

Mixed Mammals Size & Mass



Maths Activities for Children

By Susanna Ramsey & Derek Crawley



Mammals



Badger



Fox



Hedgehog



Rabbit



Brown Hare



Beaver



Otter



Pine Marten



Polecat





Fox

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Badger

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Fox

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Badger

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Badger

Mammals Size and Mass Table



Otter

Species	Body Length (cm)	Tail Length (cm)	Mass (kg)
Badger	87	15	10
Fox	67	40	6
Hedgehog	22	1.5	1.2
Rabbit	40	6	1.6
Brown Hare	55	10	3.5
Beaver	82	33	25
Otter	70	44	7
Pine Marten	50	22	1.8
Polecat	39	15	1.2



Brown Hare



Fox



Pine Marten



Polecat

Activities



Fox

1. Bar Charts

Using the data on the Table on Page 5 for UK mammals, complete the three **Bar Charts**.

2. Tail Length to Body Length Proportion

Look at the animals' tail length in proportion to the body length.

The proportion of tail to body is one way to identify or recognise small to medium-sized mammals, if we only get a quick glimpse of them.

Work out the proportions for some of these animals. Put your answers on the **Answer Sheet**.

Example. Fox: Tail 40cm, body 67cm; $40/67$, so the tail is about two thirds as long as the body

3. Size and Mass

Look at the animals' body size and mass. Which are the four biggest animals? Are these also the heaviest? Which are the lightest? Is it easier to work this out from the table or the bar charts?





Beaver

Activities



Hedgehog

4. Match the Length

Look at the mammals' body length on the Table on Page 5. Find some objects in the room which are a similar size. This will give you an idea how big these animals are.

How do they compare to your height?

Make a list of the objects you have found on the **Answer Sheet**.

5. Match the Mass

Look at the mammals' mass on the Table on Page 5. Find some objects in the room which are a similar mass. (You could combine two objects to get the right number.) This will give you an idea how heavy these animals are.

How do they compare to your own mass?

Make a list of the objects you have found on the **Answer Sheet**.



Pine marten

Activities



Badger

6. Tails

Animals' tails are adapted for different purposes. Some help the mammals swim faster, for others the tail helps with balance in the trees or when pouncing onto prey. Some animals use their tails to warn each other of danger.

Which do you think these might be?

Put your answers on the **Answer Sheet**.

7. Diet

What do these animals eat? Are they herbivores, carnivores or omnivores? Follow the **Research link** at the very end.

Put your answers on the **Answer Sheet**.

8. Nests

Where do these animals nest? Underground, on the ground, in the river bank or in the trees?

Put your answers on the **Answer Sheet**.



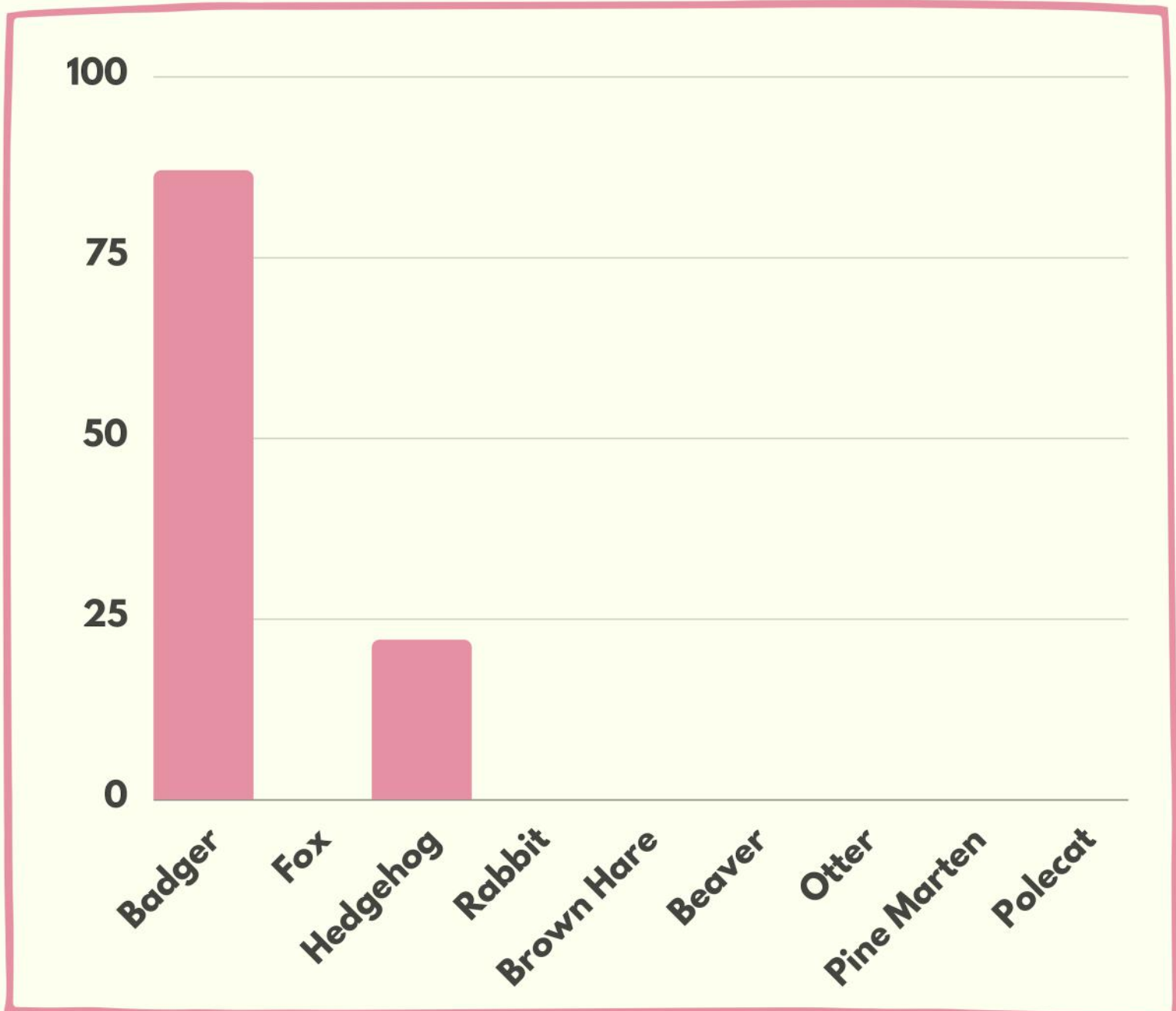
Name:

Look at the Table on Page 5 to complete this Bar Chart.

MAMMALS BODY LENGTH



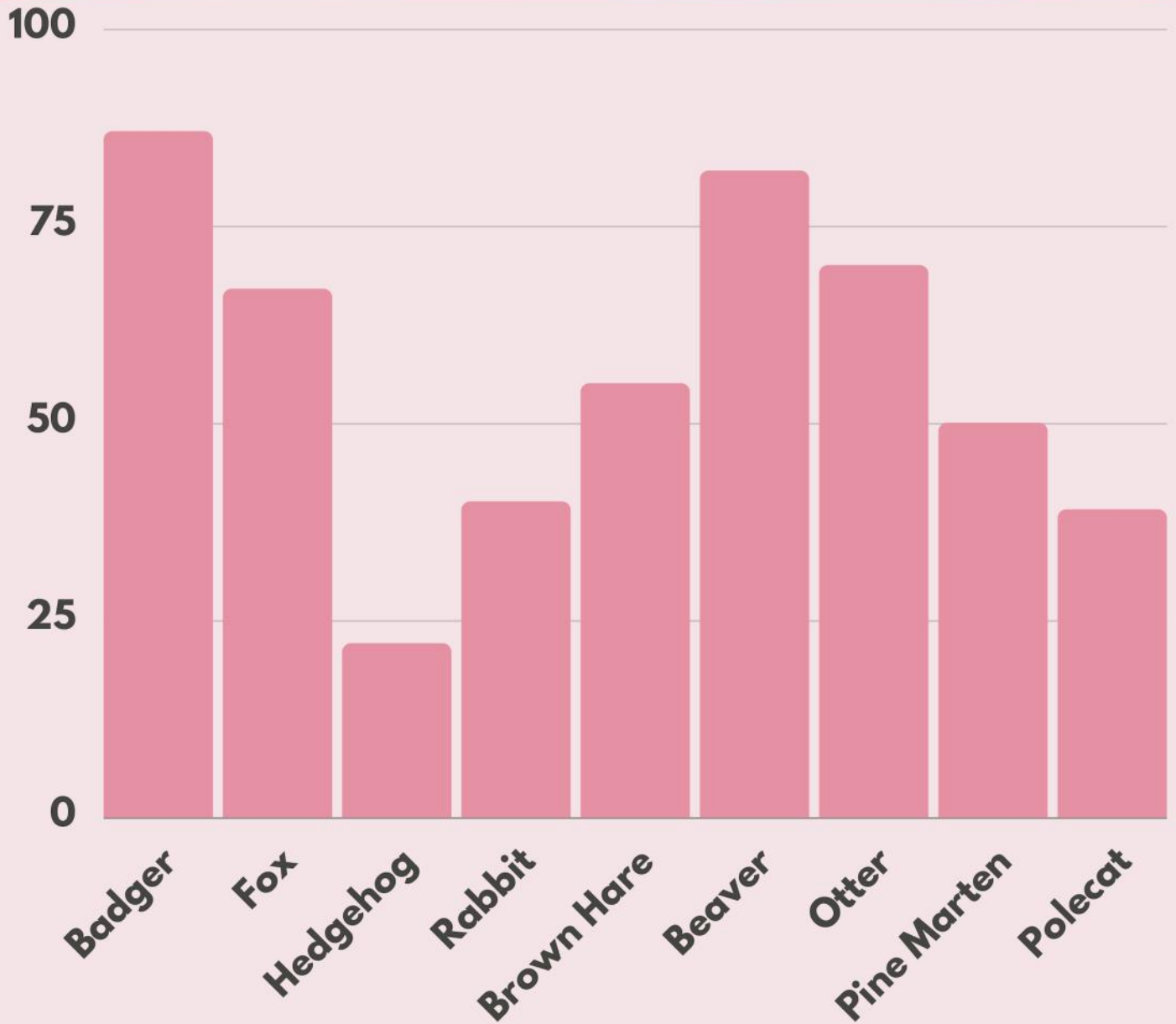
Average Body Length (cm), excluding the tail



MAMMALS BODY LENGTH



Average Body Length (cm), excluding the tail



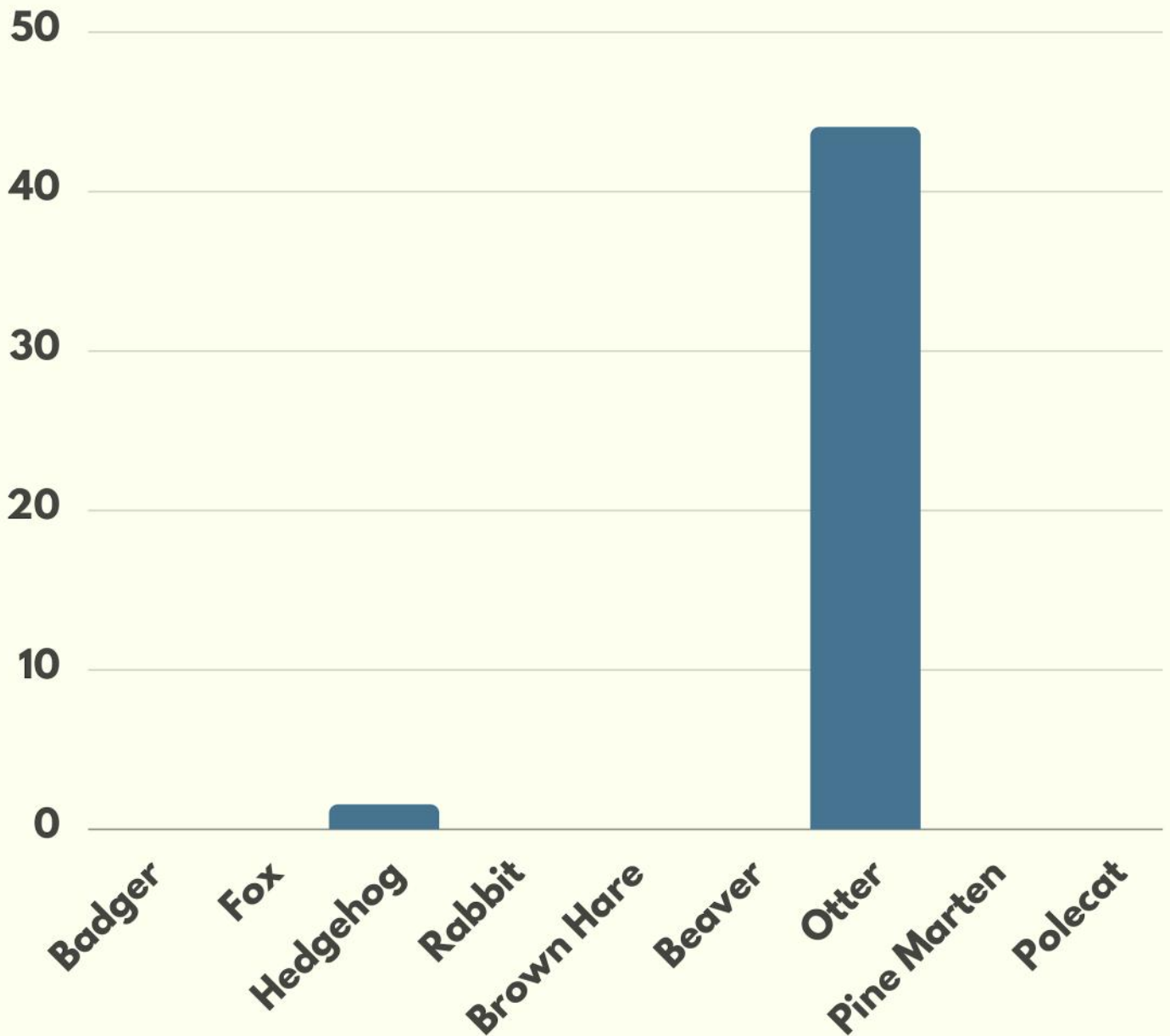
Name:

Look at the Table on Page 5 to complete this Bar Chart.

MAMMALS TAIL LENGTH



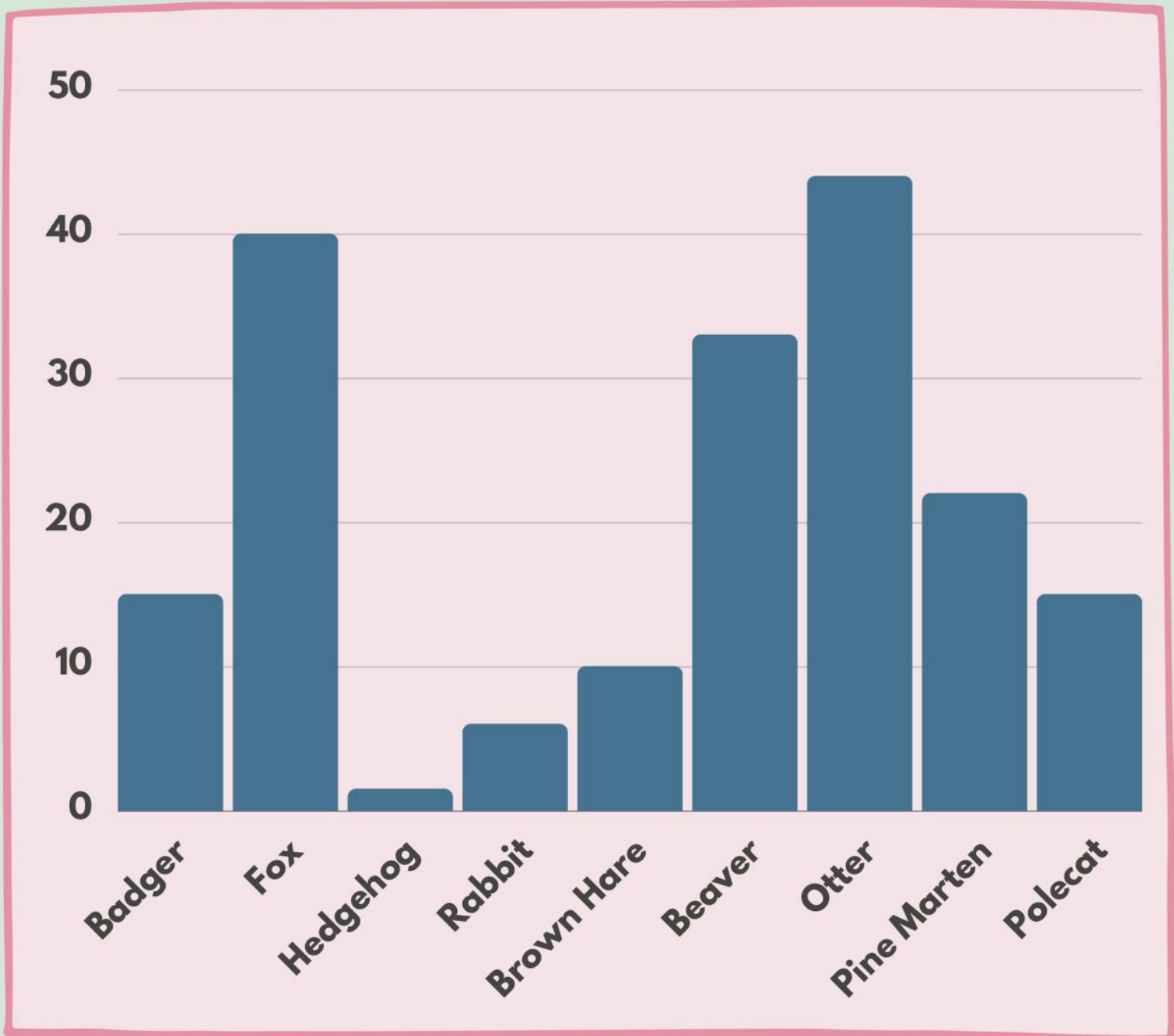
Average Tail Length (cm)



MAMMALS TAIL LENGTH



Average Tail Length (cm)

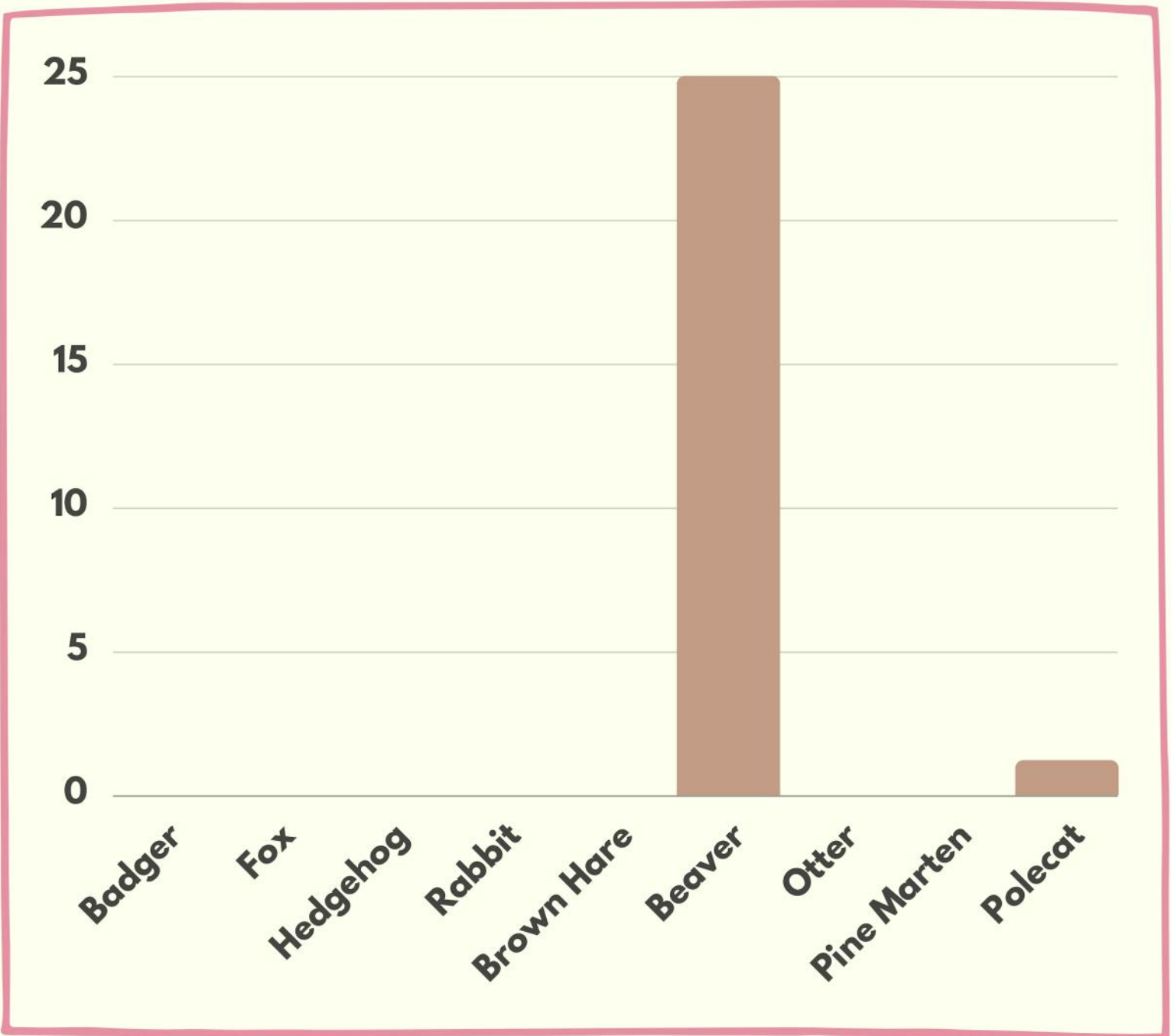


Name:

Look at the Table on Page 5 to complete this Bar Chart.

MAMMALS MASS

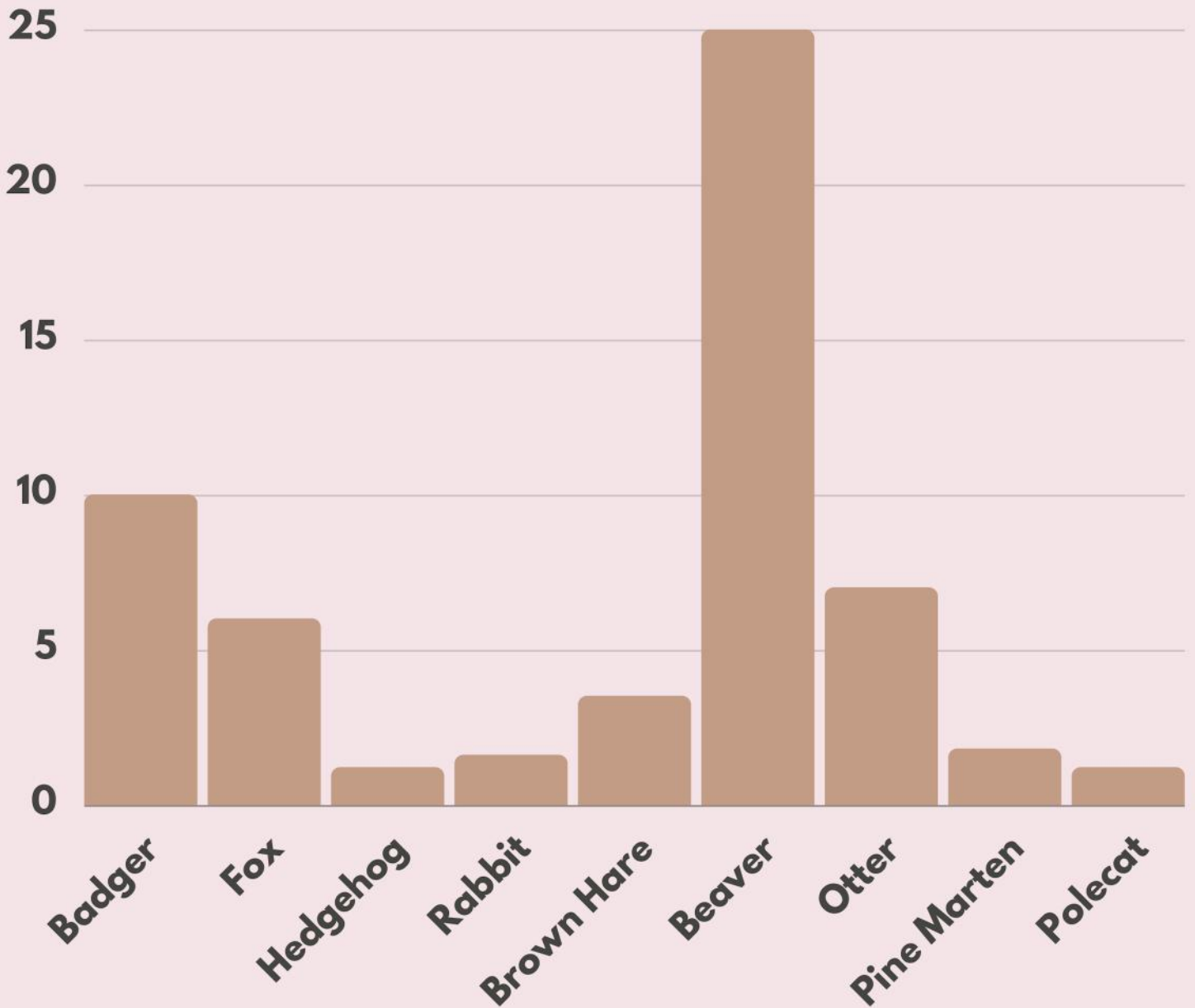
Average Mass (kg)



MAMMALS MASS



Average Mass (kg)



Name:

Proportions & Numbers Answer Sheet



Brown hare



Otter

2. Tail Length to Body Length Proportions Calculate the fractions.

Pine marten. Tail cm, body cm, / =

Brown hare. Tail cm, body cm, / =

Otter. Tail cm, body cm, / =

3. Look at the Numbers in the Table on Page 5

Name the four biggest animals:

Name the four heaviest:

Name the two lightest:

Is it easier to see this on the table or the bar charts?



Otter

Proportions & Numbers Answers



Pine marten

2. Tail Length to Body Length Proportions

Pine marten. Tail 22 cm, body 50 cm, $22/50$, *about half as long as the body*

Brown hare. Tail 10 cm, body 55 cm, $10/55$, *about 1/5th of the body length*

Otter. Tail 44 cm, body 70 cm, $44/70$, *about 2/3 of the body length*

3. Look at the Numbers

Four biggest animals: *badger, fox, beaver, otter*

Four heaviest: *badger, fox, beaver, otter*

The lightest? *hedgehog and polecat*

Is it easier to work this out from the table or the bar charts? *Bar charts are easier to compare data.*



Name:



Rabbit

Match the Length Answer Sheet



Fox

4. Find Objects of a Similar Length to the Animals' Body Lengths in the Table on Page 5

What is your height? cm

Badger, 87cm,

Fox, 67cm,

Hedgehog, 22cm,

Rabbit, 40cm,

Brown hare, 55cm,

Beaver, 82cm,

Otter, 70cm,

Pine marten, 50cm,

Polecat, 39cm,



Hedgehog

Match the Length Sample Answers



Rabbit

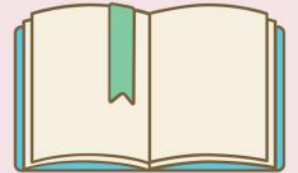
4. Match the Length - Sample Answers

Badger, 87cm, *width of my desk*

Fox 67cm, *width of a book shelf*



Hedgehog, 22cm, *length of Nature Tracker book*



Rabbit, 40cm, *from the ground to the author's knee*

Brown hare, 55cm, *width of the oven door*

Beaver, 82cm, *width of the door into the room*



Otter, 70cm, *width of piano stool*

Pine marten, 50cm, *width of a computer screen*

Polecat, 39cm, *height of a side table*



Name:



Fox

Match the Mass Answer Sheet



Beaver

5. Find Objects of a Similar Mass to the Mass of the Animals shown in the Table on Page 5.

What is your mass? kg

Badger, 10kg,

Fox, 6kg,

Hedgehog, 1.2kg,

Rabbit, 1.6kg

Brown hare, 3.5kg,

Beaver, 25kg,

Otter, 7kg,

Pine marten, 1.8kg,

Polecat, 1.2kg,



Hedgehog

Match the Mass Sample Answers



Rabbit

5. Match the Mass - Sample Answers

Badger, 10kg, 10 litres of water - 5 large (2L) bottles

Fox, 6kg, bowling ball



Hedgehog, 1.2kg, bag of rice (1kg) + small tin of beans (200g)

Rabbit, 1.6kg, 4 tins of tomatoes (400g each)



Brown hare, 3.5kg, 3 litres of milk

Beaver, 25kg, small labrador dog



Otter, 7kg, 5-month old baby

Pine marten, 1.8kg, 4 large jars of honey (454g each)



Polecat, 1.2kg, bag of flour (1kg) + large chocolate bar (200g)



Name:



Polecat

Tails & Diet Answer Sheet



Brown hare

6. Tails. Think about how these animals use their tails. Sort them into these groups.

Tails for swimming:

Tails for balance:

Tails for pouncing:

Tails for warning others:

7. Diet. What do these animals eat? Sort them into these groups.

Herbivores:

Carnivores:

Omnivores:



Polecat

Tails & Diet Answers



Brown hare

6.Tails

Tails for swimming: *otter, beaver*



Tails for balance: *pine marten*

Tails for pouncing: *fox*

Tails for warning others: *rabbit, hare*

7.Diet

Herbivores: *hare, rabbit, beaver*

Carnivores: *polecat, otter, hedgehog*

Omnivores: *badger, pine marten, fox*

Name:



Brown hare

Animals' Nests Answer Sheet



Fox

8. Nests. Where do you think these animals nest? Sort them into these groups.

Underground:

On the ground:

Underground in the riverbank:

In the trees:



Pine marten



Polecat





Brown hare

Animals' Nests Answers



Fox

8. Nests

Underground: *polecat, rabbit, badger, fox*

On the ground: *hedgehog, hare*

Underground in the riverbank or in lodges on the water: *beaver, otter*

In the trees: *pine marten*



Beaver's lodge



Beaver

Further Research



Polecat

Click on this link to The Mammal Society website to find out more about UK mammals.



Mountain hare

The Mammal Society: Full Species Hub

The British Isles are home to around 90 species of mammal in the land, sea and air. Click on the hare photo to access the Hub and discover more about these mammals.

Click on this link to discover more resources and activities on the Mammal Youth Hub.



Harvest mouse

The Mammal Society: Mammal Youth Hub

If you are a mini mammalogist or a teacher inspiring your class about the wonderful world of mammals, take a look at the resources on the Mammal Youth Hub! Click on the harvest mouse photo.

Click on this link to The Nature Collection.



Wood mouse back foot bones

The Nature Collection

If you want to learn more about all kinds of UK animals, looking in particular at their skulls and skeletons, click on the foot bones photo.

