



Source: AWSMR Kids (Youtube)

### Glow in the Dark Slime Recipe

1/2 cup of Elmer's Glue

1/2 cup of Liquid Starch

2 Tbs of \*Glow in the Dark Paint\*

Gel Food Coloring

\* to change the texture and / or color, replace the glow in the dark paint with beads / glitter, dry rice (or iron powder to make it magnetic!) \*

### Why Slime?

"It's an incredible sensory experience for the kids as they dig in and get gooey, but it doesn't leave a big mess behind for you [educators, guardians, even babysitters!] to clean up."

Source: "Slime Science" (Science Kiddo)

The process of making and playing with slime encourages children of all ages to hypothesize, experiment and invent. Slime is a fantastic way to teach children about complicated scientific principles -- including "non-Newtonian fluids." Challenge your children to make white or clear slime (just substitute clear glue for white glue!) and drop food coloring onto the surface. Then, press it to a paper plate to make some ooey, gooey abstract art!

For other slime recipes and ideas, check out:  
<https://www.sciencekiddo.com>



### Why STEM Play?

Research shows that STEM play promotes:

- Problem solving
- School readiness
- Teamwork and collaboration
- Social and emotional development
- Creativity
- Confidence -- both in and out of the classroom

Source: "Understanding STEM in Play-Based Curriculum" (Kids of Excellence)



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# STEM Play GUIDE

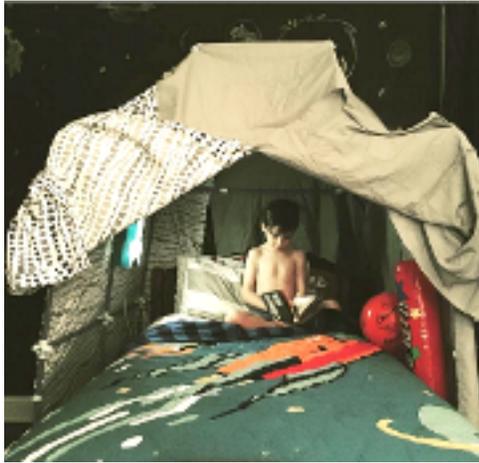


## Embrace the Mess!

This Play Guide aims to inspire educators, caregivers, and children to engage in STEM play through the use of readily accessible or natural materials. All of the activities included in this guide combine elements of STEM (Science, Technology, Engineering, and Mathematics) learning with art-based projects and experimentation in order to nurture creative, confident, and expressive children.



Source: Lehigh University



Source: Fort Magic

### Forts

#### Materials:

- Pillows, blankets, sheets
- Chairs, tables, and open space
- Clothes pins, bungee cords
- Anything else the little engineers find necessary!

### Why Forts?

Fort-building is a highly stimulating activity which allows children to collaborate, design, build, and problem solve in order to create a standalone structure. Help your child gather the necessary materials, then allow them to share their thoughts on the building process. Assist when needed, but let the kids take the lead on this one!

Forts are a great way to encourage children to engineer their own unique little worlds. Forts can be built anywhere -- from a rural barn to a city apartment. Forts also provide kids with the opportunity to be responsible in cleaning up! Challenge your children to draw pictures of themselves in their fort -- and pin them to the inside!

### DIY Gardens



Source: Personal Creations "Planting in Egg Shells" (Flickr)

### Why DIY Gardens?

DIY ("do it yourself") mini-gardens can be built in any container anywhere -- in the country, in the city, indoors, and outdoors. Cut a bottle in half and you have a usable vessel to make your own garden! Or, like the example above, just use eggshells and an egg carton! Allow children to make their garden truly theirs. Doodle on it! Paint it! Create a fairy village with your vessels!

Watching plants grow teaches children about the life cycle, as well as about responsibility -- including the daily watering of each plant. Try growing your own tomatoes with your children -- and serving them at dinner!

#### Materials:

- Seeds
- A vessel (bottles, cans, jars, eggshells, egg cartons, etc.)
- Potting soil and water
- Your choice of decorating materials

**Tip: try going to a local flower shop or garden; they might give you seeds for free!**

For other DIY garden ideas, check out:  
<https://www.playdoughtoplato.com>

### Water and Sand Tables

#### Materials: Anything You Have Handy!

- Plastic storage container or bucket
- Sand, water, snow, ice, dirt, dry rice
- Vessels of various shapes and sizes
- Child-safe shovels, utensils, measuring cups, bowls
- Ice cubes
- Magnets

Challenge your children to draw a picture in the sand or make a sculpture in the snow!



Source: Incirlik Air Base (Turkey)

### Why Water / Sand Tables?

Water and / or sand tables allow children to explore and experiment with diverse natural materials, such as snow, dirt, ice, etc. Water tables are easy to make and easy to clean -- and teach children valuable skills regarding conservation and density. They can also be used as contained spaces to do messier art projects, like sculpting or playing with food coloring, soap, and water.

### Make Your Own Moonsand!

- 3 cups cornstarch
- 1 1/2 cups water
- 6 cups fine, clean sand