



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

create a house out of popsicle sticks!



Supplies Required:

Popsicle or craft sticks
Hot glue gun
Scissors

Video

General video about how to construct a popsicle stick house: <https://tinyurl.com/y3ezr2a6>

Overview

Today, we want you to be an architect, using your imagination to dream up your own house! To create your model, you'll have craft sticks and hot glue. Will your house be multiple stories? Don't forget to include doors and windows! Will it be more than one story? What shape will your house be and does it include more than one room?

The sky is the limit! Use your imagination to dream up what your house might look like. While the video demonstrates some good tips and tricks for building your structure, there are no right or wrong answers here. Be creative and have fun!



Instructions

- 1. Problem** - What do we want to solve?
We need to build a house! It can be any design we choose, but it should have walls, a roof, and a door to go in and out. The rest is up to your imagination!
- 2. Solutions** - What are some ways to solve the problem?
Illustrate your ideas for your house and share them with any nearby friends or family members. Are there other ideas they have? Other shapes you can include? How many rooms and walls will your house include?
- 3. Model** - Build your design!
Build your illustrated designs using the popsicle sticks you were provided in your STEMkit. Use hot glue to paste the pieces together, if you have it. If you don't have hot glue, craft or wood glue will work.
 - Start with the foundation - what shape will the floor of your house have?
 - Build walls - will your house be a single story or be more than one story tall?
 - Add a roof - you don't want rain getting in! Will your roof be flat or have steep sides or some combination of elements?
- 4. Test** - Is your model strong enough to survive wind and rain?
Apply pressure to your house. Does it hold up? Give it a push from one side or tilt the surface it stands on once it is fully dry. Does it stay standing?
- 5. Reflect & Redesign** - Was your model successful? Does it need to be redesigned? Explain what was successful and unsuccessful in their model. Does it need to be redesigned? If so, how? Are there additional improvements you can make to your house? What about color or shingles? Use your imagination and be creative!

Additional Resources

Think about it! What was your favorite part of designing your house? What styles do you most like? If you were to build another model house, what would you do differently? Use these videos to bring about additional ideas!

1. Popsicle stick castle: <https://tinyurl.com/yxe8yl7l>
2. This popsicle dream house took 800 hours to make: <https://tinyurl.com/yy7wff5t>
3. What else can you make using popsicle sticks? <https://tinyurl.com/y6fk24dc>

Share It Out

What did you learn as you built your house? What challenge would you give yourself next time you tried to build your dream house from popsicle sticks? Add another story? Use different shapes? Do you have friends or family members who would enjoy this challenge?

Share on social media: Take a photo of your popsicle stick house and share it on social media using the hashtags:

#PopsicleHouse
#ProjectExploration
#STEMatHome

For more activities like this one, go to www.projectexploration.org/stemhome. If you're interested in learning more about Project Exploration and our free events, programs, and activities, please find us on social media and be sure to follow!



Call or text us for help: 312-772-6634



www.projectexploration.org