



**Welcome to the
Redhill Academy
Science
Department!**



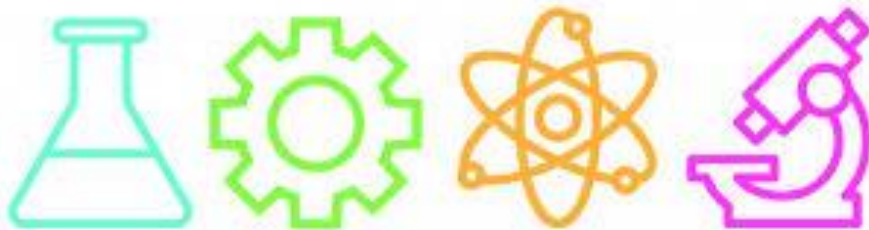
Hello future Redhill scientists!

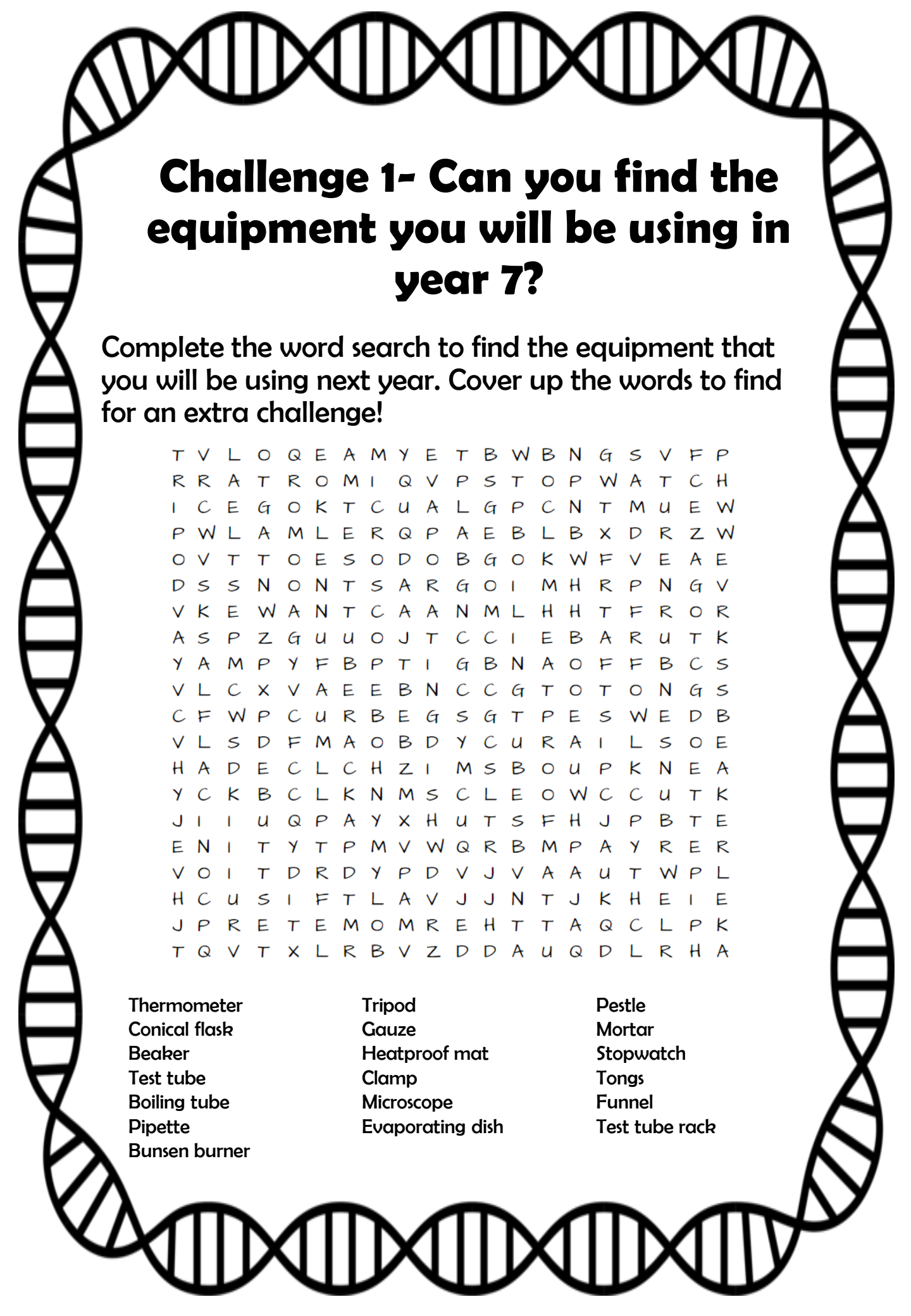
**All of the teachers in the science department
are looking forward to meeting you in
September.**

**In the meantime, we have made this
booklet to introduce you to some of the
equipment and terminology you will be
using in year 7. It also includes some short
practical investigations that you can try at
home.**

We hope you enjoy them!

The Redhill Science Team





Challenge 1- Can you find the equipment you will be using in year 7?

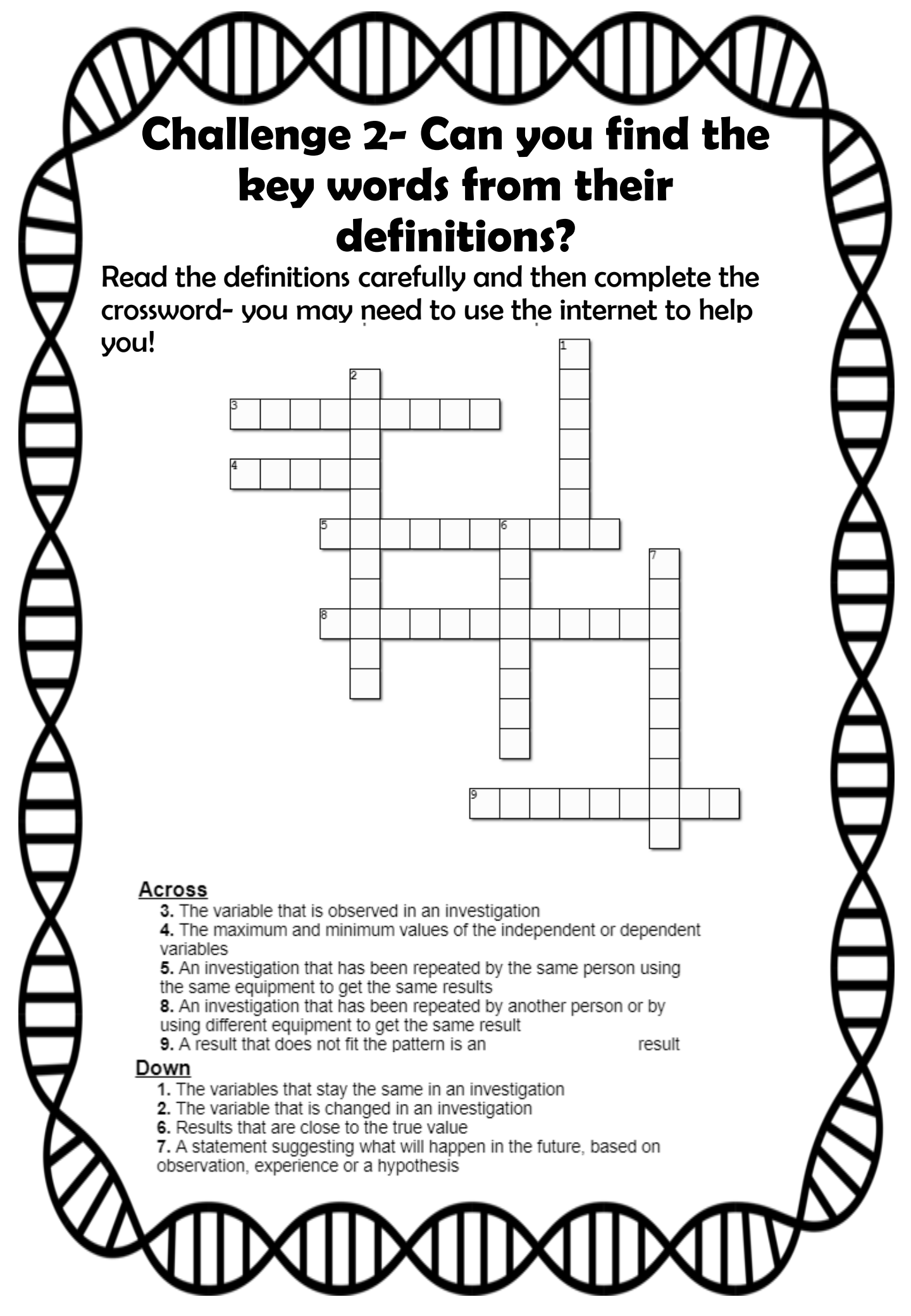
Complete the word search to find the equipment that you will be using next year. Cover up the words to find for an extra challenge!

T V L O Q E A M Y E T B W B N G S V F P
R R A T R O M I Q V P S T O P W A T C H
I C E G O K T C U A L G P C N T M U E W
P W L A M L E R Q P A E B L B X D R Z W
O V T T O E S O D O B G O K W F V E A E
D S S N O N T S A R G O I M H R P N G V
V K E W A N T C A A N M L H H T F R O R
A S P Z G U U O J T C C I E B A R U T K
Y A M P Y F B P T I G B N A O F F B C S
V L C X V A E E B N C C G T O T O N G S
C F W P C U R B E G S G T P E S W E D B
V L S D F M A O B D Y C U R A I L S O E
H A D E C L C H Z I M S B O U P K N E A
Y C K B C L K N M S C L E O W C C U T K
J I I U Q P A Y X H U T S F H J P B T E
E N I T Y T P M V W Q R B M P A Y R E R
V O I T D R D Y P D V J V A A U T W P L
H C U S I F T L A V J J N T J K H E I E
J P R E T E M O M R E H T T A Q C L P K
T Q V T X L R B V Z D D A U Q D L R H A

Thermometer
Conical flask
Beaker
Test tube
Boiling tube
Pipette
Bunsen burner

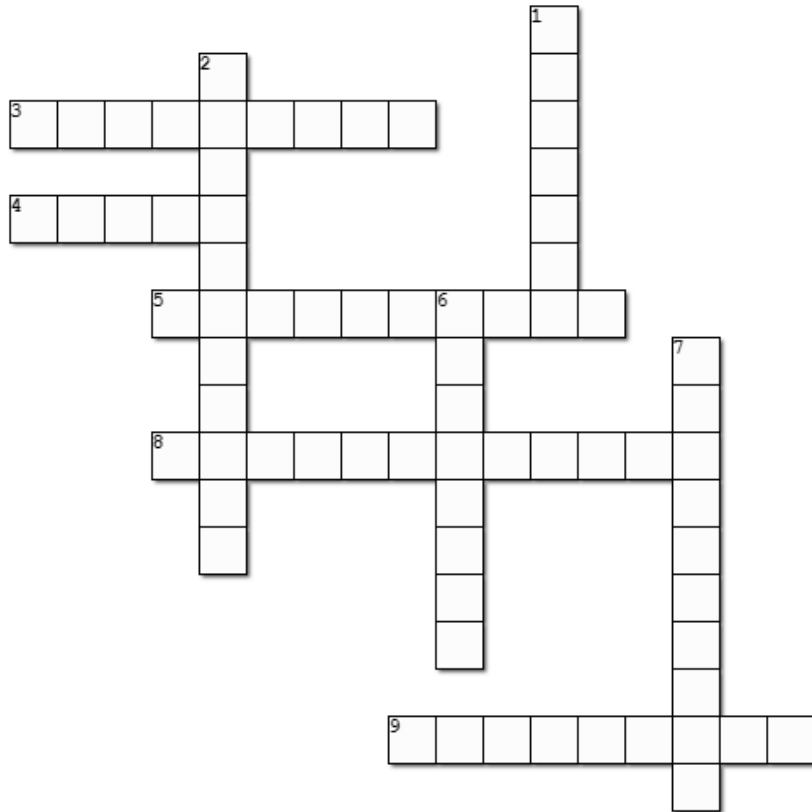
Tripod
Gauze
Heatproof mat
Clamp
Microscope
Evaporating dish

Pestle
Mortar
Stopwatch
Tongs
Funnel
Test tube rack



Challenge 2- Can you find the key words from their definitions?

Read the definitions carefully and then complete the crossword- you may need to use the internet to help you!



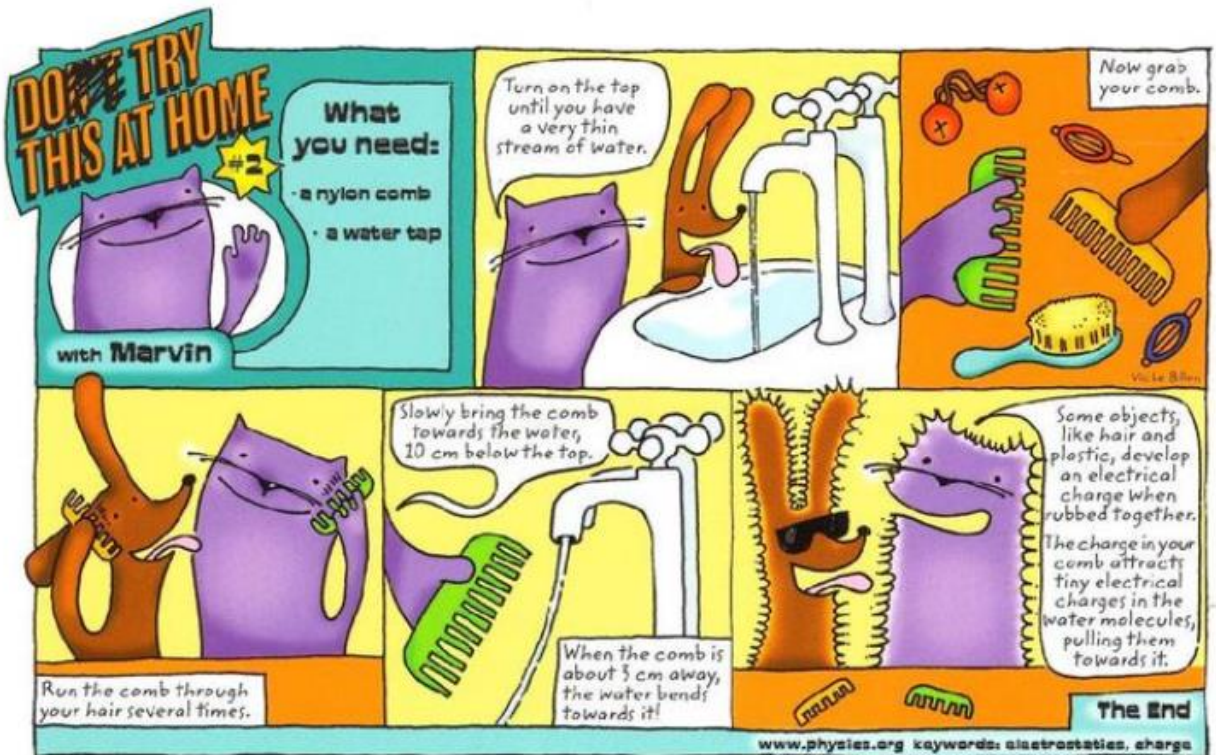
Across

3. The variable that is observed in an investigation
4. The maximum and minimum values of the independent or dependent variables
5. An investigation that has been repeated by the same person using the same equipment to get the same results
8. An investigation that has been repeated by another person or by using different equipment to get the same result
9. A result that does not fit the pattern is an _____ result

Down

1. The variables that stay the same in an investigation
2. The variable that is changed in an investigation
6. Results that are close to the true value
7. A statement suggesting what will happen in the future, based on observation, experience or a hypothesis

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to know more? Go to:

<https://www.bbc.co.uk/bitesize/guides/zthyvcw/revisio n/1>

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to know more? Go to:

<https://www.bbc.co.uk/bitesize/guides/z93jfcw/revisio n/2>

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to extend this?

Try the investigation with different fizzy drinks- does it affect how quickly the peanuts move?

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to know more? Go to:

<https://www.bbc.co.uk/bitesize/guides/z8d2mp3/revision/2>

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to extend this? Why not try with some warm water. What happens differently? Why does this happen?

Investigations for you to try at home!

#12 DO TRY THIS AT HOME

Featuring: **Marvin and Milo**

What you needs: • piece of foil • scissors
• washing-up liquid • sink or bath

Ahoy there me land lubbers! Today we are going to race my metal boat against Milo's ship.

To make a boat like mine, cut this shape...
10cm
4cm
... out of the foil.

Gently place your boat into a sink full of clean water.

Carefully place a drop of washing-up liquid into the boat's hole.

IT MOVES!

Water molecules are attracted to each other, creating "surface tension". The soap disrupts the surface behind the boat but the molecules in front are still pulling together, so the boat is pulled forward.

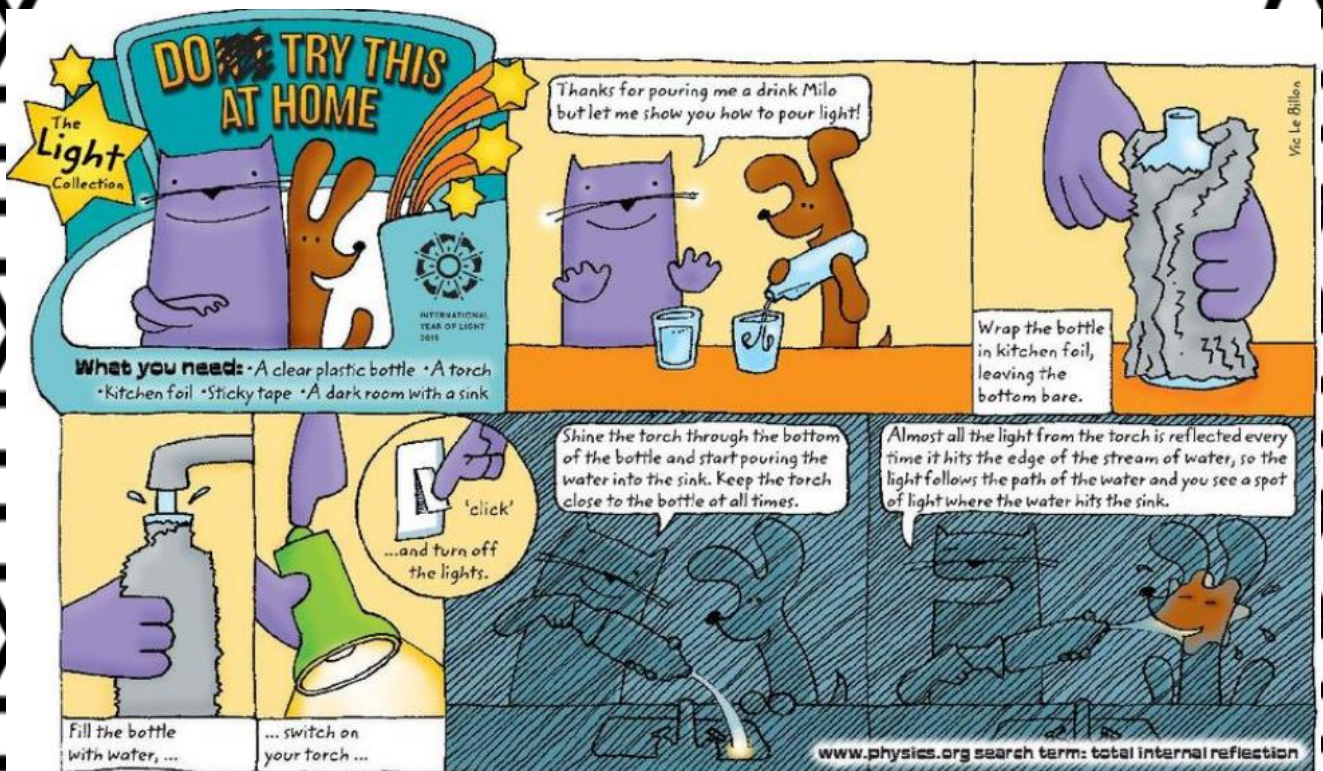
www.physics.org keywords: surface tension

<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

Want to know more? Go to:

<https://www.bbc.co.uk/bitesize/topics/z9r4jxs/articles/zkd3rwx>

Investigations for you to try at home!



<https://www.stem.org.uk/resources/elibrary/resource/25416/do-try-homesuitable-home-teaching#&gid=undefined&pid=1>

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What else can you do?

If you would like to learn more about different areas of science, or would like to have a go at some other investigations then have a look at the links below:

Lots more experiments you can do at home:

<http://www.sciencefun.org/kidszone/experiments/>

Online Science lessons from Brian Cox:

<https://www.bbc.co.uk/iplayer/episode/p089sj60/bitesize-1112-year-olds-week-2-5-science-with-prof-brian-cox>

