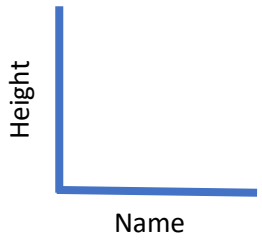
1. Define the following…
- Variable
- Independent
- Dependent
- Control
- Reliable
- Repeatable
- Risk
- Accurate

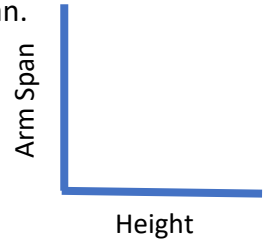
2. Copy the table of results and collect the data from people in your house (or over the phone!)

Name	Height	Eye Colour	Arm Span

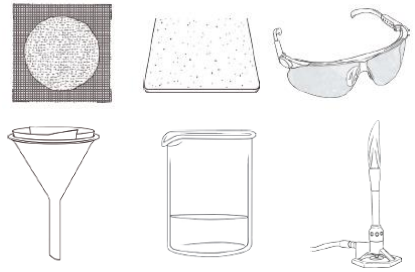
3. Plot a **bar graph** to show height.



4. Plot a **line graph** to show the correlation between height and arm span.

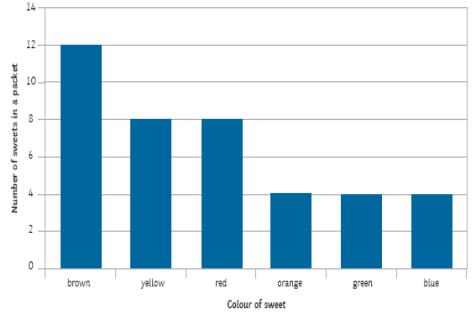


5. Name the pieces of equipment



6. Explain, referring to some of the equipment above, how you would separate the salt from salt water.

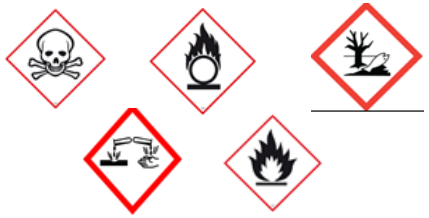
7. Using the graph below..
a. What is the independent variable?
b. What is the dependent variable?
c. Why was a bar chart used?
d. What colour of sweets was there the most of?
e. How do you know?
f. What was the total number of sweets in the experiment?



8. State what the following pieces of equipment are used for
- Measuring cylinder
- Thermometer
- Top pan balance
- Gauze
- Filter funnel
- Splint
- Evaporating basin

9. Write step by step instructions that someone could follow to use a microscope to view a prepared slide.

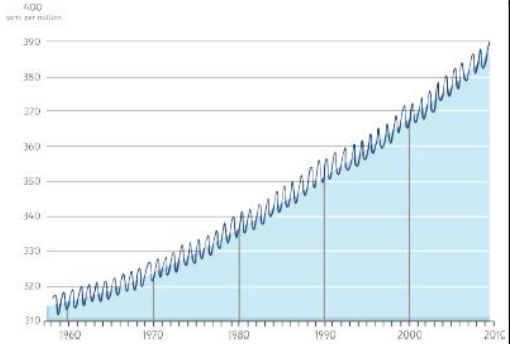
10. Label the following hazard symbols and explain where you might find them.



11. Copy and complete the table to create a 10 question science quiz that you can use to question someone in your house (or over the phone!)

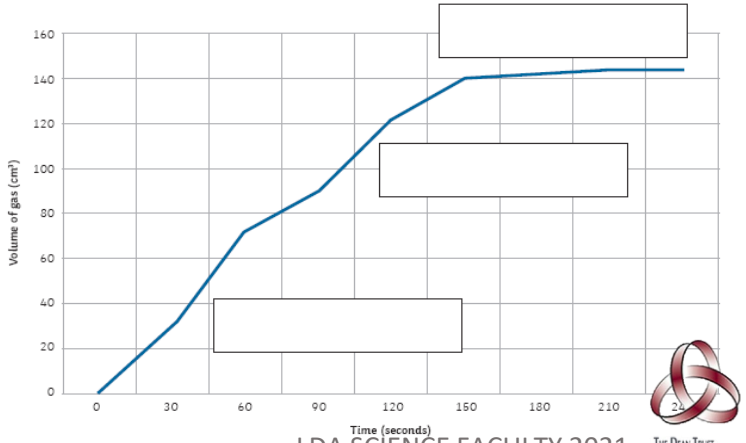
My question	My answer	Their answer
1.		

12. Using the graph below…
a. Describe the change in CO_2 levels from 1960 to 2010
b. What do you notice that is strange about the levels of CO_2?
c. What data can you use to support your conclusion?
d. Suggest why CO_2 levels have followed this overall trend



13a. The graph shows an investigation to find out how the volume of gas produced changes over time.
Put the following sentences on the correct place on the graph.
- As the time increases, the volume of gas goes up rapidly
- As the time increases, the volume of gas goes up steadily
- As the time increases, the volume of gas produced starts to plateau

13b. Now justify your answers. Write 3 sentences to explain why you think this.
Start off with 'I know this because…'



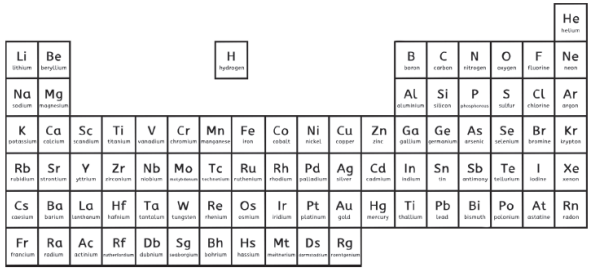
14. Create a poster/act it out/mime some safety issues that may occur in a science laboratory and what you can do to keep safe.

15. Find your pulse rate (on your wrist or neck)
Count your pulse for 60 seconds and write it down =
Have someone older than you count their pulse for 60 seconds =
How do they compare? Why are they different? Try exercising for 2 minutes and retake your pulse!

16. Draw and label a plant and animal cell.
Do not forget to include the mitochondria and ribosomes!

20. Using different colours for each bullet point, shade in and label…

- ❑ Metals and non-metals
- ❑ The transition metals
- ❑ The alkali metals
- ❑ The noble gases
- ❑ The halogens

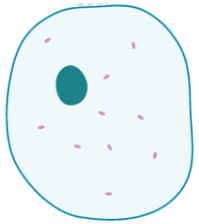


27.Create 2 paper airplanes – 1 with small wings and 1 with large wings.
Fly your airplanes at the same time.

a. Which plane was the best?
b. What do you mean by 'best?'
c. What was changed between the 2 planes?
d. Write a paragraph explaining the forces acting on your plane.

31. List as many organ systems in the human body.
Explain the role of each system.

17. Describe the function of each organelle in a plant and animal cell.



21. Complete 3 boxes to show the particles in a solid, liquid and gas

a. Add arrows to show the changes of state
b. Explain, in terms of energy, the arrangement of particles in a solid, liquid and gas

24. Make a model of a plant or animal cell (or both!) using whatever material you can find in your house.

- Label your model.
- Take a photo if possible.

28. Colour in the pH scale.

- Label the pH scale with different substances.

1	2	3	4	5	6	7	8	9	10	11	12	13	14

18. Copy and complete the table.
Put the forces into the correct

Contact Force	Non-Contact Force

Up thrust, gravity, tension, reaction, magnetic, air resistance, weight, electrostatic, friction

22. Plan an investigation to find out how a type of shoe affects frictional force.
Write down a clear method.

25. Draw a **line graph** for the following data. *Explain* what the results show.

Mass (kg)	extension of spring (cm)
0	0
1	10
2	25
3	45
4	40
5	50

29. Create an information leaflet describing the functions of 4 specialised cells.

- Include diagrams and information.

32. Match up the following.

speed	$\frac{\text{mass}}{\text{volume}}$
density	force × perpendicular distance
volume	$\frac{\text{force}}{\text{area}}$
pressure	Length × width × height
moment	$\frac{\text{distance}}{\text{time}}$

19. Write down as many careers in science

23. Create an information leaflet (like the ones in a doctors office) to explain the issues smoking can cause.

26. Using the equation
speed = distance/time

a. Draw an equation triangle
b. D = 12m, T = 4s
c. T = 50s, D = 250m
d. T = 66s, S = 31m/s
e. S = 468m/s, T = 40m
f. D = 200m, S = 2m/s

30. Calculate the mean average of magnesium oxide produced.
Plot the data as a **line graph**

Mass of magnesium (g)	Mass of magnesium oxide (g)			
	Test 1	Test 2	Test 3	Mean average
1	1.2	1.3	2.0	
2	2.5	2.7	2.5	
3	4.1	4.1	4.2	
4	5.7	4.1	5.5	
5	7.1	7.2	7.2	

a. Name 2 elements in this chemical reaction
b. Name the compound formed
c. As the mass of magnesium increases