

# Science Challenge



## Animals

### Animals

Find as many pictures of different animals as you can from a magazine or write the names of different animals on pieces of paper.

Sort the animals in as many ways as you can. For example- size, how many legs, what kind of skin covering, what they eat, where do they live?

Choose a favourite animal to draw and write a factfile on.

### Minibeasts

If you have a garden or safe place, take part in a minibeast hunt. Remember to look in different places such as on a wall, under a stone, the underside of a leaf, in the soil. Put the minibeasts back where you found them when you have had a good look!

You could use this BBC bitesize Page to learn more about mini beasts.

<https://www.bbc.co.uk/bitesize/topics/z6882hv/articles/z9fkwmn>

There is a minibeast search competition available if you would like to do more work on this-<http://www.schoolscience.co.uk>

# Technology Challenge



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## Indoor Den Building

Your challenge is to build a den inside your home. You can use your den as a place you can do your learning at home tasks, to read, to play or to store your Easter eggs!! There are lots of ideas below to get you started with your den but if you can come up with a new design then give it a go!

- 1. Bunk Bed Fast-Track** If you have a bunk bed or a cabin bed, you've got a ready-made den structure just waiting to be transformed into a cosy hideout. You simply need to tuck in some sheets and blankets around the top bunk to completely surround the bottom bunk or under-bed space and hey presto! Den-ready in seconds.
- 2. Seats Become Walls** Got a few dining room chairs or two sofas? Simply arrange them back-to-back with space in between for your den. Then all you need is a big sheet or blanket to drape over the top as a ceiling and you've got the beginnings of a den.
- 3. Table Tops** Tables act as all-in-one walls and ceilings, meaning you won't need as many sheets and blankets to finish off the main den structure. You can also join up lots of different tables to make quick den extensions – just add blanket walls and you're done!
- 4. Broom Roof** A few household brooms or mop poles make the perfect roof supports for a big den. You can place the broom across the top of your back-to-back chairs to give your blankets and sheets an extra bit of structure to drape over, preventing any unwanted sagging in the middle.
- 5. Rope Roof** Want to make a really really big den? Try tying lengths of rope or string across a few far-apart points (make sure they're strong and won't tip over) and then drape your blankets and sheets over the tops to create a roof.
- 6. Light it Up** Once your den is built you can add a hint of magic with a few strings of fairy lights. Use battery-powered lights as these give you greater amounts of freedom and are much safer to use for a den. You can wind them around your support ropes, drape them from your den walls or simply lay them around the edges of your den for a cosy glow.
- 7. Get Comfy** A den isn't a den unless it's comfy and cosy. Scatter the inside of your den with lots of cushions, pillows, duvets and soft toys to give you something soft and squashy to sit on and snuggle up with.
- 8. Just Add Fun** Dens are the perfect place for games, movie-watching, reading and midnight-snacking. Stock your den with a few tasty snacks and lots of fun activities for hours of entertainment in your new home-within-a-home. Don't forget the password!

# Engineering Challenge



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## Marvelous marbles

Do you know what an engineer is? There are lots of different types of engineers, but they all have one thing in common: engineers are **problem solvers**. They look for solutions to everyday problems by using what they know in science, technology and maths. Watch this [short clip](#) to find out a bit more about what engineers do.

Have you ever watched Marblelympics before? It involves 'teams of marbles' competing in a range of Olympic events through different marble runs. Watch this example of the [exciting 2018 Marblelympics final](#).

How do marble runs work? Earth's gravity is an invisible force which pulls things towards it's centre. This means gravity constantly pulls down on the marble towards the ground, causing it to roll on any surface which isn't totally flat.

**Challenge:** Become an engineer and **design & build your own marble run**. (If you don't have a marble you could use a bouncy ball, bottle lid, ping-pong ball – or go outside and build an outdoor course using a football!)



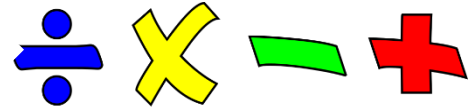
Try to include the following in your marble run;

1. A turn
2. A starting box/line
3. An ending pen to catch the marbles as they finish
4. A special feature (e.g. a wobbly bridge/steps/a tunnel/split pathway)

You can **use any materials or toys** that you have at home e.g. junk cardboard, empty plastic containers, LEGO, K'NEX, building blocks, books, DVD cases, sticks, stones, chairs...be creative!



# Maths & Numeracy Challenge



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## Capacity Container Hunt

Capacity is the amount of liquid a container can hold.

In our houses we have lots of containers which would hold liquid – storage tubs, jugs, cups and glasses in the kitchen cupboards, buckets, bottles, pet water bowls..... the list goes on.

- Collect some empty containers – be careful and make sure you ask if it is ok to use the containers.
- Discuss the different containers
  - Which one do you think holds the most? Why?
  - Which one do you think holds the least? Why?
  - Can you order them from smallest capacity to largest capacity?
  - Do you think any of them will hold the same?
- On the draining board of your kitchen sink, outside or in the bath/shower tray – use a jug to find the capacity of the containers.
  - Do any of them hold more than one jug?
  - Which ones hold less than a full jug?
  - Discuss with an adult the liquid scale on the jug – it will have ml on it.



- ml means millilitres
- a tablespoon holds 10ml and a can holds 330ml of juice



- Can you use the scale on the jugs to find out the measured capacity of the containers?



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# Literacy Challenge



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## Improving Your Memory!

### Repeat a four-digit number

Take turns to say a four digit number out loud and have someone repeat it back to you. If this is too hard you could try three digits first or challenge yourself further with 5 or 6 digits to remember.

### Make your own Pairs Game

Cut up about 20 small squares of paper or card. Draw matching pictures on the cards so that you have 10 sets of pairs. So you could draw an apple on two cards, a pencil on two cards, a star on two cards, a duck on two cards etc. When you have drawn the pictures shuffle the cards and place them upside down. Try to find matching pairs by turning over two cards at a time.

### Kim's game

Place 10 random items, such as a pencil, a rubber band, an apple, a fork, a coin etc on a tray. Look carefully at the items then cover them. Either ask someone to remove an item and you need to work out which one is missing or write a list of the items down and try to remember them all.

### Retell a story

Share a story book or a chapter from a book and talk about the characters, the setting and what happens. Try to retell the story remembering some details and what happened in the correct order.

# Health & Wellbeing Challenge



## Obstacle course

**CODE RED** – Here at DG Ninja HQ, we are desperately in need of some new ninjas...are you up to the challenge? Set up and try out this ninja training obstacle course to test your skills and see if you have what it takes to become a super ninja!

First things first...choosing a **ninja code name**. [Roll a die](#) twice and find out what your code name will be. For the remainder of the day, this is what you are to be known as...

Roll 1: 1-Red 2-Black 3-Blue 4-Gold 5-Green 6-Purple

Roll 2: 1-Tiger 2-Dragon 3-Ninja 4-Serpent 5- Arrow 6-Pheonix

Now **set up these obstacles** and **time yourself using a stopwatch** completing them separately or together as one big course. **Record your times/scores** for each challenge. Redo the activities and try to **improve on your results** – challenge family members to compete against you – who is the ultimate ninja in your household?!



1. **Quick feet** – set up some hoops, mats or spots and race across them quickly hopping from one foot to the other.
2. **Lazer beam agility** – get a ball of wool or string and wrap it through and round things at lots of different heights. Try to get from one side to the other without touching the string!
3. **Think fast** - Ask a fellow ninja trainee to pass a ball back and forth between you. How many passes can you make in one minute?
4. **Target practice** - use a Nerf gun or a ball, make and set up a target. How accurately can you aim and hit the target out of 10 shots?
5. **Stealth** - Hang some balloons underneath a table or make a tunnel by draping a blanket over some chairs and commando crawl underneath.
6. **Tightrope** – lay a skipping rope (or rope) on the ground and walk along it on your tip toes – be careful to keep your balance!
7. **Speed** – set up two cones (or objects) a few metres apart. How quickly can you run back and forth between them 5 times?

**Get creative:** What other challenges could be added to this obstacle course to test out someone's ninja skills? Create your own obstacles and test them out!



Obstacle courses are a great way to get active, develop coordination, balance and creativity. You can set them up indoors and outdoors and use whatever objects you have around the house and garden to become potential obstacles!

# Social Studies Challenge



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## Exploring My Surroundings: School Playground Design

Playgrounds can sometimes be dull and boring, full of concrete and not much to play with or look at! Your challenge is to change that. Can you design a playground that you and friends would love to play in?

Start by thinking about what is in your school playground now. Ask yourself:

1. What can we play on or with?
2. Where can we run around?
3. Where can we sit quietly?
4. Where can we be with friends?

Now think about how you can improve your playground.

1. What activities and games will be available in the playground?
2. Do you have things for running, balancing, walking on?
3. Will you have things for climbing on? How will you make them safe?
4. What can you include for children who don't want to join in with football, rugby or skipping?

When you have all your ideas together, it's time to design your playground. You can draw or paint your design and if you are feeling really adventurous, you could have a go at building a model of your new playground.

# Expressive Arts Challenge



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## Beautiful Blooms



Spring is a Season on the Year. Lots of flowers begin to bloom in Spring. Seeing flowers in your house can make people smile. Follow these Visual Instructions to make paper tulip head



Can you problem solve using a rolled up piece of paper how you will attach the stalk and make the leaves?

Answers can be found here: <http://krokotak.com/2020/02/paper-tulips-2/>