

## INSTRUCTIONS & TIPS

### BEFORE YOU BEGIN ANY OF YOUR EXPERIMENTS...

- MAKE SURE TO READ ALL INSTRUCTIONS CAREFULLY.
- ADULT SUPERVISION IS RECOMMENDED FOR THIS ACTIVITY.
- KEEP SMALL CHILDREN AWAY FROM THE CHEMICALS USED IN THIS ACTIVITY.

**⚠ WARNING:** THIS SET CONTAINS CHEMICALS THAT MAY BE HARMFUL IF MISUSED. READ CAUTIONS ON INDIVIDUAL CONTAINERS CAREFULLY. NOT TO BE USED BY CHILDREN EXCEPT UNDER ADULT SUPERVISION.

## CONTENTS

**A** Clear Glue



**B** Sand



**C** Glow-in-the-Dark Sand



**D** Measuring Cup



**E** Mixing Stick



**F** Sodium Tetraborate



**G** Plastic Spoon



### Not Included:

- Warm Water
- 2 Cups

## Prepare Your Work Area

- Find a flat surface that you can use as your work area. It is best to set up next to a sink so you can continuously dump any excess water.
- Cover your work area with scrap paper, newspapers, or paper towels.
- Lay out all of your materials in front of you before you begin.

**DID YOU KNOW:** The Earth contains approximately seven quintillion, five hundred quadrillion grains of sand. That is 75 followed by 17 zeroes!

Sand can be found in many different colors in nature – white, black, pink, red, and brown, among others. The color of sand depends on the rocks it comes from and the minerals it contains.

## Create-your-own Quick Sand

### Step 1: Making the Activator

- In one cup pour 20mL of warm water and mix in half of the provided spoonful (G) of Sodium Tetraborate(F). Mix well until all of the crystals are dissolved and set aside for later use.

**NOTE:** If the water is hot, ask an adult for help.

### Step 2: Making your Base

- Pour 10ml of glue (A) into the second cup.
- Pour 30 mL of room temperature water into the cup with the glue. Add the natural sand and GID sand and stir with the mixing stick.
- Mix thoroughly so all of the lumps are removed.

### Step 3: Combining your Base and Activator

- Slowly pour the activator into the base mixture, constantly stirring, until a goo starts to form.

**TIP:** You might not use all of the activator. Pour in a little at a time until it reaches your desired consistency.

## What is Happening?

- The quicksand you made is a non-Newtonian fluid, which means it has properties of a liquid and a solid. Real quicksand in nature is also a non-Newtonian fluid; however, real quicksand and the one you just made react in very different ways. With real quicksand, the more you move it the more it acts as a liquid which causes you to sink! With your homemade quicksand, a solid object will slowly start to get swallowed up. Try lying an object like a penny or a paper clip on your quicksand and see what happens.

## Clean Up and Storage of Materials

- Make sure to clean your work area with soap and water.
- Be sure to wash your hands with soap and water after handling any of the chemicals used in this kit.
- The quicksand should always be disposed in the garbage and not the sink!