February 10th

Memory Verse:

God is our refuge and strength, a very present help in trouble. Therefore will not we fear, though the earth be removed, and though the mountains be carried into the midst of the sea; Though the waters thereof roar and be troubled, though the mountains shake with the swelling thereof. Psalm 46:2-3

For more information on today's memory verse see the lessons for 8th February.

A story from history,[1] a poem and a book to read

Today's lessons are all connected with the sea. The first one is about smugglers.

When the Napoleonic War ended in 1815 thousands of men were disbanded from the army and navy and many of them, missing the adventure and dangers of war, became smugglers.

A small army of blockaders was established to protect the Sussex and Kent coast against smugglers, and the Navy helped the Government to patrol the coast with a fleet of sloops and cruisers.

For a long time, however, they were no match for the highly organized bands of smugglers. The smugglers were reckless and ruthless men – and carried firearms which they were only too eager to use. Law-abiding people in coastal areas were terrified of them.

On February 10th, 1821, about 250 smugglers assembled on the borders of Kent and Sussex, preparing for the battle with the blockaders which they expected at dawn the next day. In the early morning a boat was due off the coast near Rye, loaded with contraband spirits. The smugglers planned to march to the beach in a body and then split up. While two-thirds of them unloaded the cargo the remainder would stand on guard.

It was three in the morning when they saw the signal from the ship, telling them that all was ready, but the blockaders also saw the signal.

The unloading had begun when the officers, led by three midshipmen, arrived at the beach. They were met by a hail of bullets as the gang opened fire.

While the men with the contraband retreated from the coast their way was covered by the other smugglers who set an ambush near Brookland, along the road between Rye and Romney. In the fierce battle that followed twenty smugglers were killed and badly wounded but only one of the blockaders, a midshipman, lost his life. Reinforcements appeared and soon the smugglers were routed, leaving two prisoners in the hands of the officers.

1 Adapted from Owen, Evan, *What Happened Today?* Book 1 available on the *Mothers' Companion* flashdrive https://motherscompanion.weebly.com/

The Battle of Brookland was the first serious blow suffered by the smugglers but it was not until 1827 that the gangs were finally stamped out.

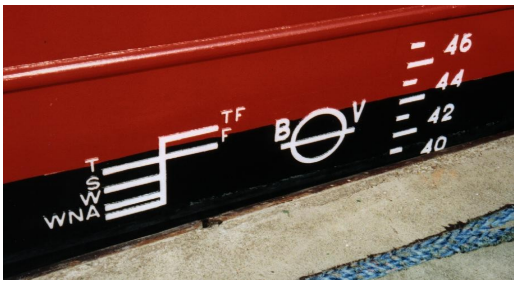
Among the last of the smugglers to be captured and sentenced to transportation for life was the man who took command of the gangs after the Battle of Brookland. His name was George Ransley. Although he was an inn-keeper (you can see his inn, The Walnut Tree, in the picture on the right)[2] and made a fortune smuggling spirits into the country, he was a strict teetotaller. With the others he was transported to Tasmania where he is believed to have become a successful farmer and a worthy citizen.

Rudyard Kipling's well-known evocative poem "Smuggler's Song" paints a picture of these times and I have included it in today's Optional Resources files. If you began a poetry memorisation programme on 5th January (if not look at that lesson and begin one now) you could include it.

If you like smuggling adventure stories you might enjoy J. Meade Falkner's classic *Moonfleet* published 1898. Cheap copies are available on Amazon.[3]

Look out for another smuggler's tale on September 25th.

Something to spot [4]



If you have ever been at a dock and looked at ships you may have noticed some marks like the ones in the picture on the left. Look out for them next time you see a ship. These life saving lines were the invention of James Hall a Hull shipowner. Samuel Plimsoll MP (1824-1898), who was born on 10th February, spent his life campaigning for their compulsory use on ships.

In Plimsoll's days, ships were often heavily overloaded and therefore unseaworthy in rough weather. The way the marine insurance market operated meant that it was economic for ship owners to send out vessels in this state. A horrific loss of life resulted among the poor merchant sailors and this was what concerned Samuel Plimsoll. He called the ships involved "coffin ships".

Plimsoll met with opposition and defeat at every turn in his fight to get a line marked on ships which would indicate whether or not they were dangerously overloaded. His book *Our Seamen* (1872) which discussed the problem and pinpointed the reasons for the opposition to the adoption of a line quickly became well known everywhere. A Bill was brought forward to deal with the matter. Plimsoll recognised that it would be inadequate but decided to support it as the best that could be done at the time. But then poor Plimsoll could hardly believe his ears when the the Prime

2 Permission for image sought 23/11/22 info@walnuttreealdington.co.uk
3 Available on line here: https://www.gutenberg.org/cache/epub/10743/pg10743.txt
4 Information from https://oceanservice.noaa.gov/facts/plimsoll-line.html and other sources. Permission for image of jug sought 23/11/22 by email hannah.chapman@nqyne.co.uk

Minister, Benjamin Disraeli announced that even this bill would be dropped. The abuse of the poor sailors was going to be allowed to continue!

At this, Plimsoll lost his temper. He shook his fist at the speaker and he called the MPs responsible "villains" – all of which is very unparliamentary behaviour. The Prime Minister at once moved that he be rebuked but other MPs could see the reason why he was so very upset. Lord Hartington suggested that the matter should be adjourned for a week to allow Plimsoll time for reflection.

Plimsoll apologised for his behaviour but popular feeling had been roused on the issue by his book and the matter could not be allowed to rest. The government passed a better bill the following year giving the board of trade powers to inspect and requiring a line to be marked on vessels to show the safe limits of lading. The line is still often called the Plimsoll line after its heroic promoter.

Density: something to find out[5]

The line you can see in the picture on the previous page is not just one simple line. The letters you can see have the following meanings:

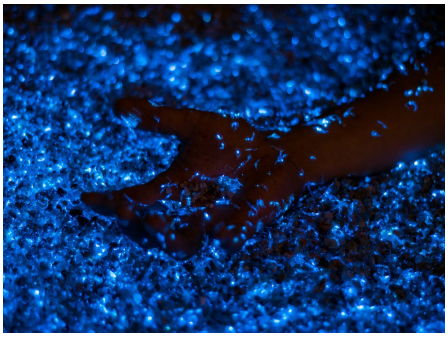
TF – tropical fresh water
F – fresh water
T – tropical seawater
S – summer temperate seawater
W – winter temperate seawater
WNA – winter North Atlantic

They indicate the safe lading for a variety of conditions. Use your own encyclopedias and science books to find out about density. Can you find out why a different mark would be needed for fresh water and salt water and for the different temperatures indicated by tropical, summer, winter and so on?

You can find out where a vessel is registered by looking at the letters that flank the circle in the waterline mark. AB is the American Bureau of Shipping, BV is Bureau Veritas, a French organisation, VL is a Norwegian organisation, IR is the Indian Register of Shipping, LR is Lloyd's of London Register, NK is Japan and RI is Italy.

Something to do

Get out your toy boats. If you do not have any, find some suitable floating items such as plastic food storage boxes or empty margarine tubs. Now you can gauge your own boats by loading them until they sink in various conditions. You could use wooden toy bricks, lego or even kitchen weights or (more messy) a more realistic cargo such as rice. Experiment to find out where you would put the "Plimsoll line" – perhaps you could even mark it on the side of you boat. Don't forget that you need to test rough as well as calm conditions but do clear up any mess afterwards!



Do some classification

Christian Andreas Victor Hensen (1835 – 1924) was born on February 10th. It was he who gave a name to the myriads of luminescent sea creatures you can see in the picture. He called them plankton.

Hensen was a biologist with a love for the sea. In fact, his work laid the foundations for the establishment of the whole science of biological oceanography, the study of how organisms affect and are affected by the physics, chemistry, and geology of the

5 Warm water provides less buoyancy because it is less dense than cold water. Fresh water is less dense than seawater.

oceans.

Besides making important discoveries in other unrelated areas such as embryology and anatomy, Hensen led marine biological expeditions. It was on these that he decided that a name was needed for the tiny creatures which he collected from the water in devices he designed specially for that purpose. The German word for these creatures at the time was *Auftrieb* – floating material. Hensen changed this and with the name came the first step to the recognition of what we would call an ecosystem. He wrote:

'Auftrieb' does not describe the floating matter sufficiently. I prefer to call this material 'Halyplankton'. Since this contribution is only concerned with the oceans, I will use the shorter expression 'Plankton'. I define that plankton is comprised of all particles and materials, which float in the water column, no matter whether they occur in the upper or deeper layers of the water column, or whether they are alive or dead.[6]

Hensen's researches uncovered the fact that all life in the ocean depends on plankton because it is at the bottom of the ocean food chain.[7] Plankton is a *functional* classification. That means it is based on where these creatures live and their size, not their anatomy. Plankton contains creatures as different as jelly fish and shrimps. Some of the creatures that make up plankton are single cell organisms, some are larger multicellular organisms. Tiny fish fry which will (if not eaten) grow into larger fish of many species are also included. It is all plankton – and this definition is very useful in biological oceanography. Without it it would be hard to define the very basis of the food chain in the ocean. Similar functional terms are used to define organisms that swim against water currents (nekton), organisms that live at the ocean surface (neuston) and organisms that live at the ocean floor (benthos). This is the kind of classification God uses in his Word when he describes the "fowl" that were all created on day five of creation week. This class of creatures is here defined by the ability to "fly above the earth in the open firmament of heaven" and so includes bats and pterosaurs not just what we would call "birds".

Some people complain that the Bible speaks of the creature that swallowed Jonah as a "great fish" in one place (Jonah 1:17) and a "whale" in another (Matthew 12:40). But this objection is really just projecting a classification system onto the Bible which had not been adopted when it was written. Nowadays we restrict the term "fish" to non-mammalian creatures. That was not the case in Bible times. Then the term "fish" was defined by function (swimming) and habitat (water) not anatomy and so a whale was properly classified as a (great) fish.

Classification is very important in our lives. Food is classified on supermarket shelves, books are classified in a library, vehicles are classified for taxation, insurance and licencing purposes and so on. The criteria for classification have to be correctly chosen for the function required. It would make shopping very hard if supermarkets classified and shelved food on the basis of nutritional value or colour for instance. What criteria are used to classify roads? How do you classify the books in your own collection? By size, subject, alphabetically by author or some other method (or none!)?[8]

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6 Information and quotation from https://onlinelibrary.wiley.com/doi/pdf/10.1002/mrd.21194 and other sources.

7 Image: By Christian Sardet/CNRS/Tara expeditions - https://www.frontiersin.org/articles/10.3389/fmars.2017.00068/full, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=91193068

8 For information on how music is classified see the lesson for July 28th.

Good classification helps us to find things we need quickly. Have a look through your personal lesson work, cupboards, storage shelves etc. today. Could you have a better classification system for filing, storing and shelving things? See if you can make some improvements today!