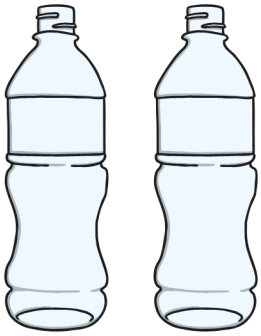
Floating Rice Bottle Science Experiment

You will need:

2 empty and dry plastic bottles
Rice
2 chopsticks
Funnel
Pencil



The Activity

1. Using the funnel, fill the bottles with rice, leaving about 3cm space at the top. Put one bottle to the side.
2. With the second bottle, you need to pack as much rice in as possible so tap the bottle against your work surface and make space for more rice.
3. Top up the bottle and repeat the tapping of the bottle until you are sure you couldn't possibly fit any more rice in.
4. Push the rice down with a pencil to pack the rice in further.
5. When you have finished, ensure that both bottles look like they have the same amount of rice in them.
6. Show the children the bottles and ask them if they can pick up the bottles using just the chopsticks.
7. Give the children the bottle with the lightly packed rice and keep the tightly packed bottle yourself. (The chopstick will be harder to push into the more tightly-packed bottle.)
8. At the same time, push the chopsticks into the bottles. You will be able to pick your bottle up from the table using just the chopstick, whereas the child will find that the chopstick slides in and out of the bottle.
9. It will look like your bottle of rice is magic and can float!

Note: Why does this happen? You will be able to lift the second, more tightly-packed bottle due to friction and density.