

## Kinetic Sand Construction Site

*Use materials from home to mix up your own kinetic sand for construction play!*

### Big Idea

Children will explore Non-Newtonian fluids, construction, and tactile play by mixing together their own moldable, movable sand!

### Standards

7.A.ECb: Use nonstandard units to measure attributes such as length and capacity.	Children will use containers to explore capacity and they mix and build.
12.C.ECb: Experiment with changes in matter when combined with other substances.	Children will explore what happens to the materials as they mix.
19.A.ECa: Engage in active play using gross- and fine-motor skills.	Children will use their fine and gross motor skills to move and manipulate the sand as they construct.

### Materials

- 1 cup sand (play or craft sand recommended)
- ½ cup of school glue
- 2 tsps of dish soap
- 2 tbsps of cornstarch
- Bowl or plastic container to mix in (and play in)
- Craft stick or spoon
- Toys to play with (plastic trucks, cars, animals)

### Setup

Children will combine the materials together to create kinetic sand, so using a bowl or plastic container they can play with and put sand in is recommended. Since pouring glue is involved, mix up the materials over a table that is easy to wipe down, or cover the table ahead of time.

### Directions

1. Pour the sand, dish soap, and cornstarch into your chosen container and stir well so that all the ingredients are blended together.
2. Add the glue to your sand mixture slowly, pouring in only a little at a time and stirring thoroughly each time before you add more.
3. Once all the glue is added, use your hands to knead the mixture together to finish it off.

4. Your finished kinetic sand should be similar to oobleck: not quite a solid, and not quite a liquid. If the mixture feels too dry, add more glue. If it feels too sticky, add more cornstarch.
5. Once you feel like your kinetic sand is done, add some toys to the bin and explore your creation!

*Investigation Questions:*

- What does your mixture feel like?
- Can you build a sandcastle with your kinetic sand? How tall can you make it?
- How much sand can each container or toy carry?
- What do you think each ingredient adds to the kinetic sand? What would it feel like if we didn't use the dish soap? What if we didn't use the cornstarch? What if we didn't add the glue?
- Non-Newtonian fluids are not quite solids and not quite liquids. What would we need to add to the kinetic sand to make it a liquid? A solid?
- What else could you mix into your kinetic sand to explore even more of your senses? What would happen if we added food coloring? What if we added spices or scented oils?