

STEM

starts now

Liquid Sensory Bottles

Recommended Age: 25–30 Months

STEM concepts: Science (physical science), technology (simple tools), math (engineering, measurement)

Materials: 3 clean plastic water bottles with lids. Water, a few small rocks, toys or heavy balls that can fit inside the neck of the water bottle (these can be choking hazards. Do not leave your child unattended with items), vegetable oil, food coloring, funnel, scissors, duct tape, dishwashing soap

What to do: Fill each of the plastic bottles three-quarters full of water. Set each bottle on a flat surface and place a funnel into the bottle. Have your child help pour the vegetable oil into the bottles. Use dishwashing soap to add bubbles to your bottles. Only 2–3 tablespoons will provide bubbles to the bottle. This step is not required. Add color into the bottle with the food coloring and then insert the small object you've collected. Place the lid back onto the bottle and use the duct tape to secure the lid on the bottle. Have your child roll, twist and turn the bottle around to see the materials move around in the bottle.

Language and Communication: As you are creating the bottles, discuss the purpose of the funnel. This is a simple tool that helps humans complete a task. This creates conversation about technology. Discuss the different sounds of the toys hitting the funnel and then the liquid. Ask your child if there is a different sound for each surface. If you have different things to insert into the bottle, ask your toddler to feel them and discuss whether they are heavier or lighter than others. Then discuss how the items fall into the bottle. Do some items fall slower or faster than others? As the materials move around the bottle talk about rolling, swirling and moving the bottle. Ask them to observe the bottle and see if the items are floating or sinking. Explain what floating and sinking means.

Expand the Activity: Hold the bottles up to light and see if it changes the way the bottle looks and moves. Keep one bottle clear and compare the clear bottle to colored bottle with light.

