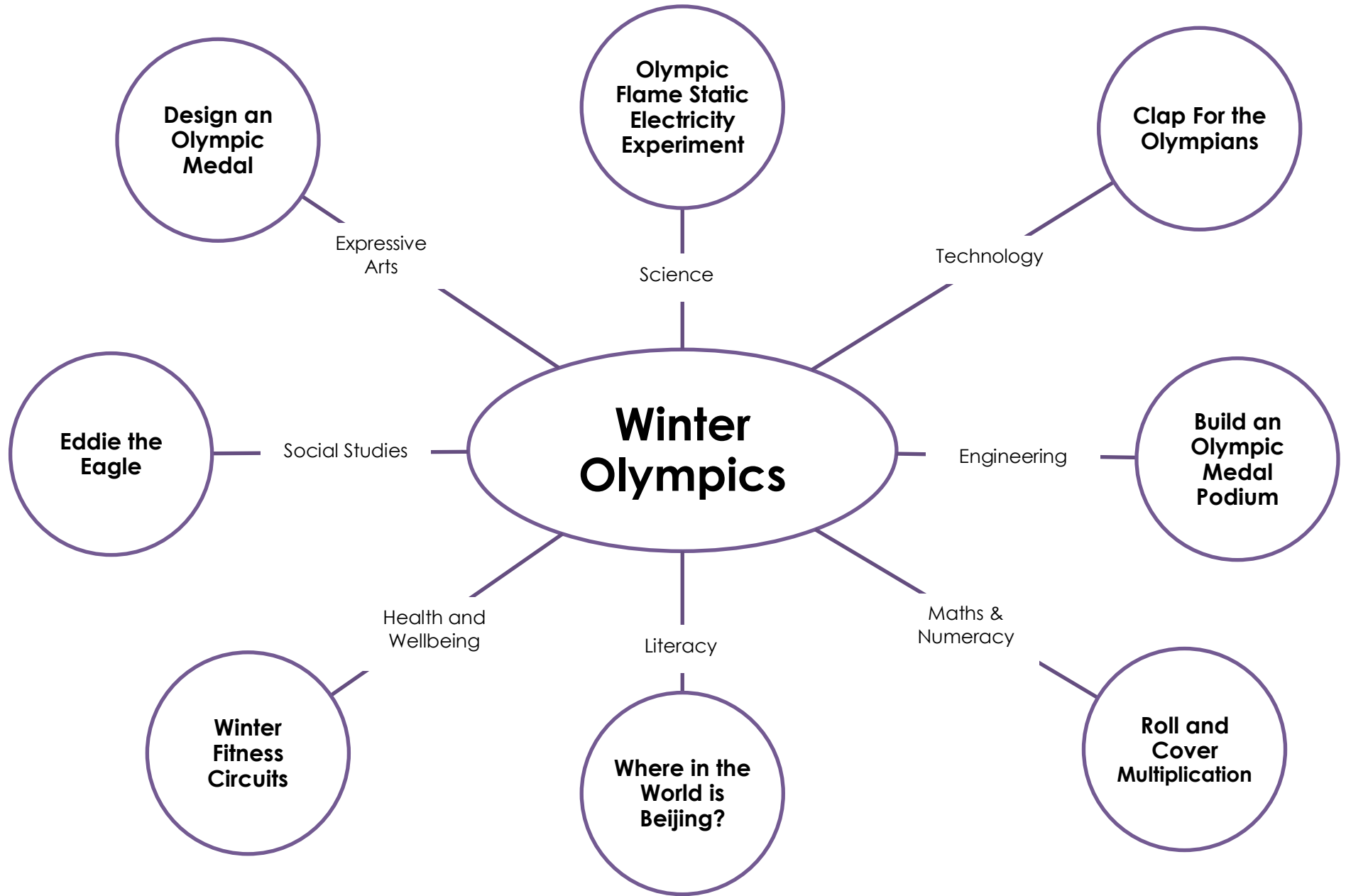




Learning from Home



Science Challenge



Olympic Flame Static Electricity Experiment

Today we will make our own Olympic torch with tissue paper flames. We will then use static electricity to make the flames flicker.

You will need:

- Cardboard from a cereal box
- Coloured tissue paper (red, yellow, and orange, if possible)
- Glue stick and **scissors**
- Black marker pen
- Blown up balloon



Activity and photos from
<https://daniel4smom.com/>

To learn more about static electricity click here:

<https://www.youtube.com/watch?v=5TAIUCYMIIQ>

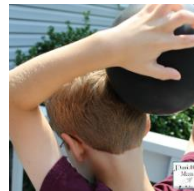
Putting the Torch Together:

Cut out a torch handle from some cardboard taken from the side of a cereal box. You can cut out the torch freehand as it is a simple shape to draw (like a large ice cream cone) **but ask an adult for help if you need to.**

Cut out a few flame shapes from the tissue, then glue one flame onto the torch at a time. Glue on the tissue flames in several rows. Swap between each of your colours if you can as this will make them most look like proper flames.

Method:

1. Rub a balloon on a piece of wool, on a carpet **or** on your hair.
2. After gathering electricity, the next step is to rub it on the Olympic torch's flames.
3. Try to make all of the flames move. You may want to try to move one section of the torch at a time.



The Science:

Static electricity is a build-up of electrical charge on the surface of an object. The reason that it's called static electricity is because the charges stay in one area for some time and don't flow or move to a different area.

A static charge happens when two surfaces touch each other, and the electrons (tiny negatively charged particles) move from one object to another. One of the objects will have a positive charge and the other a negative charge. If you rub an object quickly, like a balloon, or your feet on the carpet, these will build-up a large charge. Items with different charges (positive and negative) will attract each other like a magnet. So, when you hold your charged balloon over the paper flames, the negatively charged surface of the balloon attracts the positively charged flames. This causes the tissue paper flames to look like they are flickering.

Technology Challenge



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Clap For the Olympians

When you watch others perform, whether they are acting in a play, singing onstage or playing football or other sports, it is customary to clap to applaud their efforts.

Today's challenge is to create a moving mechanism which will cause 2 hands to clap together which you can use to applaud the athletes taking part in this year's Winter Olympics. Follow the instructions below to make your clapping hands.

<p>Step 1</p> <p>Cut two strips of card with the measurement:</p> <p>5cm x 2cm (A and B)</p>	<p>Step 2</p> <p>Cut one strip of card with the measurement:</p> <p>7cm x 2cm (C)</p>	
<p>Step 3</p> <p>Cut a rectangle with the measurements</p> <p>5cm x 4cm (D)</p>	<p>Step 4</p> <p>Make two small slits in strips A and B. Then push a split pin through the three strips of card as shown.</p>	<p>Step 5</p> <p>Split pin the strips to the rectangular piece of card. Don't fix the split pins tightly. Make sure the card strips can move freely.</p>
<p>Step 6</p> <p>Cut two hands out and stick to the arms.</p>	<p>Step 7</p> <p>Pull the strip up and down and the hands will clap together!</p>	

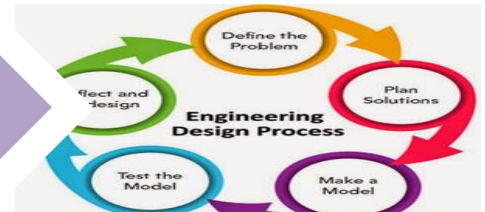
You will need: card from a cereal box, scissors, ruler, sharp pencil, piece of blue tac or plasticine / playdough, 3 split pins

Adult support is suggested for cutting card and for piercing a hole ready for the split pins. (This is easiest done by placing the card on top of a lump of blue tac and pushing the sharp pencil point down through the card and into the tac.)

If you would like to add more detail you could draw a picture or use a photograph of your face which you could stick on to the front of your product. Do not stick it to the back as this could interfere with the moving mechanism and prevent the hands from clapping.

Activity and image from Twinkl

Engineering Challenge



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Build an Olympic Medal Podium

The Olympic committee have a problem – the podium has broken, and the medal winners have nothing to stand on to receive their awards.

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

Using materials you have at home, build a podium for your dolls, action man, lego block people or teddies. Make sure it can support their weight.

You could recycle any boxes you have at home, or you could use empty food containers, tubs, tubes, or use lego or building blocks.

Plan it: Write down and / or draw what your podium will look like. Make a list of the materials you plan to use. Can you explain why you have chosen them?

Build it: Remember to ask a grown up for help if you need to.

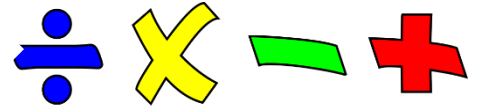


Test it: Does the podium support the 3 medal winners and is the middle 1st place position taller than 2nd place? 2nd place taller than 3rd place?

Improve it: Could you add any special features to support your dolls or toys, so you don't have to hold them in place?

Image from www.clipart-library.com

Maths & Numeracy Challenge



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Roll and Cover Multiplication

Today we are going to play a dice game to help us with our multiplying.

You will need: 2 dice and something to cover up the numbers on the bobsleigh team below. You could use counters or tokens if you have some or you could cut out some pieces of paper or card if you prefer.

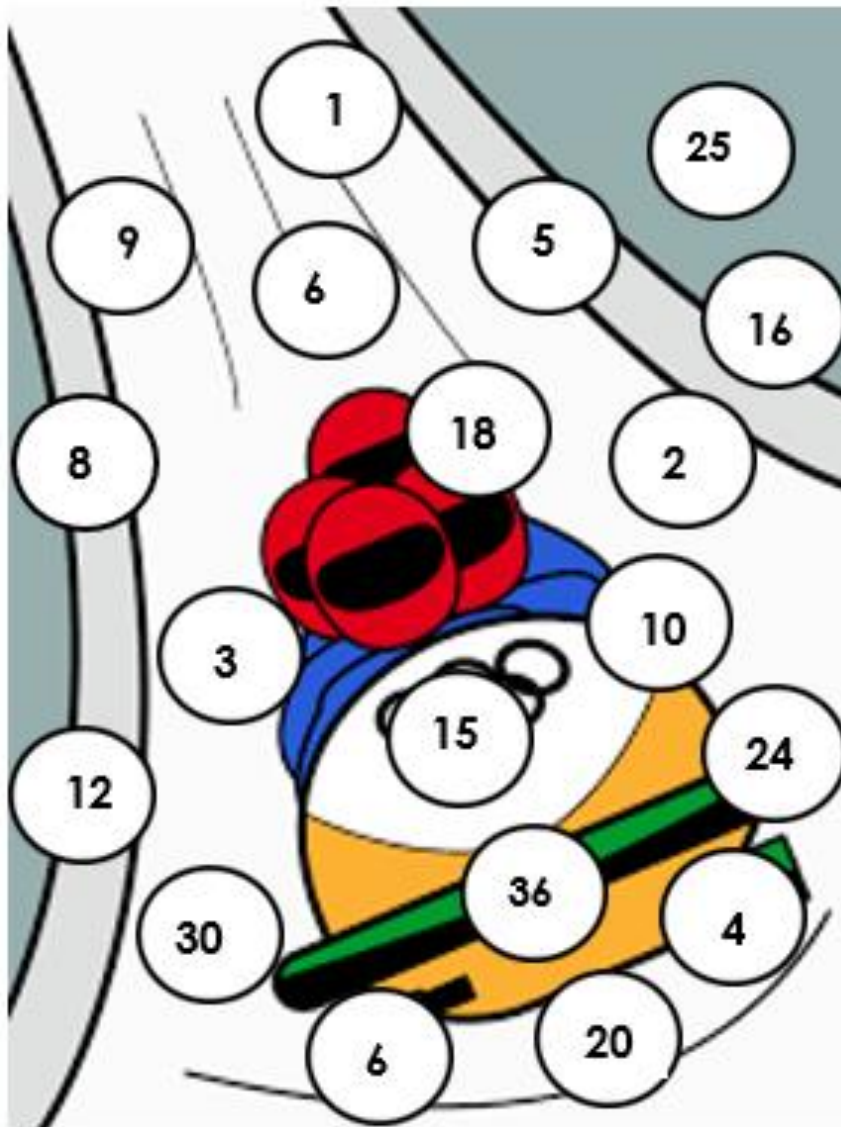


Image from www.clipart-library.com

Instructions: Roll two dice and multiply the numbers together. Look for the answer (**the product**) and cover it up with your token or paper.

You can play this game by yourself or with someone at home. If they use a different colour than you then at the end you can see who has the most tokens.

If you play alone, you could ask a grown up to time you – can you get quicker the more you play?



Literacy Challenge



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Where in the World is Beijing?

Instructions: Replace the underlined words with **contractions**. (A shorter way to say two words, adding an apostrophe for any removed letters) The first one is done for you.

1. Beijing is the capital of China, but it is not the city with the largest population.

isn't



2. The tourists did not pack enough warm clothes.

3. Let us ride the chair lift to the top of the slopes.

4. They could not wait for the snowboarding event.

5. We would have loved to watch skiing.

6. He will go to both of the country's two ski resorts.

7. Summer is not cold at all.

8. I hope I will go on a trip there one day.

9. Some athletes did not make it to the games.

10. Even very hard work does not guarantee an athlete a medal.



Images from www.clipart-library.com

* Pick three of the contractions and use them in some sentences.

Adjective and Alliteration Practise

Choose a different letter for each line. Choose 3 adjectives that describe the possible sights, sounds and smells of the Olympics. The adjectives must have one, then two and then three syllables in them.

	One syllable	Two syllables	Three syllables
Eg Letter F	fun,	fancy,	fantastic
1.			
2.			
3.			



Health & Wellbeing Challenge

Winter Fitness Circuits

With the Winter Olympics taking place, it's time for us to do some exercise of our own. Today we are going to be doing some circuit training – this is where you do several short exercises in a certain order. We spend a bit of time on each exercise or do a certain number of tasks (repetitions) before moving on to the next one.

Exercise helps us stay active and that helps us to become and stay healthier. Can you think of any reasons why this is the case? Chat to a grown up or brother or sister about this.

Here are today's exercises:

1. Running on the spot for a count of 30. (You could count yourself or ask a grown up or brother or sister to do it for you)
2. 20 sit ups
3. Skip around the room (or garden) for a count of 30
4. 20 star jumps
5. Throw and catch a ball or soft toy 20 times
6. 20 press ups



When you complete the list, you can say you have done a circuit.

You can complete more than 1 circuit if you feel strong enough. You could also just work on an individual exercise if you prefer.

If you have a grown up helping, you could take it in turn to try the exercises or you could turn it into a game by using dice, with each number corresponding to an exercise. Score a point for each successful exercise you complete. Keep your score and try to beat it next time or compete against your family member.

Extra Challenge: Can you substitute any of the activities above with an exercise of your own to make up your own circuit? Can you encourage a sibling, or an adult to have a go, with you showing them and explaining what to do?

Images from www.clipart-library.com

Social Studies Challenge



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Eddie the Eagle

Michael Edwards was born on the 5th of December 1963. Michael (Eddie) loved sports and tried hard at everything he did. When he was 10, he hurt his knee playing football and spent the next three years with his leg in plaster. At the age of 13, he decided to try a new sport – skiing. After joining his local dry ski slope, he quickly became a very good downhill skier. A few years later, Eddie just missed out on being chosen to ski for Great Britain at the 1984 Winter Olympics.

Click here to see Eddie in action:

<https://www.youtube.com/watch?v=L1aWsFpg3To>



Information and images of Eddie from <https://en.wikipedia.org/>
Clip art from www.clipartlibrary.com

Eddie was determined not to miss out on the next Olympic Games, so he moved to Lake Placid in America to improve his chances. Whilst there, he decided to switch to ski jumping instead as it was cheaper and there were no other British ski jumpers to compete against for a place on the Olympic team. Eddie quickly ran out of money as he had no sponsorship deals or funding, so he had to work doing odd jobs to get by. He also slept in his car or in empty old buildings to avoid paying rent in hotels. He often struggled to buy food.

In 1987, Eddie represented Great Britain in the World Championships, where he was ranked 55th in the world. This meant he qualified for the 1988 Winter Olympics.

The Winter Olympics made **Eddie the Eagle** a household name. Despite coming last in the 70m and 90m ski jump events, he became the British record holder.

Eddie's story shows us that we should always try our best to achieve our dreams no matter how unlikely they seem. Nobody thought Eddie could ever compete in the Olympic games and although he came last, he achieved his aim with very little help from anybody else. What a hero!



* Eddie wore very thick glasses because he was longsighted. (Difficult to see close up) When he did his ski jumps, his glasses fogged up so much he couldn't actually see!



Task: What would be your dream achievement? Chat about it with a grown up at home.

Expressive Arts Challenge



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Design an Olympic Medal

In the ancient Olympics, no medals were awarded. The first-place winner was given an olive wreath to wear on his head; second and third place winners received nothing.



Medals were first awarded in 1896 but only to winners. Gold, silver and bronze medals only started to be given out to 1st, 2nd and 3rd placed competitors from 1904.

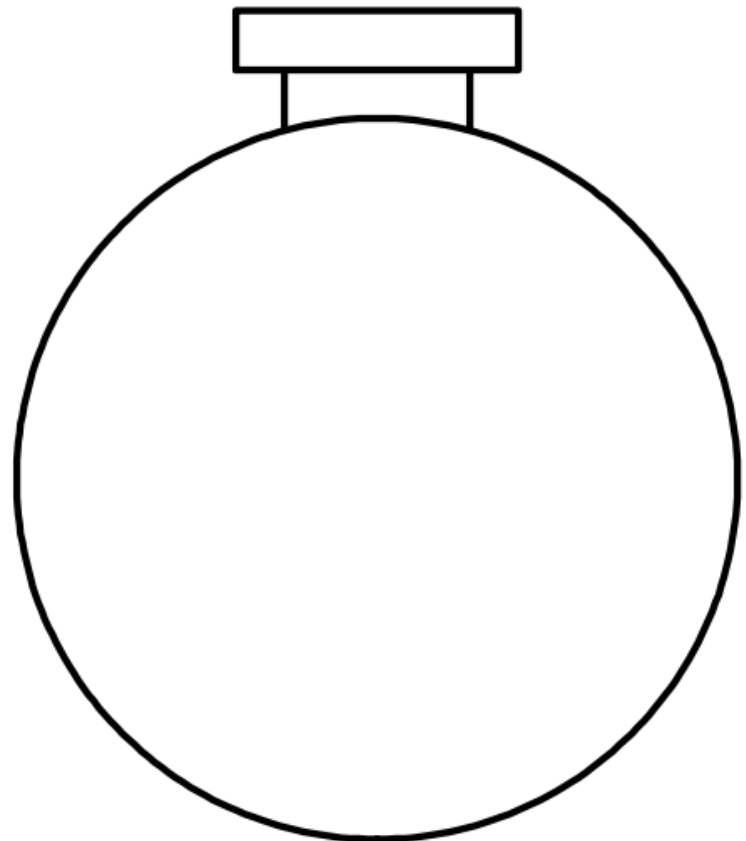
The design of the medals changes with each Olympic games but since 1928, the front of every medal has shown a picture of **Nike** the Greek goddess of victory.

Your task: Create your own design for this year's Winter Olympic medals. You can use the template provided if you wish but you don't have to. You could stick your design down onto some card and if you have some ribbon at home, you could attach it to make your design into a proper medal.



Click here to watch how the medals were made for the 2014 Sochi (Russian) games:

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



Information from www.en.wikipedia.org
Images from www.pinterest.co.uk