Science and the Wider Curriculum - Planning and Ideas

Week Commencing: 15.06.20

Year Groups: 5/6

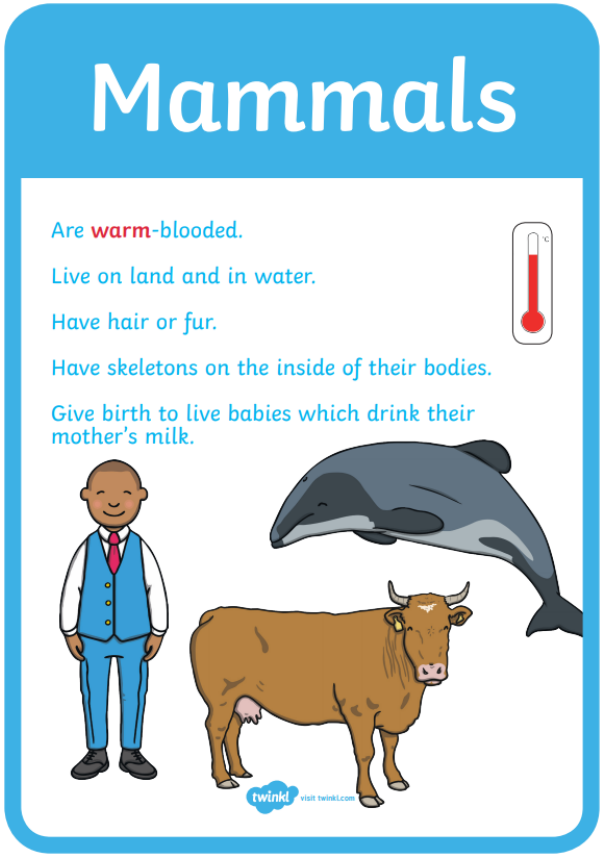
	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	**Subject: History** **To explore the importance of Skara Brae in revealing what life was like in the Neolithic period.**	**Subject: Science** **To find out who Carl Linnaeus was and why he is significant in classifying living things**	**Subject: PE** **To create a ball game.**	**Subject: Music** **To keep in time with the pulse and to follow tempo changes**	**Subject: Art (Prehistoric art)** **To make a 3D sculpture**
Activity	**Starter** During today's lesson, we are going to be looking at Skara Brae, an example of a Neolithic village that reveals much about how people lived during the Stone Age. Having looked at hunter gathering and housing, another key part of daily life is the use of tools. Watch the video below to find out more: https://www.youtube.com/watch?time_continue=1&v=SJ5s75osk_0&feature=emb_title Skara Brae is in Orkney and was discovered in 1850 after a storm washed away the earth that was covering it. Archaeologists believe it to be one of the most important pieces of primary evidence for telling us about the Stone Age – remember, this is prehistory, before written records, which means there is very	**Resources** • Paper and pencil • Internet access • Access to the environment (if safe to do so) Now that we have classified and grouped some living things using keys, we need to take a closer look at the groups that we are using. Who decided on these groups? What are the groups called? What are their characteristics? **Activity 1** Having briefly looked at animal groups a few weeks ago using the photos provided, we need to take another look at how we define groups such as mammals, reptiles and amphibians. Using the posters below to help you, list 5 examples of animals that fit	**Resources** • Ball • Paper • Pen/pencil We would like you to think about the games which already require the use of a ball. Football, netball, golf, netball etc Today, we would like you to invent a new game with a ball(s) and create a set of rules for someone to follow. What will the aim of the game be? How many players will there be? How do you score points? You can write the rules as a poster, leaflet or a booklet. You might even have an idea of your own. Once you have designed your new game, you might like to share your	**Resources** • Internet access Listen to the 'Bim Bom' song with Mrs Sellars. https://www.durhammusic.org.uk/bim-bon-rockin-rhythm-friday-episode-6 You will need to listen a few times to get used to the tune and the actions. I hope that you have fun – we would love to see some videos! Thank you to those who sent them in last week. **Extension Activity** Complete the activities in the worksheet below. If someone has a phone or an IPad you can use a piano app to play along. Even better, if you have an actual instrument you can use this.	**Resources** • Any recycling materials • Glue (optional) • Sticks Starter: Can you discuss with an adult or sibling how do we know what dinosaurs looked like? We know the shape and size of dinosaurs because we have found many fossilised bones, including full skeletons, of the different species. What about the skin colour and texture of dinosaurs? There is a small amount of evidence that some of the dinosaur species had feathers (although this did not necessarily mean they could fly). Some rare fossils have shown traces of skin, which suggest dinosaurs had scaly skin, similar to that of a crocodile. Other fossils have

	little evidence to give us lots of detail about this time. Further excavations were carried out by an archaeological team in 1925 to reveal more of the site and discover a wide range of artefacts. **Activity 1** Read through the slides below to find out more. As you do, think about and make notes on the following questions: • What does it reveal about housing during the Neolithic period? • What can we find out about the groups that people lived in? • What does it NOT tell us / provide no evidence of? **Activity 2** Using what you have found out and the video linked below, plan out and write an imagined news report about the archaeological dig in 1925. https://www.youtube.com/watch?v=de4kOrOaNyI In your report, you will need to include key details, such as who was involved and when it took place, as well as information about what the artefacts are and what they reveal about daily life in the Stone Age. This does not need to be too long, and it would be great if you could	into each group, e.g. 5 different mammals, 5 different reptiles etc. Beware, the last 3 groups may be new to you so you will need to take your time with these! *Top Tip: Refer back to the photos from a few weeks ago to spot any visual characteristics if you are unsure.* **Activity 2** Extending this initial classification was Carl Linnaeus, an 18th Century scientist who grouped the animals even further using genus and species name – he felt that each living thing should have its own very specific name so that it was more easily identifiable. Read through the slides below to support your understanding of this. Now, research Carl Linnaeus – you don't need to make any notes or produce any written evidence, but still take the time to do some further reading about him, his work and why he is significant to classification. These websites might help: https://kids.britannica.com/kids/article/Carolus-Linnaeus/625446	game with an adult or brothers and sisters. Have fun!		been found which contain traces of a pigment (natural colouring) which suggests dinosaurs might have had generally very dark skin, although some other researchers think a red/brown skin colour might have been possible too. It's important to remember that we don't know for sure exactly what skin colour or texture dinosaurs had. <u>Main activity:</u> Your main activity is to develop your sculpture making skills by making a 3D sculpture of a dinosaur. Don't panic if you think this is a daunting task! There are lots of ideas below to help you if you are stuck or struggling for resources. <u>Plenary:</u> Look at the art work that you have created today. Decide on one aspect that could be improved and explain why/how. We would love to see pictures of your finished sculpture.

	even have a go at filming it like a real TV news report! ☺	https://easysciencefor kids.com/carl-linnaeus/ **Activity 3** Following on from your research, let's explore the naming of living things further. Choose 10 different animals and plants and find out their full scientific names (these will usually be made of two parts and be in Latin). *Bonus*: See if you can think of two examples that are in the same family but have different names, e.g. the grey and red squirrel. Compare their scientific names and see what you notice.			

Science Activities

Activity 1 Prompt Posters



Fish

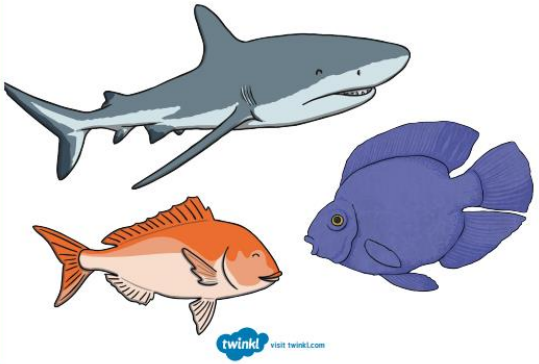
Are cold-blooded.

Live in water.

Have fins to move and gills to breathe underwater.

Have skeletons on the inside of their bodies.

Lay eggs (in water).



Birds

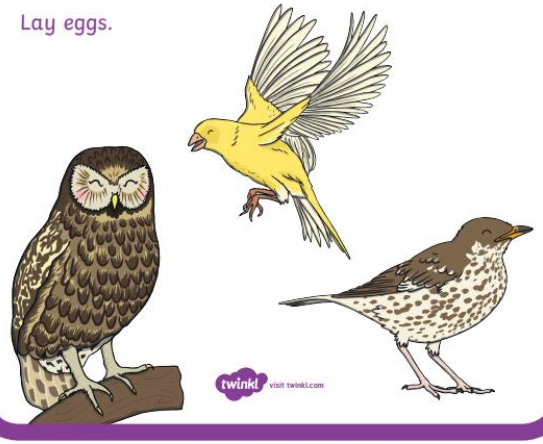
Are warm-blooded.

Live on land and water.

Have feathers (unique to birds), wings and a beak.

Have skeletons on the inside of their bodies.

Lay eggs.



Insects

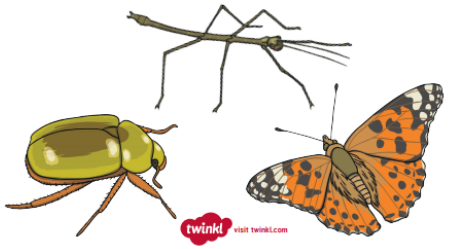
Are cold-blooded, though their blood (actually called haemolymph) is not like ours as it does not carry oxygen or carbon dioxide.

Live on land and in water.

Have bodies in 3 parts and most insects have 2 pairs of wings.

Have skeletons on the outside of their bodies.

Hatch from eggs and often change their bodies (for example, a caterpillar changes into a butterfly).



Arthropod

Are cold-blooded.

Are invertebrate (without a spine).

A segemented body (with more than one part).

Have skeletons on the outside of their bodies.

About 85% of all animals are arthropods, including spiders, insects and crustaceans.

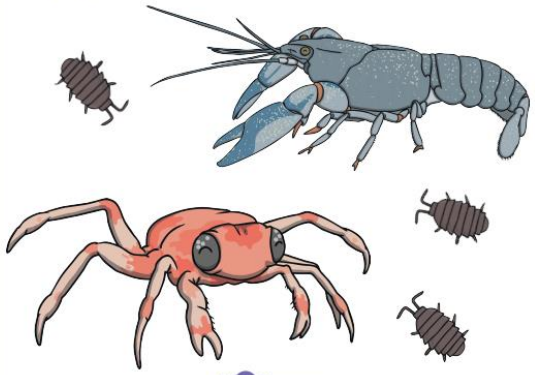
Crustaceans

Are **cold**-blooded.

Live usually in the sea (except for woodlice!).

Have skeletons on the outside of their bodies.

Lay eggs.



Molluscs

(Mollusks)

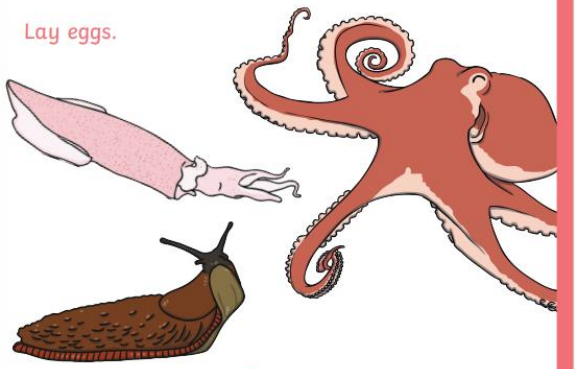
Are **cold**-blooded.

Live on land or water.

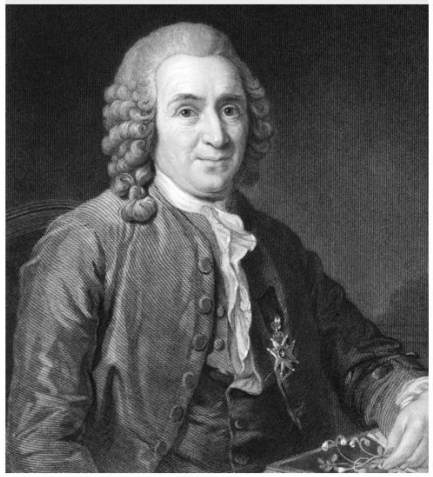
Have very soft bodies.

Some have skeletons on the outside of their bodies.

Lay eggs.



Activity 2



© Georgios Kollidas / shutterstock

The system we use to classify living things was developed by Carl Linnaeus

He was born in Sweden on 23rd May 1707.

- Linnaeus wanted a system that everyone could understand.
- He wanted every living thing to have a name that was unique – a name that only that particular animal or plant had.
- In his system, each plant and animal was given a name made up of two words in Latin.
- The first word is a family name, like your surname. This is called the genus. The second name is called the species, and is like your first name.

Smith, John

For example, the Horse Chestnut was called

Aesculus hippocastanum

Genus name.

Named after the roman name for an edible acorn

© spline_x / shutterstock

Species name.

Hippo was the latin for horse Castanum is the latin for chestnut

- Living things with the same family name are related.
- For example all bushy tailed squirrels were given the name **Sciurus** meaning "Shadow tail".
  - *Sciurus vulgaris = red squirrel*
  - *Sciurus carolinensis = grey squirrel*

© Pedro Bigeriego / Adobe stock

© geertweggen / shutterstock

History Activities

Information About Skara Brae

Skara Brae provides evidence that **Stone Age people were beginning to settle down in one place**, making homes and farming, rather than being on the move all of the time.

The people who lived there had **started growing their own food** and **looking after livestock.**

Skara Brae

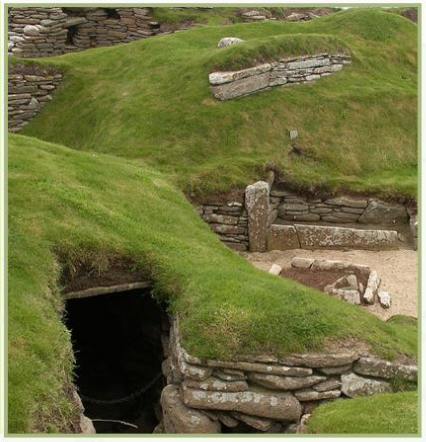
Skara Brae is a remarkably well preserved Stone Age village built in the Neolithic period, around 3000 BC.

It was discovered in 1850, after a heavy storm stripped away the earth that had previously been covering what we can see today.

Orkney is off the North coast of Scotland. Skara Brae can be found on Mainland, the largest of the Orkneys.

The remains of eight houses stand on the site. They were not all built at the same time, so at some point the original village was added to. Apart from one building, which stands slightly separate from the others, the layout of the houses is very similar.

The houses were linked by covered passageways.



The earlier houses had more of a circular shape. There was one main room with a fire pit in the middle, and beds built into the walls at the sides.

Each house also had a set of stone shelves, called a dresser.

The later houses were slightly bigger and more rectangular, although the corners were still rounded. They still built stone beds, but not into the walls. The fire pit and stone shelves remained.

Although the doorways seem very small to us, early humans were shorter than we are today.

Lower doorways would also have helped keep the weather out.

The doors were stone slabs, and could be bolted shut.

At first glance, house seven is the same as all the others. However, it's worth looking a little more closely.

No. 7

Some interesting facts about house seven:

- The bodies of two women were found in a stone grave under a wall. They were buried **before** the house was built. This could have been part of a ritual.
- The door could only be bolted from the **outside.** The people inside the house would not be able to leave of their own free will.
- Unlike the other passageways, the passage to house seven went only to house seven.

What could these facts tell us?

What do you think the house might have been used for?

Unlike the other houses, all built closely together and linked with passageways, house eight stands alone. It had carved patterns on the walls and no beds or shelves. It could have been a workshop or meeting place, or simply built on the site at a later date.

No. 8

There were no windows, but there may have been a smoke hole in the roof. There would have been some light from the fire. As wood was scarce on the Orkney Islands, they were more likely to have burnt seaweed, dried animal dung and peat.

The floor area inside would be between 36 - 40m^2. some people today who live in small apartments might have the same living space. With straw and heather to make mattresses and animal skins for blankets, it would have been relatively cosy – at least compare to outside!

The walls of the houses were built against 'midden', piles of discarded rubbish that would have protected the walls from the elements as well as provide a layer of insulation.

None of the houses have a roof, so they must have been made from something that has since perished.

A common early roofing material in Orkney was seaweed, fixed with ropes and stones.

They could also have used straw, animal skins or turf, laid over a frame of driftwood or whale bones found on the shore.

What Else Was Found and What Does it Teach Us?

Animal bones including cattle and sheep, and barley and wheat grown nearby, suggest a farming community.

Plentiful remains of fish and shellfish indicate they were also skilled fishermen. Large piles of limpets were found, but these weren't necessarily part of their diet, they may have been used for bait.

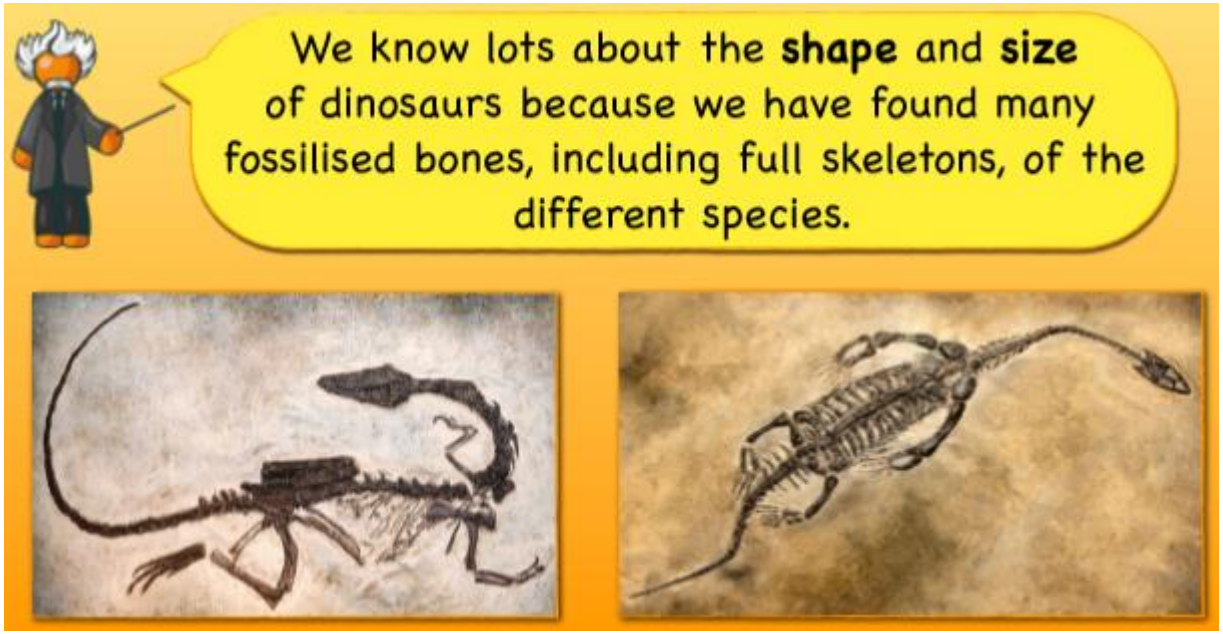
The lack of weapons found suggest that life was peaceful.

Richly carved stone objects might have been used for religious rituals.

Bone tools, along with the absence of tools for weaving, indicate that animal skins were used for clothing.

Many examples of jewellery were found including pendants, pins, necklaces and beads.

Art Activities



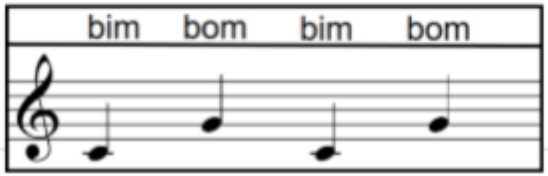
If you don't have the items, you could use recycling to make your own 3D dinosaur sculpture.

- **Could you use pipe cleaners, toilet rolls, tin foil, cello-tape or cereal boxes?**
- **Could you build a sculpture using Lego?**
- **Could you use sticks, which you might find on your daily walk?**

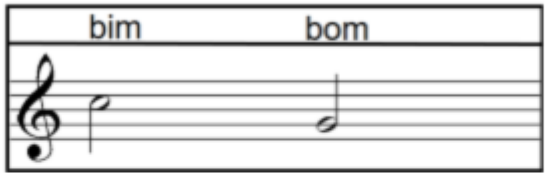
Music Lesson

Keep in time with the **pulse** and follow the **tempo** changes as you play **ostinatos** and **drones** on a tuned instrument or piano app.

1. Learn the actions with the song as Mrs Sellers teaches it and sing along.
2. In the first half of song on the rhythm *bim bom bim bom* (counting 1 2 3 4):
   - make up a *low* action on **Bim** - this matches with the pitch **Low C.**
   - make a *medium high* action on **Bom** - this matches with the pitch **G.**



3. In the second half make a *high* action on **Bim - C** and a *medium high* action on **Bom - G.** Minims count 2 beats on each note.



4. On a piano app find the notes to play the **bim bom** drones on **Low C, High C and G** and play them in time with the song.

Where can I complete further work?

Twinkl – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

Classroom Secrets – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

BBC Bitesize Primary – Free learning resources available for KS1 and KS2 across all subjects.