

# Prior Learning

- Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1/2 -Animals, including humans)
- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). (Y1/2 - Animals, including humans)
- Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. (Y1/2 - Animals, including humans)
- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3/4 - Animals, including humans)

# Misconceptions

When you have a meal, food goes down one tube and the drink goes down another.

Food is only digested in the stomach

The food you eat becomes 'poo' and the drink becomes 'wee'.

Your stomach is where your belly button is.

There is always plenty of food for wild animals

The death of one of the parts of a food chain or web had
no, or limited consequences on the rest of the chain

Arrows in a food chain means 'eats'

## Future learning:

- Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. (Y6 Animals, including humans)
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 -Animals, including humans)
- Describe the ways in which nutrients and water are transported within animals, including humans. (Y6 -Animals, including humans)

## National Curriculum:

Curriculum Opportunities: Activities, Distinctions, Knowledge, skills and understanding

#### AUT A:

**Objective 1-** To describe the simple functions of the basic parts of the digestive system in humans

## What is the digestive system?

Children to discuss what the digestive system is, think about what is means to digest food. Explain the digestive system is a variety of organs (Mouth, oesophagus, stomach, small intestine, large intestine, anus) that break down the food. Children to watch a video about the digestive system so it can take them on the journey. Children have a diagram of the human body with the organs one between two and a group of post it notes. Go through the process one organ at a time. Talk about what happens at this point BUT this is not the powerful knowledge they need to take, instead it is the organ and when it happens. After each organ, child go and write it down on a post it note and add it to the diagram. By the end they should have all 6 organs and perhaps some images/sentences to help them remember it. Play some graphic organiser games: one child closes their eyes and one child takes one away. The other child has to say which one is missing. Once children have done this, challenge by taking 2 away etc. Give each child a set of cards that have the 6 organs on. Children to cut them out. Teacher to point to an organ on the diagram, children to have 3 seconds to decide which card it is and show it after the count down. Children can then play a game with their partner, turn them over and pick one. Try to guess which organ it is by where the person is pointing to. Children to stick in the diagram and label it in their books. Plenary: go through the powerful knowledge. If there is time, get the children into small groups and give them different lengths of rope cut to the size of the organs in the digestive system. Get the children to match them up to the different organs.

## What are the functions of the organs in the digestive system?

Children to have a few minutes to discuss and recap what the digestive system is and what organs are involved. Give the children a set of the cards with the organs and functions on. Ask them to cut out the organ cards first and order those from start to finish. Tell them to save the functions for later. Go through one function at a time, after each one, children find the function that matches with the organ and put them together. Children can mix them up and re match them. Do whole class experiment so the children can see the process of the digestive system. Look at the ppt for the experiment.

## What is the process of digestion?

# <u>Powerful knowledge</u>

- The digestive system is the organs involved in digestion.
- The digestive system is made up of the mouth, oesophagus, stomach, small intestine, large intestine, rectum/anus.

- Mouth begins to break down food.
- Oesophagus carries food to stomach.

Children to have a part of the knowledge organiser with the missing words. Children work in groups of 3 to fill in all of the boxes with the organ and function on the digestive system. Recap the experiment. Give children organ and function cards from last week, cut them out and match them together. Let the children play some games - Can play games - children to turn over the cards and play matching. Turn two over and if they match they can keep them.

Children turn the cards over and one child picks on up, if it is the organ their partner has to tell them the function and visa versa. Children to have a sheet with 6 boxes on to represent each organ and function. Use the cards and posters around the room to help them fill it in. Once children have done this they can then use chatterpix to explain these functions in a video. Choose an organ and explain what it does at each section.

# What are the names and functions of our teeth?

Ask the children what names are given to our teeth and to describe what our teeth do. Explain to the children we have incisors, canines, pre-molars and molars. They each have they own functions: incisors- cut and slice food into smaller pieces, canines- tear food especially meat (link to animals at this point- dogs), pre-molars and molars- grind and crush food. Children to use a mirror to look at their teeth and see what they notice about them. Children to have a graphic organiser colour coded sheet of teeth one between two. Go through one tooth at a time with its function. At the end, children to write the name and function down on a post it note to add to the graphic organiser. At the end children play graphic organiser games- take one away and see which is missing. Ask the children if it would be possible if we just had a mouth full of incisors? Children to investigate by eating a piece of fruit with only their incisors and to discuss if it was easy or hard and why. Give children a smaller version of the graphic organiser to stick into their book. Chn to write down the teeth names and functions using their big graphic organiser.

#### What drink causes the most tooth decay?

Children to have cards with teeth names, function and pictures on. Children to cut them out and match them together. Get the children to discuss the question 'why should we take care of our teeth?', get them to suggest reasons how we can do this as well. Explain to the children that if we don't brush our teeth twice a day and keep them clean then we can get a build-up of plaque that causes our teeth to rot and we can end up having to have fillings. Children to discuss what food and drinks are bad for our teeth (high in sugar). Children to do the egg experiment where the egg represents the tooth (enamel is the shell) and they place it into a cup of different drinks, make predictions about what will happen. Have 5 different groups - each group to have a different drink (water, squash, coke, diet coke, lemonade). Children can have a look at the sugar content of each drink by looking at the packaging. Leave them for a week and identify what has happened to each egg and why. Children will be observing all of the different eggs. Children to make a prediction as to which drink may cause the most damage and why. Children can keep a table/diary of what happens over the week, what changes to do they notice.

### Why should we take care of our teeth?

Children to recap what our investigation was and why we did it. Children to find out the results of the drinks and eggs. Children will identify that drinks with high sugar in has rotted the shell away in comparison to a drink such as water it has stayed the same. Children to conclude their findings and revisit their prediction. Think about what this all means in terms of our teeth and why we should take care of them. Following this, children can partake in a disclosing test to have a look at the plaque on their teeth. Children to bring in toothbrush and toothpaste to see how exactly they should brush their teeth.

- Stomach churns and breaks down food with acid.
- Intestines absorb nutrients and water from the food.
- Incisor cut and slice food
- Canine tear and rip food
- Premolar hold and crush food
- Molar grind food
- Sugar can cause decay in our teeth.
- Some drinks are high in sugar.

- Some drinks are high in sugar and natural acidity can cause harm to the teeth.
- We can have these things in moderation but we need to ensure we are brushing our teeth.
- To keep our teeth healthy, brush them twice a day for 2 minutes and floss.

**Objective 2** - To identify the different types of teeth in humans and their simple functions

#### AUT B

## LQ: What do I know about teeth and digestion? (Recap and assessment)

In this lesson, the children are going to recap everything the know about the digestive system and teeth that we have learnt so far. Start with a Kahoot as a form of assessment to find out what the children have encoded and what they have not yet encoded. From here we can use the areas of weakness to embed into lessons and learning. Put the picture of the digestive system on the board and ask the chn to discuss what they know about the image. Get the children to point to each organ where they think it is in their body. Misconception: Children may point to their belly button for their stomach. Correct this - it is on the left under their ribs. Their intestines are where their belly button is. Show chn blank matching cards that we used last half term. Each child is going to create their own set. They have the pictures but they need to wite the organs and their functions. When done, cut and match them together and stick in books. Move onto the teeth, again display image of teeth and ask them to talk about everything they know about the teeth. Same activity again, children to have blank cards, they need to fill in the missing names and functions. SEN children to have the cards words and to stick them in. Finally, children to have a reasoning card about tooth decay. Children to stick it in and write down their answers to it in their books. If time, children can re-do Kahoot quiz.

#### Why do animals have different teeth?

Recap what teeth humans have and their functions. Children to match the definitions of herbivore, omnivore and carnivore – this vocabulary will be key for today's lesson. Show chn some images of different animals. What do they eat and how do you know. Chn to refer to their teeth? Go through what the eat using words such as 'mammas, birds' ect. These are words used in year 1/2. Look at some skulls and teeth and ask the question 'how does the food the animal eats effect the teeth they have?'. Look at an example of a carnivore, herbivore and omnivore. Chn are going to be teeth detectives. Have images of skulls and teeth around the classroom (GK has a shark mouth/teeth, use this as well). Children to go round in pairs or groups and talk about what they think the animal is and why. Come back and go through each skull on the board, chn to vote using their whiteboard as to whether it is a carnivore, herbivore or omnivore. Spend a bit of time deciding how they know after they have voted. Chn to have mini versions of the images, they can sort them into a table or venn diagram. If they finish, write some sentences explaining the type of teeth a carnivore, herbivore or omnivore have and why.

## What is a food chain?

Children to recap what a balanced diet is and how we get nutrition. Introduce the key vocabulary of producer, prey and predator. Refer to these being on the KO. Talk about and discuss why we need food - to create energy and to grow. Pose the question, do all animals eat the same things? Refer back to carnivore, herbivore and omnivore. Children to have a graphic organiser one between two and post it notes. We are going to go through a simple food chain one step at a time and allow the children to add to the food chain. Start by explaining what a food chain is - children to put it on a post it and add to their GO. Then go through what the arrows in a food chain mean - get rid of the misconception the mean 'eat', instead the mean 'eaten by' and a transfer of energy. Child add to GO. Next start with the producer in a food chain - show chn up to 14 seconds of a video on bitesize - add to GO. Next talk about the consumer which is a herbivore or omnivore and also the prey - add to GO. Finally talk about the secondary consumer which is the predator also a carnivore or omnivore - add to GO. Look at completed GO. Play some games where the children remove a post it note and the other partner has to guess which is gone. Task: children use their GO to write down what a food chain is. Stick in a mini version of their graphic organiser and add to it.

#### How can I construct a food chain?

Recap what the children can remember about food chains. Go over the powerful knowledge from last lesson. Go back through key vocabulary for today. Children to have a set of pictures with their partner, cut them out and organise them into producers, predators and prey. Children may find that some predators can also be prey as well. Challenge: can you say if they are herbivore omnivore and carnivore as well. Go through the answers as a class. Pose the question 'can a food chain be longer than 3 living things?'

- The digestive system is made up of the mouth, oesophagus, stomach, small intestine, large intestine, rectum/anus.
   They can tell you a simplified version of the functions.
- The names of the teeth are incisors, canines, premolars, molars. Chn should recall basic functions of teeth.
- Sugar/acid can cause tooth decay. Must brush teeth twice a day and floss.
- Carnivores eat meat they usually have more canines to tear and rip.
- Herbivores eat plants, they will have molars to get grind down the plants.
- Omnivores eat both meat and plants, they will have a mix of incisors, canines and molars.
- A food chain is a sequence describing how different animals eat each other.
- The arrows in a food chain means 'eaten by' or the 'flow of energy'.
- In a simple food chain there is a producer, prey and predator.
- A predator can also be prey.

**Objective 3** - To construct and interpret a variety of food chains, identifying.

explain that it can. This is why a predator may also be prey. Show example from KO and go through it. Next the children are going to construct a food chain with the teacher - the teacher is going to ask key questions at each step that are in blue on the slide. Children to put these in their books at the same time. Once they have done that. Next talk about how we can label our food chain using the key words: Producer, prey, predator, consumer, herbivore, omnivore, carnivore. Go through the example and then go through the one constructed together and label it. Next the children work with their partner to construct a new food chain, they can use the picture they cut out and ordered earlier they can use ipads to research if they are a herbivore, omnivore or carnivore if they are not certain (SEN children to stick them in, instead of drawing them- they can also construct a 3 living thing one as opposed to a 4). Once children have drawn and labelled their new food chain, they can use the sheets printed to create a food chain for different habitats e.g. arctic animals, savannah animals, woodland animals. Show children how to present this - use a subtitle to show which animal food chain it is. Children can work their way through different habitats. If finished - children can get an ipad and scan the QR codes which will lead them to a food chain game.

#### Mind map assessment lesson

Conduct the kahoot quiz to identify any final gaps that can be covered in this lesson or next lesson. Use the assessment data from that to see who needs support. Next give children the big graphic organiser with all of the key questions covered throughout the unit on. Go through each question and get the children to talk about it. Go through sections of the KO. Remind the children to use their KO, book and their brain. Remind the children to add diagrams, labels, key words and full sentences. All of the powerful knowledge we have learn should be included.

- A food chain can be more than 3 living things.
- We can organise food chains by their habitat.

# Vocabulary List

digest Mouth tongue oesophagus Stomach small intestine large intestine molar premolar anus rectum canine incisor acid churn producer predator nutrition omnivore carnivore herbivore prey