13th June Memory Verse

He telleth the number of the stars; he calleth them all by their names.

(Ps. 147:4)

Younger children can learn the words in bold and understand that ""He" in this verse is the Lord God. More information about this memory verse in tomorrow's lesson.

Scotland features in both today's lessons. Can you find the Grampian Mountains in your atlas?

A famous speech to learn

Today is the anniversary of the birth of Gnaeus Julius Agricola (40 AD– 93AD), the Roman general responsible for much of the Roman conquest of Britain. We know quite a lot about Agricola because

his son-in-law, the historian Publius Cornelius Tacitus, wrote his biography. Agricola was made consul and governor of Britain in 77AD. He conquered Wales and northern England. Then he led his army to the far north of Scotland, establishing forts across much of the Lowlands.

Agricola's last battle in Britain, before returning in triumph to Rome, was the Battle of Mons Graupius. No one knows now where exactly in Scotland this battle took place, although many have speculated that the name indicates it was somewhere in the Grampian Mountains, which you can see in the picture on the right.



The tribes gathered together against Agricola under the leader of the Caledonians who, according to Tacitus, was called Calgacus. In his telling of the event, Tacitus gives Calgacus a wonderful speech which has resonated down the ages:

When I consider the origin of this war and the necessities of our position, I have a sure confidence that this day, and this union of yours, will be the beginning of freedom to the whole of Britain.

To all of us slavery is a thing unknown; there are no lands beyond us, and even the sea is not safe, menaced as we are by a Roman fleet. And thus in war and battle, in which the brave find glory, even the coward will find safety. Former contests, in which, with varying fortune, the Romans were resisted, still left in us a last hope of succour, inasmuch as being the most renowned nation of Britain, dwelling in the very heart of the country, and out of sight of the shores of the conquered, we could keep even our eyes unpolluted by the contagion of slavery.

To us who dwell on the uttermost confines of the earth and of freedom, this remote sanctuary of Britain's glory has up to this time been a defence. Now, however, the furthest limits of Britain are thrown open, and the unknown always passes for the marvellous. But there are no tribes beyond us, nothing indeed but waves and rocks, and the yet more terrible Romans, from whose oppression escape is vainly sought by obedience and submission.

Robbers of the world, having by their universal plunder exhausted the land, they rifle the deep. If the enemy be rich, they are rapacious; if he be poor, they lust for dominion; neither the east nor the west has been able to satisfy them. Alone among men they covet with equal eagerness poverty and riches. To robbery, slaughter, plunder, they give the lying name of empire; they make a desert and call it peace.

This speech, with its majestic denunciation of the Romans and its poignant cry for freedom is part of our British heritage which every child should know. If you can memorise even the first few lines and the famous final phrase, you will have learned something well worth storing away in your mind. I have highlighted some parts of the speech which make sense without the rest. You could make the task easier by just memorising those.

This speech is also a brilliant exercise for reading or speaking out loud. Imagine the scene. Calgacus has gathered his men – Tacitus says there were 30,000 of them – in the wilds of the Scottish highlands to face Agricola. Agricola's soldiers are auxiliary legions supported by Roman troops. The auxiliaries were from various distant parts of the Roman empire. The Roman general would send them in first because it was considered a more glorious victory if the battle was won without the loss of a single Roman life. To the Britons these foreign looking troops with their own leaders, their own style of fighting and their own distinctive weapons look like kings with their troops from far away exotic lands who were confederate with the Romans.

The rest of Britain has been subdued. Calgacus knows that this is the last chance for freedom. He must convince his troops to do their best and he wants to tell them that they are doing the right thing for their families, their lands, and their heritage. His own warriors are from several different tribes. He must keep them together.

See how well you can read out or say this speech yourself. It must be dignified and measured but animated and powerful. See what you can do; try your hand (or voice!) at some oratory. Print out the page and underline the words you think you should emphasize. Mark where you think a dramatic pause would be good. Then practice! How will you say that marvellous final phrase?

Calgacus's army was defeated, although possibly not as thoroughly as Tacitus tells us; he was keen to make the most of his father-in-law Agricola's achievements. Tacitus did not hear Calgacus's speech. Nor did Agricola, we would imagine! So how did Tacitus know what he said and write it down? We can imagine defiant captured Caledonian tribesmen repeating it to their Roman captors perhaps, but the reality is that Tacitus probably made it up. Tacitus is believed to have put the correct type of speeches (as he saw it) into the mouths of most of the characters about whom he wrote.

"History is what people agree to believe," says one website in connection with this speech.¹ But this is *not* a good definition of history. As Christians we know that the past is not something that *we* determine. Though we were not there in the past, God was! God is in charge of history. The unfolding of the events of history is the unfolding of God's purposes. What people might now agree has happened in the past does not determine what actually happened. What actually happens all the time, moment by moment is in the hand of God. That includes the past, the present and the future. When a good historian looks at the evidence before him he does his best to determine what actually happened is at best a poor historian. At worst he is twisting history for some purpose of his own.

This does not mean that because we do not know whether Calgacus said these words – or even if he existed – the speech has no value. It still contains ideas and expressions which help us articulate our feelings about freedom and about being British today! It is a great piece of literature, even if it is not history, and it can be valued as such.

If you would like to read the whole of the speech as Tacitus wrote it, you will find it in today's Optional Resources files.

¹ https://www.undiscoveredscotland.co.uk/usbiography/c/calgacus.html

Some science history

Scottish mathematician and physicist James Clark Maxwell $(1831-1879)^2$ was born on 13^{th} June. He was responsible for the classical theory of electromagnetic radiation, which was the first theory to describe electricity, magnetism and light as different manifestations of the same phenomenon. In 1865 he published his *A Dynamical Theory of the Electromagnetic Field* which demonstrated that electric and magnetic fields travel through space as waves moving at the speed of light. This led to his prediction of the existence of radio waves.

Maxwell's discoveries were foundational to modern physics and many physicists today think of Maxwell as the 19th-century scientist having the greatest influence on 20th-century physics.

Maxwell came from a Christian family and in his childhood had been taught by his mother to memorise many passages of the Bible. This stood him in great stead in later life. His mother educated him herself until her death which occurred when he was only eight years old. His education continued at home with a tutor until he was ten when he was enrolled at the Edinburgh Academy.



Maxwell was converted while young at Cambridge University, possibly during a serious illness in 1853 when he was looked after by the family of a Christian minister in Sussex. He wrote to the minister when he recovered:

...but I maintain that all the evil influences that I can trace have been internal and not external, you know what I mean — that I have the capacity of being more wicked than any example that man could set me, and that if I escape, it is only by God's grace helping me to get rid of myself, partially in science, more completely in society, – but not perfectly except by committing myself to God as the instrument of His will, not doubtfully, but in the certain hope that that Will will be plain enough at the proper time.

Maxwell like to read the puritan writer John Owen and also the American preacher Jonathan Edwards. He had a firm belief in the truth of the Bible but, unlike Sir Ambrose Fleming³ he did not join the Victoria Institute, the organization devoted to combatting evolutionary theory. Also unlike Fleming, he does not seem to have toyed with some of the weirder theories that were popular at the time such as the existence of a pre Adamite race of beings. Both Maxwell and Flemming wanted to defend the truth of the Bible and to participate in the study of science. These are both laudable aims. The state of science at the time meant that the pontifications of Darwin and his supporters as to the origin and development of life on earth were more difficult to challenge than they are now. Flemming was led into dubious theories. Maxwell, was perhaps more farsighted. He was concerned that the Victoria Institute was trying to "set in stone" certain ideas in response to current scientific thinking and would be left behind when that thinking changed.

Make a colour spinner⁴

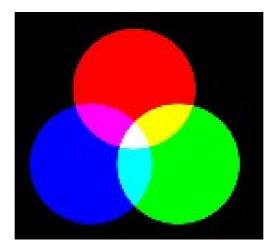
Maxwell's work on colour, colour vision and colour photography was based on discoveries about how colours behave when mixed together. As you probably know when coloured paints are mixed the primary colours are red, blue and yellow. Read and yellow mix to give orange. Blue and yellow mix to give green and blue and red mix to give purple. If you have never thought about this you can

² See lesson for March 22^{nd} .

³ See the lesson for November 29th.

⁴ Permission to use sought 21/12/21 from St Nicholas and St Mary Primary School, Sussex, office@stnm.org.uk

demonstrate it to yourself using your paint box. However the mixing of coloured light is quite different. The way the colours of light mix is shown in the diagram below. Maxwell used a spinning disk to experiment with the mixing of coloured light. Full instructions are given in today's Optional Resources files to make a colour spinner that will "reverse the rainbow" and produce a white effect from mixing colours. Maxwell used more complex spinners than this⁵ but this one will give you an idea of what he was doing.



⁵ An more complex spinner with explanation can be downloaded from this page:<u>https://www.mathematicalperspectives.org/western-europe</u>