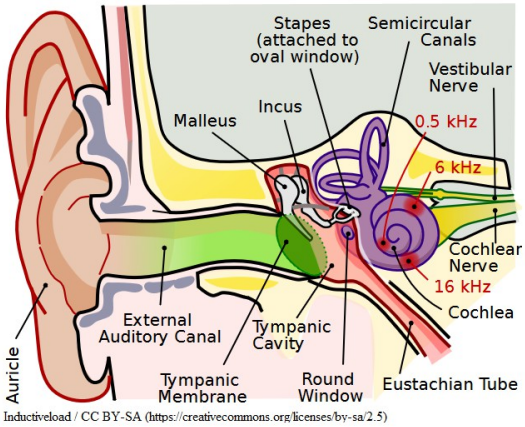
3rd June

Memory verses

I do set my bow in the cloud, and it shall be for a token of a covenant between me and the earth. [And it shall come to pass, when I bring a cloud over the earth, that the bow shall be seen in the cloud: and I will remember my covenant, which *is* between me and you and every living creature of all flesh;] and the waters shall no more become a flood to destroy all flesh.
Genesis 9:13-15

Science

Georg von Békésy (1899-1972) born on 3rd June was awarded a Nobel Prize for his work on the structure of the ear. This Hungarian scientist studied the details of how the ear works. He discovered that high frequency waves cause more vibration at the base of the cochlea (purple in the diagram) and low frequency waves cause more vibration at the apex. This is not very easy to understand if you do not know how the ear works. If you watch this lovely presentation by Professor Andy Mcintosh https://www.youtube.com/watch?v=jjSIbjMqCt4 everything will be clear – and you will begin to understand what a marvel of God's creation the ear is. He describes what Georg von Békésy discovered (although he does not mention his name) at around 31:17 and it is truly astounding.



I'm sure you know that you need to exercise to keep healthy. If you do not keep your muscles in good condition by running, jumping, stretching and so on they will not work as well as they should. But did you know that your ears need regular training too? Today in the Optional Resources file these is a sheet telling you how you can have fun training your ears every day. The sheet suggests using a piano but any electric keyboard will do. All you need is some accurate notes![1]

Something to read[2]

Here is something important that we know about because somebody kept a diary. Don't forget to keep yours!
On June 3rd, 1658, John Evelyn (1620-1706) wrote in his diary:

A large whale was taken between my land abutting on the Thames and Greenwich, which drew an infinite concourse to see it, by water, horse, coach, and on foot, from London, and all parts. It appeared first below Greenwich at low water, for at high water it would have destroyed all the boats, but lying now in shallow water encompassed with boats, after a long conflict... it ran quite on shore, and died. Its length was fifty-eight feet, height sixteen; black skinned, like coach leather; very small eyes, great tail, only two small fins, a peaked snout and a mouth so wide, that divers men might have stood upright in it; no teeth, but sucked the slime only as through a grate of that bone which we call whalebone; the throat yet so narrow, as would not have admitted the least of fishes. The extremes of the cetaceous bones hang downward from the upper jaw, and are hairy toward the ends and bottom within side: all of it prodigious; but in nothing more wonderful than that an animal of so great a bulk should be nourished only by slime through those grates.

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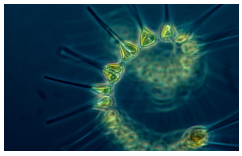
1 If you have no piano you can use this tool https://www.imusic-school.com/en/tools/online-piano-keyboard. If you are not sure where the notes on the keyboard are click on "English Notation" above the keyboard and the letter names will be shown on the keyboard for you.

2 Adapted from Owen, Evan, *What Happened Today* Volume 2 Available on the *Mothers' Companion* Flashdrive. https://motherscompanion.weebly.com

Evelyn lived in Deptford. His description of the poor whale is good enough for us to identify what type is was. He says it was 58ft long (about 17.5m) black in colour with a large tail, a peaked snout (a beak) and a "grate of... bone". The grate of bone is the baleen through which the whale filters its food. This gives us a picture of a very large, black, baleen whale with a beak and a large tail, found in British waters at least sometimes. The colour is the biggest clue. Right Whales, also called Black Whales, are such rarities in British waters now that spotting guides[3] often do not even mention them but they answer to the description of Evelyn's whale perfectly. Perhaps they were more common here in his day. What about the "Slime", as Evelyn calls it? It is something we met on May 25th and April 28th. Can you guess?[4] Evelyn is astounded that such a huge creature can live on such stuff. On the right is a speck of Evelyn's "slime" under the microscope. Isn't it beautiful?



Something to do

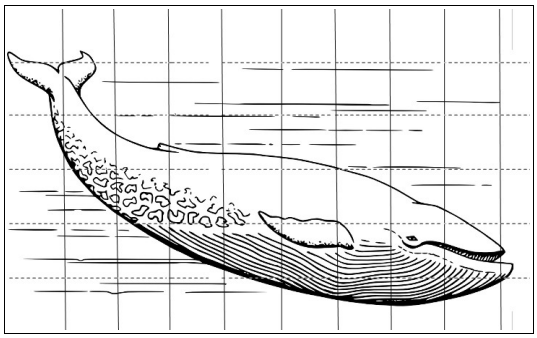
Do some research using your own encycloaedias and animal books to see how much you can find out about whales. Humpback Whales which are seen around our coast feed in the same way as Right Whales.[5] Humpback whales also "sing" although the reasons why they do this are so different from those of humans who sing that perhaps the word is misleading.[6]

There have been a number of whales in the Thames over the years and usually they do not survive the experience. Often they are ill before they arrive or they have mistaken their way. Once in the Thames there may not be the correct food for them. This would certainly be the case with a Right Whale. However, the Beluga Whale who arrived and stayed for a while a couple of years ago managed to go back to the sea safely.[7] Did you know that all whales (and dolphins) in British waters belong to the Monarch?

What about Jonah? Was it a whale that swallowed him? The Bible calls the creature a "great fish" so it might not have been a whale. Our modern classification system, which put whales into the category of mammals not fish, is a recent invention. The Bible classification puts whales into the fish category because it is based, as it were, on different criteria: it is what is known as a functional classification.[8] Jesus describes the creature as a "whale" in Matthew 12:40. The word Jesus used could apply to a whale but it is broader, encompassing all sea monsters.

Something to do outside

Take a tape measure out into the park and find a space where you can mark out the length of Evelyn's Right Whale. (58ft or about 17.5m). If you live in a quiet street you might even be able to measure the length out on the pavement. A large space (church car park with permission?) might allow you to chalk out the shape of the whale from Evelyn's measurements but don't forget to wash away the chalk marks when you have finished.



Something to draw

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3 e.g. https://www.countryfile.com/wildlife/marine-life/guide-to-britains-dolphins-porpoise-and-whales-how-to-identify-and-where-to-see-them

4 Plankton.

5 This clip https://www.youtube.com/watch?v=sAXR6PNUV50 gives some clues as to how it is done!

6 Younger children might enjoy https://answersingenesis.org/kids/animals/whale-gymnastics and here is a humpback whale filmed in our waters https://www.youtube.com/watch?time_continue=1&v=S5xzgUyIH0Y&feature=emb_logo.

7 See https://en.wikipedia.org/wiki/Benny_the_Beluga_Whale

8 See the lesson for 10th February for more on this topic.

If you would like to draw a whale there is a Optional Resources file[9] with a sheet on how to draw one by drawing round your hand. If you prefer you can enlarge the picture on the right as you did with the American Blue Jay last week.

A poem to read aloud

The Whale

Oh! the whale is free of the boundless sea,
He lives for a thousand years;
He sinks to rest in the billow's breast,
Nor the roughest tempest fears:
The howling blast as it hurries past,
Is music to lull him to sleep,
And he scatters the spray in his boisterous play,
As he dashes the king of the deep.
Oh! the rare old whale, 'mid storm and gale,
In his ocean home shall be,
A giant in might, where might is right,
And king of the boundless sea!

II

A wondrous tale could the rare old whale
Of the mighty deep disclose,
Of skeleton forms of by-gone storms,
And of treasures that no one knows;
He has seen the crew, when the tempest blew,
Drop down from the slippery deck,
Shaking the tide from his glassy side,
And sporting with ocean and wreck,
Then the rare old whale, 'mid storm and gale
In his ocean home shall be,
A giant in might, where might is right,
And king of the boundless sea.

III

Then the whale shall be still dear to me
When the midnight lamp burns dim,
For the student's book, and his favourite nook,
Are illumed by the aid of him;[10]
From none of his tribe could we e'er imbibe
So useful, so bless'd a thing;
Then we'll on land, go hand in hand
To hail him the ocean king,
Oh! the rare old whale, 'mid storm and gale,
In his home will ever be,
A giant in might, where might is right,
And king of the boundless sea!

Joseph Edwards Carpenter (1813-1885)

9 From *How to Draw Animals* included in the *Mothers' Companion* available from https://motherscompanion.weebly.com

10 Whale oil was used in lamps.

If you began a poetry memorisation programme on 5th January (if not, look at that lesson and begin one now) you could include this poem.

Something to think about

Do you know what is meant by the phrase, “might is right”? It means that whoever has power can do what they want since they can force the weaker to obey their will. Although this idea can be traced right back to Plato, the ancient Greek philosopher, in its modern form it comes from the evolutionary thinking: the fittest (i.e. strongest or “mightiest”) survive which is therefore “right.” As human beings we instinctively recoil from such an idea because we have a conscience or moral compass that tells us that what is right must be determined by some absolute standard not by force wielded by the most pwerful. But where can we look for that absolute standard? God is our creator and his standards of right and wrong flow out of his unchanging character. He is the standard of right and wrong and he has revealed himself to us in his Word, the Bible. It is interesting to discover that without a Biblical world-view which gives an absolute standard for our behaviour, whatever system we try to build for right and wrong usually comes down to “might is right” in the end.[11]

11 If older children are interested in this topic there is a good article here: https://creation.com/can-we-be-good-without-god