



Canine

calculations

For 7-11 year olds

Maths | Citizenship | PSHE

learnwithdogstrust.org.uk

Teacher's notes

About this activity




In these activities, pupils will practice their adding, subtraction and multiplication of numbers, and analyse data to find the answers while exploring the costs involved in owning a dog.

In the optional activities, pupils practise their data analysis and Venn diagram skills as they investigate what is safe for dogs to eat and how much different dogs should eat to be happy and healthy.



Age range: 7-11 years

Subjects: Maths, PSHE and Citizenship

You will need:

-  Activity 1 - 'A visit to the Vet' and 'Vet's price list'
-  Activity 2 - 'Doggy shopping' and 'Doggy items price list'
-  Activity 3 - 'How much does Lulu cost?'

Optional extension activities:

-  Activity 4 - 'Safe and toxic foods'
-  Activity 5 - 'How much should my dog eat?'

How to use this activity

Activity 1 - Pupils use the 'Vet's price list' (can be shared in pairs) to answer a series of questions about the cost of caring for a dog.

Activity 2 - Pupils use the 'Doggy items price list' (can be shared in pairs) to locate answers and calculate the cost of things that dogs need.

Activity 3 - The Jones family have adopted Lulu. Pupils answer five questions about how much it has cost the family, and how much they saved on vet bills and basic items by adopting Lulu from Dogs Trust.

Activities 2 and 3 are for use with older and/or more able pupils, or could be used as a paired, group or whole class activity.

Activity 4 - Pupils sort different foods and drinks into a Venn diagram showing which are safe and unsafe for dogs to eat, and what can be eaten safely by both dogs and humans. Pupils are also asked to think about what a dog owner can do to stop their dog eating something that could be dangerous for them.

Activity 5 - Pupils analyse the table of data looking at dog size, weight and activity levels to determine how much food they should be eating per day and per meal. Pupils are asked to think about the consequences of not feeding a dog the correct amount, and especially what happens if an owner feeds them too much.

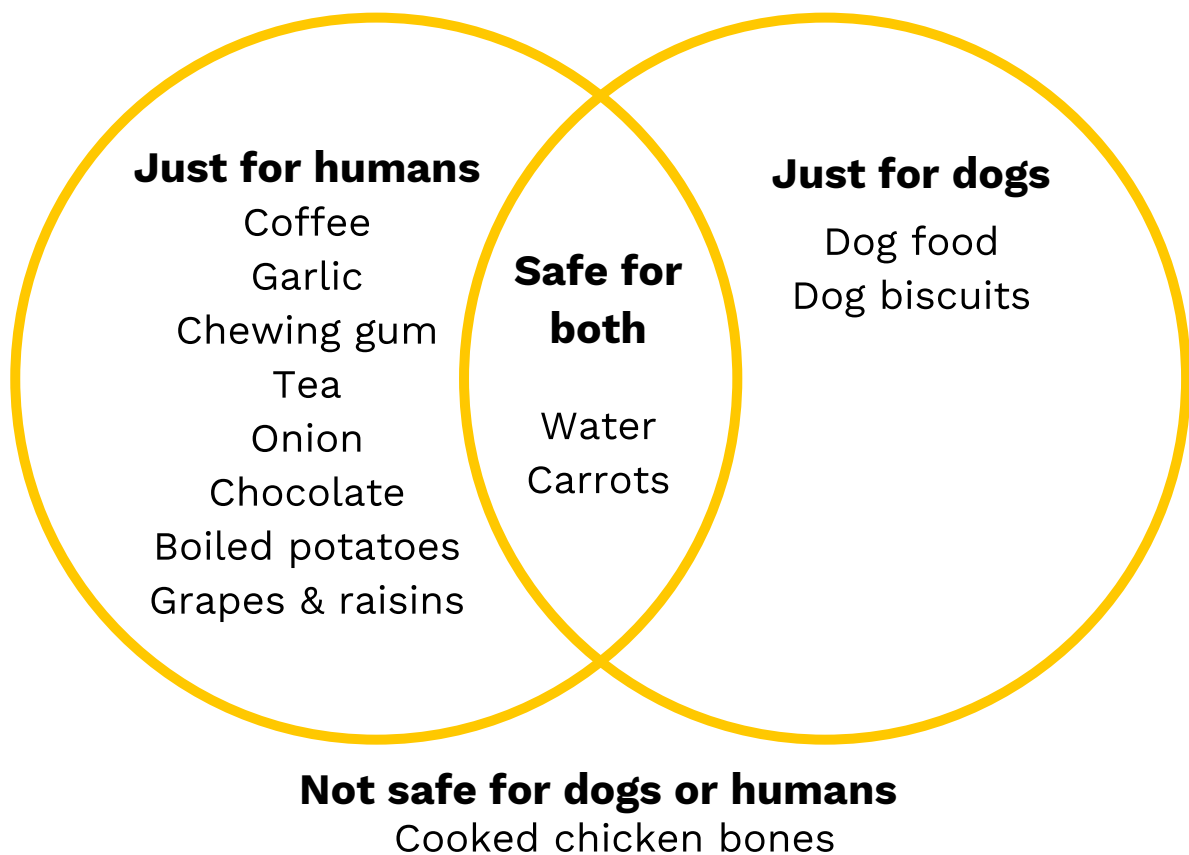
Teacher's notes

Activity 1 Answers: 1) £255, 2) £375, 3) £120, 4) £344

Activity 2 Answers: 1) £21.00, 2) £0.53 3) Large dog: £37 + £11.20 + £5.99 + £6.49 + £12.99 + £3 = £76.67 Small dog: £18 + £6.50 + £3.49 + £6.49 + £12.99 + £3 = £50.47 4) Large, 5) £26.20






Activity 3 Answers: 1) £375, 2) £12, 3) £25, 4) £15.48, 5) £277.48

Activity 4 Answers - Task A:



Task B: Can you think of 3 things an owner could do to stop their dog eating something which could be dangerous for them?

Answers may include:





-  Don't give food with those things as ingredients.
-  Place dangerous food on high shelves.
-  Store dangerous foods in cupboards the dog cannot open.
-  Tell other people/children not to share those foods with the dog.
-  Only feed the dog food and treats meant for them.

Activity 5 Answers

Task A: This activity is based on James Wellbeloved feeding guidelines – please note these may vary for other brands.

Dog Name	Dog Weight (kg)	Activity Level	Food per day (g)	Food per meal (g) Food per per day ÷ 2
Example	30	low	338	$338 \div 2 = 169$
Bella	20	low	250	$250 \div 2 = 125$
Charlie	5	normal	102	$102 \div 2 = 51$
Lola	35	normal	440	$440 \div 2 = 220$
Bailey	10	low	148	$148 \div 2 = 74$
Coco	40	high	552	$552 \div 2 = 276$
Luna	20	high	328	$328 \div 2 = 164$
Milo	70	high	840	$840 \div 2 = 420$
Teddy	50	normal	575	$575 \div 2 = 287.5$

Task B: Sometimes owners do not measure their dog's food correctly and feed them too much. What could be the long-term consequences of this? Answers may include:

-  The dog gains weight/becomes obese.
-  The dog could develop health problems like diabetes or heart disease.
-  The dog finds walking more difficult – they can no longer run, jump or play well (they are no longer able to have a 'normal' life).
-  Existing health issues could become worse e.g. joint problems, breathing difficulties.

A visit to the vet

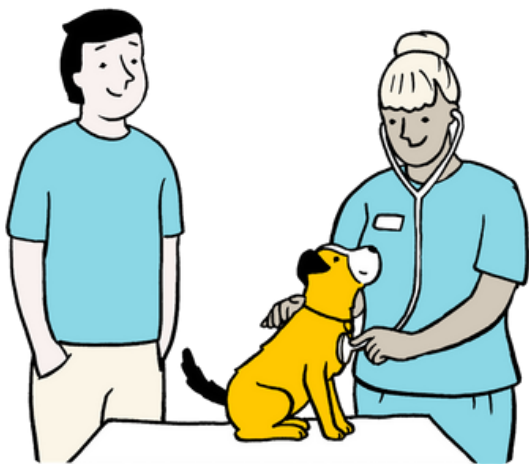
Use the 'Vet's price list' to answer the following questions

Q1. Millie takes her small, male dog to the vet to be microchipped, neutered and vaccinated.
Calculate the cost of Millie's visit.

£

Q2. Tariq takes his large, female dog to the vet to be microchipped, neutered and vaccinated.
Calculate the cost of Tariq's visit.

£



Q3. How much more did Tariq pay for his dog's treatment than Millie?

£

Q4. A dog needs to be given flea and worming treatment every month.

How much does it cost to treat a large and a small dog for one year?

£

Vet's price list



	Small dog	Large dog
Microchip	£35	£35
Vaccination	£40	£40
Flea and worming treatment (per year)	£144	£200
Insurance (per year)	£300	£600
Neutering / Spaying	Female £300 Male £180	Female £300 Male £180

Doggy shopping

Look at the 'Doggy item price list' and answer the following questions

Q1. Harry's large dog eats two tins of dog food per day.
How much does it cost Harry to feed his dog each week?

£

Q2. Sally's dog has a long coat, which needs grooming every day.
She bought a new brush, a dog toy and some dog chocolate.
How much change did she get from £10.00?

£

Q3. Find the prices, and calculate the totals for this shopping list.
First for a large dog and then for a small dog.

Item	Large dog	Small dog
Bed		
2 x Bowls		
Collar		
Engraved Tag		
Long Lead		
3 x Treats		
TOTAL COST		

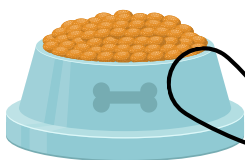
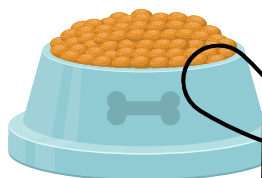
Q4. Which dog costs the most?

Q5. How much more does their shopping list add up to?

£

Doggy items price list

Dog bowls



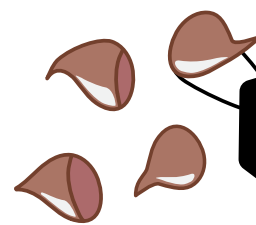
Dog food



Dog food



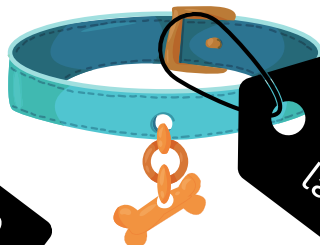
Dog chocolate



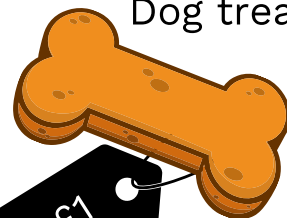
Dog toy



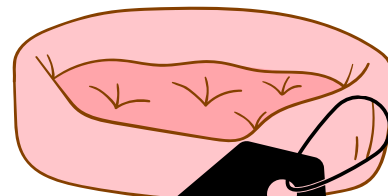
Dog collar



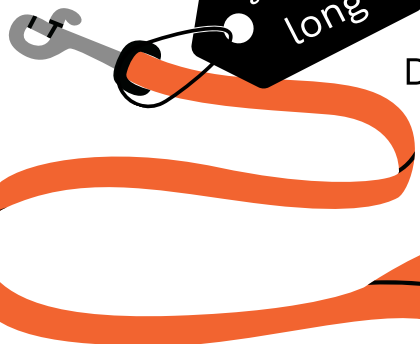
Dog treat



Dog brush



Dog bed



Dog lead



Engraved tag

How much does Lulu cost?

Use both price lists to answer the following questions.



Q1. The Jones family adopt a small, adult, female dog called Lulu from Dogs Trust. Dogs Trust neuter, microchip and vaccinate all dogs in their care.

How much would this usually cost for Lulu?

£

Q2. Lulu will be given one month's flea treatment and wormer before she leaves. How much would this usually cost for Lulu?

£

Q3. Lulu will have one month's pet insurance free. How much would this usually cost for Lulu?

£

Q4. When Lulu leaves Dogs Trust, the Jones family are given a brand new collar and short lead and a bag of dry food for her. How much would these items cost for Lulu if the Jones family had to buy them?

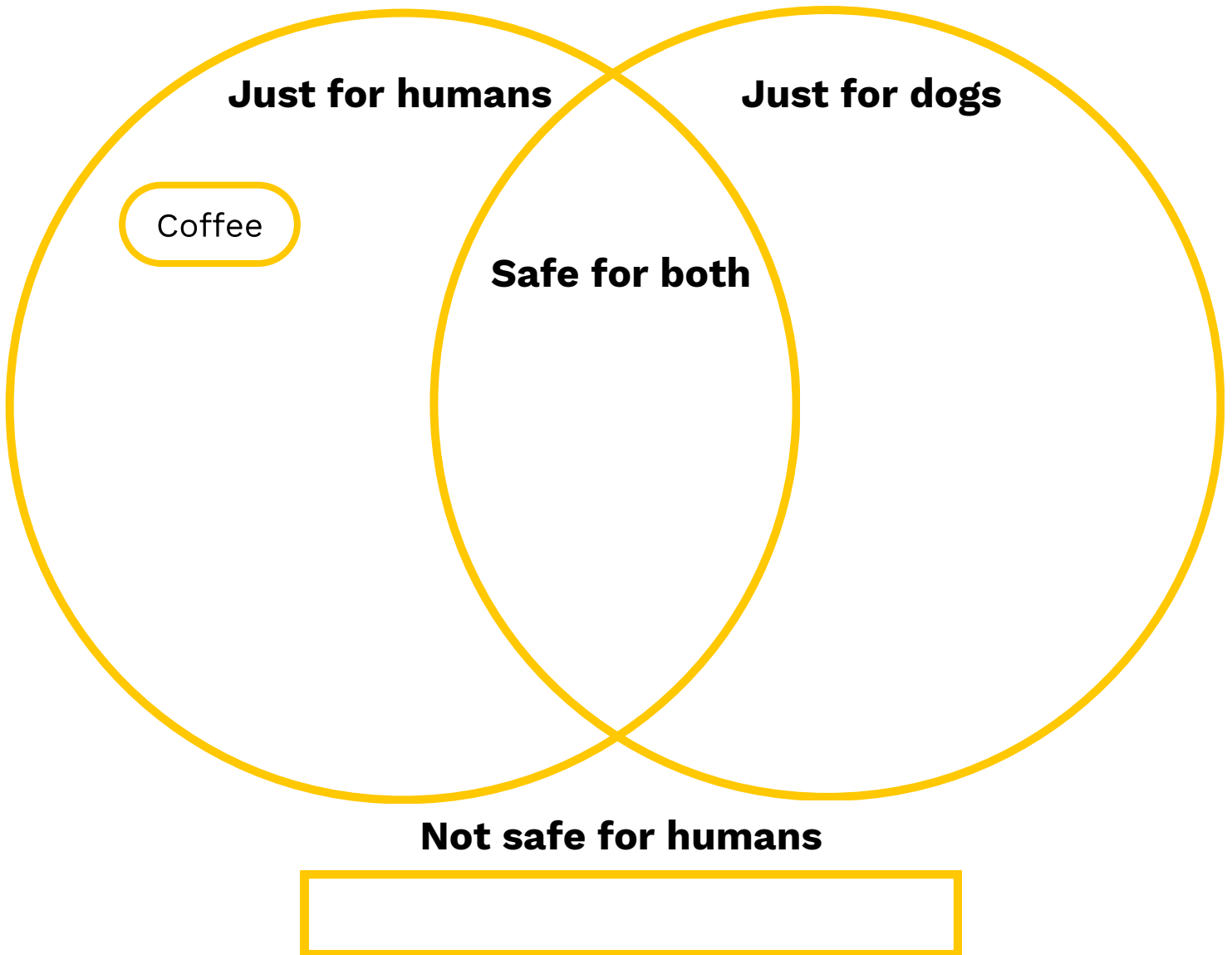
£

Q5. The adoption fee at Dogs Trust is £150. How much did the Jones family save on vet bills and basic items by adopting? (Hint: add the previous four prices you worked out together, then subtract the adoption fee.)

£

Safe and toxic food

Task A: Sort the following foods and drinks into the Venn diagram.



Water

Baked potatoes

Carrots

Chocolate

Cooked chicken bones

Dog food

Grapes and raisins

Tea

Chewing gum

Dog treats

Garlic

Onion

Safe and toxic food

Task B: Can you think of 3 things an owner could do to stop their dog eating something which could be dangerous for them?

1. _____

2. _____

3. _____



How much should my dog eat?

Task A: Use the information in the table on the next page to calculate the correct meal sizes for these dogs (the top line is already done for you)

Dog Name	Dog Weight (kg)	Activity Level	Food per day (g)	Food per meal (g) Food per per day ÷ 2
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Lola	35	normal		
Bailey	10	low		
Coco	40	high		
Luna	20	high		
Milo	70	high		
Teddy	50	normal		

Dog	Body Weight (kg)	High Activity	Normal Activity	Low Activity
Toy	2	58	51	44
	5	166	108	88
Small	10	195	172	148
Medium	15	265	233	201
	20	328	289	250
	25	388	342	295
Large	30	445	392	338
	35	500	440	380
	40	552	486	420
	50	653	575	496
	60	749	659	569
	70	840	739	639
	80	929	817	706
	90	1015	893	771

How much should my dog eat?

Task B: Sometimes owners do not measure their dog's food correctly and feed them too much. What could be the long-term consequences of this?

