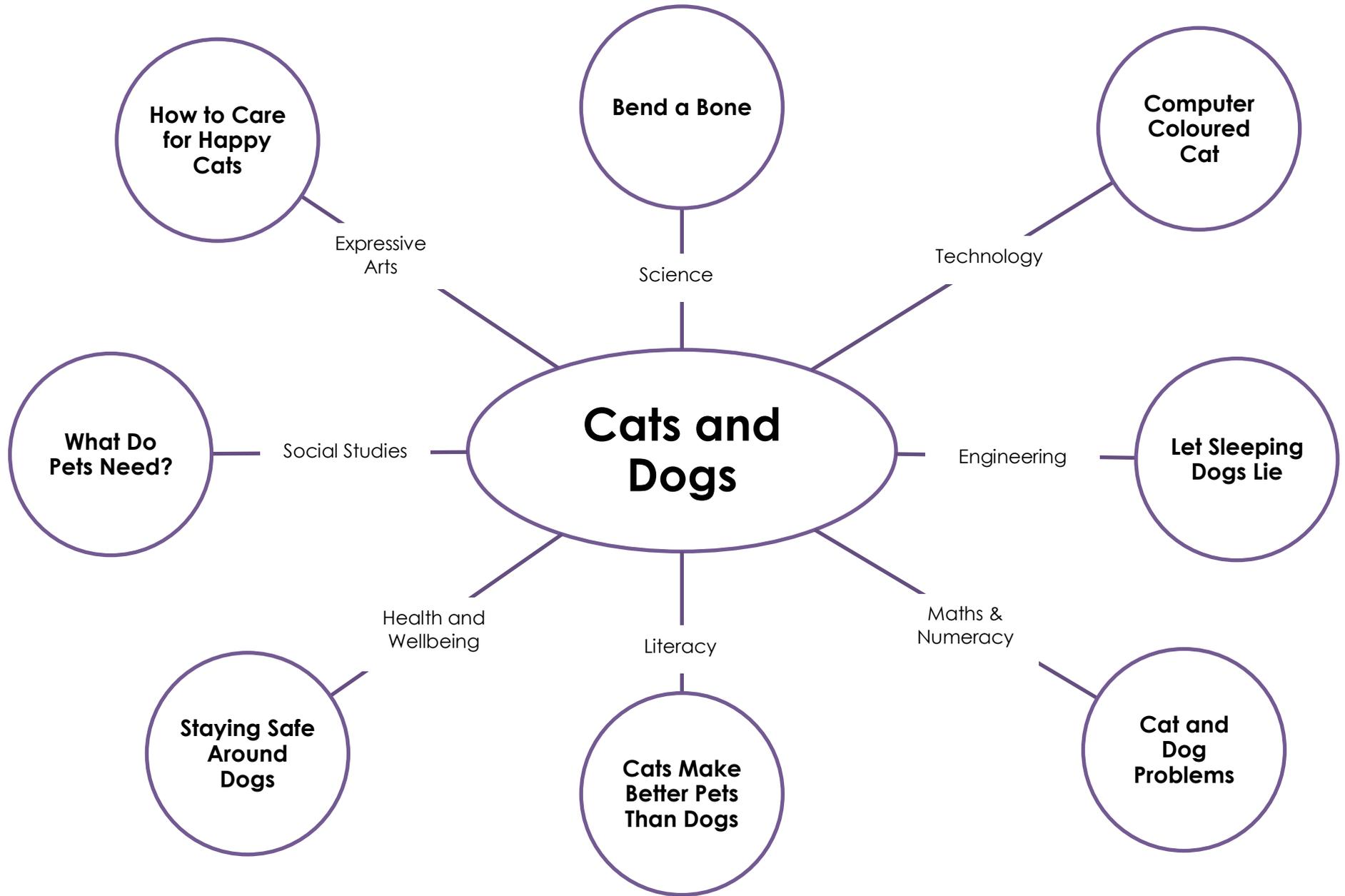


Learning from Home



Science Challenge

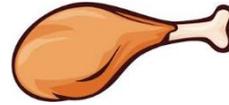


Bend a Bone

Dogs love chewing bones but what makes a bone are so hard and strong? Let's do an investigation to find out.

You will need:

A bone (a leg or "drumstick" bone works best)
A jar large enough to fit a chicken or chop bone
Vinegar



***Note:** This investigation takes place over 3 days. You will not get instant results.*

Instructions:

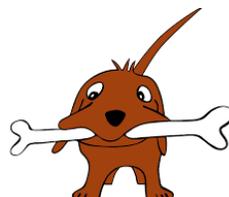
1. Wait until you are having a meal involving meat on the bone like a chicken drumstick or a chop and save a bone.
2. Rinse off the bone in running water to remove any meat from it.
3. Notice how hard the bone is – gently try bending it. Like our bones, animal bones contain a mineral called calcium in them to make them hard.
4. Put the bone into the jar and cover the bone with vinegar. It might be a good idea to put the lid on the jar or cover it – let it sit for 3 days*
5. After 3 days remove the bone. It should feel different. Now rinse it off under the tap and try bending it again. Is it really a rubber bone?

The Science:

Vinegar is considered a mild acid, but it is strong enough to dissolve away the calcium in the bone. Once the calcium is dissolved, there is nothing to keep the bone hard – all that is left is the soft bone tissue. With some effort you might be able to get the bone to bend. When we drink milk and eat dairy products – the calcium in the milk finds its way to our bones, helping to make them stronger.

Things to Think About (and possibly investigate yourself):

1. Would the length of time the bone is in vinegar affect how much the bone bends?
2. Do you think smaller size bones would become "bendy" sooner?
3. Would different types of vinegar affect how bendy bones become?



Activity from <https://sciencebob.com/>
Clipart from www.clipart-library.com

Technology Challenge



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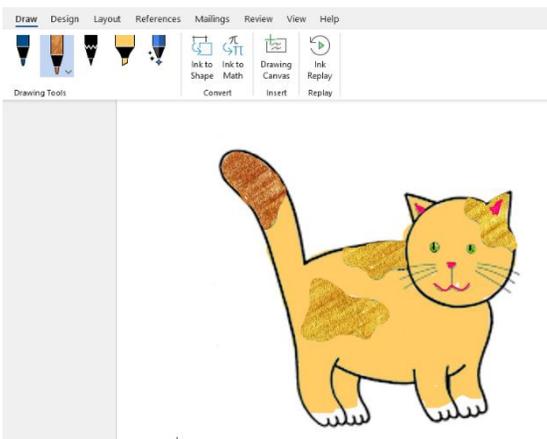
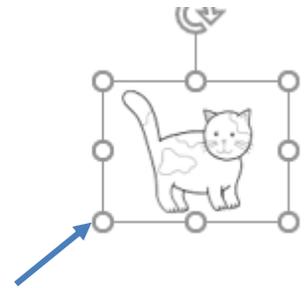
Computer Coloured Cat

Adult Support Required

Your task: is to decorate a cat picture from the internet using the Draw Menu tools in Word, or similar

You will need: A computer or tablet with access to the internet and access to a word processing program such as **Word**.

1. Open a **Word** document
2. Open your internet browser and search for 'cat colouring in picture'
3. Look through the results and find an image you like.
4. Right click to **copy** it.
5. Return to your *Word* document, right click then '**paste**' the picture onto your page.
6. Click on one of the circles at the corners to stretch out the cat to make it bigger.
7. Now click on **Draw** on your toolbar.
8. Explore the different tools and colours to decorate your cat however you like.
9. Remember to **Save** your work when you are finished. You may need to ask an adult or older brother or sister to help with this.

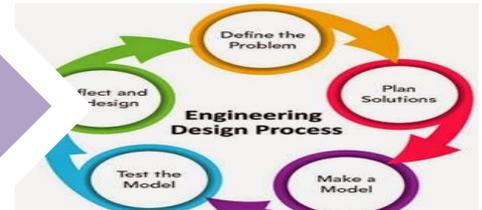


Tips:

1. It will be easier to colour in your cat if you increase the size of your page.
2. If you go over the lines, you can use a white pen or pencil in the tools to tidy up your picture.

Cat template from www.clipart-library.com

Engineering Challenge



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Let Sleeping Dogs Lie

Adult Supervision May Be Required

Toby the dog has a problem – he is feeling very tired and would like a kennel to lie down in.

Challenge: Can you help him by designing and building him a new kennel?

Plan it: Write down or sketch some ideas as to how you will construct the kennel.

Build it: Using materials you have at home. Make sure the toy dog (or other toy) can fit inside comfortably. You could use lego or building blocks or you could recycle old boxes and bottles. **Remember to ask an adult for help if using scissors!**

Test it: Does your toy fit comfortably inside the kennel?

Improve it: Could you add any special features to make the kennel even better? Perhaps you could make it waterproof, or you could make a soft lining for the inside? Can you add a window?

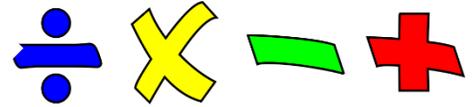


Can you take a photograph of your finished kennel with your toy in it? If you can, paste the photo onto a Word document and type up a short explanation of what it is and how you built the kennel. Remember to give your document a name before saving it. Ask a grown up for help if you need to.

Image from www.clipart-library.com



Maths & Numeracy Challenge



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Cat and Dog Problems

Remember to use concrete materials or draw out the problems to help you solve the following – some are hard!!

1. Tim the terrier is feeling a bit lazy. Today he walked 267m around the garden, and he will now walk another 135m in order to reach the shop to get more dog food with his owner. He will then walk back home. How far will Tim have walked today?
2. Three cats live with Gemma. Gemma gets each cat a new toy. She buys a toy mouse for £2.55, a spiky ball for £3.67 and a ball of wool for £1.97. How much does Gemma spend altogether? How much change will she receive from £10?
3. Charlie the cat climbed a tall tree in his owner's garden. The tree is 5.64m tall. The fire brigade brought Charlie back down, but he climbed up again. How many metres did Charlie climb altogether?
4. Dennis the blood hound woke up at 7am. He ran around until breakfast 15 minutes later. After breakfast he went out into the garden for a pee and a sniff. Dennis and his owner then left the house 15 minutes after starting breakfast to go on a long walk before arriving back home at 9.30am. How long was it between Dennis waking up and him arriving back home after his walk? What time did they set off on the walk? How long did the walk take?
5. Cats measure an average of 76cm from nose to tail. How long would 4 be if standing end to end? (Answer in cm and metres)
6. There were 132 cat whiskers counted at the pet show. Given that most cats have 12 whiskers, how many cats were there?



Extra Challenge: Adult dogs have 42 teeth and puppies have 28. If the vet counts 336 dog teeth in one day, how many adult dogs and how many puppy dogs did she examine?

If you have a calculator, use it to check your answers.

Images from
www.clipart-library.com

Literacy Challenge



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Cats Make Better Pets Than Dogs

Persuasive writing is all about making your reader believe your message...even if you don't believe it yourself.



Whether you agree that cats are better or not, complete each sentence below with some arguments to convince the reader that cats make better pets than dogs. This might be easy for you if you own a cat already, but you might want to do some research either by looking at some books or by using the internet.



(Remember to ask an adult for permission first.)

The first one is done for you.

1. We all know that cats are better at looking after themselves than dogs.
2. Only a fool would think that ...
3. One reason why...
4. Just think about...
5. Most people feel that...
6. To sum up I would like to say that...

Can you think of any other reasons why a cat would make a better pet? Present your arguments to a grown up at home. What is their reaction? Do they agree with the points you make? If they disagree do you have any other information you could use to change their minds?

Images from www.clipart-library.com



Health & Wellbeing Challenge

Staying Safe Around Dogs

Adult Support Required!

Cats and dogs can be great as pets, giving you lots of love, friendship and fun. When you have a pet, you are able to get to know each other and build up a relationship. This is not the case when you come across cats and especially dogs, you do not know.

Have a look at the poster below from the RSPCA animal charity which breaks down its **6 Golden Rules** for keeping children safe around dogs. The poster has been made for grown-ups so ask an adult to read through and discuss the information with you.

RSPCA

The 6 Golden Rules

for keeping your child safe and your dog happy

- Never leave your child alone in the same room as a dog, even your own.
- Teach your child never to approach dogs when they:
 - are eating or have a treat they really like
 - have a toy or something else they really like
 - are sleeping
 - are unwell, injured or tired
 - are blind or deaf.
- Teach your child to be kind and polite to dogs. Don't let your child climb on dogs, pull their ears or do anything you wouldn't allow them to do to another child.
- Teach your child how to play nicely with your dog. For example, your child can teach your dog some really fun tricks like shake a paw, play dead, or roll-over.
- Supervise your child when they're with your dog – if your dog looks unhappy, let him/her go somewhere they feel safe and happy.
- Never allow your child to approach a dog they don't know, for example when out in the park.

TOP TIP We all need a break sometimes – give your dog a cosy spot in a quiet room where they can have their own space. Teach your child to leave your dog alone when they're in their private spot.

www.rspca.org.uk/safeandhappy

Task: After talking to a grown up about the RSPCA poster, draw your own poster warning other children about the dangers of approaching a dog you do not know. Include pictures and text and try to make it stand out so people walking by would want to stop and look at it. (You might do this by including bright colours, big words or detailed pictures)

*You can draw your poster yourself or you may be able use a computer if you have some help at home.

Image from:
<https://www.rspca.org.uk/adviceandwelfare/pets/dogs/company/children/safe>

Social Studies Challenge



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What Do Pets Need?

Animals all live in a variety of different places because they all require different things.

What is a habitat? A habitat is a place in which living things live. Cats and dogs need somewhere to live, and each will require somewhere which provides for their needs.

Cats and dogs (and indeed all pets) need 5 main things to keep them healthy and happy and where they live is a part of this.

The **5 Welfare Needs** are:

- Need for a suitable environment
- Need for a suitable diet
- Need to exhibit normal behaviour patterns
- Need to be housed with, or apart, from other animals
- Need to be protected from pain, suffering, injury and disease

Click here to watch the Chris Packham 5 Welfare Needs video:

<https://www.youtube.com/watch?v=vaTEmeHXJxl>

Task: Draw the items that a cat or dog might need to make sure they are healthy and happy in their habitat. Colour in the items and label them.



Click here to play a game about Jamal and his dog Rocky:

<http://www.rspca-education.org.uk/jamal-and-rocky>



Talk to someone at home – can they think of anything else a cat or dog might need to be happy and healthy?

Images from www.clipart-library.com

Expressive Arts Challenge



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How to Care for Happy Cats

Today you will be learning a song about cats. It is sung to the tune **of London Bridge is Falling Down**. *Click here for the music:* <https://www.youtube.com/watch?v=5L6DA6ZwbjY>

Read through the words before you begin. Try to sing each verse in time with the music. The music will continue to play – this time do not sing, instead clap or tap a foot to the **beat** of the music. **The beat is the steady pulse that you feel in the tune, like a clock's tick. It's the beat you'd naturally clap along to or tap your foot to.**

		
<p>1. How to care for happy cats Happy cats, happy cats How to care for happy cats Miaow, miaow, miaow, miaow</p>	<p>2. Food and water in their bowls In their bowls, in their bowls Food and water in their bowls Miaow, miaow, miaow, miaow</p>	<p>3. Let your kitten sleep in peace Sleep in peace, sleep in peace Let your kitten sleep in peace Miaow, miaow, miaow, miaow</p>
		
<p>4. Stroke your kitten carefully Carefully, carefully Stroke your kitten carefully Miaow, miaow, miaow, miaow</p>	<p>5. Cats and kittens love to play Love to play, love to play Cats and kittens love to play Miaow, miaow, miaow, miaow</p>	<p>6. Now we all have happy cats Happy cats, happy cats Now we all have happy cats Purr, purr, purr, purr</p>

Activity and images from <https://education.cats.org.uk/>

Can you sing and tap out the beat at the same time?
Try to teach the song to someone else at home?