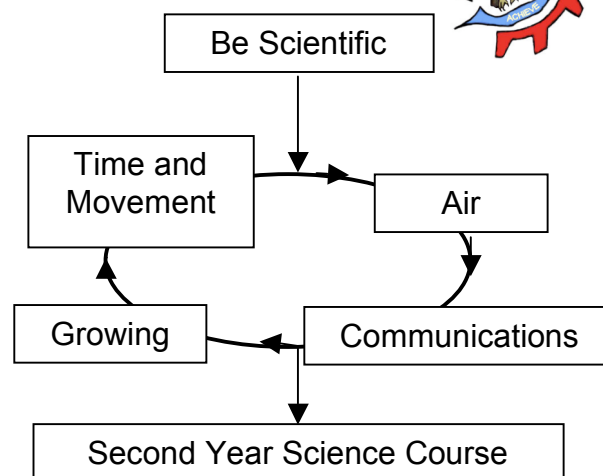


S1/S2 Science at Millburn Academy



The first year science course comprises of the five units in the diagram opposite. All classes start with an introductory theme Be Scientific finishing in October and then work around the other four units until May.



All pupils will have studied Science in Primary School and we aim to reinforce and extend the skills covered so far.



What kind of activities do pupils do in class?

Pupils work in groups of 3 or 4 on a wide range of practical activities including discussion and practical work. A wide range of resources including computer interfacing is used

in first year Science.

What precautions are taken to ensure safety in the laboratory?

All pupils are briefed at the start of first year with the need for safety rules and a list of safety points. All experiments are standard procedures which have been widely used in the past. Pupils are also encouraged to carry out their own risk assessment.

How much homework will there be?

There are at least four homework exercises each term issued roughly once a fortnight and recorded in their homework diary/planner. Pupils are issued with a yellow homework sheet and a blue homework jotter.

The Science department places emphasis on homework for three main reasons:

- Homework reinforces work carried out in class
- Homework is individual rather than group work and give the teacher a better picture of a pupil's strengths and weaknesses.
- The good study habits of regular homework are essential for nationally assessed courses later in secondary school

Pupils usually have a whole week between homework being issued and due back. This allows pupils to fit in homework for Science alongside work for other subjects due that week.

It is recommended that pupils try homework exercises well before the date due so they can ask for help from the teacher in class if necessary. The investigation homework in Time and Movement is a practical investigation planned and carried out at home. Experience has shown that pupils often need to ask their teacher for help with these aspects of homework.



If your son or daughter's homework is late or below an acceptable standard more than three times the teacher may contact you by letter. Pupils are issued with a brown study guide and summary notes booklet for each unit which should be completed to summarise work carried out. These notes should be used alongside jotters when revising for a test.

What assessment takes place?

All learning in school is observed by teachers who use these observations and written evidence to assess attainment. Pupils complete a summary of each unit which is brought home and retained by the teacher as evidence of attainment.

All of the 5 units are also assessed by a two part written test:

- Knowledge and understanding – learned from work covered in class summarised by study guide and summary notes.
- Science Skills – skills developed during the course such as graphing, comprehension and investigation.

Teachers will also observe pupils practical investigative work in class. This observation will support Science Skills grades.

An individual practical task is carried out by each pupil at the end of each unit to assess competence in a key practical skill.

How do I know how well my child is doing in Science?



Parents evening for first year pupils is in November when you will be able to get an idea of how your daughter or son is settling in. You may take this opportunity to find out more about the Science course.

A written report is issued in late May along with all other subject reports.

If your son or daughter's progress or behaviour is well below the teacher's expectations you will be contacted by letter.

What if my child is finding the work too difficult?

Pupils who have difficulty writing or organising work can use write-on worksheets which follow the work of the class. If you have concerns about your son or daughter coping with work in Science please contact me or the relevant guidance teacher. As the units are tackled in rotation your child will not be able to change classes without often missing out on some aspect of the course.

What can I do to help my child with their work in Science?

- Spend just a few minutes with your child and their jotter, and make up three revision questions about the work covered that day. If this is done regularly, it should help long term memory retention.

- Ask them:
 - if they are enjoying science?
 - did they learn anything surprising recently?
 - Have they done anything in class which could be tried at home?
- Encourage your child to read about something scientific, and then explain it to you in their own words.
- Try some simple experiments at home measuring things etc, the time for advert breaks during a TV programme and get your child to do something scientific with the results e.g. calculate an average over the night, or draw a bar chart of the results.
- Regularly check, help with and sign - homework, pupil profiles, revision booklets and summaries. Praise them when they have worked well.
- Make comments in your child's jotter, feel free to correspond with teachers using jotter or planner.
- Encourage pupil to watch topical science programmes to increase background knowledge e.g. Bang Goes the Theory, Mythbusters, Brainiac etc.
- Help with vocabulary – write a glossary of difficult words in jotter.
- Help pupils to access online revision, You tube videos, school website etc.
- Provide a 'quiet' area for revision and identify revision strategies that are personal to your child.

- Agree targets/goals with child and discuss course choices throughout S1/2.
- Discuss how science is involved in your life/work.
- Supporting your child at school:
- Attend parents evenings.
- Check you child is prepared for the following days lesson by ensuring they have their jotter, planner and a pen or pencil.
- Ask them open ended questions about their learning, e.g. What did you learn in Science today? Then ask further questions to find out the 'science'.
- Come and talk to the class about your experiences and knowledge of science and if you work in science, technology, engineering or maths become a STEM ambassador. www.stemnorthofscotland.com

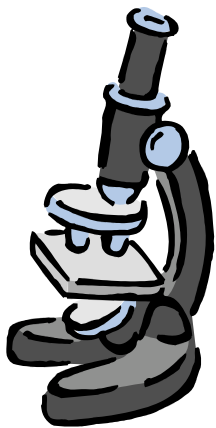
Taking an interest in the work they are doing and asking to see jotters is a good opportunity for pupils to talk to you about the Science they have been doing. This often helps with recall and understanding of the Science covered.

Can the Internet help with homework?

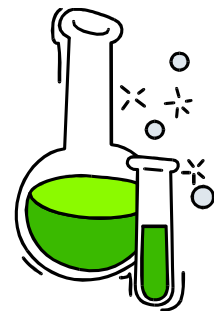
All homework is based on work done in class so there should be no need for additional resources to complete homework. Occasionally a homework exercise may benefit from research from an encyclopaedia or a website such as www.howstuffworks.com or www.nasa.gov .

What happens after first year?

Science in second year is again a similar integrated course of Biology, Chemistry and Physics with assessments for each unit. Second year report grades and third year course recommendations are based on these marks.



Second year test marks are used to determine whether a pupil has sufficient ability to follow National 4 or National 5 courses in Biology, Chemistry or Physics.



I hope your son or daughter finds their work in Science interesting and provides a firm foundation for Science subjects later in the school and is useful beyond school.

Martyn Crawshaw

Faculty Head of Science