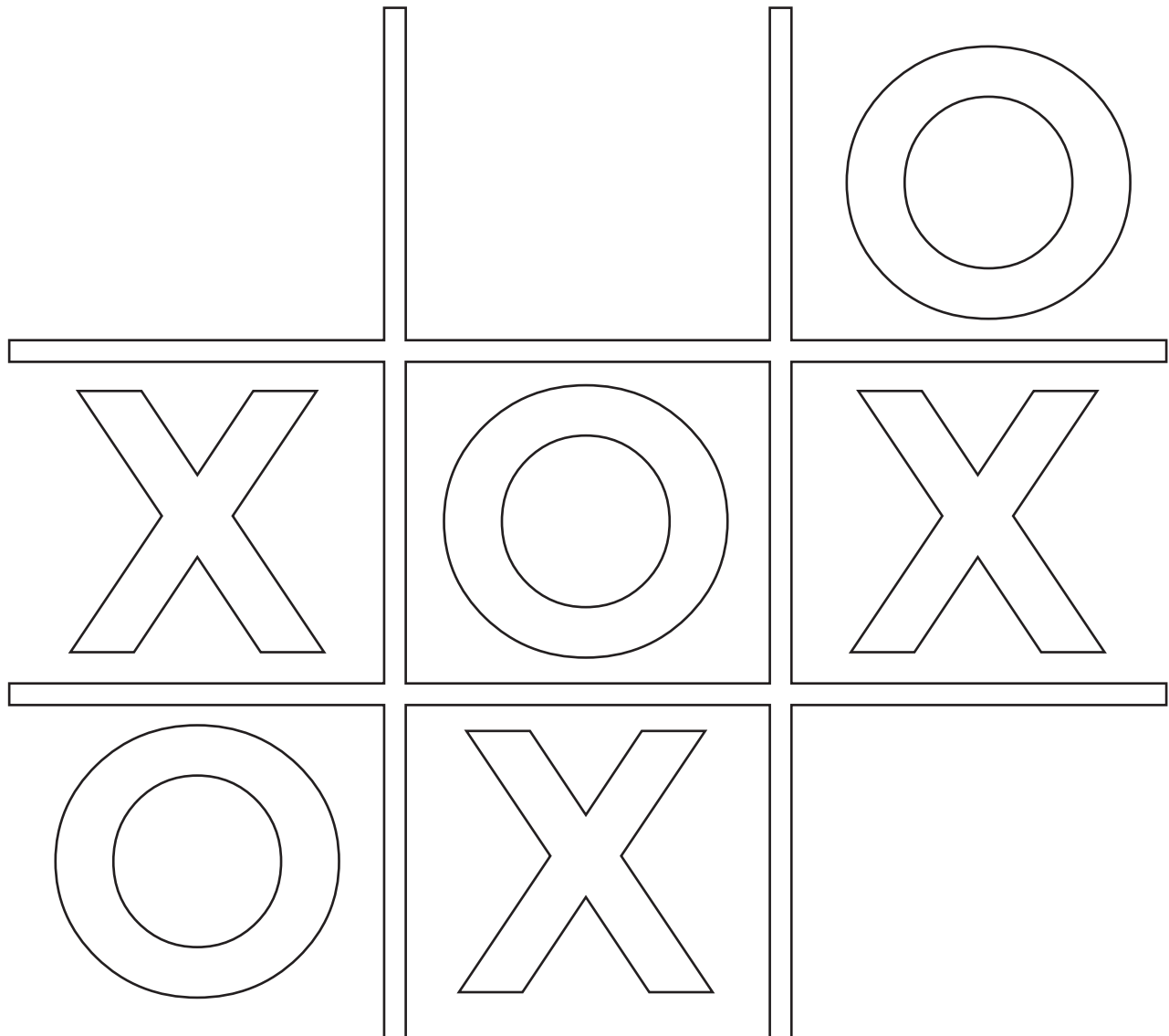
1. Ask your learner, "Can you build a tic-tac-toe grid?"
2. Encourage your child to make a **plan**. Ask, "How many bricks do you think you will need?" or "How large or small do you want your grid to be?"
3. Give your child time to **create** their design. Ask your child if they need help, but they should be allowed to do most of the building. You can also ask your child if they want to use other materials to create "x" and "o" pieces.
4. Have designers **play** tic-tac-toe with their new design.
5. After testing out the design, ask your learner what ways they can **adjust** their design. For example:
  - Do you want to make the grid larger or smaller?
  - Do you think tic-tac-toe can be played on a grid other than 3 by 3?
6. Challenge designers to **share** their new designs. They can record a video, or write an article describing it. Ask some prompting questions, like:
  - What did you enjoy the most about this activity?
  - Did you find tic-tac-toe challenging?
  - Who won the most rounds of tic-tac-toe?
  - Did you discover a strategy for winning?

## Building Brick Challenge: Make a Tic-Tac-Toe Grid



**Amplify this challenge!** Choose one or more of the following questions to add a new level of difficulty to the challenge:

- Create and play tic-tac-toe on a 5 by 5 grid!
- Make it fun for the whole family by having a family-wide tic-tac-toe tournament!



# Create a Home Challenge Course



Staying close to home doesn't mean you can't get moving! Use this fun physical activity to encourage your child to move their body in new ways while testing their endurance! Regular physical activity supports healthy growth and development, while also improving balance, coordination, and strength. Designed for children in third through fifth grade, this activity guides you to create a simple home challenge course that the whole family can enjoy together. The brain releases endorphins during exercise that improve energy, mood, and even the quality of your sleep! Getting active at home can be a fun way for your child to burn some energy, get their heart pumping, and have fun!

## What You Need:

- Index cards or blank paper
- Markers

## What You Do:

1. Get out 5–10 notecards (or small pieces of paper).
2. On each card, write one of the following:
  - hop and share (name as many countries as you can)
  - sit-up
  - plank
  - reach up to the sky and down to your toes
  - balance on one foot
  - run in place
  - stretch
  - drink water
  - wall sit
3. Feel free to make changes to the list or add some of your own!
4. Place the cards in a stack, and explain to your child that they will be choosing one card at a time and completing the activity for the duration of a one-minute timer.
5. Set the timer for one minute and begin!
6. Support your child as needed (such as modeling how to do a modified push-up or sit-up).
7. Create a second set of challenges for your child to accomplish, this time focusing on different parts of the body (stretching muscles, gross motor movements, etc.) or using a different amount of time. You can even get the whole family involved for a friendly competition, or set up a circuit where each person performs a different activity and rotates around the circuit until everyone has completed each challenge!

# Chest & Back Circuit



This upper-body workout routine will help children keep their muscles, bones, and joints in good shape at home, while also helping them get to know their own bodies and strength. Geared towards children in third through fifth grade, this chest and back circuit replicates actual gym exercises but does not require gym equipment. Children will use a bag and books to create adjustable weights, perform standing rows and push-ups, and even learn a bit about anatomy in the process.

## What You Need:

- Backpack, duffle bag, or tote bag
- Books, towels, a water bottle, anything that has light weight and can be evenly distributed in your bag
- Reasonably open space
- Athletic shoes
- Water

## What You Do:

1. Find an open space, outdoors or indoors, with nothing around that can be knocked over or that can hurt your child if they fall. Make sure they're wearing shoes! It's always best to be present to "spot" them in case they need help.
2. **Warm-up:** Have your child warm their joints up and get the blood flowing to their muscles with jumping jacks, arm circles, and upper body twists.
3. **Stretch:** Stretch to loosen those muscles up. Raise your arms straight out on either side of you like a "T" then slowly pull your arms back while keeping them straight, and squeeze your shoulder blades together to stretch your chest. Then, raise your arms straight up above you and hold your hands together. Slowly lean to one side, then the other to stretch your back.
4. Put a towel at the bottom of the bag to cushion it, then add in a book or two. You should always start with very light weight to ease your muscles into the lifts. Make sure the weight is evenly distributed throughout the bag.
5. **Standing row:** Stand with your legs shoulder-width apart. Holding the bag in both hands, bend your knees a little and lean forward with your arms straight down, shoulder-width apart so your hands are holding the bag in between and slightly in front of your feet. Make sure you keep your back straight throughout the exercise. Slowly pull the bag upwards to your chest. For the duration of the

# Chest & Back Circuit



exercise, keep your elbows at your sides as you pull, or point them out sideways to work different back muscles. Repeat 10–15 times.

- Breathing tip: Breathe in, then breathe out slowly as you pull up, then breathe in again as you let it down.

6. **Push-ups:** Assume push-up position. You should be on the ground, hands shoulder-width apart, with your legs together, fully extended, and your toes on the ground. Alternatively, you can rest your knees on the ground instead of your toes. Slowly lower yourself to the ground by bending your elbows until they're at ninety-degree angles. Pause, then push yourself back up. For the duration of the exercise, keep your elbows bending outwards as you push, or tkeep them closer to your sides to work different muscle groups. Repeat 10–15 times.

- Breathing tip: Breathe in as you lower yourself, then breathe out slowly as you push up. Do you notice any change in difficulty if you lower yourself slower or faster?

Have your child repeat these exercises 3-5 times. Don't forget to make sure your child stays hydrated! See if your child can feel each different muscle working with each exercise, and teach them the anatomical term for each one (standing rows with elbows out use latissimus dorsi; standing rows with elbows in use trapezius and rhomboid; push-ups with elbows out use pectorals and deltoids; push-ups with elbows in use pectorals and triceps). You can have your child guess which muscle is where on their body after they do the different exercises based on where they felt the workout.

*Warning is hereby given that not all Activities are appropriate for all individuals or in all circumstances. Implementation of any Activity should be undertaken only in appropriate settings and with appropriate parental or other supervision. Using correct form and following proper safety precautions is the sole responsibility of each individual.*

# Building Brick Challenge: Find the Perfect Fit



This tricky building block challenge asks your learner to think creatively. They will work on their divergent thinking skills as they try to fill up an index card perfectly with building bricks. This simple activity provides plenty of problem-solving practice.

## What You Need:

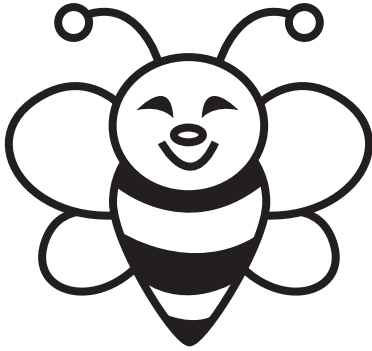
- Building bricks of any size and shape
- Index card or piece of paper

## What You Do:

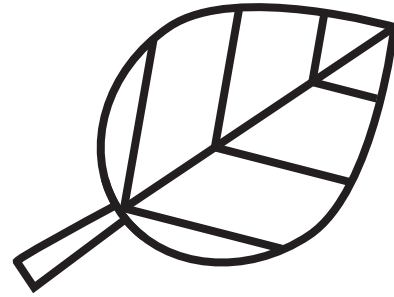
1. Ask your learner, "Can you fill up this index card or paper perfectly with building bricks?"
2. Encourage your child to make a plan. Ask, "How many bricks do you think you'll need?" or "What part of the index card do you want to fill up first?"
3. Give your child time to create their building brick design on the paper. Ask your child if they need help, but they should be allowed to do most of the building.
4. After testing out different building brick layouts, ask your child in what ways they can adjust the bricks to fit better on the paper. For example:
  - Would it be helpful to use different pieces?
  - Should you use bigger or smaller pieces?
  - Would it be helpful to begin from a different place on the index card?
5. Challenge designers to share their building block combinations. They can record a video, or draw a picture of the design and add a few sentences describing it. Ask some prompting questions, like:
  - What did you enjoy the most about this activity?
  - Did you find this activity difficult?
  - Even though you faced difficulty, why was it important for you not to quit?
  - Can you complete this challenge using only one size building brick?

# Chalk Walk Choice Board

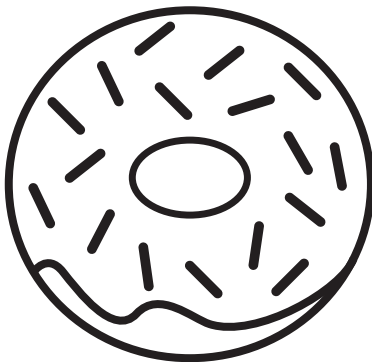
**Directions:** Take a walk around the neighborhood. Choose one of these encouraging drawing options and draw it on the sidewalk in your neighborhood. Color in the affirmations on the choice board when you finish drawing them.



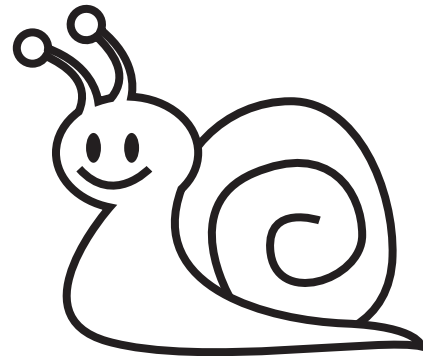
Bee Kind



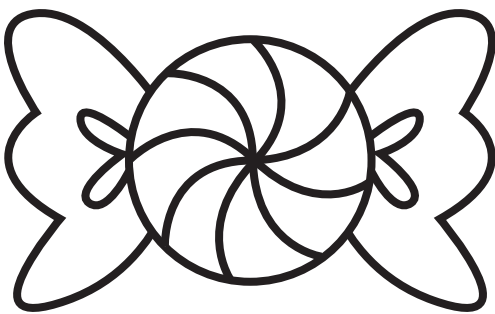
We be-leaf in you!



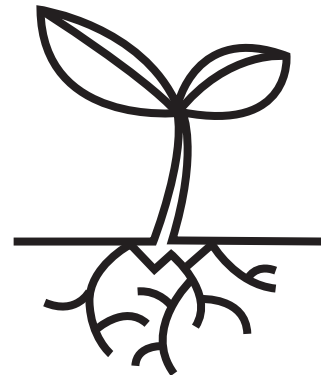
Donut give up!



You snailed it.



Daily Encourage-Mint



We're rooting for you!

# Build a Tunnel



If your child has ever ridden in the subway or metro, or gone on a long road trip, they have probably traveled through a tunnel. Tunnels are located underground and sometimes even underwater. Some tunnels are dug just to help transportation vehicles, but other tunnels have laboratories, or are created to observe underwater animals at aquariums.

Tunnels are dug underground for various reasons. Thousands of years ago, people dug tunnels to take out minerals from the ground. Farmers also made tunnels for irrigation, and before we had toilets, people made sewage channels to dispose of waste.

In this science and engineering activity, challenge your child to design and build a tunnel of their own. During their planning process, ask them to decide on a purpose for their tunnel and how it will help make people's lives easier. Encourage your budding engineer to imagine the location of their tunnel and how it can be helpful to people, as well as aesthetically pleasing.

## What You Need:

- Access to the internet
- Variety of household materials, such as:
  - Play dough
  - PVC pipes
  - Toilet paper or paper towel rolls
  - Paper
  - Tape
  - Glue
  - Paint

## What You Do:

1. Review the information from the introduction to this activity with your child.
2. Conduct a search online for additional facts and examples of tunnels.
3. Show pictures of various tunnels from around the world. Ask your learner if they can think of any tunnels they have seen before (such as at the playground or on road trips).
4. After a conversation about the purpose of tunnels and where they are located, ask your learner, "Can you build your own tunnel?"
5. Encourage your child to make a plan, thinking about materials they will use and what their tunnel may look like. They can even draw a picture of their proposed tunnel. To encourage thinking, ask your learner:



# Build a Tunnel



- What will your tunnel look like?
  - What materials will you use to make your tunnel?
  - How much space will you need?
  - What is the purpose of your tunnel?
6. Give materials to your child, or let them choose what they will need for their tunnel.
  7. Make sure you're available for questions or assistance while your child creates their design, but have them build the tunnel on their own. Encourage your child to refer back to their plan.
  8. When they're ready, tell your learner to play with their new tunnel. It's important to remind them about the purpose they set for their tunnel. Ask your child:
    - Is your tunnel strong?
    - Is it able to do what you wanted it to do?
    - Can you think of things to make your tunnel better?
  9. After testing out the design, ask your learner to think of ways they can adjust their design. For example, ask, "What changes can you make to the tunnel? What do you need in order to make adjustments to your tunnel?"
  10. Allow time for your child to share their new designs. They can record a video explaining the tunnel and its purpose, or they can write an informational, how-to explanation about their tunnel. Make sure they take pictures to include in their writing.

**Amplify this challenge!** Choose one or more of the following questions to add a new level of difficulty to the challenge:

- Can you develop the landscape around the tunnel? People create tunnels usually through mountains, large hills, or underwater.
- Can you make your tunnel longer? The largest undersea tunnel in the world is 31.4 miles long with 23.5 miles underwater.
- Can you make your tunnel stronger to withstand the elements and storms?
- Can you create a tunnel using a different method? Research the different methods for creating a tunnel and try to make a new tunnel with a different method. Compare the new tunnel to your first tunnel. Which tunnel serves its purpose best? Why do you think that is?

# Design Challenge: Make a Rube Goldberg Machine



In this design challenge, your child will make their very own Rube Goldberg Machine! They will use household reusable materials to make a complex machine that completes a simple task. This activity allows for your child to be creative with their ideas and follows the design thinking process of brainstorming, prototyping, and then redesigning to improve their machine.

## What You Need:

- Any materials found around the house, such as:
  - Cardboard
  - Popsicle sticks
  - Cotton balls
  - Dominoes
  - Legos
  - Paper cups
  - Toy cars
  - Duct tape
  - Marbles
  - String
  - Paper towel tubes
  - Pencil and paper for notetaking and brainstorming
  - Scissors
  - Tape and/or glue

## What You Do:

1. Explain the purpose of the Rube Goldberg Machine to your child. Explain that rather than simplifying a complicated task, these machines perform a simple task in a complicated way. Consider showing your child a video of Rube Goldberg Machines online. Ask your child what makes these machines different from others they have seen.
2. Ask your child to brainstorm tasks for their machine to complete. Some of these could be:
  - Turning on or off a light switch
  - Turning off an alarm clock
  - Squeezing toothpaste on a toothbrush

## Design Challenge: Make a Rube Goldberg Machine



- Turning on a faucet
  - Opening a phone app
  - Popping a balloon
3. Have your child choose which task they would like to use for their machine.
  4. Ask your child to collect various materials that they think might be useful in creating a machine to complete their chosen task. Remind your child that they will not have to use all of the items in their machine.
  5. After collecting materials, have your child brainstorm different ways they can use their materials to complete their task. Ask them to write or draw several ideas on a piece of paper, and ensure that they remember the purpose of their machine: completing a simple task in a complicated and creative way.
    - Consider having your child design their machine backwards, working from the completion of the task itself and adding on more elements to the beginning of the machine.
  6. After your child has finished brainstorming, ask them to choose the design they think will work best. Once again, emphasize the purpose of their Rube Goldberg Machine: to complete a simple task using a complicated machine.
    - This is an important step of the design thinking process because it teaches your child to prioritize the functionality of their design over personal preferences, and it prevents them from getting too emotionally attached to one design.
  7. Once your child has decided on a design, they can start building. Be sure to supervise and help out wherever is needed.
  8. After your child has finished building their machine, it's time to test it!
    - If your child's machine works, congratulate them on creating a functioning Rube Goldberg machine. Ask your child which parts they could change to make a more complex machine, or ask them to create another one of their designs and compare the two machines.
    - If your child's machine does not work, ask them what they think went wrong. Encourage them to return to the brainstorming phase and redesign their machine until it successfully completes their task.

## Design Challenge: Making Floating Sea Creatures



In this interactive design challenge, your child will learn the basics of buoyancy while making small sea creatures. Your child will use a variety of recycled materials and their knowledge of how different objects float to create different sea creatures that, when placed in a bucket of water, float on top, sink to the bottom, or stay in different locations throughout the bucket.

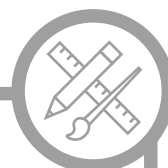
### What You Need:

- Large, clear tub (preferably on the taller side so there is more room vertically)
- Various recycled materials (preferably some that will float on water)
- Toothpicks
- Corks
- Skewers
- Pipe cleaners
- Ping pong balls
- Tinfoil
- Paper clips
- Lego blocks
- Magnets or other small, heavy objects
- Long spoon or tongs for extracting creations from the tub
- Tape (for marking different heights along the tub of water)
- Tape or glue (for sticking pieces of your child's creature together; glue will probably work better when exposed to water)
- Scissors
- Pen and paper for notetaking
- Camera (optional)

### What You Do:

1. First, prepare for the activity. Fill a tall bucket or tub with water. Mark different heights on the bucket using tape. (These can be general such as halves and quarters, or more specific heights such as one inch, five inches, and so on.) Place the bucket in a location that can get wet, such as an outside area, in a bathtub, or in a large sink. Then, have your child help you collect the materials they would like to use to make their creatures. (The materials list above is merely a suggestion to help you and your

## Design Challenge: Making Floating Sea Creatures



child get started with ideas on what to use.)

2. Now, discuss the concept of buoyancy with your child. Do they know what the word means? Does it remind them of any other words (buoy)? Explain that if something is “buoyant” on water it means that it floats. Explain to your child the concept of density. Do they know what density means? Explain that if an object placed in a bucket of water is more dense than the water it will sink, but if it is less dense than water it will float. Now explain that if an object has the same density as water it will neither sink to the bottom of the bucket nor float on top. Explain that if an object stays in the middle of the bucket of water then it is considered neutrally buoyant. Make sure your child understands these concepts by asking a few questions.
  - a. What happens when your child is in a swimming pool? Do they sink or float?
  - b. Has your child ever dropped a toy in a bathtub? Which toys sink and which float?
  - c. Can they think of any objects that, when placed in a bath or other body of water, stay in the middle? What is different about these objects?
3. Next, explain the challenge. Explain that they must use the different materials to create "sea creatures" that float, sink, or are neutrally buoyant in a bucket of water. Show them the different heights that you have marked on the bucket. Before starting the challenge, allow your child to place different objects in the water to test if they sink or float. Make sure to have your child write down their observations from this initial experiment.
4. Before your child begins building, instruct them to brainstorm a few ideas. Remind your child to look at their notes from the initial tests that they completed to come up with several ideas. Encourage your child to write or draw any designs that come to mind and make sure that they have ideas for each different height.
5. After your child has finished brainstorming, ask them to choose the design they think will work best for each challenge. Emphasize the purpose of their design: to float, sink, or remain neutrally buoyant at different heights in a bucket of water.
  - This is an important step of the design thinking process because it teaches your child to prioritize the functionality of their design over personal preferences, and it prevents them from getting too emotionally attached to one design.
6. Now it's time to build! Give your child room to explore with the materials and make changes to their design as they test what works and what doesn't work. Try to let your child build on their own, but make sure to step in and offer assistance if they seem to be struggling. Ask your child to write down

## Design Challenge: Making Floating Sea Creatures



notes about what they are doing and why as they change their design during the building process.

7. Once your child has completed building their creature, it's time for final testing of what they've made. Ask your child to place their creatures in the bucket and observe where they sit in the water. If desired, take pictures for data collection.
  - a. If your child's creatures stay in the desired part of the bucket, congratulate them on successfully completing the challenge!
  - b. If your child's creatures do not have the anticipated outcome, discuss with your child what they might change about their design. Remind your child that setbacks like these are one of the most important parts of the design thinking process and they should use their mistakes to create even better creatures. Encourage your child to go back to the brainstorming stage or try a different one of their ideas from the first round of brainstorming.

# Tin Can Lantern



Children often love candles, whether they're perched on cake tops or on elaborate holders. But in our gadget-happy age, it can be easy to forget that in the "olden" days, those candles were the only source of light around! Here's a fun arts and crafts project that supports this kind of social studies learning. It also happens to reuse household materials and create a very attractive table piece, or camping lantern. And did we mention it's more or less free? Read on!

## What You Need:

- Clean, dry tin can
- Hammer
- Nail
- Wire clothes hanger
- Needle nose pliers
- Wire cutter
- Small votive-sized candle

## What You Do:

1. Fill the tin can with water, and place it in the freezer until the water is frozen solid.
2. Take a wide-headed nail (roofing nails work great), and, with an adult's help, pound it into the side of the tin can until it pierces the metal. (The ice will keep the can surface firm as you pound!) Keep piercing the metal to make any design you like—a star, perhaps, or a moon, or creative sun. When you're done, make two more extra holes across from one another near the very top of the can—these will be for your handle.
3. By now, your block of ice will be melting. Dump it out, and you'll see that you've got a very attractive small lantern!
4. Now use the wire cutters to cut the wire hanger, and use the needle nosed pliers to shape it. Stick it through each side of the tin can, and loop it around to make a handle.
5. Congratulations! You've made a tin can lantern, quite similar to ones that lit our country's log cabins across the frontier. Take it on your next camping trip, or use it to decorate your table. You might even make several, and then turn off all the lights for an entire evening—something our ancestors did every night!

# Monster Bookmark



There's nothing scarier than losing your spot in a fantastic story! Construction paper, scissors, markers, and glue are all your child needs to make these gruesomely whimsical monster bookmarks. They fit over the corner of the page, ensuring you'll never miss a beat in your books. Whether your child likes a scary, silly, or friendly monster is up to them – the possibilities are endless!

## What You Need:

- Construction paper
- Glue
- Scissors
- Markers

## What You Do:

1. Have your child cut a large square piece of construction paper.
2. Fold it in half and crease one way, and then the other, to create four squares with your creases.
3. Cut out one of the four small squares
4. Now fold down the remaining three squares and glue one small square over the other. This is the base of the bookmark.
5. Now it is time to decorate the bookmark. Have your child go wild with construction paper and markers to create a scary mouth, fangs, horns, or hair.
6. Let the glue dry completely before sticking the new bookmark into a book.

