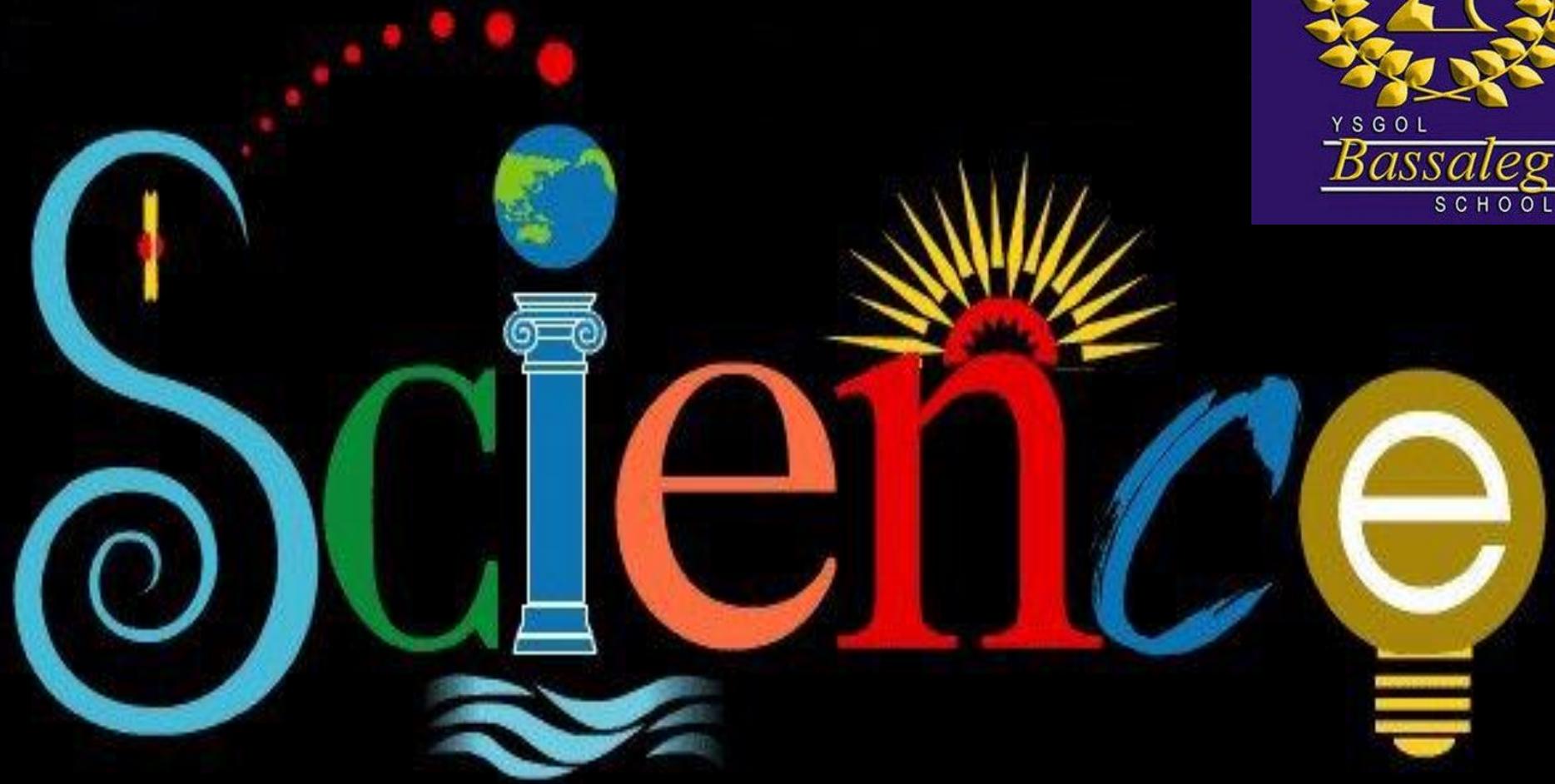


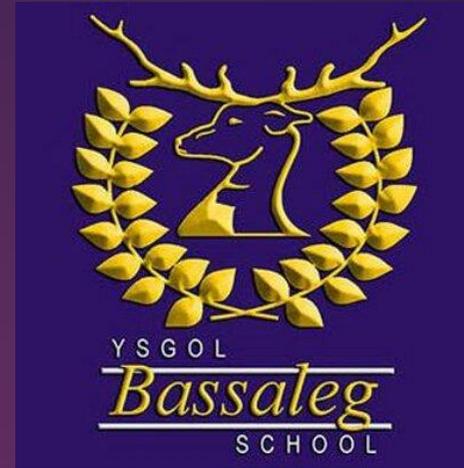


YSGOL
Bassaleg
SCHOOL



Explore The Possibilities

Bassaleg School



Science Department

Mrs Colebrook, Mrs Davies, Miss Wilkins

Dr Jones, Miss Backhouse, Mrs Cozzi, Mr Davies, Mrs Clapham

Mr Pearce, Dr Stark, Mr Lane, Miss Snelgrove, Mr Price

Year 7 Overview

The Year 7 curriculum is based on the Donaldson framework and is delivered in topics with an emphasis on Science skills development. Science is within the SciTech area of learning so topics run in conjunction with Digital Technology and Engineering.



Areas of learning

Tomorrow's World - pupils begin with an introduction to science. They explore the importance of science and technology in the modern world. They develop practical skills that will underpin subsequent units.

Survival – pupils explore how organisms can survive in changing environments, the demand for clean water supplies, the impact of plastics on our environment and the impact of diet on health. Activities include writing a report based on the problem of water supply and writing piece of persuasive writing on the impact of plastic pollution.



Areas of learning

Space – pupils investigate how we have explored space, the daily life of an astronaut, the effects of space travel on the body and how we can plan to survive in a sustainable environment in space. Activities include planning and producing a diary from an astronaut's perspective and investigating how rockets launch.

Earth –pupils explore our local environment and the impact that our own activities can have on a local, national and global scale. Pupils will also investigate the structure of the Earth and how weather affects our environment. Activities include investigating sampling methods and presenting research on climate change.



Year 7 Assessment

Pupils will have two exercise books in Science:

Lesson activity book – to record observations and reflections on the lessons covered.

Core task book – to complete the teacher assessed core tasks that will be taken in every unit covered. This book remains in school as a profile of each pupil's assessment in Science.



Pupils will need to prepare for each core task and they will be given information by their Science teacher in order to do this. Electronic revision resources will be available for pupils to use to help them prepare for assessments and these resources and other important information will be shared with pupils via their Google classroom.



We hope that this information is helpful in providing an overview of the Science curriculum.

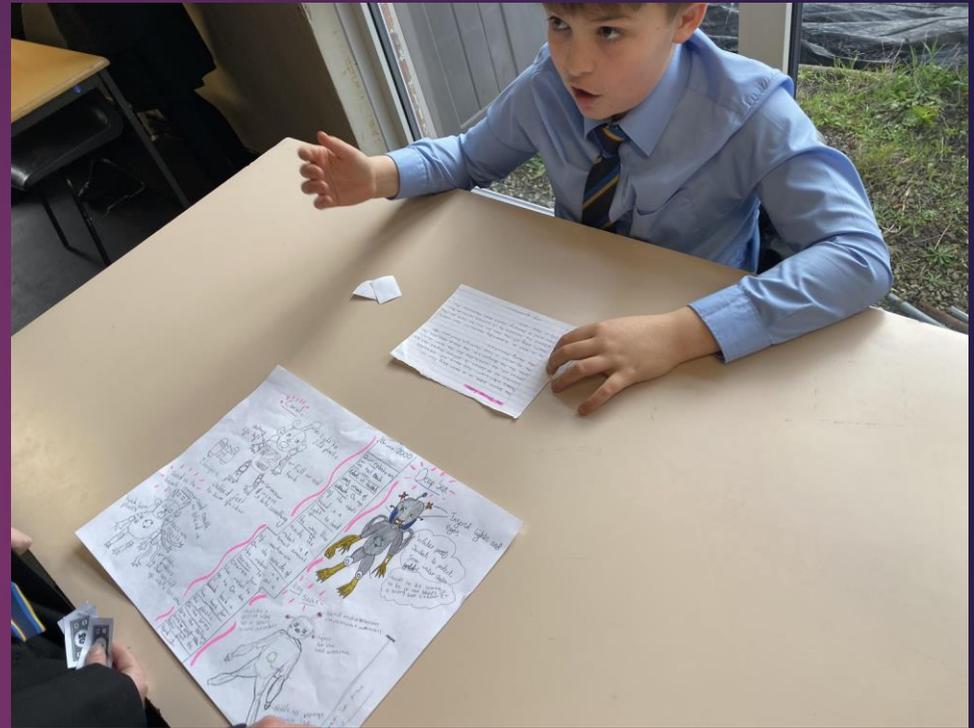
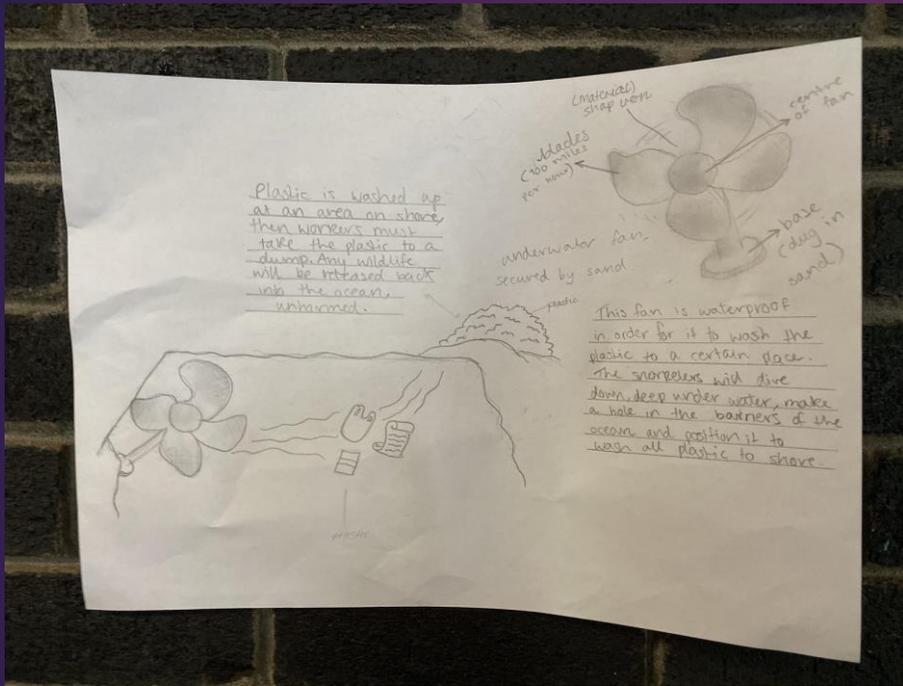
We look forward to seeing you in September! 😊

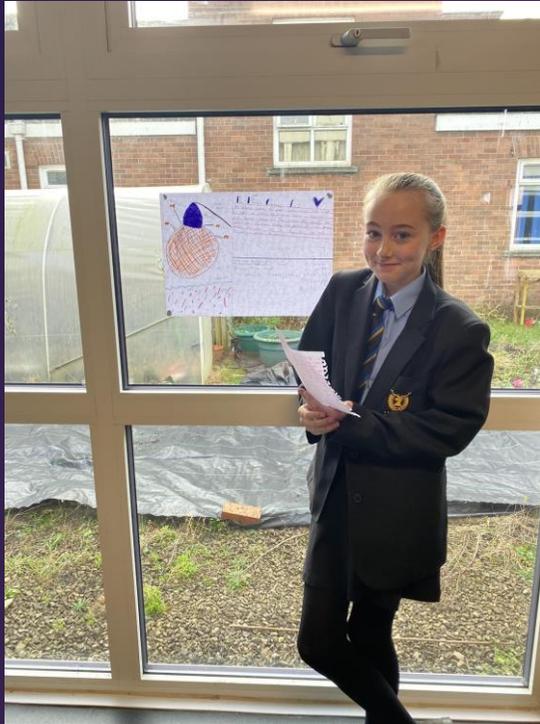




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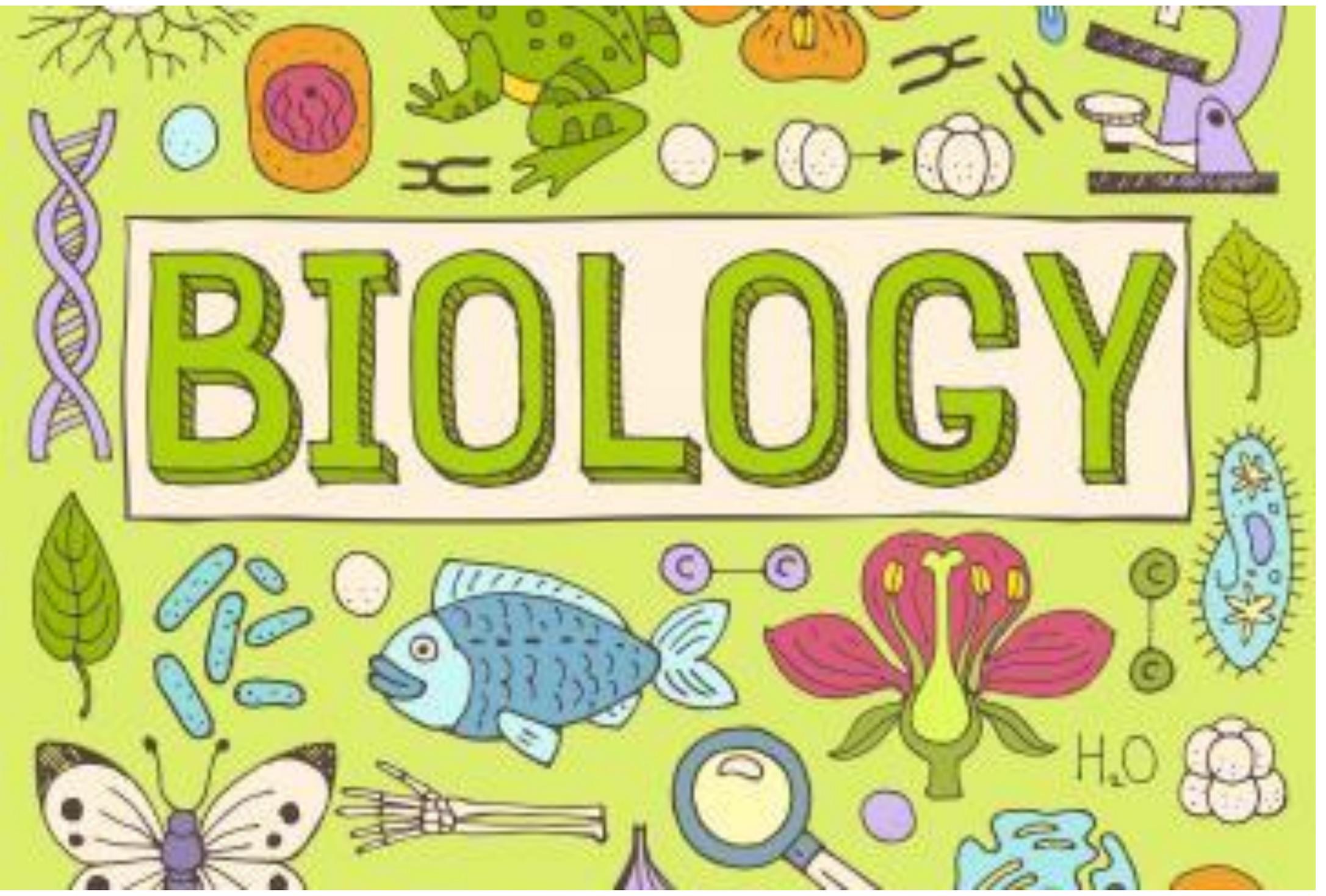






The aim of the following activities is for Year 6 pupils to sample a number of different aspects of the Science curriculum at KS3. The worksheets have short tasks, most of which have some kind of general activity and research that can be carried out independently.

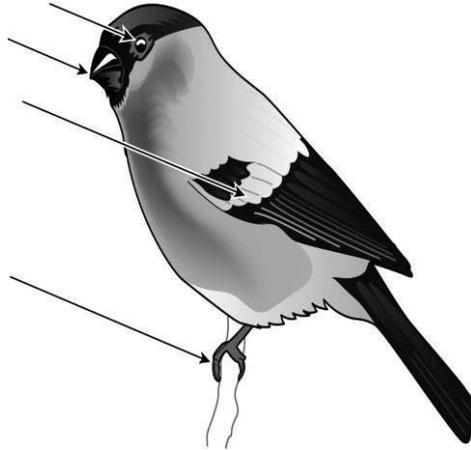
BIOLOGY



Special features of birds

In a local park, choose a bird to watch closely.

- Label the parts of the bird's body on the diagram.
- Why do you think the bird needs wings?
.....
- Why does it have claws?
.....
- Why does the bird have feathers?
.....



Parts of a leaf

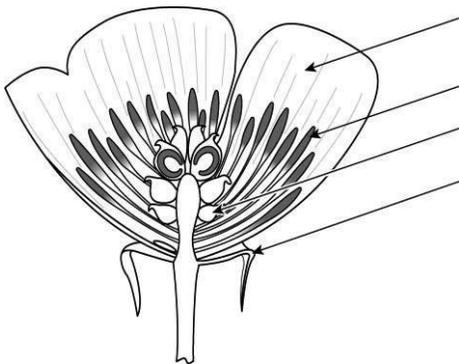
On a visit to a park or on a walk, find a tree and collect a leaf. Use books or the Internet to identify the tree from the leaf.

In the space below, draw the leaf and label as many parts as you can.



Parts of a flower

Label this diagram of a buttercup flower, which has been cut in half.



Local wildlife

Think about the living things that you might find in your garden, or in a local park. List as many organisms from your area as you can. Divide the list into producers, herbivores, and carnivores.

Producers

Herbivores Carnivores

Complete these tasks using what you know about the human body.

Healthy Eating

During the summer holiday, find three different chocolate bars of your choice, or three different soft drinks of your choice.

Look for the nutritional on the wrappers or bottles. Fill in the table below with the nutritional information about the bars or drinks.

| Name of chocolate bar or soft drink | Carbohydrates (per 100 g) | Fats (per 100 g) | Protein (per 100 g) | Calories |
|-------------------------------------|---------------------------|------------------|---------------------|----------|
| | | | | |
| | | | | |
| | | | | |

Which of the chocolate bars or drinks is the healthiest? Use your table to help you decide.

.....

.....

The Human Heart

Answer these questions using what you know about the human heart.

Where is the heart found in your body?

.....

What does the heart do?

Your pulse measures how many times your heart beats in one minute. Your pulse goes up when you exercise.

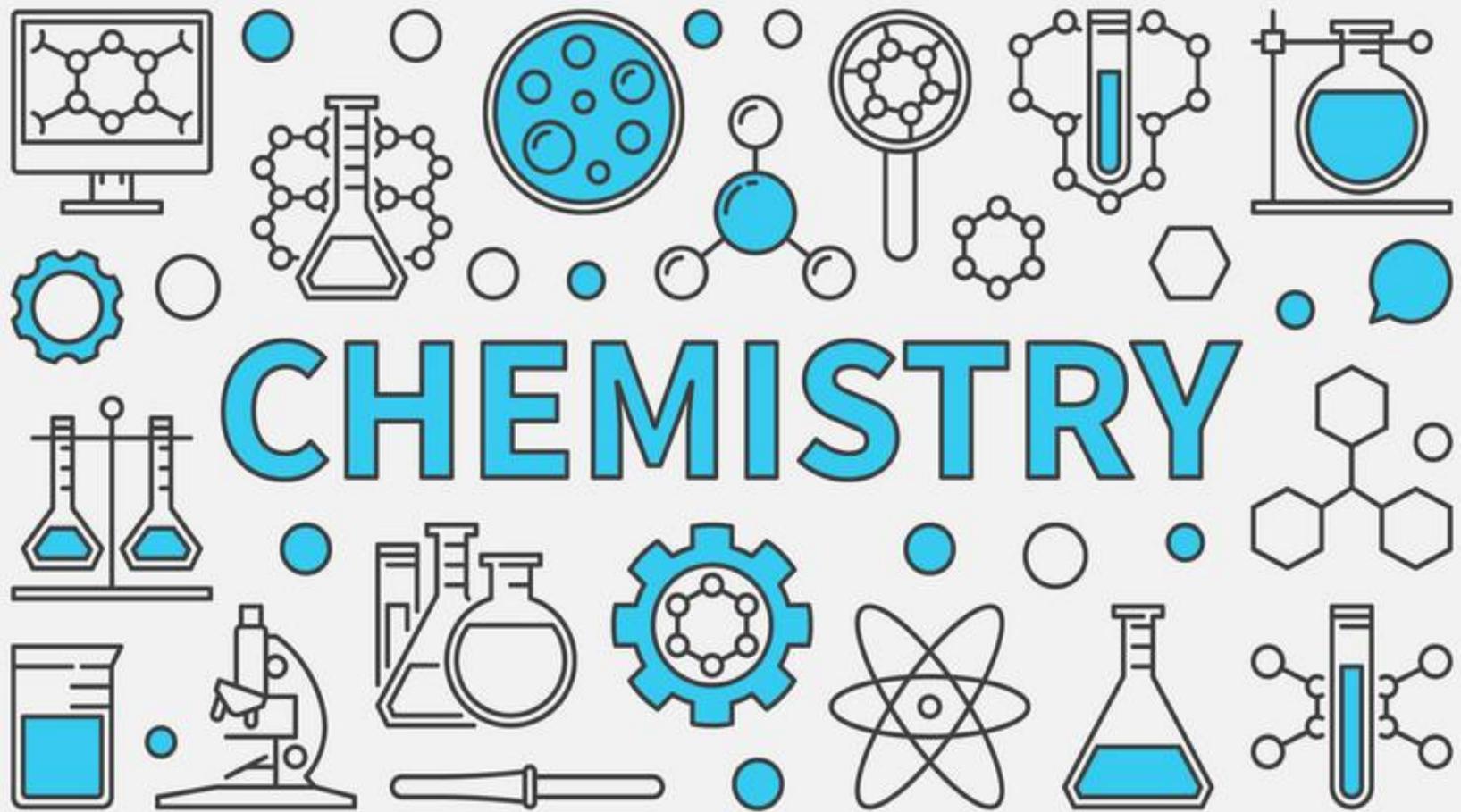
- Record your pulse when you are resting, and fill in the table.
- Now jog on the spot or do star jumps for two minutes.
- Measure your pulse again and fill in the table.

| Resting pulse (beats per minute) | Pulse after exercise (beats per minute) |
|-------------------------------------|---|
| | |

What is the effect of exercise on your pulse rate? Use your table to help you decide.

.....

.....



CHEMISTRY

Birthday chemistry

Every day, scientists do investigations and make observations to answer questions in chemistry. These scientists are called chemists. Chemists work out why materials have certain properties. They find out how materials change in chemical reactions. They create new materials, with perfect properties for particular purposes.

What to do

- Go to this website: <http://www.rsc.org/learn-chemistry/collections/chemistry-calendar>
- Click on your birthday.
- Fill in the form to show others in your new class why your birthday is important in chemistry.

Hints

- Fill in the form in your own words.
- If there is a word you don't understand, ask someone for help, or look it up in a dictionary or on the Internet.
- You can draw a picture or find one on the Internet, print it out, and stick it on the form.

Why is my birthday important in chemistry?

Name: ___ My birthday is on: _____

The name of my chemist is: _____

My chemist is from this country: _____

This is what my chemist did: _____

Here is a picture of my chemist, or of something my chemist discovered.

Materials matter

Chemists make materials that are suitable for their purpose. In this activity, you will work out why objects are made from certain materials.

What to do

- Find five objects at home that are made from different materials.
- Fill in the table to show why the objects are made from their materials. The first line is already filled in.

| Object | Material the object is made from | Properties of the material that make it suitable for the object |
|------------|----------------------------------|--|
| frying pan | metal | <ul style="list-style-type: none">· good conductor of heat· rigid |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Sugar or salt?

In this activity you will plan and do an investigation to answer this question: **Can you dissolve more sugar, or more salt, in a glass of water?**

My plan

- Complete the table.

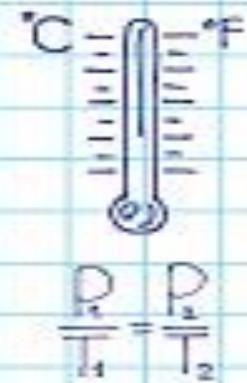
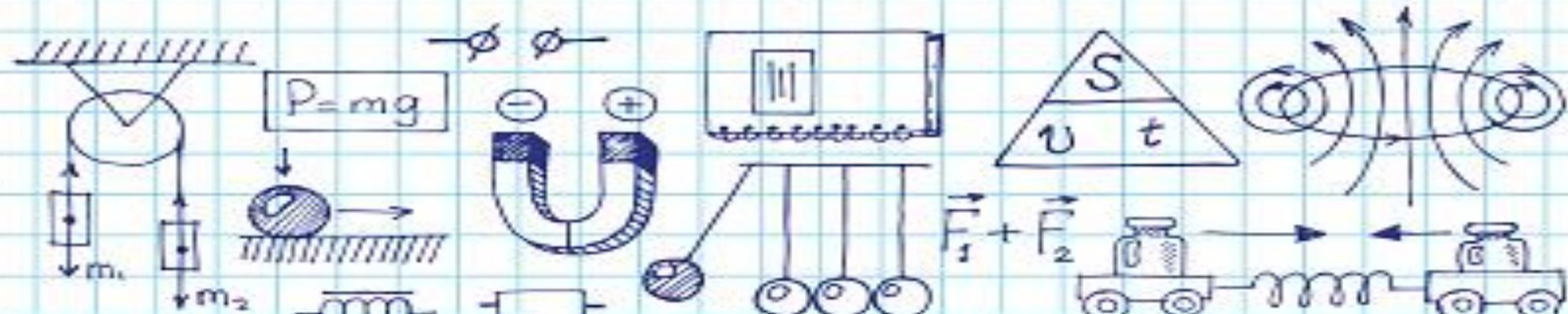
| Variable | Will I change it or measure it or keep it the same? |
|---------------------------|---|
| substance (sugar or salt) | |
| amount that dissolves | |
| volume of water | |
| temperature of water | |

- Write down what you will do.

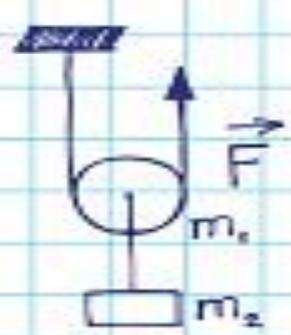
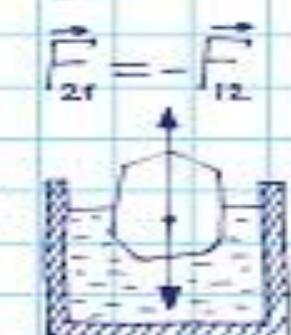
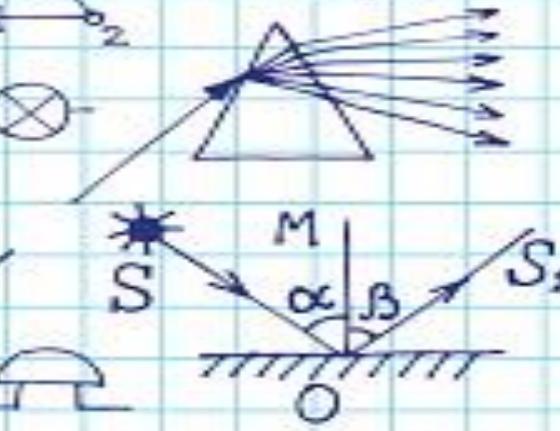
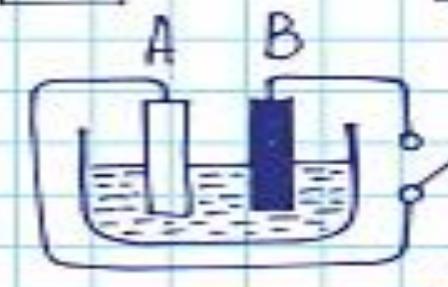
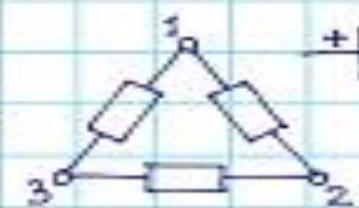
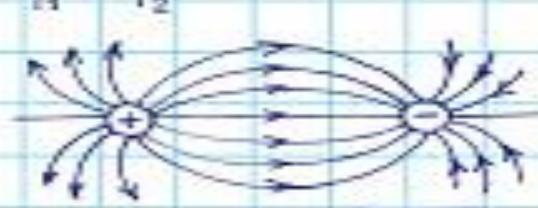
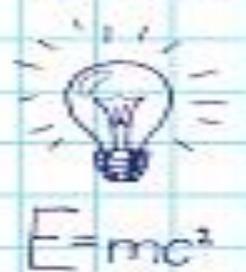
My results

| Substance | |
|-----------|--|
| Sugar | |
| Salt | |

What I found out



PHYSICS



We use physics in lots of areas of our lives. Use what you know about science to help you carry out the tasks below.

Circuits



Can you draw a simple circuit that you would find in a torch? Include these things:

battery bulb switch

The Sun

Check the Sun's position several times in one day and write the changes.

Warning: Never look directly at the Sun!

| Time | Height in sky | Position |
|-------|---------------|----------|
| 7 am | | |
| 12 pm | | |
| 4 pm | | |
| 9 pm | | |

The Moon

Watch the moon every night for a week. Write down what it looks like each day. Think about its shape, and brightness.

| Day | How the Moon looks |
|-----------|--------------------|
| Monday | |
| Tuesday | |
| Wednesday | |
| Thursday | |
| Friday | |
| Saturday | |
| Sunday | |

Forces

Some types of force slow us down when we are moving. Fill in the blanks, using the words below:

water resistance air resistance drag

- A force that slows me down when I run is
- A force that slows me down when I swim is
- A force that slows me down when I cycle is

Magnets



List some objects that are magnetic and some that are not.

Magnetic

Not magnetic