



# HANDS-ON EXPERIMENTS

HUMAN ADAPTATION

When we spend a lot of time in water – in a bath, during a swim, or, in our case, paddle-boarding down the Severn– our finger tips and toes go wrinkly and look like raisins! Have you ever wondered why? Nobody is 100% sure but some scientists think the wrinkly effect might be a special response that humans have evolved to help our fingers grip onto wet objects and our toes get a more stable footing on wet surfaces. The patterns of wrinkles look like channels, which means water on these wet surfaces will drain more quickly through them so we can grab damp objects more easily.



## The Experiment

What you need: Marbles – wet and dry, YOUR HANDS, tube of warm water, stopwatch

1

Using dry and unwrinkled fingers of one hand, time how long it takes you to pick up a wet and dry marble

2

Now steep the same hand in a tub of warm water for 10 minutes. Your finger tips should have gone wrinkly

3

Dry your hand

4

Time how long it takes you to pick up a wet and dry marble

5

Compare these results with when you did it with unwrinkled fingers

## Further Investigation

- Try repeating the experiment with cold water – do you see any differences in how quickly your fingers wrinkle?
- Dip your fingertips in cooking oil and try the experiment again – what do you notice about the wrinkling effect?
- Scientists have noticed that wrinkling doesn't happen when you cut or block the nerves running to our finger and toes – why do you think this might be?

# VIDEOS FOR THIS RESOURCE AT:

INTRODUCTION:



Clickable Link:

<https://youtu.be/uEA1C1U0ASg>

CONCLUSION:



Clickable Link:

[https://youtu.be/Ekj6z5fo\\_K4](https://youtu.be/Ekj6z5fo_K4)

