Back to Learning!

STEM Activities

Ages 5 - 7

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Use this packet of activities to help children practice their STEM skills. Adult supervision required.
What is a Makerspace?

A makerspace is an innovation space filled with materials designed to facilitate and encourage creative thinking. Young learners bring their design ideas to life through real-life, do-it-yourself building tasks.

In a makerspace, children must select their own building materials, allowing them to have a truly open-ended, creative, problem-solving experience. See below for a list of suggested items to use.

- Glue
- Paper
- Scissors
- Play-Doh
- Building bricks
- Markers
- Paint
- Paper towel rolls
- Paper cups
- Paper plates
- Paper bowls
- Straws
- Ribbon
- Coffee stirrers
- Craft sticks
- Cotton swabs
- Yarn
- Egg carton
- Tape
- Pipe cleaners
- Sponges
- Scraps from the recycling bin

What will my children learn through makerspace activities?

There are tons of benefits to makerspace activities! Here are a few of the things that children will learn:

- Empowers student curiosity and creativity
- Fosters independent problem-solving
- Builds confidence as children persevere through mistakes
- Provides the opportunity to innovate
Questions to ask your child while they are creating

Remind children that the design process is never complete!
Ask children questions such as:

- How can I improve my design?
- Can I add another feature to my design?
- Can I rebuild this with another material?

Reflecting is a critical part of the design process.
Ask children questions such as:

- What could I have done better?
- What can I do differently next time?
- What did I learn during this activity?

Encourage children if they get stuck during a design. As Thomas Edison once said, “I have not failed. I’ve just found 10,000 ways that won’t work.”

Makerspace Activities

Each of the activities below will take children from 10-30 minutes.
Children should start by identifying which materials to use for their design. There are no right or wrong answers during makerspace—this is a time to **explore, create and design!**
Day 1

Make a pop-up card.

Any materials can be used in a makerspace! Which items in your house might work well to make a pop-up card?

Tip

Think about different ways you can fold your paper or use different materials to create a pop-up layer in your card.

Think Bigger

Add a closure to your card that needs to be unfastened to open the card.

Integrate other materials into your pop-up card, such as foil or sequins.
Day 2
Make a tabletop miniature golf hole with at least 2 obstacles.

Tip
Sketch out the design of your miniature golf hole before building it. Think about what materials to use for your obstacles, golf ball, and golf club before you start building.

Think Bigger
Add a ramp or a tunnel to your miniature golf hole.
Day 3

Design and build a ramp that allows a ball to roll a distance of 3 to 4 feet.

Tip

Think about how the height and length of the ramp affects how far the ball travels.

Think Bigger

Modify your ramp to provide the ball with the needed force to roll a distance of more than 5 feet.
Day 4
Design and build a boat that will float.

Tip
Do some testing to see what types of materials will float before you start building.

Think Bigger
Test and modify your boat so that it can hold an object.

There are many types of boats, including speedboats, cruise ships, and sailboats. Build another type of boat.
Day 5
Make a candy dispenser.

Think about how your dispenser will release the candy.

Tip

Think Bigger

Modify your dispenser so it is able to release different sizes of candy.

Modify your design to include a different dispensing mechanism, such as a spiral or a button.