

Dogs Trust's Science week Investigation for primary schools.

STUDENT PACK

DOG SENSES



www.dogstrust.ie

www.learnwithdogstrust.ie

WELCOME TO DOGS TRUST'S SCIENCE WEEK INVESTIGATION!

We love dogs in Dogs Trust (could you guess?!), and we are always trying to find out more things about our four legged friends so that we can make sure we keep them healthy and happy.

So this investigation is designed so that you can find out a little bit more about dogs, in fact, you will find out about some of the senses dogs use!

Over the course of the week you will do research and carry out some experiments and activities to find out what dog senses are like, and if/how they differ from human senses!

You will also find out how we can use this knowledge to keep our pets healthy and happy, and you'll even get to design a dog toy based on your research!

So young scientists.... Your mission awaits !



Over the course of this week you will be investigating dog senses. In this pack we've given you some activities that will help you to carry out your investigation.

If you see an 'E' that looks like this:



This means that you will be doing a small experiment. These experiments should help you understand dog senses a little more.

If you see an 'A' that looks like this:



This means that the task is an activity. There are a few different activities here such as cutting and sorting some cards, and colouring in!

If you see an 'R' that looks like this:



This means that the task is a research one. There are lots of ways that we can research things. You could use books and the internet to help you here.

There are lots of ways
you can present your
research. Maybe you
could make a poster?
Or write a report?

Ask your teacher
and see what they
think would be
the best way for
your work!

We're going to start our investigation by talking about senses. Have a look at the paw print below. Can you answer the questions? Can you **predict** (guess) what sense that dogs might use the most? Do you think dog senses are better than ours?

Can you
name at
least 3?

Do you
think dogs
have simi-
lar senses?

What
senses do
humans
have?

What sense
do you think
dogs use
the most?

SENSES!

Dogs have some of the same senses as us humans.

Their 3 main senses are **SIGHT**, SMELL and HEARING. These are the senses we will be finding out about this week!

Sight

R

Today we'll talk about sight in dogs. We need to do some **research** to find out the answers to these questions:

- Are dogs eyes on the front of their faces, or on the side? Can you find some pictures that show the answer?
- Can dogs see better up close, or far away?
- Is their eyesight better or worse than ours?
- Are dogs colourblind? Does this mean that they only see in black and white? Can they see any other colours?



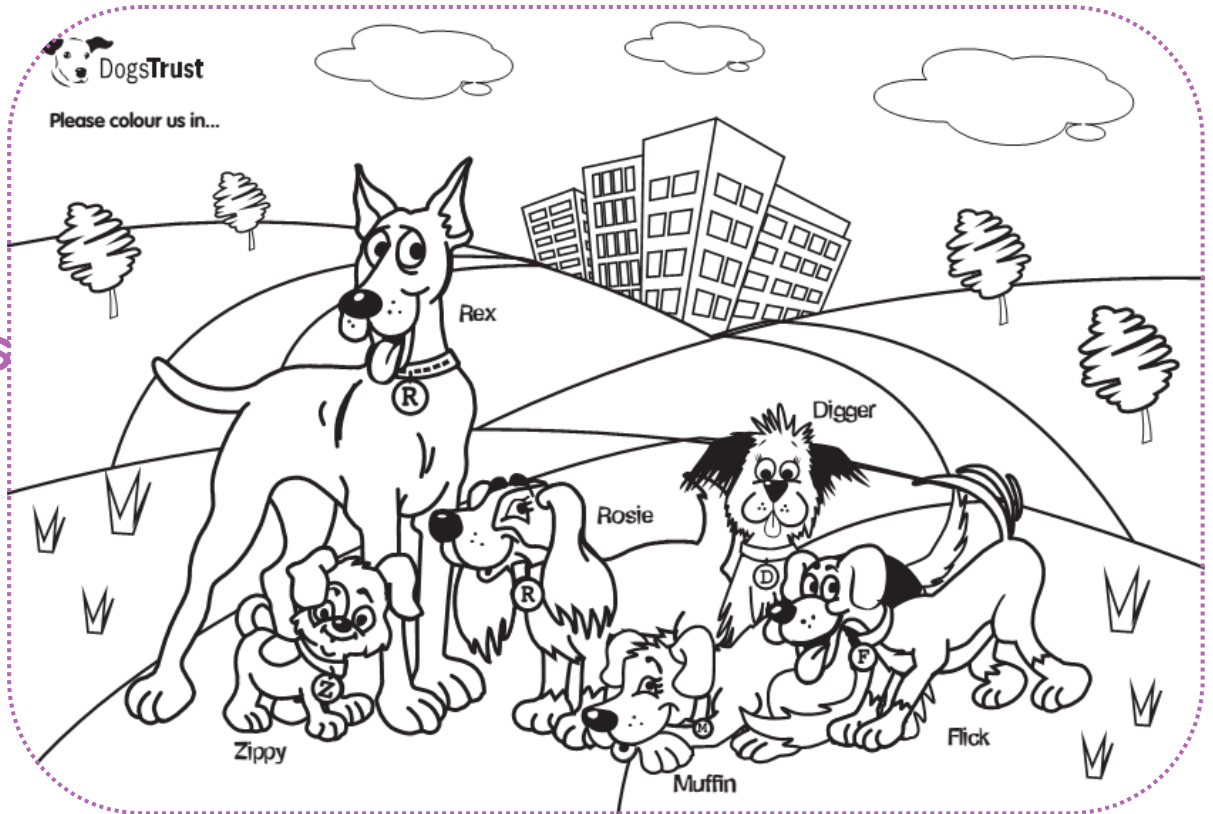
A

Dogs don't see things the same way we do. To show this, carry out this activity.

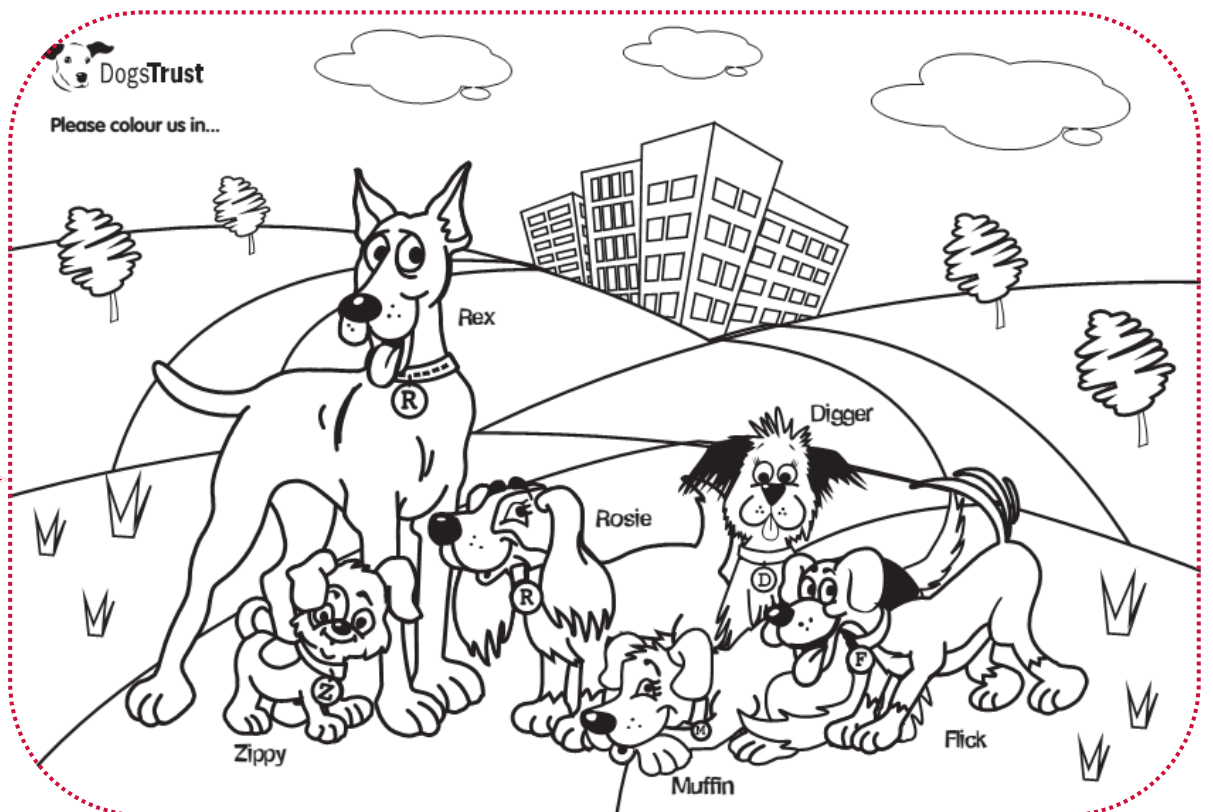
Colour the top picture how humans might see it.

Colour the bottom picture as seen by a dog. Can dogs see the same colours we can?

Humans
see



Dogs
see



Dogs have some of the same senses as us humans.

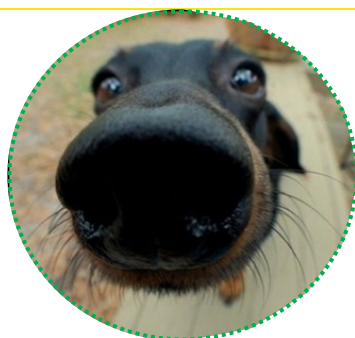
Their 3 main senses are SIGHT, SMELL and HEARING. These are the senses we will be finding out about this week!

Smell

R

Today's sense is smell! We're going to research this sense just like you did with sight. Some questions you could answer are:

- Can dogs smell things that human's can't?
- Why do dogs have a wet nose?
- There are special cells in noses that pick up smells, can you find out what they are called?
- Do dogs have more or less of these cells than humans?
- How do we use a dog's sense of smell to help humans?





To give you an idea of just how good a dog's sense of smell is compared to ours, have a go at this experiment.

You will need: 2 different sets of 'smelling pots'. Make sure you have 1a-1e, and 2a-2e.

METHOD:

- Start with set 1: Try to identify what's in each pot just by smelling it. Write your answers down, you could make a table like the one below.

Pot	SET 1	SET 2
A		
B		
C		
D		
E		

- Now do the same with Set 2: Smell each pot and write on your table what you think it is.
- Check the answer sheet to see if you got the right answers.
- Which set was the smelliest, set 1 or set 2?

If a dog was to sniff set 1, they would be able to smell what was in there as well as you were able to in set 2! Amazing!

Can you design an experiment to test Human Vs Dog senses of smell?

Dogs have some of the same senses as us humans.

Their 3 main senses are SIGHT, SMELL and HEARING. These are the senses we will be finding out about this week!

Hearing

R

The last sense we are going to find out about this week is hearing. You should be really good at research by now! So here's some questions for you to answer.

- Compared to us humans, how good is a dog's hearing?
- Dogs can move each ear independently, how does this help their hearing?
- Are some dogs better hearers than others?
- How does the shape of a dog's ears affect it's hearing?
- Can you find pictures of different dog ear shapes?





To find out just how further a dog can hear compared to us, try this experiment, you will need to work in groups of at least 3 for this experiment.

You will need: A watch (one that makes a ticking sound!), a measuring tape, paper to make dog ears.

METHOD:

- Choose one person to hold the watch and another to be the listener.
- Hold the watch up to the listener's ear and start to slowly move away.
- Stop when the listener can no longer hear the ticking of the watch.
- A third person can measure what distance that was (between the listener's ear and the watch)
- To see how much further a dog would be able to hear the clock, extend the distance by four.

Does it surprise you to see how far a dog can hear?

- Try the same again, this time use a piece of paper to make a doggy ear. Can you hear further now?
- Try again with a different dog ear shape, does this make hearing easier/harder?

As well as being able to hear things further away than us humans, dogs can also hear noises that we can't, like special high frequency dog whistles!

Why do you think some dogs find fireworks and thunderstorms scary?

You have now found out lots of new information about dog senses. What's next?

A

Now that you know lots about dog senses, cut out the cards on the sheets that have information about dog and human senses.

All information about **SMELL** is **GREEN**

All information about **SIGHT** is **BLUE**

All information about **HEARING** is **RED**

Any information you think is about dogs, put in a 'dog' column.

Any information you think is about humans, put in a 'human' column.

Ask your teacher to check your answers, did you get them all right? If not, then just go back to your research and see if you can correct anything that's wrong! :)

Once you have got all the cards in the right column, you are ready for the final task!

A

Use what you know about dog senses to ***design a dog toy!***

Things to think about:

- What colour should it be?
- Will it make a noise?
- Should it smell of anything?

Design your toy on some plain paper, think about dog toys that you may have seen before if you need some ideas!

Don't forget to label your toy design so that whoever is looking at it knows why you designed it the way you did!

Dogs have other senses too, could you find out about these to help you design your toy?

Have 5 million scent receptors.

Has a wet nose to help capture smells

Have 20 million scent receptors

Has a weaker sense of smell

Uses this sense the most

Can use each nostril independently

Uses it's sense of sight the most

Cannot use each nostril independently

Have smaller nasal passages & can't take in as much scent information

Have larger nasal passages to take in more scent information

Humans ...

Dogs ...

Cannot see the colours
Red or Green

Has much better vision
up close

Most can see the colours
Red and Green

Up close things appear
blurry

Can see from greater
distances

Can see in the dark

Cannot see as far away

Cannot see well in the
dark

Eyes closer together so
narrower field of vision

Eyes further apart so
has wider field of vision

A human's sight...

A dog's sight...

Has a better sense of
hearing

Can hear high pitched
sounds

Sense of hearing is
weaker

Cannot hear high pitched
sounds

Can move ears
independently

Can hear from a greater
distance

Ears cannot move

Cannot hear from as far
away

Cannot use ears to
express feelings

Can use ears to express
feelings

A human's hearing...

A dog's hearing...

CONGRATULATIONS!

You have finished your investigation and now know lots about dog senses!

Your local Education and Community Officer would LOVE to see all your hard work. Your teacher could send them on some photos of your project and dog toy designs—they may even make it onto the Education Blog! You'll be famous!

The contact details for you local officer are below.



Fiona Simpson

Dublin and Eastern Area

087 1360771

Fiona.Simpson@dogstrust.ie



Heather Keating

South East Area

087 2965883

Heather.Keating@dogstrust.ie



Dawn Kavanagh

South West Munster

087 9239221

Dawn.Kavanagh@dogstrust.ie



Audrey Gough

Dublin and Eastern Area

123 456789

Audrey.Gough@dogstrust.ie



Aoife Murdock

Connacht Area

086 8323325

Aoife.Murdock@dogstrust.ie



Paul Cleary

Midlands Area

086 0440829

Paul.Cleary@dogstrust.ie

About Dogs Trust Ireland:

Dogs Trust is Ireland's largest dog welfare charity, and currently has over 200 dogs looking for their forever homes!

The Centre is based at:

Dogs Trust Rehoming Centre
Ashbourne Road,
Finglas
Dublin 11

Open to visitors 12pm-4pm 6 days a week (closed Tuesdays).

