



JUNIOR SEABEE

BU – BUILDER



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A Solid Foundation

Seabee Builders do all of the building of horizontal and vertical structures in a project. It is their job to ensure that the building has a solid foundation, and that everything built upon that foundation will stand for many years. In this exercise, we're going to work to build a solid foundation, and vertical structures to put into that foundation. You can add a ceiling or roof style of your choice out of additional crafting sticks, cardboard or another

For this exercise you will need the following:

- Small Craft sticks (about 40)
- Glue or hot glue gun and glue sticks
- Paints (if desired)
- Mixing bowl
- Soft spatula
- Plaster substance
 - Plaster of paris can be purchased at general/craft stores, (follow directions on the package)
 - or*
 - homemade plaster using one of the following recipes (water can be carefully heated in the microwave for either recipe. Additional instructions for these methods are below):
 - Mix 2c flour into 1c of warm water (100° F) until smooth – use within 10 minutes of mixing!
 - Heat 2-3c of warm water (100° F), mix 2c of school glue with 1c of the warm water, add scant amounts of water until the mixture is the texture of a thick creamy soup – use within 15 minutes of mixing!
- Wax paper or a piece of cardboard big enough for your building to sit on (recommend at least a 1' square to place under walls as they are built)



JUNIOR SEABEES CAN DO TOO!

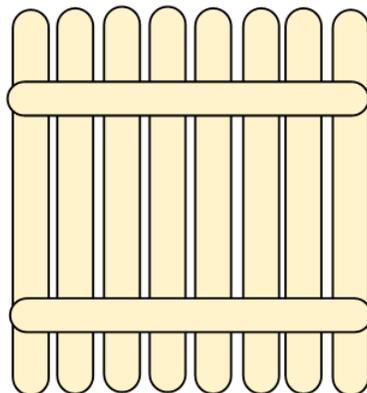
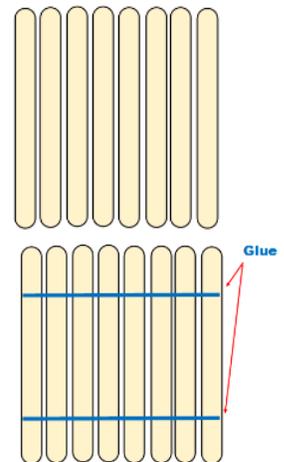


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- A mold or flat, disposable food container – can be a takeout tin that has been washed out, a plastic container such as Glad or Ziplock, or any box that can be cut to less than 2” deep that is ideally around 5” x 5”. This will be the form for your foundation.
- Additional craft sticks or cardboard or other materials to create a roof

1) The first thing you want to do is make sure you have your building pre-staged and ready to place into your foundation. Because the foundation dries fairly quickly, if we create the building walls FIRST, then they can be set into the foundation before it sets. We will need four sets to create our four walls. These can be made one at a time or all four at once, but each wall will require the same 3 steps below.

1. To create the walls, lay out 6-8 craft sticks flat on the table, closely side by side (you might want to have something underneath to keep the glue from dripping).
2. Draw a line of glue or hot glue across the sticks about 1” from the top edge and a line of glue about 1” from the bottom edge.
3. Place another craft stick on each stripe of glue, holding the original sticks in place. Your wall will look like this:



2) If you have used school glue for this portion, you will need to allow at least 20 minutes for the glue to dry. Hot glue can be handled once it has cooled, generally five minutes or so. If you would like to paint the walls, now is a good time for that, but it is not necessary. You can draw or paint doors, windows, etc.



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3) Once your glue has set, you can begin building your foundation. You will need approximately 1 to 1 ½ c of plaster for this project, depending on the size of your container that will serve as a mold. For example, we used a medium square Ziplock container as a mold, and it measures approximately 5" x 5" x 2". To fill this container to ½" it took about 1c of plaster, as mixed.

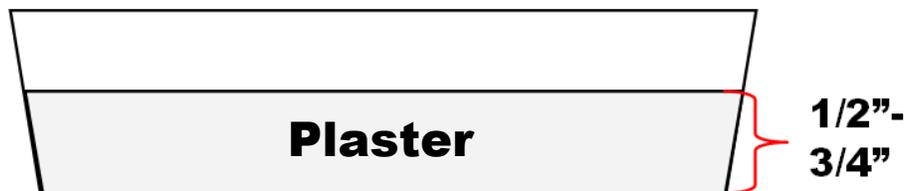


A good way to measure is to fill your container with water until it reaches between ½" and ¾" and then pour the water into a measuring cup to see how much plaster you will need.



1. If using plaster of paris, follow the instructions on the packaging.
2. If using the flour and water mixture described above, there is a tutorial available at www.wikihow.com/Make-Plaster-of-Paris
3. If using the Glue and water method, there is a tutorial at https://www.ehow.com/how_6401925_make-homemade-plaster-paris-molds.html

4) Once you have your plaster made, you need to act quickly! Pour the plaster into the container until you have between ½" and ¾" and smooth the top. You can smooth it with a scraping spatula, or another craft stick. Any Builder will tell you that a strong and flat foundation will make the best building!



If you have extra plaster, be sure to put it into the trash, NOT down the drain. Each type of plaster described here will clog drains!



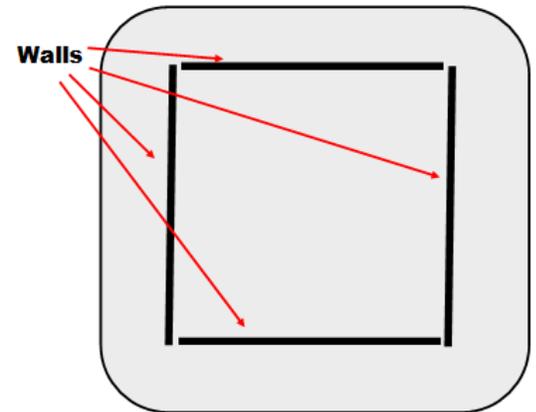


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5) When your plaster is beginning to set, start placing the four walls of your building. Push the wall straight down into the plaster, until it stands securely, then repeat with the other three walls. Try to make sure that the walls are square and that they remain upright! Think about whether you want the cross pieces on the inside or outside of your building.

6) If you want to add other accessories, such as plants or flowers, you can put those into the plaster as well.

7) If you'd like to make your building look more realistic, you can add a roof – either a flat roof or an angled roof. You may have to cut some of your craft sticks or you can use cardboard to create your roof.



8) Clean-up is always the last part of anything we do! Wipe down your work space as well as any other equipment that you have used.

9) Please remember to post pictures on social media using #JuniorSeabee and #USNSeabeeMuseum so the world can see what you've learned. Share your creations on our Instagram or Facebook pages – tag us at **U.S. Navy Seabee Museum** and don't forget to follow us!

If you're interested in learning more about how Seabee Builders do their jobs, check out some of these videos of Seabees placing concrete:

Video(s) (<https://www.youtube.com/watch?v=U-IE9I6G6ZM>)
(<https://www.youtube.com/watch?v=ebpDbEKoNwk>)