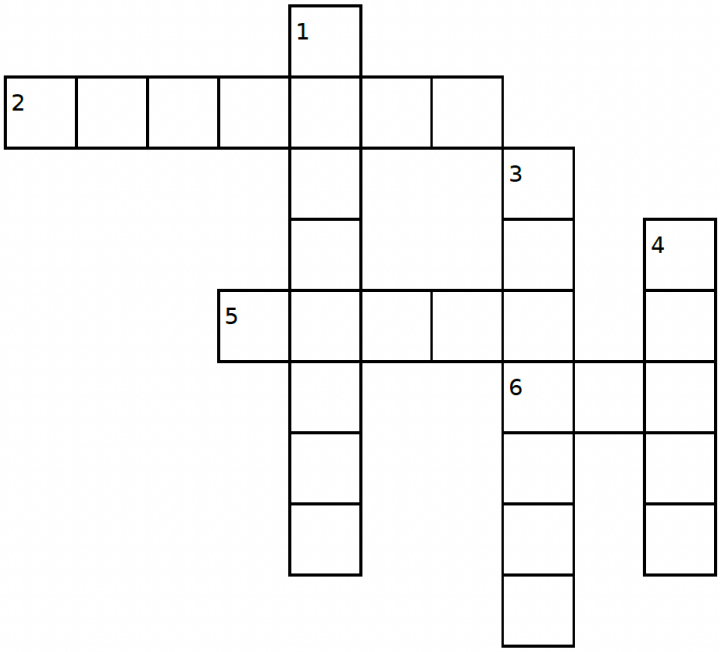
Crossword Puzzle



Down:

1. Your kidneys contain 1 million of these.
3. Tubes that connect the kidneys to the bladder
4. What do the kidneys filter?

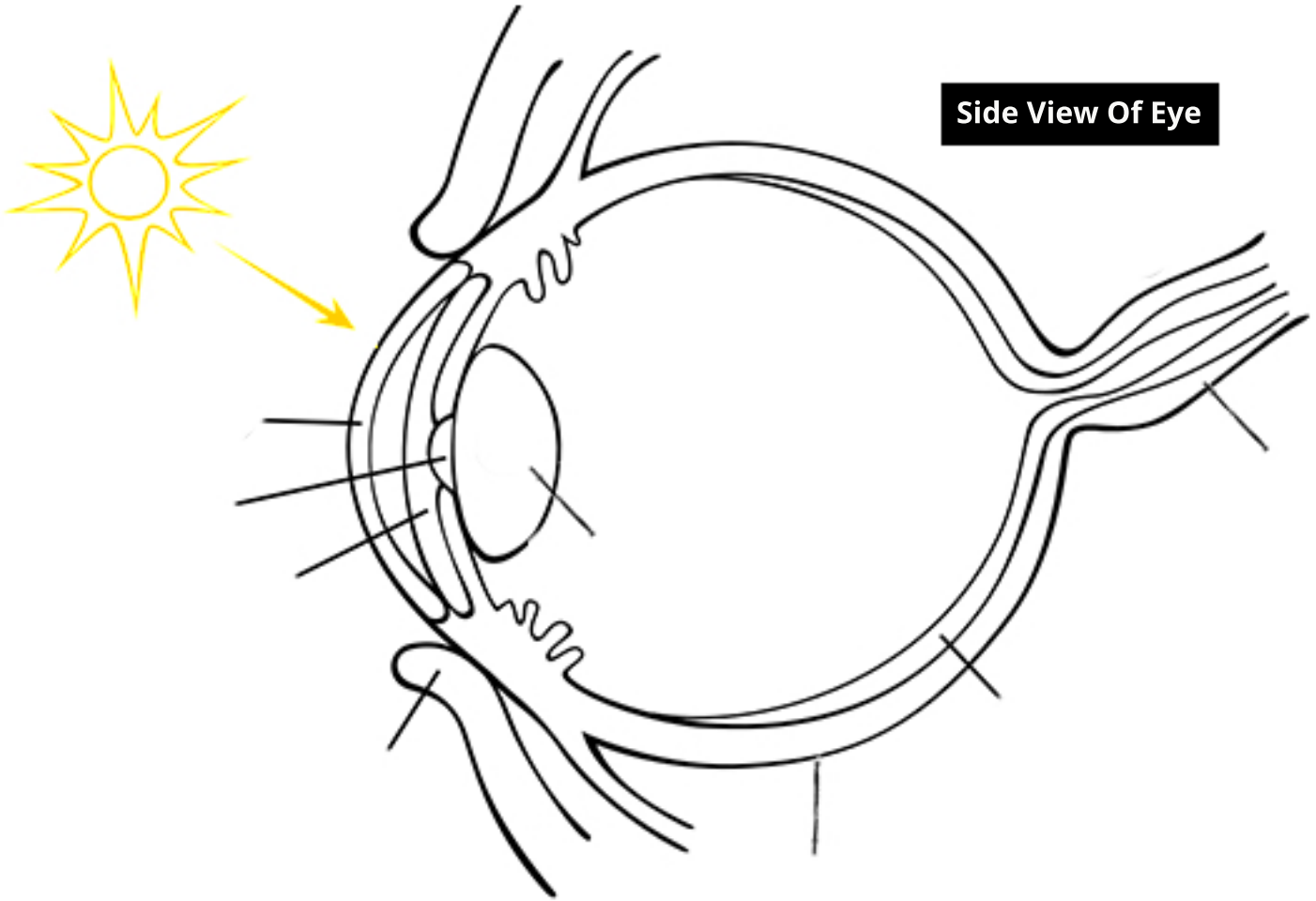
Across:

2. Organs that filter the blood
5. Yellow fluid stored in bladder
6. How many kidneys do we have?

Word Search

G F T K I D N E Y I
B L T U R E T E R B
L T O E L S W U D L
O N R M C C O K U A
O X E T E O Q W R D
D Q N P U R S S I D
W T A K H B U Z N E
Y N L U G R U L E R
F I L T E R O L U J
K L F Y T X X N E S

glomerulus
kidney
renal
nephron
ureter
urine
bladder
tubule
blood
filter



Optic Nerve (sends signal to brain) **Retina (back of eye)** **Cornea (window of eye)**

Lens (to focus light) **Sclera (white outer surface of eye)**

Iris (coloured area of eye) **Lower Eye Lid** **Pupil (black central area where light passes through to back of eye)**

Collect & Analyse Some Peritoneal Fluid!

You will need:

- A disposable plastic / latex glove (alternatively you could use a sandwich / freezer bag and elastic band)
- A tumbler glass or jam jar
- A thin syringe or pipette / turkey baster
- Water
- Orange juice or orange squash
- (optional red food colouring or red coloured juice / squash)
- Hundreds and thousands type cake sprinkles
- 3 small bowls or ramekins / jars
- A measuring jug
- Paper & pen / pencil

Method:

1) Place the glove inside the tumbler and fold the cuff of the glove over the edges of the tumbler or jar so it holds the glove open (the glove will act like the peritoneum, the inside of your glove is the peritoneal cavity).
2) Fill your glove 1/3 with water, suck up the sample with your pipette or syringe and squirt it into 1 of your bowls – label the bowl sample A and put the date and time it was collected.
3) Fill up your glove with 2/3 water and add 2 tablespoons of orange juice or squash, add a teaspoon of sprinkles, give it a little mix
4) Suck up this sample with your pipette or syringe and squirt into a new bowl – label the bowl sample B and put the date and time it was collected.
5) Repeat step 3 and this time add 2 teaspoons of sprinkles, and if you have it a small drop of red food colouring or juice/squash
6) Suck up this sample with your pipette or syringe and squirt it into the 3rd clean bowl – label it sample C and write the time and date it was collected
7) Look at the 3 samples you collected from the peritoneal cavity (glove) – use the table and note down your observations for each parameter.
8) Using your measuring jug measure the volume of each sample in milliliters and note it down in your table.
9) Have a guess at which sample is ‘normal’ sample and which is blood contaminated.

Fluid Analysis Table

Sample reference (label)	Date & time of collection	Sample type (type of fluid collected)	Colour	Turbidity (how cloudy)	Estimated number of cells (sprinkles)	Any blood contamination (red / pink colour?)	Volume collected (ml)

Healthy biscuits for dogs (and humans!)

Ingredients:

- 1 ½ cups of oats
- 1 tablespoon of chia seeds mixed with 3 tablespoons of water, leave to go gelatinous
- 1 medium apple grated
- 1 medium carrot grated
- 1 large ripe banana mashed
- 2 tablespoons of vegetable oil or melted coconut oil
- Rolling pin
- 2 sheets of greaseproof paper (or plain flour for rolling out dough)
- Cookie cutter in the shape of your choice
- Baking tray(s)

Method:

1) Preheat the oven to 180 C
2) Mix all ingredients together in a bowl until it forms a dough, if it's a little wet, add a small amount of oats, if it's a bit too crumbly add a tablespoon of water until its just right.
3) Taste test your dough, if you're just making it for humans and you'd like it to be a bit sweeter you can add 1-2 tablespoons of sugar / honey / maple syrup or alternative (if you add liquid sweetener you might need to add a few more oats to make the dough less sticky).
4) Roll the dough out between 2 sheets of grease proof paper, or on a floured surface, to around ½ cm thickness
5) Cut out your biscuits
6) Gently place biscuits onto a greased or lined baking tray
7) Bake for 15-20 minutes until golden.
8) Enjoy! (if giving to your dog, only give 1-2 per day depending on their size)



Mixing



Rolling & cutting



Placing on baking tray with fork



Baked!





Pip enjoying his biscuits!

Test the glucose (sugar) content of different food & drinks

You will need:

- A pack of urine test strips (I got mine from amazon: https://amzn.eu/d/6XUq1MR)
- Water
- Lemon juice or a slice of lemon
- Fruit juice(s)
- Diet fizzy drink
- Non-diet fizzy drinks
- Milk of any variety
- A variety of slices of juicy fruit & veg, e.g., citrus fruit, cucumber, tomato, melon, pineapple etc…
- Other foods you want to test like spreads, sauces & dressings etc…(you might need to mix these with a little water to make them more liquidy)
- Pipette or shallow bowls/ramekins

Experiment:

For this experiment we will only be looking at the glucose section of the strip (usually it is the blue square on the bottom of the strip, refer to the test strip instructions to locate the correct square on your strips if they are a different brand to what I used).
It will be easiest to test liquidy / watery or juicy type food samples,

- Gather all the liquids and foods samples you want to test and lay them all out in front of you
- Use a new test strip for each liquid or food.
- You can either dip, pipette on, or touch the glucose square on the test strip onto the sample food or drink.
- Note down any colour changes of the glucose square and the number or symbol underneath that colour.
- Record these findings in your table
- Repeat for each liquid / food sample
- Can you see which ones are more or less sugary?

Results Table:

Sample	Colour change of glucose square?	Reading	Notes
e.g. Water			

Here’s a picture of the quick experiment I did at home to test it out:
I just used what I could find in my house; water, sweetened soya milk, banana, cucumber and cola.

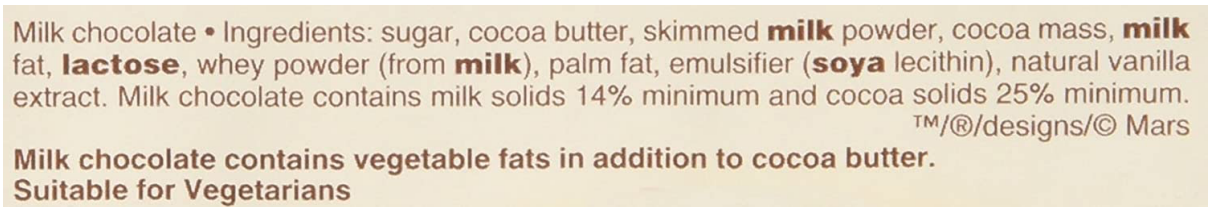


Chocolate Toxicity

Use the Vets Now chocolate calculator:
https://www.vets-now.com/app/chocolate-calculator
to find out what level of chocolate toxicity these pets have been exposed to.
You might need to use some detective work to estimate how much and what type of chocolate these pets might have eaten!

CASE 1

A female 5 year old golden retriever ate a 110g bar of galaxy chocolate stolen from her owners handbag.
This is the chocolate bar label:



CASE 2

A 3kg Chihuahua ate a handful of dark chocolate truffles dusted in cocoa powder.

CASE 3

A 6 month old male neutered Cocker Spaniel was found near ripped up tub of quality streets, looking guilty. The tub had already been opened but the owner doesn't know how many were left in it before the dog got to it.

CASE 4

Mittens the Maine Coon cat was caught licking some milkybar buttons from a packet left on the table.

CASE 5

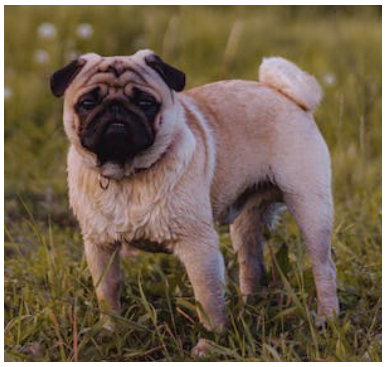
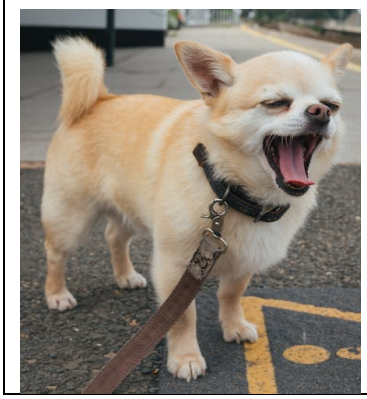
A 20kg cross-breed dog jumped on the counter and scoffed a whole Sainsburys chocolate party tray bake.

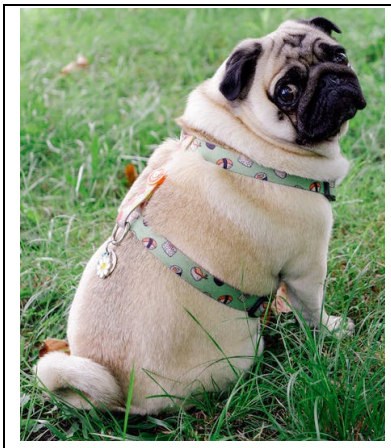
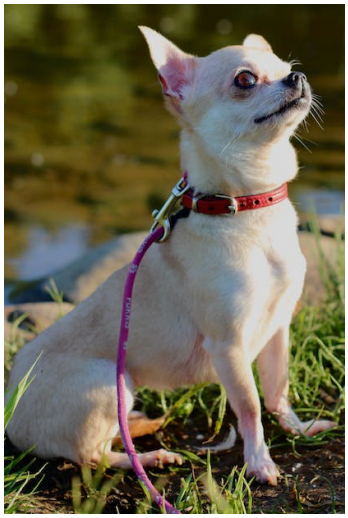
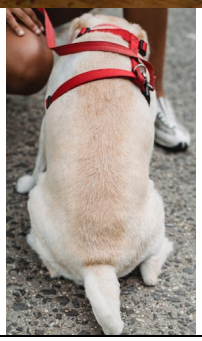
CASE 6

A female dalmatian cross ate a 170g tin of chocolate coated coffee beans.
These is the ingredients: Dark Chocolate (91%)(Sugar, Cocoa Mass, Cocoa Butter, Emulsifier: Soya Lecithin, Flavouring), Coffee Beans (8%), Glazing Agents: Gum Arabic, Maize Protein. Dark Chocolate contains Cocoa Solids 53% minimum. Produced in an environment that handles: Milk, Nuts, Peanuts & Wheat Gluten

Body Condition Scoring

Use the chart below to estimate the body condition for each pet pictured.

Image	Description	Body Condition Score
	Active, can feel ribs and spine with slight pressure	
	Very active and excitable can see ribs when he's sniffing and stretches, can easily feel ribs and spine	
	Doesn't really enjoy walks, is quite fluffy, can feel ribs with slight pressure, and does have some definition to waist	

	Likes to sleep most of the day, have to press firmly to feel ribs	
	Active and energetic, muscular, easily feel and see ribs spine and waist	
 	Older dog, slower on walks, have to press moderately to feel ribs and spine	

Hill's
Transforming Lives™

How does your pet shape up?

Check their Body Condition score on the chart below

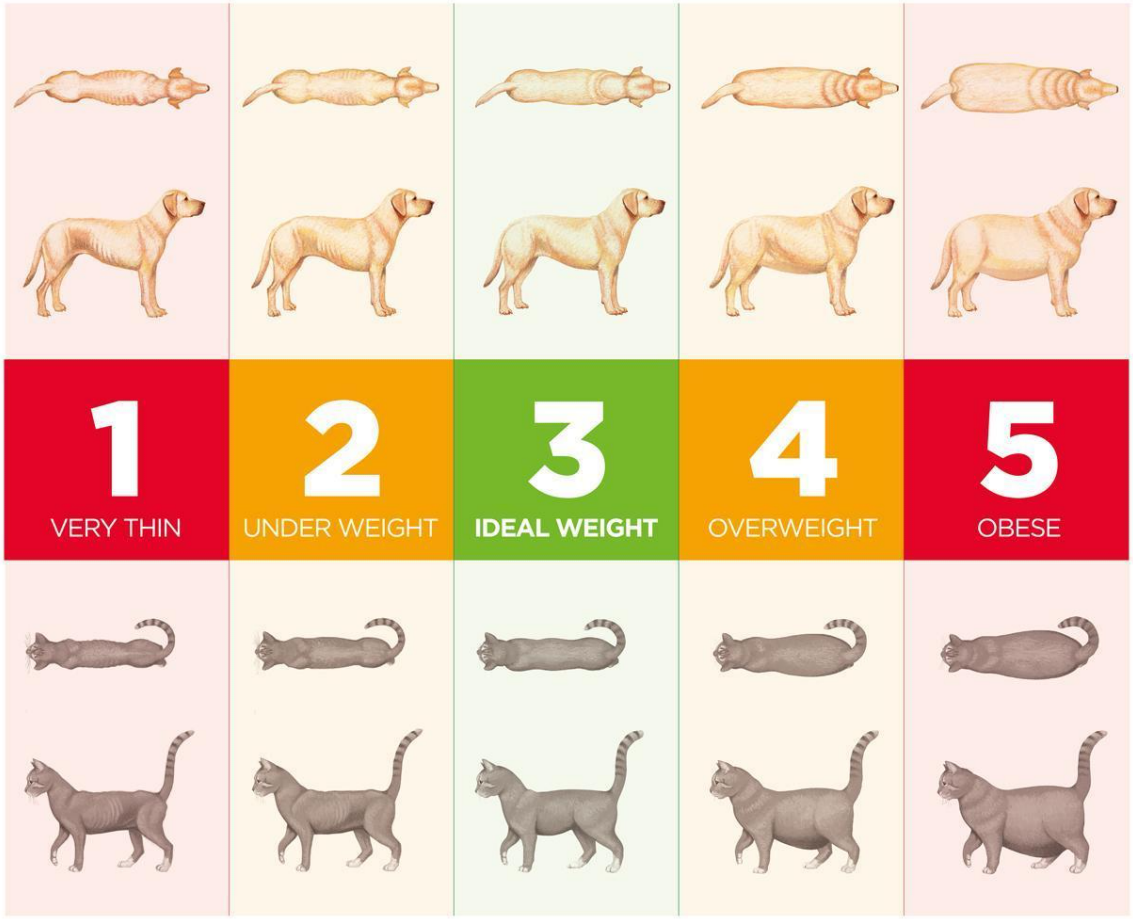


Image sources: hillspet.co.uk, pexels.com