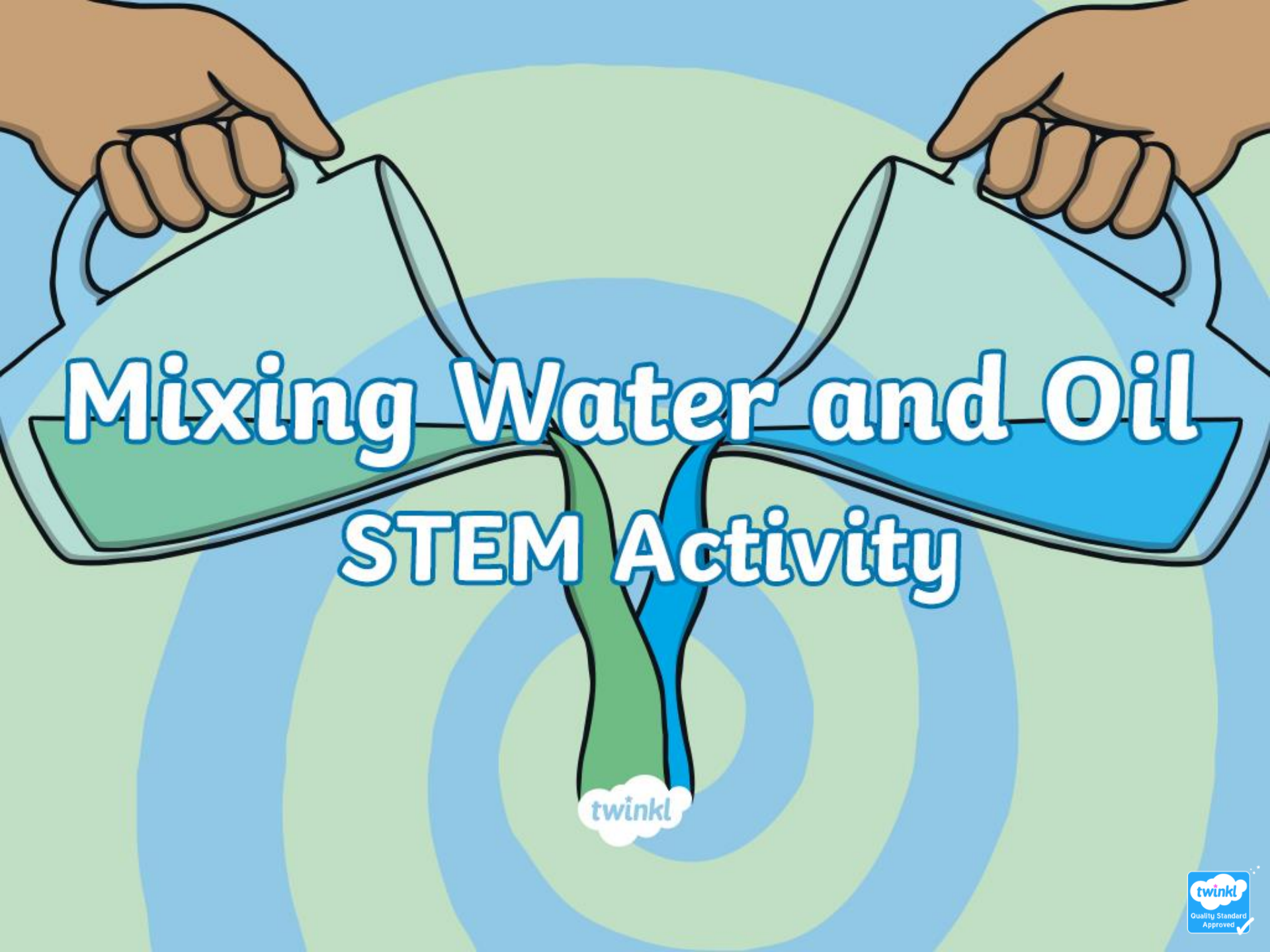
Mixing Water and Oil
STEM Activity
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Do Water and Oil Mix?

In a jar, pour a quarter of a cup of water and a quarter of a cup of oil.

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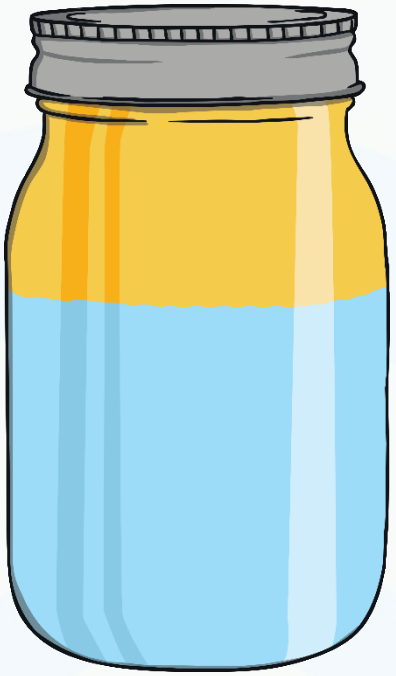
Do Water and Oil Mix?



What happens?

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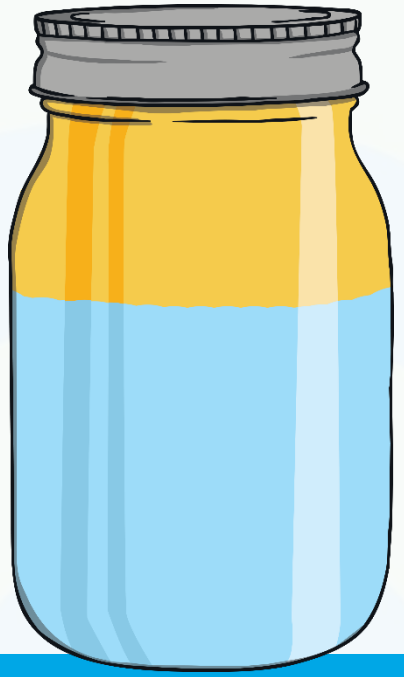
Do Water and Oil Mix?



You can mix water and oil together but they will separate again.

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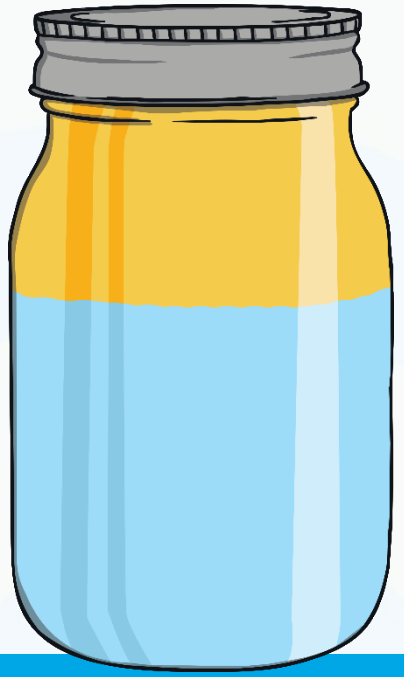
Do Water and Oil Mix?



Why is this?

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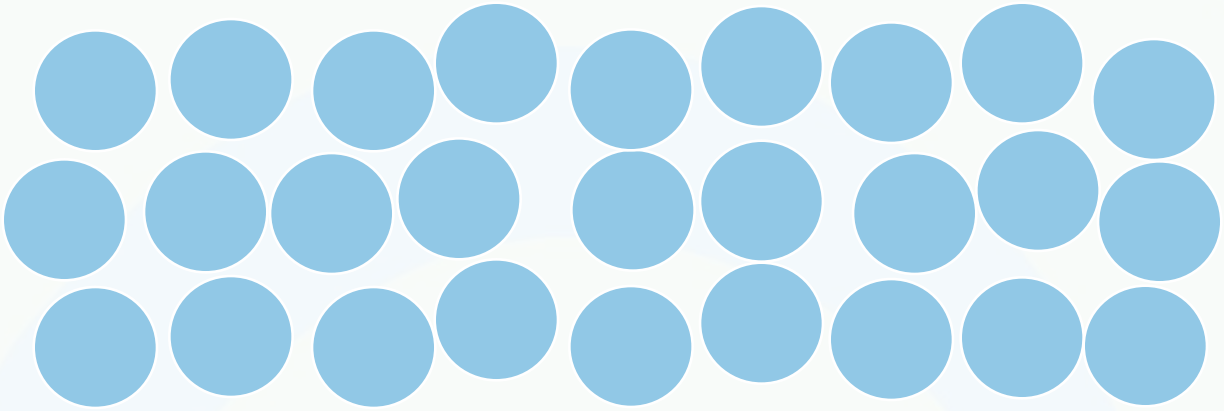
Why Don't Water and Oil Mix?



Everything is made up of tiny particles we call **molecules**.

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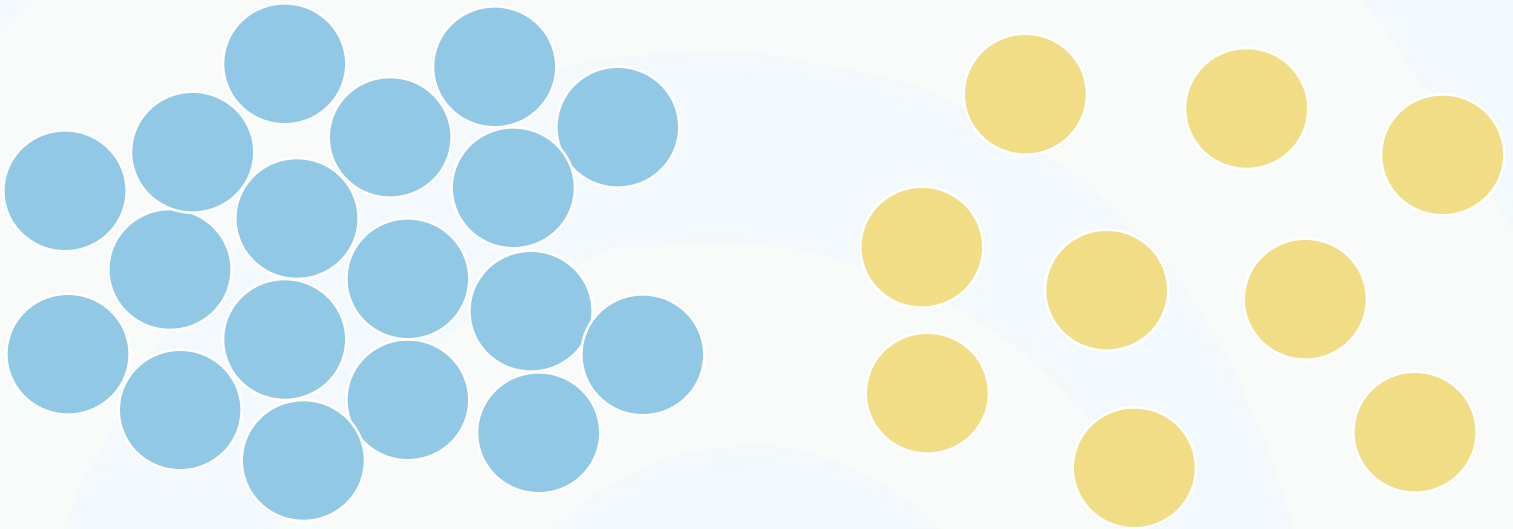
Why Don't Water and Oil Mix?



The molecules in water are quite packed in (dense) but in oil, they are less crowded.

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Why Don't Water and Oil Mix?

This means that when we have equal amounts of water and oil, we actually have more water molecules than oil molecules, meaning they will sink to below the oil.

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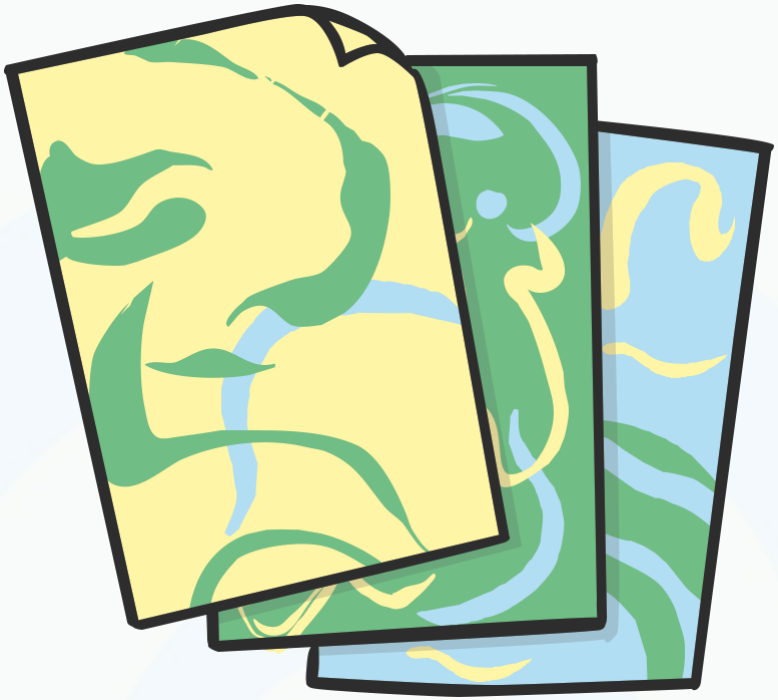
Marble Paper



We are going to be making marble paper today.

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Marble Paper

How do you think we could get the 'marble look' on paper?

What colours do you think we should use?

How could we make sure the paper won't become all wet and fall apart?

What will happen if we put the coloured oils onto the water?

What will happen when we swirl the colours around?

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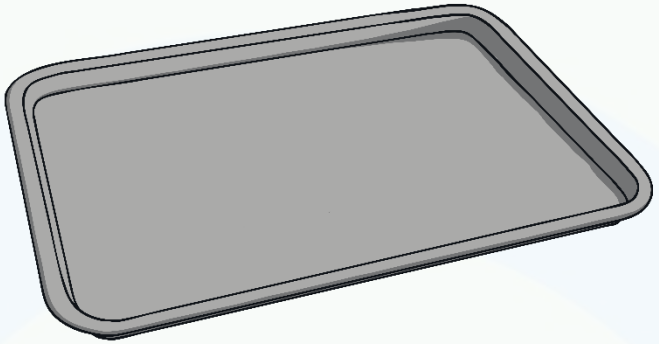
You Will Need:



- Jars with sealable lids
- Shallow pans (larger than your paper)
- Vegetable oil
- Newspaper
- Skewers

- White card
- Spoons
- Food colouring
- Range of plain objects of different materials to test marble effect on

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Instructions

In each of the jars, pour in half a cup of vegetable oil.

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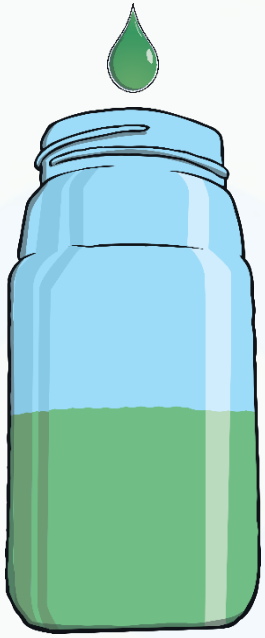
Instructions

Add food colouring to the oil.



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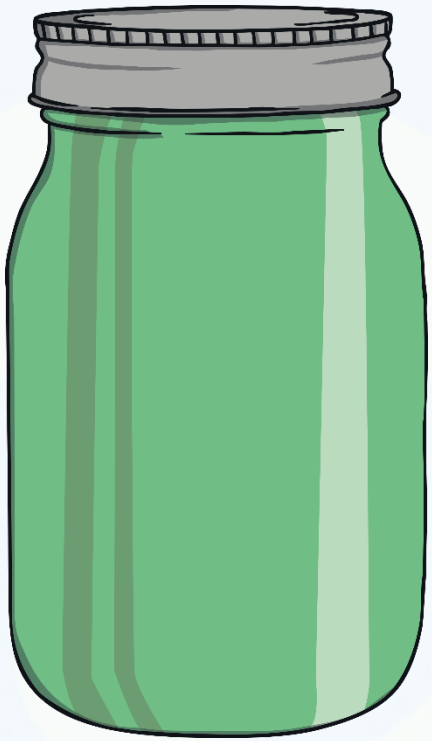
Instructions

Put the lid on the jars and shake, until mixed.



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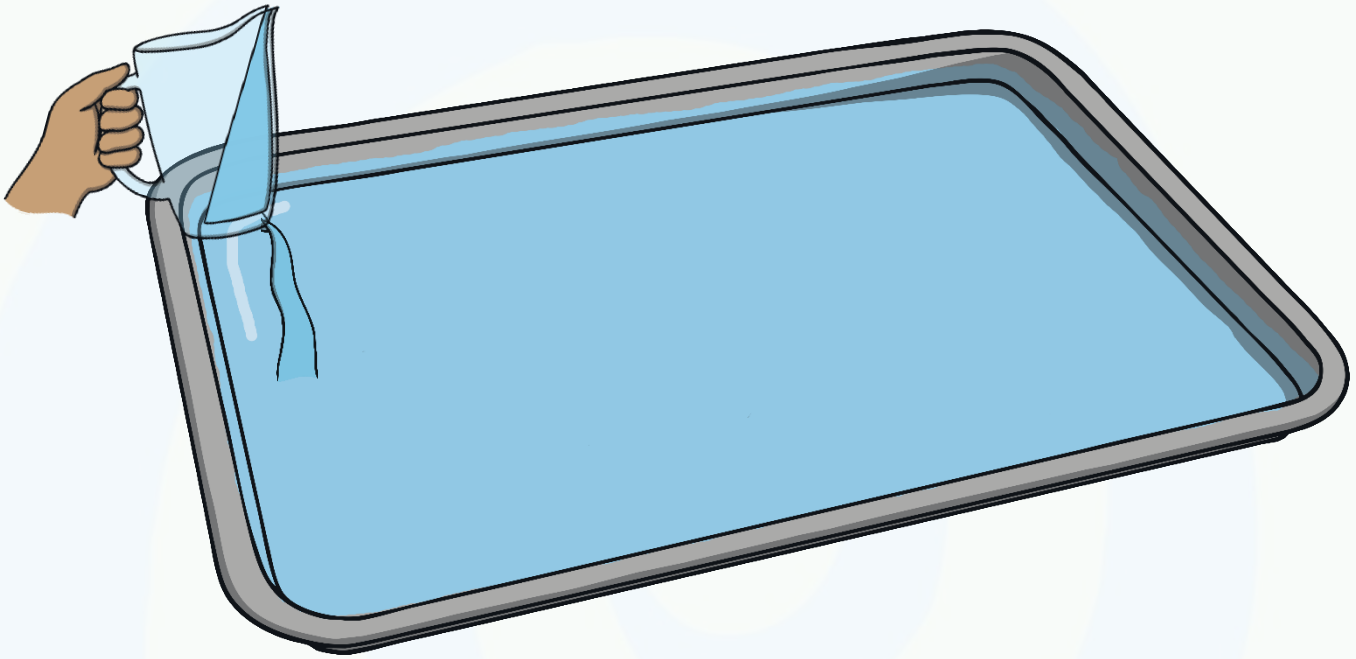
Instructions

Half fill shallow pans with water.



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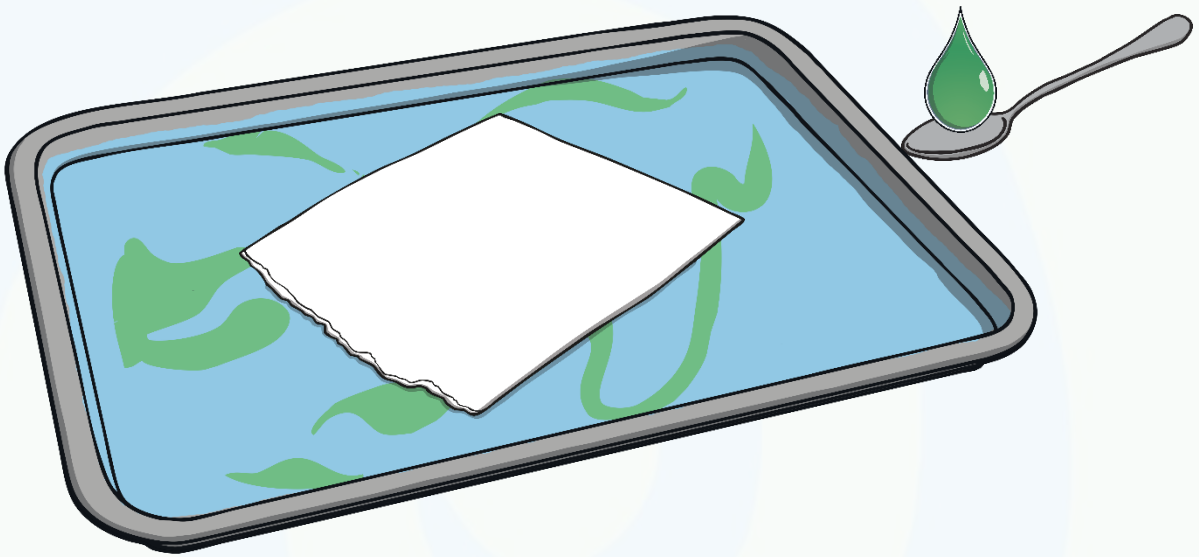
Instructions

Lift the paper out gently.



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Instructions

Leave paper to dry.

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Go Further

Try a mix of different colours on your design. Consider the Colour Wheel when selecting your colours.

What would happen if you were to mix the colours with different materials? Try using plastic forks or blowing the top with air through a straw or paint brush to create different designs.

What else could you create the marble effect on?

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Reflection

Did you use warm colours or cool colours?

How do the colours make you feel?

Did the colours mix when you put them into the water? Why/why not?

What happened when you used the different tools to swirl the colours?

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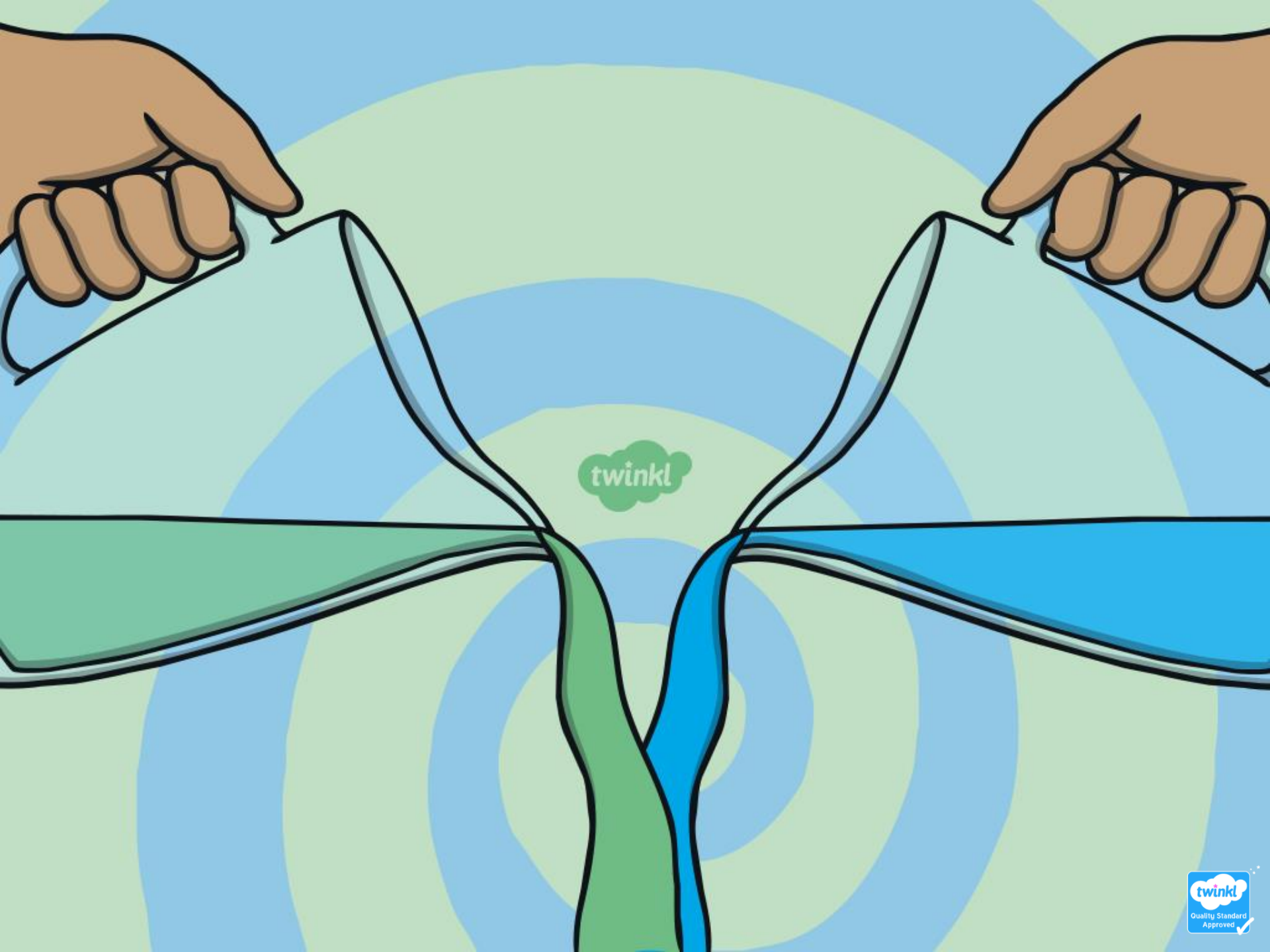
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