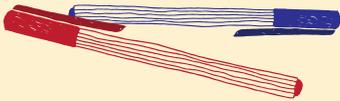




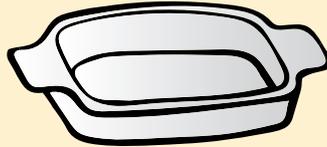
Make your drawings come alive

Who has never dreamed of seeing a drawing come to life and move on its own? This is the exploit we are going to achieve now with erasable markers. The scientific phenomenon we are going to experiment is called « **Adhesion** ». Ready?

What material do you need?



Erasable markers



White ceramic dish



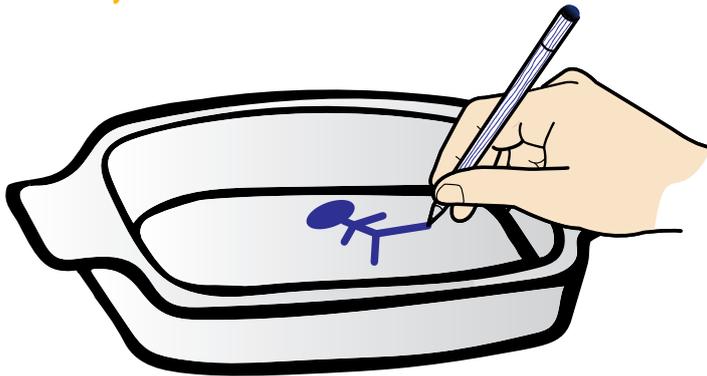
Aluminum foil



50 ml of water

Ready? Let's experiment!

1



On the bottom of your ceramic dish, draw the shape you want with your erasable marker. Then cover it with the 50 ml of water.

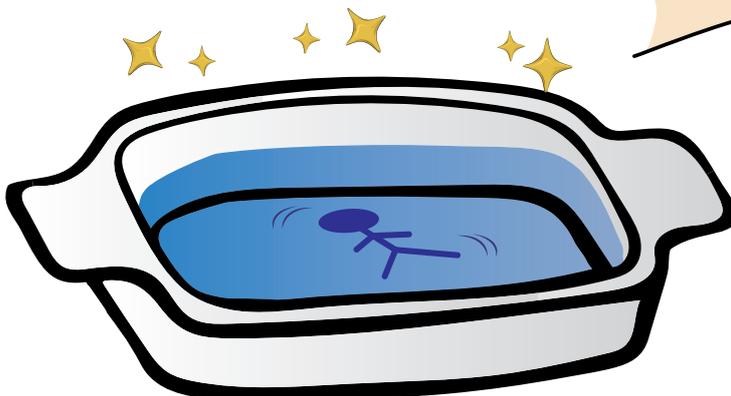


2

Wait a bit then stir the water gently by moving the dish back and forth. What's going on?



3



Miracle!
Your drawing rises to the surface.



Make your drawings come alive (end)

4

Do it again, but this time, draw your shape on aluminum foil. Put it in the dish and cover it carefully with water. What do you observe now ?

Why does it work ?

Erasable markers' ink contains color pigments, alcohol to make it liquid and a greasy silicone component.

When you draw something on a smooth surface, alcohol evaporates right away. Your drawing dries immediately. Nevertheless, the silicone in your design prevents it from sticking to the dish. In other words, your design « slides » on smooth surfaces. That's why you can make your drawing come off to rise to the surface. Moreover, it's floating and moving as if it were alive.

Once detached from the dish due to the silicone, it can rise to the surface. You can observe the same phenomenon with the aluminum foil, except that your drawing looks more brittle and breaks more easily.

You just observed the **adhesion phenomenon**. In this situation, your drawing does not completely stick to the ceramic dish, which is why it comes off easily.

What about doing a boat race ?

We can use the same principle for fun.

Draw two different colored boats at one end of the bottom of the dish. Cover them carefully with water, and, as before, move the dish softly back and forth to make your boats come off and rise to the surface.

Once they are floating on the surface, with a friend or a family member grab a straw and drive your boats by carefully blowing on them.

The first to reach the other end of the dish without breaking the boat wins !