Family Unit Study:

Mammals

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How WEE Learn

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FAMILY UNIT STUDY: MAMMALS

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FAMILY UNIT STUDIES

Welcome Home!

Thank you so much for choosing a How Wee Learn Family Unit Study. This unit study has been created with care by me, a homeschooling Mom and former teacher. These unit studies have worked so beautifully with my own family, I knew they must be shared. My time in the classroom, certification as a Reading Specialist, and 18 years as a mom has given me a unique perspective on what children truly 'need to know'.

What is a unit study?

A unit study focuses on critical thinking and problem solving, allowing children to dive deep into fascinating topics and engage in meaningful learning.

When a child is engaged in what he or she is learning, that learning sticks. And when a child is engaged *and fascinated* in what he or she is learning, learning is amazingly fun for the whole family! Say goodbye to those power struggles.

Each unit study is broken down into ten topics with manageable, bite-sized amounts of incredible information. Each of these ten topics includes a hands on activity, a math or literacy enrichment activity, a curated YouTube video, book suggestion, interesting fact and discussion question.

What are the components of a unit study?

HANDS ON ACTIVITY

Each of the ten topics includes a hands on activity that brings the information shared and discussed to life! This allows children to really engage in and solidify their learning. The hands on activities use items you likely have already. If you do not have an item, think creatively about what you do have and adapt. No buttons? I bet beads could work. No pipecleaners? Maybe you have some yarn!

MATH ENRICHMENT WORD PROBLEM

Each unit study includes five math word problems modified to three levels so they are fitting for the whole family. They cover five math strands: Number Sense, Geometry, Measurement, Patterning and Data Management/Probability. The word problem introduces your child to each of these areas with the belief of quality over quantity. This is not a full math curriculum of course, but an enrichment opportunity and chance to be exposed to some real world math.

As you go through a question, consider how you might change it slightly to ask a follow up question. Perhaps you could ask, "What would happen if there were 6 birds instead of 5?" Or you might get out some manipulatives and help your child dive into deeper learning about the geometry topic introduced.

LITERACY ENRICHMENT ACTIVITY

When a child is learning about a fascinating topic, there are so many natural opportunities to tie in literacy development. Reading, researching, recording information, labeling, and note taking will all happen naturally.

On top of this, each unit study includes five literacy enrichment activities modified to three levels so they are fitting for the whole family. Creating poems, public speaking, practicing letter formation, and literacy scavenger hunts are all fun ways literacy learning is brought to life with these unit studies.

CURATED YOUTUBE VIDEO

Each of the ten topics includes a carefully curated YouTube video. Dive into some fun and easy learning with experts in the field, entertaining stories, and inspiring tales, all selected to highlight key learning concepts. Enjoy some time snuggled on the couch learning with popcorn and a movie!

BOOK SUGGESTION

The book suggestions for each topic are just that—suggestions. Any books at all on the unit study

theme are strongly encouraged. Immersing our children in a literacy-rich environment and offering plenty of time to dive into research, pictures, and stories is key for child-led learning.

INTERESTING FACT

Did you know that elephants suck their trunks much like babies suck their thumbs? Or that a human has the same number of neck bones as a giraffe? Interesting facts are a wonderful way to spark a child's interest and imagination, which is why every topic includes an interesting fact.

DISCUSSION QUESTION

Asking the right questions and having meaningful discussions is a wonderful way to meet your child at his or her current level of understanding and to help your child grow his or her learning and thinking about topics. So much can be learned through one meaningful discussion!

How do I use a unit study?

These unit studies are completely flexible and can be used however you wish. For those who would like a few suggestions, I will outline two possible ways you might choose to use these unit studies.

OPTION 1: FOCUSED UNIT STUDY

Your family might choose to focus on one unit study over a two day period.

Day 1	• Introduce the topic with the curated YouTube video • Have an amazing discussion using the discussion question as a prompt • Research more about the topic with the suggested book or a book of your choice • Read the interesting fact together
Day 2	• Dive into the hands on activity for some deep learning • Complete the math or literacy enrichment question
Day 3+	• Core skill work in reading, writing and math at your child's individual level • Family outings • Extracurricular activities • Start another topic!

OPTION 2: BLENDED UNIT STUDY

Alternatively, your family might choose to blend the unit study with your core skill learning over a three day period.

Day 1	Morning: • Core skill work in reading, writing and math at your child's individual level Afternoon: • Introduce the topic with the curated YouTube video • Have an amazing discussion using the discussion question as a prompt
Day 2	Morning: • Core skill work in reading, writing and math at your child's individual level Afternoon: • Research more about the topic with the suggested book or a book of your choice • Read the interesting fact together • Complete the math or literacy enrichment question
Day 3	Morning: • Core skill work in reading, writing and math at your child's individual level Afternoon: • Dive into the hands on activity for some deep learning
Day 4+	• Core skill work in reading, writing and math at your child's individual level • Family outings • Extracurricular activities • Start another topic!

There is no right or wrong way to dive into this unit study. When learning is this exciting, you simply cannot go wrong!

I hope you and your family love this unit study! If you have any questions at all, wish to purchase more unit studies, or if I can be of assistance, please visit **www.howweelearn.com/family-homeschooling-unit-studies** or email me at **sarah@howweelearn.com**.

xo
Sarah

TOPIC 1

What is a Mammal?

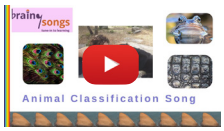
Did you know that you are probably sitting next to a mammal right now? In fact, you ARE a mammal! Mammals are a group of animals that all share certain characteristics. Mammals typically breathe air, have a backbone, have hair or fur, feed their babies milk, are warm blooded, and give birth to live young.
Let's explore...

Spark Curiosity

Did you know? Mammals can be carnivores, omnivores, or herbivores. They also appear at every level of the food web.

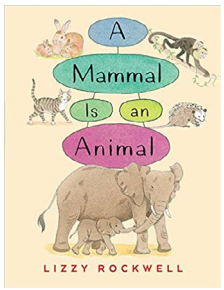
What kinds of mammals would you like to meet? Would you like to see them in the wild or at the zoo?

Resource Suggestions



Animal Classification Song
BrainySongs

Sing along to this catchy song distinguishing birds, reptiles, amphibians, mammals, and fish.



A Mammal is an Animal
Lizzy Rockwell

With clear, simple language, beautiful paintings, a chart, diagrams, and a cutaway, Lizzy Rockwell has created a beautiful and informative book that introduces young children to animal classification and dichotomous inquiry.

HANDS ON ACTIVITY

- "What Makes an Animal a Mammal?" on page 7

Literacy Enrichment Activity

"Letter and Word Cards" on pages 27 to 29

Use the Letter and Word Cards printables to play a matching game! Turn the cards upside down and flip over two at a time. If the cards match, keep them and turn over two more cards! If they do not match, flip them back upside down and it is the next player's turn.

☆ Use the beginner letter cards and try to match the lowercase with its uppercase. Start with 3 or 4 letters and add more as your child becomes more familiar with the letters.

☆☆ Use the beginner word cards and try to match the words.

☆☆☆ Use the advanced word cards and try to match the words.

HANDS ON ACTIVITY

What Makes an Animal a Mammal?

Types of Learning: Research Skills, Critical Thinking, Inquiry Skills, Literacy

WHAT'S HAPPENING?

Mammals are a very diverse group of animals. From tiny bats to great big whales, mammals certainly vary in size! Most mammals have four legs for moving around on land – though many swim and even fly.

Mammals are the only group of animals that produce milk for their babies. Mammary glands are special glands that female mammals have, allowing them to produce milk after the birth of their young. Mammals will feed their young milk until they are big enough to eat food on their own. The length of time mammals feed their babies milk varies widely, with orangutans being the longest. Female orangutans give their young milk for the first 7 or so years of their lives.

The hair or fur that all mammals have has a purpose. It is suggested that this hair or fur helps to keep mammals warm. It also might help these animals blend in to their surroundings, keeping them safe from predators. Did you know that the material that makes up hair is the same material found in your fingernails?

And did you know how smart you are? Your brain, the mammal brain, is the most complex organ known! Your brain allows you to learn from experience and adapt your behaviour.

Adapted from Britannica Kids.

Check it out here for more interesting facts about mammals.

Materials

- Research materials

Directions

Look through an animal book, choose an animal, and ask yourself these questions. If you answer "YES!" to each one, it's a mammal!

1. Does the animal breathe air?
2. Does it have a backbone (making it a vertebrate)?
3. Does it have hair or fur at some point in its life?
4. Do the females produce milk for their young?
5. Is the animal warm-blooded (the animal regulates its own body temperature)?
6. Does the animal give birth to live young?

TOPIC 2

Types of Mammals

We now know what makes an animal a mammal and we have also seen the large differences in this big group of animals. It can be helpful to further breakdown this group so we can look at more similar groups of mammals as we learn about them. Mammals can be further broken down into three subgroups. Let's explore...

Spark Curiosity

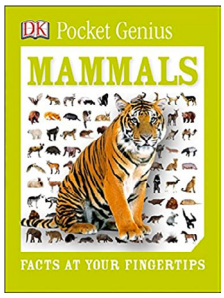
Did you know? There are 6,400 mammal species, with 19 different orders. 70% of mammal species belong to the order Rodentia.

I wonder how many mammals have still never been seen by humans?

Resource Suggestions

What Is A Mammal?
MonkeySee

Science expert Emerald Robinson explains what a mammal is and shares some examples.



Mammals: Facts at Your Fingertips
DK

Featuring almost 200 profiles of individual species, Pocket Genius: Mammals looks at humans, whales, wallabies, camels, and more.

HANDS ON ACTIVITY

- "Monotreme vs. Marsupial vs. Placental" on page 9
- "3-Circle Venn Diagram" on page 30

Literacy Enrichment Activity

"Letter and Word Cards" on pages 27 to 29

Put a piece of coloured paper on a cookie sheet and sprinkle a thin layer of salt over top. Have your child use a thin paintbrush to practice forming letters and words. Encourage proper letter formation and have them try to make their letters and words as neat as possible. Gently shake the cookie sheet to "erase" the word or letter before starting the next one.

☆ Use the beginner letters from the Letter and Word Cards printable, your child's name letters, or any letters of the alphabet that your child is practicing.

☆☆ Use the beginner words from the Letter and Word Cards printable, or any word family words you like, such as cat/bat/hat/rat.

☆☆ Use the advanced letters from the Letter and Word Cards printable. For a challenge, have your child try to spell the word and form the letters with his eyes closed!

HANDS ON ACTIVITY

Monotreme vs. Marsupial vs. Placental

Types of Learning: Literacy Skills, Printing, Comparing and Contrasting, Critical Thinking, Research Skills

WHAT'S HAPPENING?

There are three main types of mammals: monotremes, marsupials, and placental mammals.

Monotremes are members of the mammalian order Monotremata. They are the only mammals that don't give birth to live young. Instead, they lay eggs. Despite this, monotremes still nurse their young with milk, have hair, and possess three bones in the middle ear: features that identify them as being mammals.

There are only five monotreme species: the platypus, and four species of echidna.

Marsupials are a members of the infra-class Marsupialia (an Infra-class is an intermediate category below class). Marsupials are mammals whose young are born in a relatively undeveloped state. After being born, the young (called 'joeys') crawl into a special pouch in the mother's body. Here they undergo further development, and have access to their mother's milk. Examples of marsupials include: red kangaroos, koalas, Tasmanian devils and Virginia opossums.

Placental mammals are members of the infra-class Placentalia. Placental mammals give birth to live young. While in the womb, the developing fetus receives nourishment from an organ called a placenta. Examples of placental mammals include: tigers, blue whales, vampire bats and humans.

Adapted from Active Wild.

Check it out here for more interesting facts about mammals.

Materials

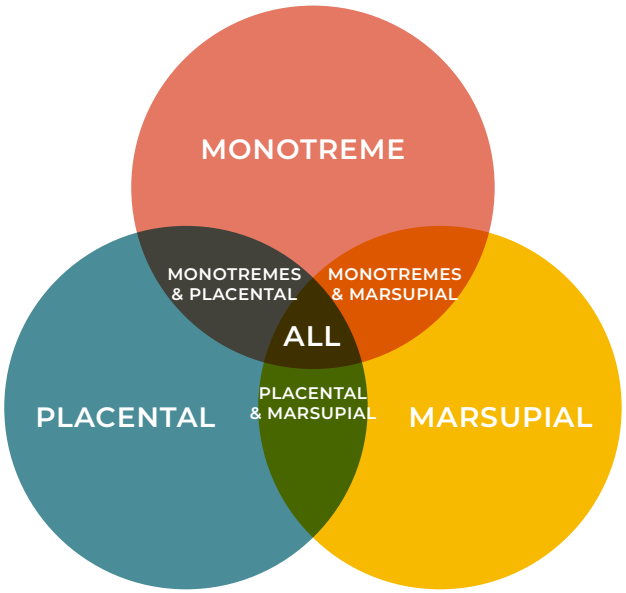
- Pencil
- Markers or crayons

Directions

"3-Circle Venn Diagram" on page 30

Fill out the 3-Circle Venn Diagram printable with the information below. Young children can simply use the Venn diagram to draw a picture of one animal from each type in the corresponding circle.

- Mammal
- Lays eggs
- Has a pouch
- Babies nourished with a placenta
- Has 3 middle ear bones
- Warm blooded
- Has hair
- Has live births



TOPIC 3

Three Middle Ear Bones

Another way mammals are unique cannot be seen outside the body: mammals have three middle ear bones. This allows them to be more sensitive to sounds. The middle ear bones are called the malleus, incus and stapes. They are nicknamed the hammer, anvil and stirrup. Let's explore...

Spark Curiosity

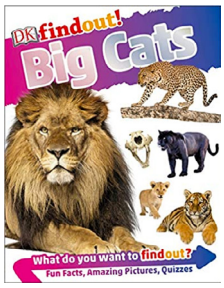
Did you know? Mammals have evolved to live in almost every type of habitat on earth, adapting to all possible extreme environments.

How many different habitats can you think of? Can you think of mammals that live in each?

Resource Suggestions

What are mammals and where do they live?
Harmony Square

Learn all about mammals in this in-depth video.



DKfindout! Big Cats
DK

Supporting STEM-based learning, this fact-filled book for animal lovers ages 6–9 is the ultimate guide to the mightiest members of the cat family.

HANDS ON ACTIVITY

- "Playdough Middle Ear Bones" on page 11
- "Middle Ear Bones" on page 31

Math Enrichment Word Problem

Currently, there are 6,400 mammal species in existence. There are an additional 96 mammal species that are, unfortunately, recently extinct.

☆ If there are 5 monkeys, 3 elephants, and 1 snake at a zoo, how many mammals are there in total? (Hint: Which of those animals are mammals?)

☆☆ How many mammals were in existence before the 96 went extinct?

☆☆☆ How many more mammal species would need to be discovered for there to be 10,000 mammal species?

HANDS ON ACTIVITY

Playdough Middle Ear Bones

Types of Learning: Human Anatomy, Science, Sensory, Hand Strengthening, Fine Motor Skills

WHAT'S HAPPENING?

Your outer ear is made up of your pinna – which is the tough, cartilage covered by skin on the sides of your head. This acts as a funnel to gather sound and send it to your ear canal. Your ear canal is the pathway that leads to your middle ear.

The middle ear is a cavity filled with air and has the job of turning the sound waves your pinna collects into vibrations and delivering these to the inner ear. The middle ear is separated from the outer ear by the tympanic membrane (also known as the eardrum). When sound hits the eardrum, it vibrates. This vibration leads to the movement of the three small bones in the middle ear, together known as the ossicles.

The ossicles are the maleus (hammer) which is attached to the ear drum, the incus (anvil) which is attached to the malleus, and the stapes (stirrup) which is attached to the incus.

The vibrations of these three bones then change into nerve signals in the inner ear, which includes the cochlea and the semicicular canals. These signals then travel to the brain along the cochlear nerve!

Adapted from Kids Health.

Check it out here for more interesting facts about ears.

Materials

- Pencil
- Playdough

Directions

"Middle Ear Bones" on page 31

The middle ear bones are called the malleus, incus, and stapes. They are nicknamed the hammer, anvil, and stirrup.

1. Try to label the nicknames on the Middle Ear Bones printable just by looking at it.
2. Now recreate this diagram of the middle ear bones using playdough!

Playdough Recipe

This is the best playdough recipe, as even very little ones can help in almost the whole recipe. PLUS you can't mess it up! If it is too sticky – add more flour, too clumpy – add more boiled water.

1. Mix **1.5 cups flour**, **1/2 cup salt**, and **2 tsp cream of tartar** in a bowl. The order of ingredients doesn't matter – just pop it all in and stir!
2. Add in **1 cup boiling water** and stir. You can add **food colouring** directly to the boiling water if you prefer for nice, easy colour mixing. Or if you want different colours, you can add the food colouring at the end into divided batches.
3. Knead a few times and it will become perfectly smooth. You can mix in some **essential oils** if you have any, or **vanilla**, or **cinnamon**.

TOPIC 4

Body Temperature

One of the classifications for being a mammal is being warm-blooded. This means that mammals don't need to rely on their environment for warmth, as cold-blooded reptiles do. Mammals can maintain a fairly consistent body temperature, no matter their environment. Let's explore...

Spark Curiosity

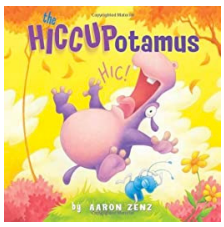
Did you know? In 1783, a sheep became one of the first animals to fly in a human invention—a hot air balloon.

Imagine an undiscovered mammal! Where do they live? What do they eat? What do they look like?

Resource Suggestions

Temperature Regulation of the Human Body
FuseSchool - Global Education

Have you ever wondered why you sweat when you get too hot from running or shiver on a cold winter's day? In this video we are going to explain why your body behaves like this.



The Hiccupotamus
Aaron Zenz

Calamity ensues when an elephant, a centipede, and a rhinoceros try finding a cure for Hippo's colossal case of hiccups.

HANDS ON ACTIVITY

- "Playing with Body Temperature" on page 13

Math Enrichment Word Problem

There are approximately 260 different types of monkeys. They are divided into two categories: New World monkeys (who live in the Americas) and Old World monkeys (who live in Asia and Africa).

☆ If there were 10 little monkeys jumping on the bed and 4 fell off, how many would be left on the bed?

☆☆ If 160 types of monkeys became extinct (let's make sure this doesn't happen!), how many types of monkeys would be left?

☆☆☆ 138 types of monkeys are Old World monkeys. How many types of monkeys are New World monkeys?

HANDS ON ACTIVITY

Playing with Body Temperature

Types of Learning: Science Exploration, Inquiry Skills, Research Skills, Human Anatomy

WHAT'S HAPPENING?

Your body, and all humans bodies, have an optimal temperature. Our bodies work best when they are 98.6 degrees Fahrenheit, or 37 degrees Celsius. When your body is working hard, like when you are riding your bike really fast, you create energy that causes your body to warm up. Your brain wants your body to stay at your optimal temperature, so it sends a message through the part of the body that controls your temperature (called the hypothalamus) which then tells your body to sweat.

Your sweat glands, located in your skin, then begin making sweat. Sweat is made almost entirely of water. When this sweat hits the air, it evaporates. As this sweat evaporates, your body cools down and returns to your optimal temperature of 98.6 degrees Fahrenheit.

A similar process happens when we shiver. Our body wants us to remain in our optimal temperature so we shiver to create energy, warming our body back up to our optimal 98.6 degrees Fahrenheit

Adapted from Kids Health.

Check it out here for more interesting facts about sweat.

Materials

- Notebook
- Pencil

Directions

Let's explore two of the most crude—and efficient—ways mammals warm up and cool down.

1. To warm up, mammals shiver. The contracting of muscles creates heat in the body. Try clenching your hands into a fist again and again and you'll feel them get warm.
2. To cool down, mammals sweat. This puts a layer of liquid on the skin which evaporates. Put one arm under running water and leave the other arm dry. Wiggle both arms in the air—which arm feels cooler?
3. If you like, write or draw your findings in a notebook like a scientist!

TOPIC 5

Bears

Bears are mammals, so they are warm-blooded, meaning they can regulate their body temperature. Before winter, bears stock up on fat so they can hibernate all winter. Since they can regulate their body temperature and they are nice and fat, bears don't need their dens to be warm, they just need them to be sheltered from the wind and snow. Let's explore...

Spark Curiosity

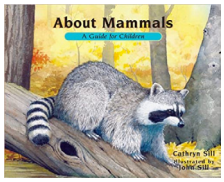
Did you know? Most mammals give their young more training and protection than many other animals.

I wonder which mammals live in big groups? What about small families? Alone?

Resource Suggestions

Grizzly Bears Catching Salmon
BBC Earth

Watch grizzly bears catch salmon traveling upstream (shows fish being consumed).



About Mammals: A Guide for Children
Cathryn Sill

This beginner's guide offers a first glimpse into the diverse and natural world of mammals.

HANDS ON ACTIVITY

- "Make a Bear Shelter" on page 15

Literacy Enrichment Activity

In an acrostic poem, the first letter of each word spells out a word or a message. Let's make an acrostic poem about mammals using the word "mammal."

☆ Brainstorm words that describe a mammal. Look at those words together and rephrase them to fit in the poem. E.g. "has fur" could be reworked to "most have fur" to fit in one of the M spots. Encourage your little one to print the letters for "mammal."

☆☆ Brainstorm words much the same way as above, but vary your level of support as needed. Have your child try to print this poem on her own, or use this as an opportunity for copy work.

☆☆☆ Have your child try this one all on his own!

HANDS ON ACTIVITY

Make a Bear Shelter

Types of Learning: STEM, Critical Thinking, Problem Solving

WHAT'S HAPPENING?

Bears are mammals that hibernate all winter long. While they are hibernating, it is important for them to stay safe from other animals and from the weather as well. For this reason, bears make or find a den to sleep in.

Often bears line their dens with leaves to make themselves a soft bed to stay comfortable. This also helps them to stay warmer. But not all dens have this. If a bear is disturbed during the winter, she will often leave that den immediately and find a different one. Since the leaves would likely be all covered with snow at this point, this new den would not have the soft leaves on the bottom.

An ideal den is the hollow of an old tree. Unfortunately, not many trees are allowed to age naturally anymore, so finding an old hollowed tree is hard. Bears will also make a den by digging under the root structure of a tree that has fallen over, in a rocky enclosure, or even just in the middle of the forest!

Rock dens, and other very stable bear dens, will be used again and again as dens for bears. Interestingly though, the same bear will not den in the same location – instead, new bears will use dens of bears from previous years, but often they wait a few years before using them.

Adapted from North American Bear Center.

Check it out here for more interesting facts about bear dens.

Materials

- Popsicle sticks
- Hot glue
- Water
- Fan

Directions

1. Try to make your own bear shelter using hot glue and popsicle sticks. Get creative!
2. When you are done, test it with some water. Does it stay dry inside?
3. Now test it in front of a fan. Does it stay strong?

TOPIC 6

Bats

You may not think a bat is a mammal, but it is! Bats are, in fact, the only freely flying mammal. Bats use echolocation to allow them to "see" in the dark. They let out a high pitch sound and it bounces off objects, then the sound returns, providing them with all sorts of information. Let's explore...

Spark Curiosity

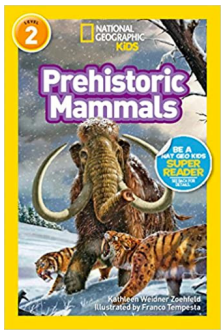
Did you know? Nearly all non-aquatic mammals are quadrupeds, meaning they walk and run using four limbs.

Can you think of any prehistoric mammals?

Resource Suggestions

3 Fun Facts About Bats!
SciShow Kids

Learn some fun facts about these furry flying mammals.



Prehistoric Mammals
Kathleen Zoehfeld

With beautiful and engaging illustrations, authentic photos, and accessible text, kids will learn all about these mighty mammals in this level 2 reader.

HANDS ON ACTIVITY

- "Demonstrating Echolocation" on page 17

Math Enrichment Word Problem

Marsupial mammals, such as kangaroos, give birth to barely formed offspring and the baby then continues to grow in a pouch on the mother's belly. There are around 250 species of marsupial mammals.

☆ If there were 8 baby kangaroos spread out evenly in the pouches of 4 mama kangaroos, how many kangaroo babies would each mama have? Use blocks or buttons to help you figure this out slowly.

☆☆ If the 250 species were divided into groups of 100, how many groups would there be? Would there be any left over?

☆☆☆ If the 250 species were divided into groups of 25, how many groups would there be? What if they were divided into groups of 10?

HANDS ON ACTIVITY

Demonstrating Echolocation

Types of Learning: Science, Animal Behaviour, Inquiry Skills

WHAT'S HAPPENING?

Bats are not blind. They have very sensitive vision but very small eyes. This allows them to see in conditions that we would have a lot of trouble seeing in – like very dark nights, for example. In addition to this special sight, bats also use something called echolocation.

Bats use echolocation to navigate their way and to find insects to eat. They produce very high frequency, ultrasonic sound waves (too high for humans to detect). These soundwaves then bounce off objects and insects and return back to the bats ears.

Bats use echolocation when they are hunting. They let out a whole bunch of short, quick calls which allows them to get a picture of exactly where an insect is – often mid-flight!

Adapted from National Park Service.

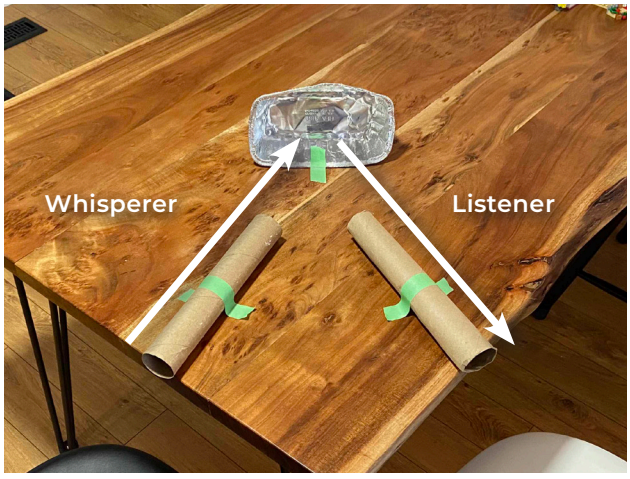
Check it out here for more interesting facts about echolocation.

Materials

- 2 paper towel tubes
- Tape
- Tin plate or aluminum container

Directions

1. To demonstrate echolocation, tape 2 paper towel rolls on a table in a V shape with both ends pointing at a tin plate or aluminum container.
2. Whisper into one tube, and the sound will bounce off the aluminum and can be heard through the second tube.
3. Take turns being the whisperer and the listener!



TOPIC 7

Elephants

Elephants are the largest land animal that exists today! Since they are mammals, we know they must have hair or fur—but why? They are so big and live in such a hot environment—doesn't hair make them too hot? Sparse hair actually helps cool elephants down! Let's explore...

Spark Curiosity

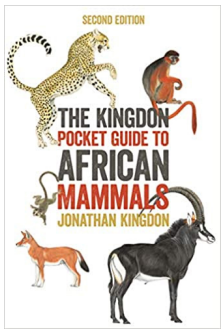
Did you know? The smallest land mammal is the bumblebee bat at just 1" long. The largest is the African elephant, averaging up to 13' tall.

I wonder what kinds of mammals make good pets? What kinds make poor pets?

Resource Suggestions

Baby Elephant's Adorable First Bath
BBC Earth

See a brand new baby elephant take her first bath, and persevere through a sticky situation.



The Kingdon Pocket Guide to African Mammals
Jonathan Kingdon

The fully updated second edition of the leading field guide for African safaris, providing unmatched coverage of all the continent's land mammals in a handy, portable volume.

HANDS ON ACTIVITY

- "Make an Elephant Face" on page 19

Literacy Enrichment Activity

Create a poem about mammals, practice it, and share it with your family by saying it out loud from memory!

☆ Help your child write a simple rhyming poem. E.g. "A mammal has fur or hair; an example is a bear! They must breathe air to live; milk to their babies they give!"

☆☆ Brainstorm word pairs together that are related to mammals. E.g. hair/bear, live/give, air/care, fur/sir, backbone/alone. Now have your child try to build her own poem.

☆☆☆ Have your child try to write a poem on his own!

HANDS ON ACTIVITY

Make an Elephant Face

Types of Learning: Art Skills, Fine Motor Skills, Creativity, Sequential Steps

WHAT'S HAPPENING?

Elephants are amazing animals! Let's learn a little more about them:

- An elephant's trunk is actually a fusion of their upper lip and their nose.
- African elephants are the world's largest land animal. They can grow to be around 3 meters (about 10 feet) tall and weight up to 7,500 kg (16,535 lbs)!
- There is a neat trick for telling African and Asian elephants apart: African elephants have ears shaped like the continent of Africa, and Asian elephants have ears shaped like India!
- Elephants tusks never stop growing.
- Elephants spend 12-18 hours everyday eating grass, plants, and fruit.

Elephants continue to be a species that is in trouble and needs our help. Some humans have decided that elephants' ivory tusks are a valuable substance, and they hunt and kill elephants just to get this ivory. Asian elephants are categorised as Endangered animals and African elephants are currently categorised as Vulnerable (which means they are at risk for becoming Endangered).

Adapted from National Geographic Kids.

Check it out here for more interesting facts about elephants.

Materials

- 3 paper plates
- Paintbrush
- Grey paint
- Grey construction paper
- Stapler

Directions

1. Elephants have sparse hair that actually helps cool them down. To remember this, use a paintbrush (pretend it's elephant hair!) and paint a paper plate elephant.
2. Use a paper plate as the face, then cut the edge off two more paper plates and staple them as big ears.
3. Roll a strip of grey construction paper around a rolling pin and staple it to the middle of the face as the trunk.

TOPIC 8

Blue Whales

The largest animal in the world is a blue whale and it is—you guessed it—a mammal! Blue whales can weigh up to 400,000 lbs. Let's explore...

Spark Curiosity

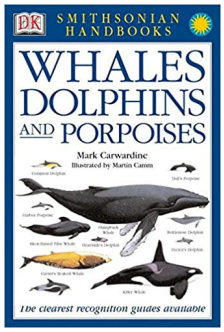
Did you know? The smallest sea-dwelling mammal is the marine otter, averaging around 3 feet long. The largest is the blue whale, the biggest animal on Earth, which sometimes reaches lengths of over 100 feet long!

Some mammals walk, some fly, and some swim. Can you think of some of each? Can you think of any animals that do more than one?

Resource Suggestions

Blue Whales 101
Nat Geo WILD

Learn all about the massive blue whale.



Whales, Dolphins and Porpoises
Mark Carwardine

Authoritative text, detailed illustrations, and a systematic approach make DK's Smithsonian Handbook of Whales, Dolphins, and Porpoises the most comprehensive and concise pocket guide to cetaceans.

HANDS ON ACTIVITY

- "Bats vs. Whales" on page 21
- "2-Circle Venn Diagram" on page 32

Math Enrichment Word Problem

Currently, there are almost 200 recognized dog breeds in the world! Dogs are mammals since they have fur, are warm blooded, mothers feed pups milk, they breathe air, and they have a backbone.

☆ If our neighbour had 10 dogs and we got to play with half of them, how many dogs would we get to play with?

☆☆ If we divided the 200 dog breeds in half, how many dog breeds would we have?

☆☆ If we divided the 200 dog breeds in quarters, how many dog breeds would be have?

HANDS ON ACTIVITY

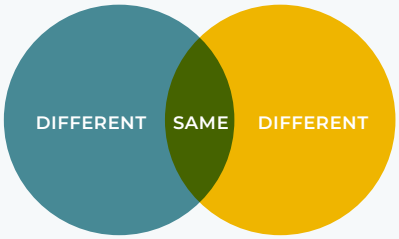
Bats vs. Whales

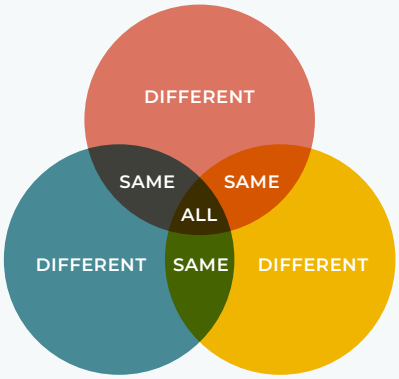
Types of Learning: Research Skills, Sorting and Categorizing, Inquiry Skills, Writing, Fine Motor Skills

WHAT'S HAPPENING?

A **Venn diagram** (named after mathematician John Venn in 1880) is a method used to sort items into groups.

These diagrams are usually presented as two or three circles overlapping, with the overlapping sections containing items that fit into both groups (or all groups, if three circles overlap). Items which don't belong to either/any group are placed on the outside of the circles.





Adapted from Third Space Learning.

Check it out here for more interesting facts about Venn Diagrams.

Materials

- Pencil

Directions

"2-Circle Venn Diagram" on page 32

The smallest mammal is the bumblebee bat, weighing only 2 grams! The blue whale is the largest mammal, sometimes reaching lengths of over 100 feet long.

1. Use the 2-Circle Venn Diagram printable to compare bats and blue whales. They have many things in common because they are both mammals—this information can be written where the two circles overlap. Facts relevant only to whales go in one circle and facts relevant only to bats go in the other. Do some research and record what you learn together!

TOPIC 9

Humans

Earlier in this unit study, we looked at six things to ask when figuring out if an animal is a mammal: Does it breath air? Does it have live young? Does it have hair or fur? Does it have a backbone? Do females produce milk for their young? Is it warm-blooded? Looking at these questions, we can figure out that we are mammals too! Let's explore...

Spark Curiosity

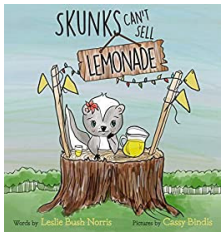
Did you know? In November 2020, the discovery of two new species of glider, small marsupials, was published. They live in Australia.

I wonder which mammals are most like people? In their body, intelligence, habitat, or diet?

Resource Suggestions

Sloth vs. Sloth!
Brave Wilderness

Watch baby sloths get fed together and learn the differences between two-toed and three-toed sloths.



Skunks Can't Sell Lemonade
Leslie Bush Norris

On her path to win a guitar, Scarlett the Skunk overcomes hardships with innovation, craftiness and just a bit of zesty spirit.

HANDS ON ACTIVITY

- "Write a Poem" on page 23

Literacy Enrichment Activity

Try to stump a family member who did not do this unit study with you! Come up with some unusual—but true—facts about mammals and some false ones. Put these in groups of three: two true and one false. See if your family member can guess which ones is false!

☆ Work on handwriting skills by trying to trace some words or do some copy work.

☆☆ Assist in creating the two truths and a lie by printing on your own or doing copy work.

☆☆☆ Take the lead! Help put the whole book together, ensuring the two truths and a lie are somewhat related and make sense.

HANDS ON ACTIVITY

Write a Poem

Types of Learning: Literacy Skills, Public Speaking, Dictation, Creating Written Pieces

WHAT'S HAPPENING?

Humans are mammals, just like all of the other animals we have learned about in this unit study. Humans breathe air, have a backbone, feed their young milk, are warm-blooded, and have hair. But there are a few things, of course, that make humans unique.

One ability unique to humans is our speech. Our larynx (voice box) sits lower in the throat than in chimpanzees. We also have a special hyoid bone (which is a horseshoe shaped bone below the tongue) that allows us to articulate our words.

Humans are also unique because we appear to have very little hair. Interestingly though, one inch of human skin has just as many hair-producing follicles as other primates! Out hair is just thinner, lighter and shorter.

The trait that sets us apart from other mammals the most, though, is our extraordinary brain. You are able to write this poem today because of your amazing brain! Can you imagine an elephant or bat being able to create a poem? Our brains give us the ability to reason and think beyond the capabilities of any other animal on Earth.

Adapted from Live Science.

Check it out here for more interesting facts about humans.

Materials

- Paper
- Pencil

Directions

Make up a poem about what makes a human a mammal and share it with your family! This can be done out loud together or written down and illustrated.

TOPIC 10

Platypus

The platypus is an exception to the rules of being a mammal. Platypuses are indeed mammals, but they do not give birth to live young—they lay eggs! Let's explore...

Spark Curiosity

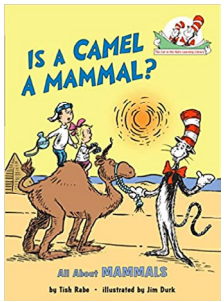
Did you know? There are 679 mammal species currently on the endangered or critically endangered list.

I wonder what we can do to help endangered mammals around the world?

Resource Suggestions

What Is A Platypus?
Learn about Animals

Learn 10 facts about the platypus in this informative video.



Is a Camel a Mammal?
Tish Rabe

The Cat in the Hat takes Dick and Sally on a Seussian safari to observe (and pontificate about) the many different kinds of mammals. An invaluable tour for all animal lovers!

HANDS ON ACTIVITY

- "Discover the Platypus" on page 25
- "All About the Platypus" on page 33

Math Enrichment Word Problem

Have blocks, stones, or other manipulatives available for these math problems. Be flexible and change up the numbers to make these problems the right challenge for your children. Extend on the problems and ask follow up questions if your child is enjoying these challenges!

☆ On average, a platypus lays 3 eggs at a time. If 3 platypus mamas laid 3 eggs, how many eggs would there be in total?

☆☆ On average, a platypus lays 3 eggs at a time. If 10 platypus mamas laid 3 eggs each, how many eggs would there be in total?

☆☆☆ On average, a platypus lays 3 eggs at a time. If 16 platypus mamas laid 3 eggs each, how many eggs would there be in total?

HANDS ON ACTIVITY

Discover the Platypus

Types of Learning: Inquiry Skills, Writing Skills, Creativity

WHAT'S HAPPENING?

While platypuses are indeed mammals, they are the most curious mammals of all! Here are some interesting facts about these odd and spectacular animals:

- Platypuses don't have stomachs. Instead they have a gullet that connects directly to their intestines.
- While bats use echolocation, platypuses use electrolocation. A platypuses bill is so sensitive it allows them to detect the electric fields generated by all living things. In fact, it is so sensitive a platypus can hunt without using its eyes, ears or nose!
- Platypuses hatch out of leathery eggs.
- Even though they hatch from eggs, platypuses still nurse from their mothers. Platypus mothers don't have nipples though, instead babies nurse from the folds of their mother's skin!
- Platypuses use gravel instead of teeth! Since platypuses don't have teeth, they scoop up gravel from the riverbed and pack this into pouches in their cheeks. It uses these bits of gravel as teeth to break up tougher food.

Platypuses sure are unique and incredible mammals!

Adapted from Mental Floss.

Check it out here for more interesting facts about the platypus.

Materials

- Pencil

Directions

"All About the Platypus" on page 33

Platypuses are very interesting animals to research!

1. Check out the YouTube video about platypuses on the prior page and read through the What's Happening section on this page.
2. Fill in the All About the Platypus printable with information that you learn.

TOPIC: WHAT IS A MAMMAL? AND THREE TYPES OF MAMMALS

Letter and Word Cards: Beginner Letters

m	a	l
s	t	i
p	n	

TOPIC: WHAT IS A MAMMAL? AND THREE TYPES OF MAMMALS

Letter and Word Cards: Beginner Letters

M	A	L
S	T	I
P	N	

TOPIC: WHAT IS A MAMMAL? AND THREE TYPES OF MAMMALS

Letter and Word Cards: Beginner Words

fur	hair	milk
mammal	cow	dog
cat	bat	

TOPIC: WHAT IS A MAMMAL? AND THREE TYPES OF MAMMALS

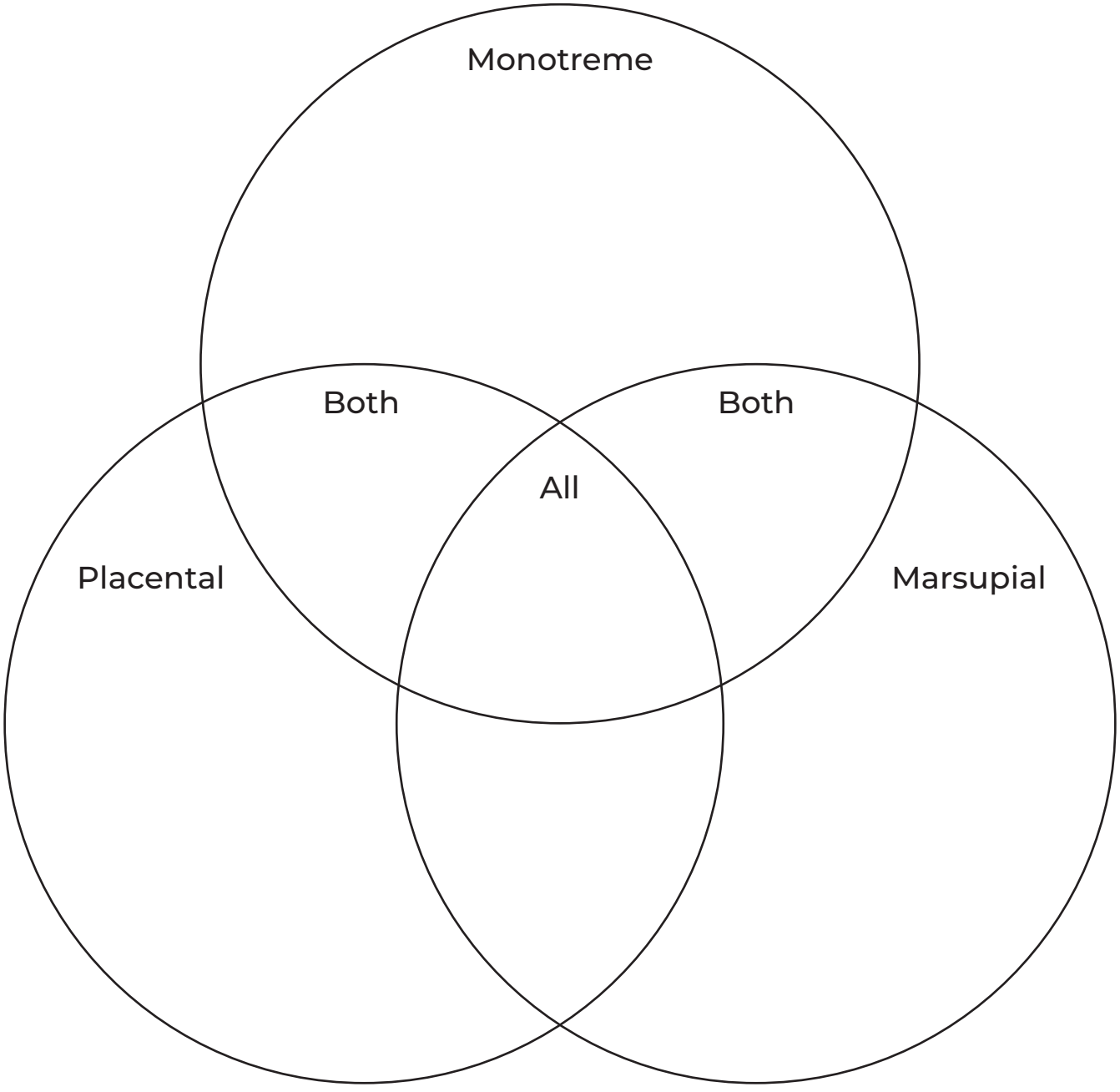
Letter and Word Cards: Advanced Words

mammal	aardvark	beluga
chimpanzee	porpoise	platypus
kinkajou	rhinoceros	

TOPIC: THREE TYPES OF MAMMALS

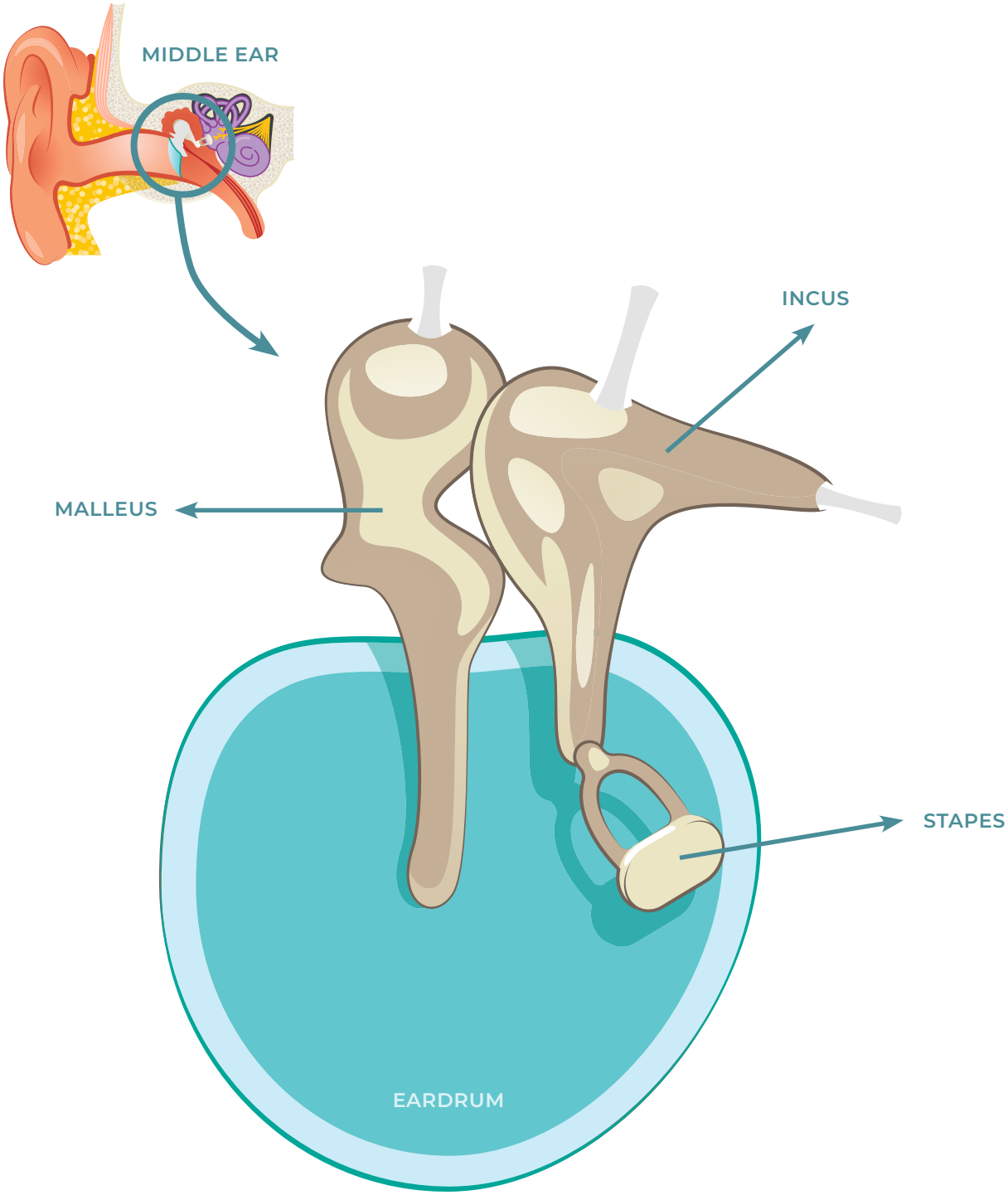
3-Circle Venn Diagram

Fill out the Venn diagram below with these details: mammal, lays eggs, has a pouch, babies nourished with a placenta, has 3 middle ear bones, warm-blooded, has hair, and has live births.



TOPIC: THREE MIDDLE EAR BONES

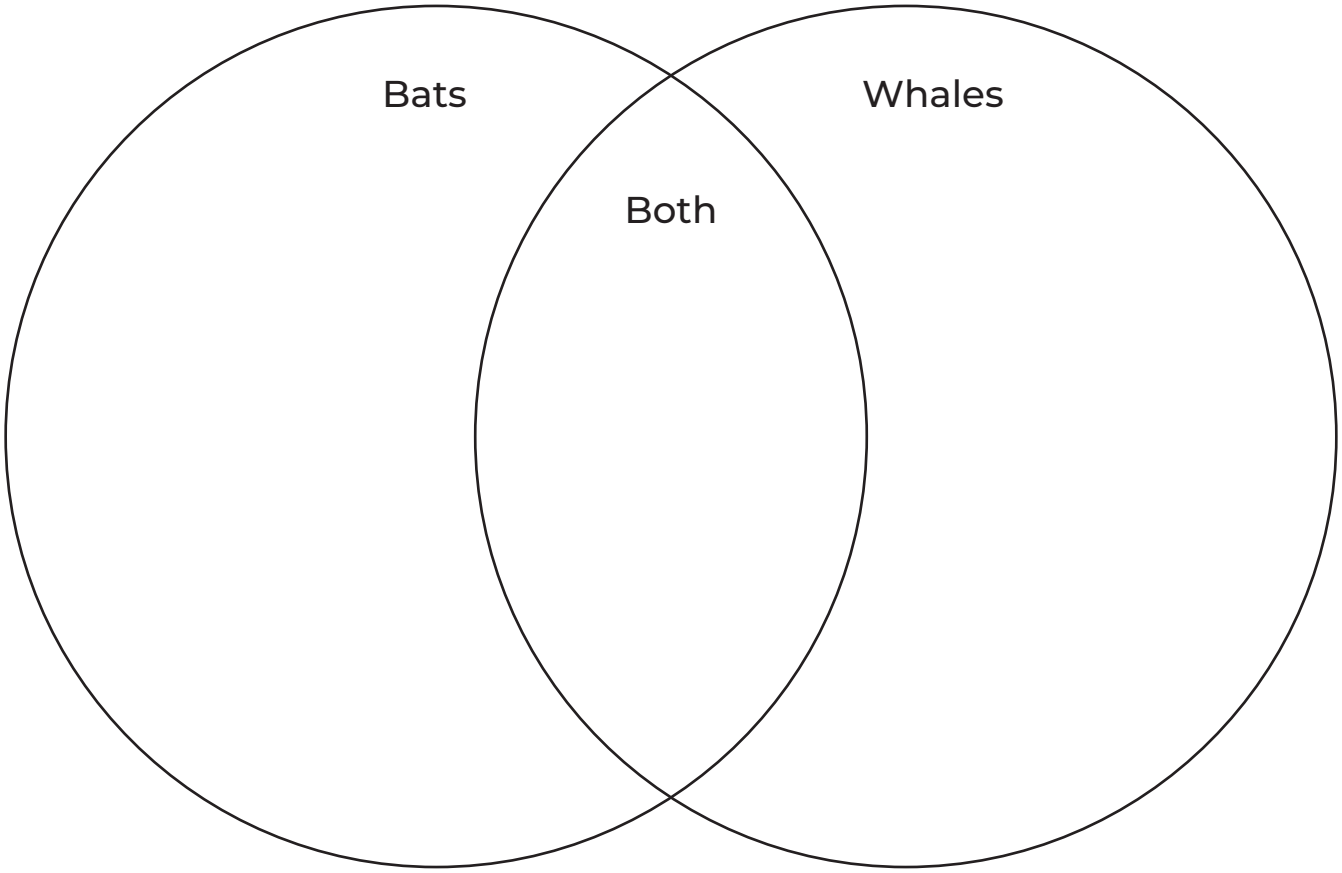
Middle Ear Bones



TOPIC: BLUE WHALE

2-Circle Venn Diagram

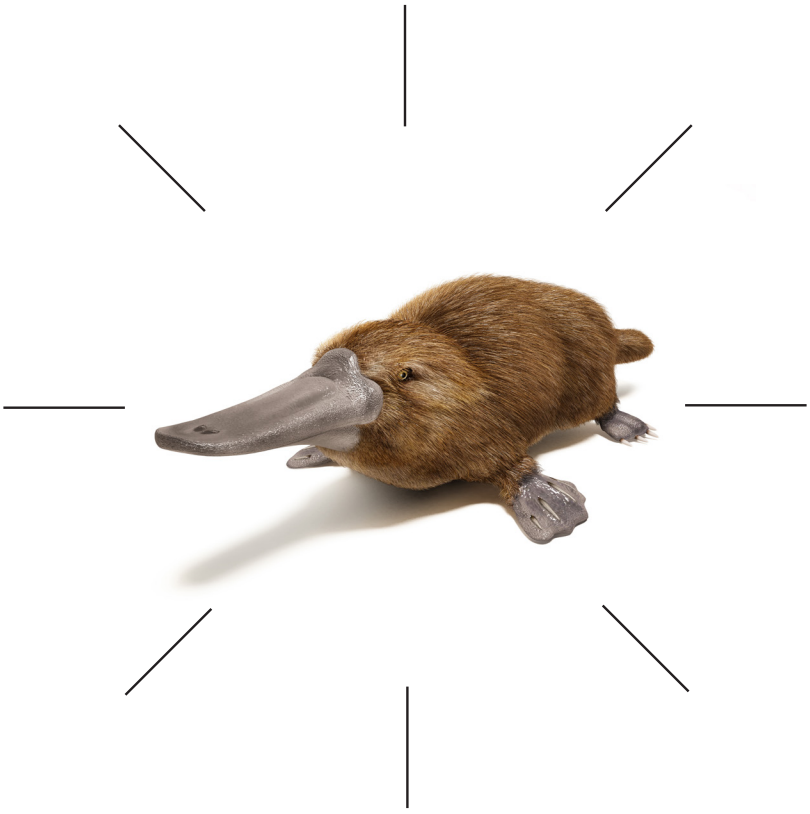
Fill out the Venn diagram below, comparing a bats to a blue whales. They have many things in common because they are both mammals—this information can be written where the two circles overlap. Facts relevant only to whales go in one circle and facts relevant only to bats go in the other.



TOPIC: PLATYPUS

All About the Platypus

Check out the YouTube video about platypuses on page 24 and read through the What's Happening section on page 25. Fill in this printable with information that you learn.



My Unit Study Notes on Mammals

TOPIC 1: WHAT IS A MAMMAL?

TOPIC 2: THREE TYPES OF MAMMALS

My Unit Study Notes on Mammals

TOPIC 3: MIDDLE EAR BONES

TOPIC 4: BODY TEMPERATURE

My Unit Study Notes on Mammals

TOPIC 5: BEARS

TOPIC 6: BATS

My Unit Study Notes on Mammals

TOPIC 7: ELEPHANTS

TOPIC 8: BLUE WHALES

My Unit Study Notes on Mammals

TOPIC 9: HUMANS

TOPIC 10: PLATYPUS