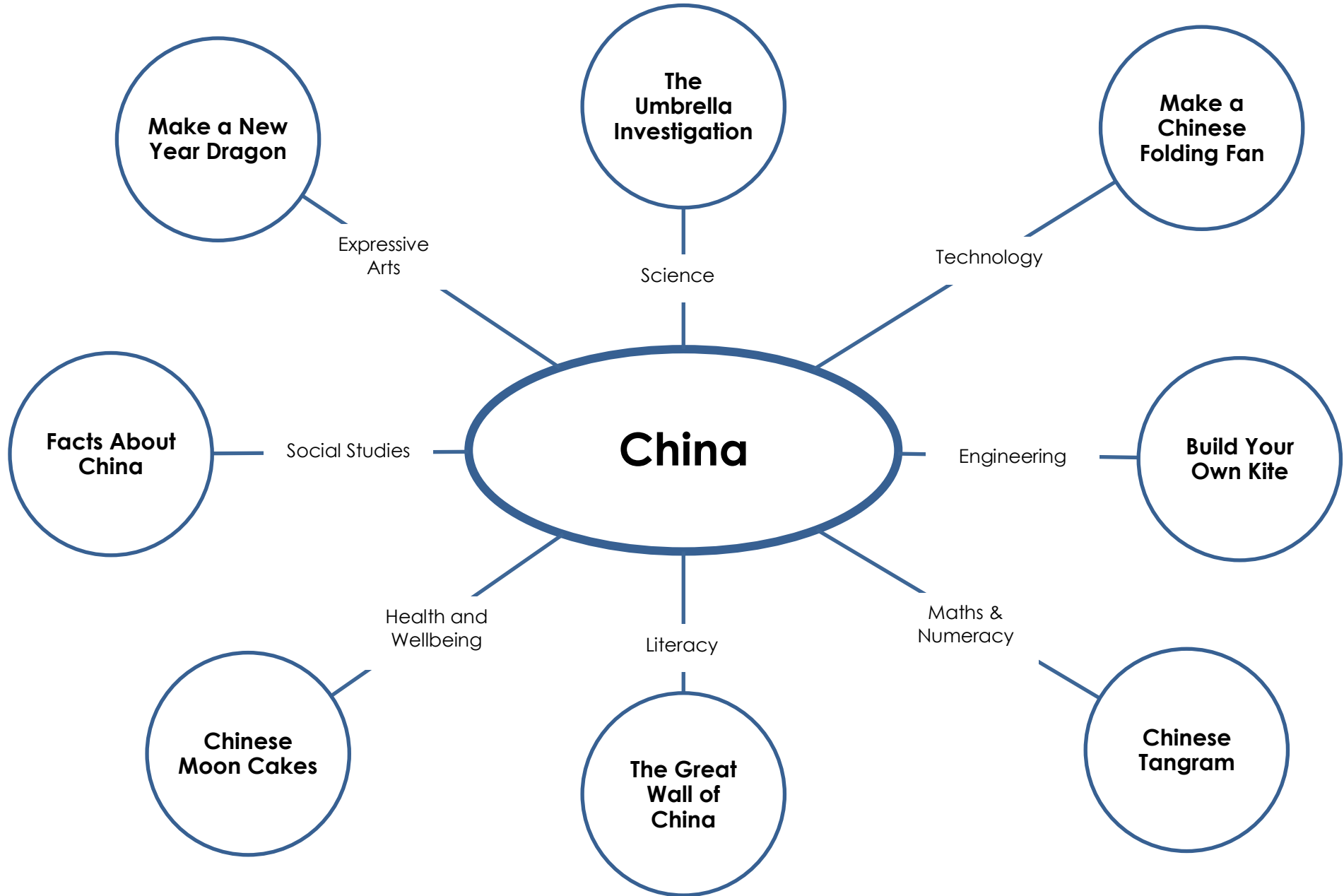


# Learning from Home



# Science Challenge



## The Umbrella investigation

**Ask an adult to read out the information for you.**

According to Wikipedia, the umbrella was invented 3500 years ago in China. Legend has it, Lu Ban, a Chinese carpenter and inventor created the first one with his wife. After watching some children using lotus leaves as a rain shelter, they created an umbrella by making a flexible framework covered by a cloth.

Today, Teddy has lost his umbrella and all he can find are materials in his cupboard.

**Your challenge** is to find some materials at home like those in the 3<sup>rd</sup> picture. You must test them to see which is the most waterproof (water cannot pass through it).

**You will need** water and somewhere to test your items without getting everything else wet. This could be the bathroom or outside. You also need to **think about** the best way of checking if each material is waterproof or not. **Talk to a grown up before you start.**

Try to **predict** (decide what you think will happen) which material would keep Teddy driest before you start.

**Write down** your results in the table below. (Or draw your own on paper) If you had to choose one to make an umbrella from, which would you choose? Why?

Teddy has lost his umbrella and it is raining.



He wants to go to see his grandma but doesn't want to get wet.



He looked in the cupboard for an umbrella, but this is all he found..



Material (Write name or draw a picture)	Waterproof	Not Waterproof

Activity and images from TES

# Technology Challenge



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## Make a Chinese Folding Fan

### You will need:

A4 paper (2 sheets), glue stick + string / thread, scissors, large lolly sticks, coloured pens /pencils, ruler, (glue gun + beads - optional)



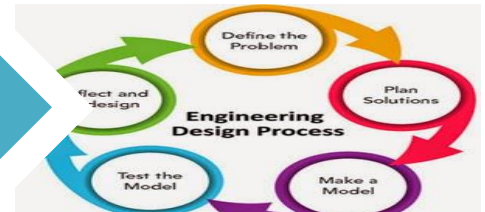
### Instructions:

**Adult Support and Supervision Required**

<p><b>1. Decorate the paper.</b></p>	<p>Leave the sheets blank or decorate them by drawing, painting or stamping on them. Your 2 sheets of paper should have a similar pattern.</p>	<p><b>2. Fold on one short side.</b></p> <p>Make about a 1-inch fold from the paper's short side. This first fold will be the same width as all the next folds.</p>	<p><b>3. Make more folds.</b></p> <p>Flip the paper and make the next fold the same width as the first one. Repeat this back-and-forth folding until you've folded the entire sheet. Trim any leftover paper after the last fold.</p>	<p><b>4. Fold the other sheet.</b></p> <p>Repeat steps 4 to 6 for the second sheet of paper.</p>	<p><b>5. Glue the 2 sheets together.</b></p> <p>Glue the two folded sheets of paper along one side.</p>	<p><b>6. Fold in the middle.</b></p> <p>Arrange the folds into a pile. Fold the pile in the middle.</p>	<p><b>7. Tie a string.</b></p> <p>Tie a string around the middle fold.</p>	<p><b>8. Glue the inner sides.</b></p> <p>Glue the two inner sides of the paper together to make the fan shape.</p>	<p><b>9. Create a handle.</b></p> <p>Colour a pair of large lolly sticks. Glue the lolly sticks onto the outer sides of the fan. Let the glue dry completely.</p>	<p><b>10. Open up the fan.</b></p> <p>Bring the two craft sticks all the way around to open up the fan. Move them the opposite way to close the fan.</p>	<p><b>11. Attach a string.</b></p> <p>As an option, you could attach a string at the base of the handles to keep the fan open or closed. Cut a 10-inch length of string. Fold it in the middle and attach this middle point to the base of one lolly stick using a glue gun. String some beads at the ends of the string if you like.</p>	<p><b>12. Fasten the handles together.</b></p> <p>Tie the ends of the string around the opposite handle to keep the fan open. The string can likewise keep the fan folded shut.</p>
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Activity and images from [www.firstpalette.com/](http://www.firstpalette.com/)

# Engineering Challenge

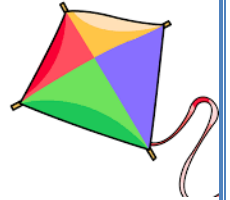


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## Build Your Own Kite

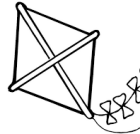
**Adult support and supervision required.**

To find out what makes a kite fly **and to watch step by step instructions** click here: [https://www.youtube.com/watch?v=mc3AUUuj9\\_I](https://www.youtube.com/watch?v=mc3AUUuj9_I)

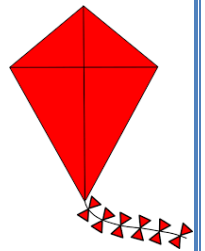


### You will need:

- A heavy plastic sheet which you can cut (like a garden waste/bin bag, plastic tablecloth)
- 2 dowels/long smooth sticks
- Ball of string / wool
- Piece of wood or cardboard (to make a handle to wind the string around)
- Strong tape (duct tape)
- Ruler, scissors and marker pen



**Kites were invented in China  
2800 years ago.**

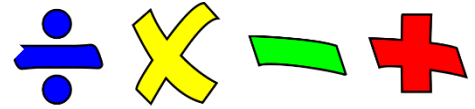


### Instructions

1. Lay the dowels down on top of your plastic to make a cross with one of the dowels higher up than the other so one side is longer than the other.
2. Tape the dowels together in the middle.
3. Lay the dowels down on top of your plastic.
4. Use your ruler to draw a kite shape all around the outside of your dowel cross. Make your diamond 2-3 cm larger than your dowels to make sure everything will fit.
5. Cut the diamond shape out from the plastic. *(Ask a grown up for help)*
6. Trim the edges of the plastic if they are too big then tape the plastic to the dowels. Make sure they are stuck down **really well**.
7. Poke 2 holes in the plastic along the dowel that goes across the kite. They should be close to the corners but not all the way at the ends.
8. Cut a small piece of string – about twice as long as a dowel.
9. Flip the kite over and thread one end of the string through one of the holes and tie it to the dowel. Do the same with the other end of the string and the other hole. Tape the ends of the string down to the dowel at either end to keep them secure and make a half loop.
10. Now take one end of the rest of your string and tie it to the shorter string half loop, right in the middle. Tape that together too!
11. Wind the rest of the wool to your wood or cardboard handle.
12. Cut out a long thin piece of your left-over plastic and tape it to the dowel at the bottom of your kite to make a tail.
13. Your kite is ready. Now ask a grown up at home where you can go (and when) to fly your new kite. Well done!

Activity from SciShow Kids

# Maths & Numeracy Challenge

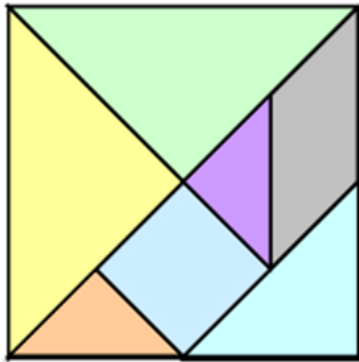


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## Chinese Tangram

**Tangrams** are an ancient Chinese puzzle

Starting with a square made up of 7 pieces... you must arrange them to make a silhouette



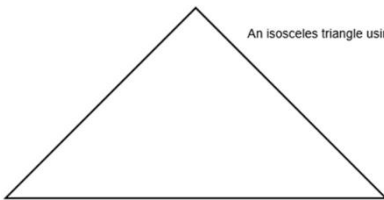
Tangrams are geometric puzzles – that is a shape which is cut into 7 pieces that then fit together to form another shape. The pieces are all **2D** shapes – 5 **triangles** (2 large, 1 medium and 2 small), 1 **square** and 1 **parallelogram**.

1. Carefully cut out the shapes from the coloured square. Arrange them to make the Chinese silhouette character shown.

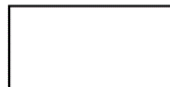
A rectangle using all 7 pieces



An isosceles triangle using all 7 pieces



A rectangle using 3 pieces



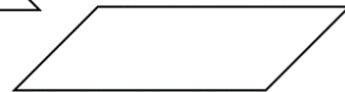
A trapezium using 3 pieces



A triangle using 3 pieces



A parallelogram using 4 pieces



2. Now use your shapes to make these geometric shapes using the number of pieces described.

Click here for an online tangram activity:

<https://www.abcya.com/games/tangrams>

Activity and images from TES





# Literacy Challenge



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## The Great Wall of China

**Ask a grown up to help you read the information below, then complete the tasks.**

The Great Wall of China, one of the greatest wonders of the world, has been said to be the only manmade structure that can be seen from space. It was built over 2000 years ago to protect China from its enemies. Barbarians had been riding their horses into China, killing the people and stealing their possessions.



Images from <http://clipart-library.com/>

The first emperor of China decided to put a stop to these attacks. So, he began to make the biggest manmade structure known on Earth. Thousands of men worked cutting bricks and blocks of stone for the wall. There were no machines, so everything had to be done by hand.

The wall is up to 8 metres tall and over 2000 miles long. It is wide enough, in some places, for nine soldiers to march side by side. It is also very steep as it snakes up the mountains. A large watchtower was built every 60 metres along the wall and smoke signals were sent from tower to tower to warn the Chinese army if an enemy tried to attack.



Many people from all over the world go to China every year to visit and walk along the Great Wall.

### Your Task:

1. Find these words in the passage above. Go over them with a highlighter pen or use a different colour to underline each. How many of each word can you find?

China	space	bricks	wall
-------	-------	--------	------

2. Write 4 sentences, using one of the words above in each.

**Remember** to start your sentences with a capital letter and finish them with a full stop and also that China is the name of a country so should start with a capital letter.



# Health & Wellbeing Challenge

## Chinese Moon Cakes

Moon Cakes are eaten during Chinese New Year because the Chinese New Year is based on the lunar calendar (and the little treats look like the moon). Cakes can be high in sugar and fat, but it is usually fine to eat them now and then (especially as part of a celebration) as part of a healthy balanced diet, as long as you don't have a health condition which advises otherwise.

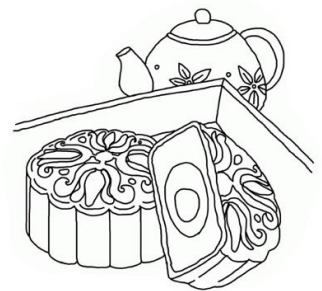
**Note:** This is a simplified version of the recipe. The original cakes are much fancier and also have Chinese letters pressed onto them.

### Ingredients:

**\*Adult supervision required\***

- 1/4 cup sugar
- 2 egg yolks
- 1/2 cup salted butter
- 1 cup all-purpose flour
- 1 cup strawberry (or your favorite) jam (traditionally red bean paste is used so if you want a more authentic version, you can use a can of red bean paste instead of the jam).

Always wash your hands before preparing food.



### Directions:

1. Preheat the oven to 190 degrees centigrade / gas mark 5.
2. Combine the butter, sugar and 1 egg yolk and stir.
3. Mix in the flour.
4. Form the dough into one large ball and wrap it in plastic wrap.
5. Refrigerate the dough for half an hour.
6. Unwrap the chilled dough and form 4 balls in the palms of your hand.
7. Make a hole with your thumb in the center of each mooncake and fill with about half a teaspoon of jam. Cover over the hole and gently press on the ball to flatten it slightly but keeping the jam / paste inside.
8. Use a prong on a fork to gently scratch a simple pattern on the surface.
9. Brush each cake with the other beaten egg yolk and place on a cookie sheet. (Don't worry if you don't have a brush to do this, just skip this step)
10. Bake for about 20 minutes or just until the outside edges are slightly brown.



Recipe adapted from [www.dltk-kids.com](http://www.dltk-kids.com)  
Images from [www.clipart-library.com](http://www.clipart-library.com)

# Social Studies Challenge



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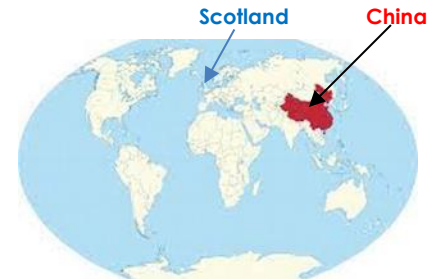
## Facts About China

**Ask an adult to help you read this information**

There are seven **continents** in the World: Asia, Africa, North America, South America, Antarctica, Europe, and Australia (listed from largest to smallest in size).

**Scotland is in Europe** and **China is in Asia**.

China is officially known as the People's Republic of China. It is a very large country and is the 3<sup>rd</sup> largest in the whole World by physical size. There are more people living in China than any other country in the World.



People in China mainly speak **Mandarin**. The official Chinese currency is the Renminbi which is often referred to as the **Yuan**.



**China enjoys many traditional festivals every year, but their most important and biggest celebration is Chinese New Year.**

The date of Chinese New Year changes from year to year depending on when the new moon occurs in either late January or February. This year Chinese New Year falls on February 1<sup>st</sup>.



Celebrations last for fifteen days, ending on the date of the full moon. In China the public holiday lasts for three days and is the biggest celebration of the year.

Info and images from <https://www.topmarks.co.uk/>  
Map and flag from <https://commons.wikimedia.org/>



The Chinese calendar is different from that used here. It is made up of a cycle of twelve years, each named after an animal. This is very like our signs of the zodiac. Some people believe that people born in a particular year such as the year of the Dog will have some of the characteristics of that animal.

**Click here to find out which Chinese Zodiac animal you are:**

<https://www.topmarks.co.uk/chinesenewyear/Zodiac>

**Click here to watch the twelve animals in the race which decided the order of the Chinese calendar.**

[https://www.youtube.com/watch?v=eVCIAj8q\\_IY](https://www.youtube.com/watch?v=eVCIAj8q_IY)

What is your favourite festival? Why? Chat to a grown up about it.



# Expressive Arts Challenge



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## Make a New Year Dragon

In China, the dragon is an important symbol representing wealth, power and wisdom. They are also believed to bring good luck. Today, you can make your own Chinese dragon.



### You will need:

- Paper (Different colours, wrapping and / or plain and decorated)
- Two lolly sticks
- Sticky tape
- Glue stick
- Scissors
- Pen

Click here to watch the instructions video: <https://www.bbc.co.uk/cbeebies/makes/chinese-hand-dragon?collection=chinese-lunar-new-year>

### Instructions:

1. Draw around your hand on 8 or 9 sheets of differently coloured paper. This could even be left over wrapping paper. (Or you can use plain paper and decorate it)
2. Cut out the hands. **Ask a grown up if you need help with this part.**
3. Glue the hands together - dab some glue on the wrist part of one of the hands and stick it to the palm part of the next hand. Repeat until all your hands are glued together.
4. Next stick your 2 lolly sticks to the back of your dragon body, near each end, and secure with sticky tape.
5. Finally, draw on your dragon face. You can make him look friendly with a smiley face or you could make him look scary or cross by adding lots of teeth and frown lines.

**The dragon dance has been an important part of Chinese New Year culture for many hundreds of years.**

Have fun playing with your dragon. Perhaps you can use him to perform a dragon dance. Click here to watch one.

<https://www.youtube.com/watch?v=vi95ZTEHoL8>

Activity and image from <https://www.bbc.co.uk/cbeebies>