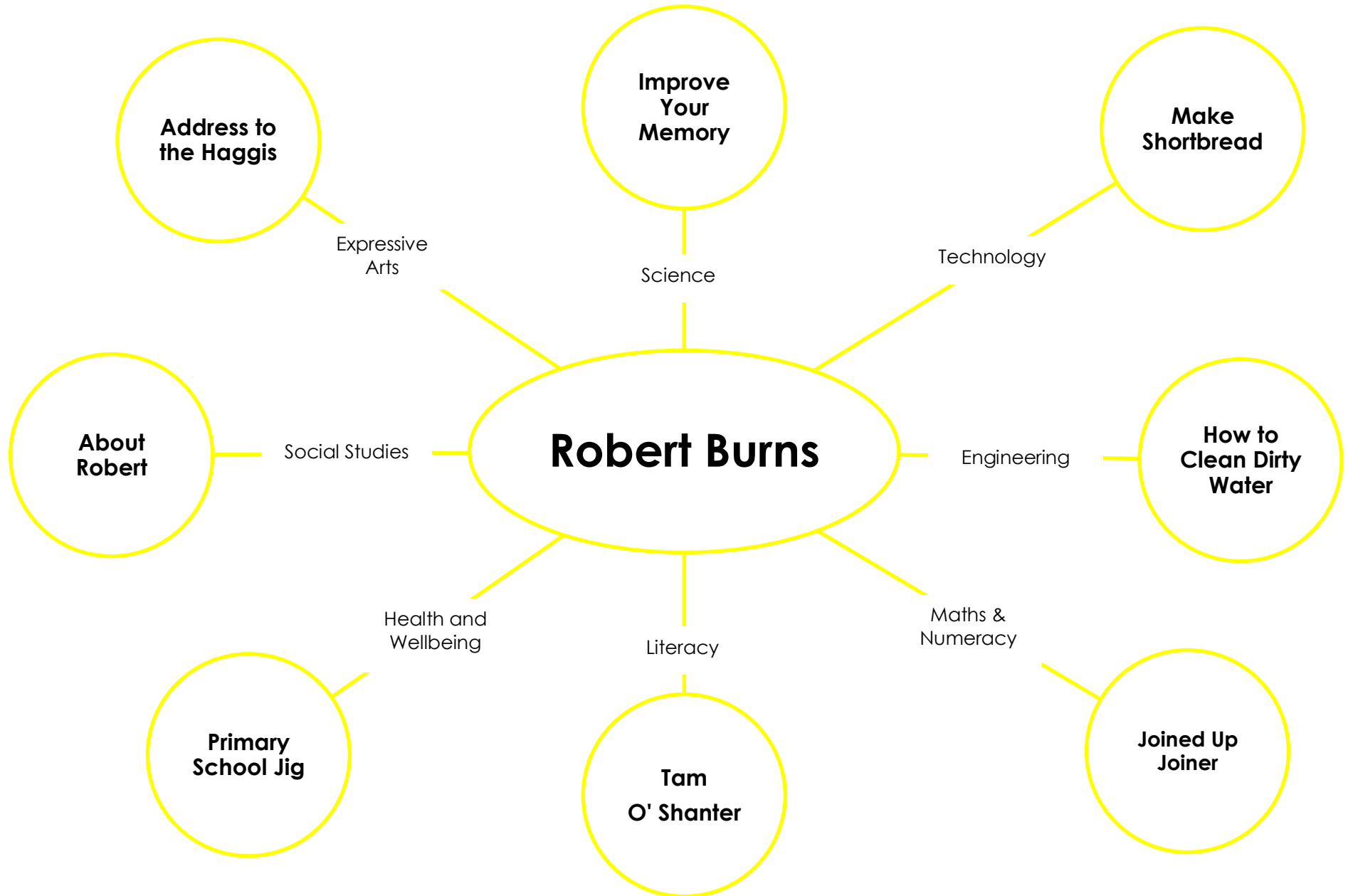




# Learning from Home



# Science Challenge



## Improve Your Memory

It can be really difficult to learn and remember new things like Robert Burns poems, but there are ways to improve your memory, and this will not only help you memorise poems but will also help your learning in other subjects at school and in life in general.

**Click on the link** to see Kat and Sam playing a memory game, trying to remember 10 random objects in different ways. Sam eventually creates a silly story to help the list stick in his mind.

<https://bit.ly/3tK2W9B>

### You Will Need:

Ten random objects    A cloth or tea towel    A partner (Adult at home or a sibling)    A stopwatch

### What to do:

Lay out your ten random objects and cover them up before your partner sees them. Tell them they have 30 seconds to look and try to remember as many objects as they can, then uncover the objects. Give them 30 seconds and cover the objects back up. Have your partner try to remember the objects. (They should find it quite difficult to remember all ten.)

**Activity:** Give your partner a chance to think of other ways, above and beyond just looking, that they think will help them remember more objects. Maybe touching or smelling them. Eventually suggest that you make up a story together to help link all the objects together. The order of the objects doesn't matter, but you must link the objects together in pairs. It is important that each pair overlaps, so pair 1 is objects A and B, then pair 2 is also object B and then object C, pair 3 is objects C and D, and so on. (So, duck and pencil, pencil and coin, coin and comb, comb and peg etc.)

Let your partner make up connections between the objects, the sillier they are, the better they will remember them later on. Have them discuss each pairing and imagine what they will look like. When the story is complete, cover all the objects. Show your partner the first object from the story and see if they can remember the pair, then the next one, then the next. They should find it easier to get all the way through all ten objects.

**The Science:** At first, we use our short-term memory to try and remember 10 pieces of information, the individual objects, and we struggle to store more than about nine 'chunks' of information at a time. By pairing the items up, two items can now be considered 1 'chunk', so we could perhaps remember twice as many things. We're also overlapping these pairs, so when one 'chunk' of information is recalled, it triggers a connection to the next 'chunk' creating a chain of memories.

**\*When you finish you could ask your partner to collect 10 new objects and now you try to remember. Can you remember more than 10?**

Activity from [www.rigb.org](http://www.rigb.org)

# Technology Challenge



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## Make Shortbread

### **Adult supervision required.**

Shortbread has been eaten in Scotland for hundreds of years and no doubt Robert Burns would have enjoyed it too although it would have definitely been a treat.

Today you can make your own with just 3 simple ingredients.

Always wash your hands properly before preparing food!

### **You will need:**

A mixing bowl, rolling pin, baking tray, baking paper, weighing scales, knife and fork

### **Ingredients**

- 150g plain flour, plus extra for dusting
- 100g butter, chilled and cubed
- 50g caster sugar, plus 1 tbsp for sprinkling

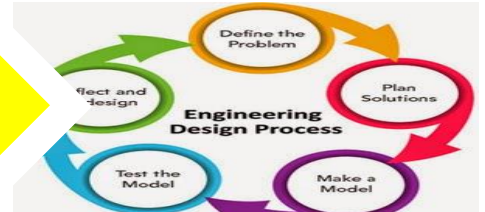


### **Method**

1. Heat the oven to 170C/150C fan/gas 3.
2. Put the flour, butter and sugar into a mixing bowl. Use your hands to combine the ingredients until the mixture looks like breadcrumbs, then squeeze until it comes together as a dough.
3. Place the dough onto a lightly floured surface. Use a rolling pin to roll out the dough to ½ cm thick.
4. Cut the dough into fingers and place on a lined baking tray. Use a fork to create imprints, then sprinkle with the remaining caster sugar.
5. Chill the dough in the fridge for 20 mins, then bake for 15-20 mins until golden brown.
6. Remove the shortbread fingers from the oven and leave to cool on the tray for 10 mins.

Recipe and image from [www.bbcgoodfood.com](http://www.bbcgoodfood.com)

# Engineering Challenge



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## How to Clean Dirty Water

When we want water, we can simply turn on a tap to receive it - clean and safe. Back in the 18<sup>th</sup> Century, when Robert Burns was alive, this was not the case. People often obtained their water from rivers or wells and this water was not always the cleanest or safest. Today our water is cleaned in treatment plants where it is filtered and disinfected, and the salt removed.

### Your task \* Adult supervision required!

Use filters to remove as much dirt and other material as you can from some dirty salty water.



Activity and images from [www.stem.org.uk](http://www.stem.org.uk)

### You will need:

- 4 clear plastic disposable cups
- a tray to catch any spillages
- a piece of scourer pad to line one sieve (enough to hold a dessert spoonful of sand)
- 1 lollipop stick (to stir the water)
- 3 small sieves
- a clear plastic cup of dirty salty water which might also contain sand, small stones, plants, silt/soil, small pieces of plastic etc. (Ask an adult to help make this up)
- sand
- a paper (coffee) filter

### Do your experiment on the tray to catch anything that gets spilt.

1. Fill your clear plastic cup with some dirty salty water.
2. You have three different types of filter: a plain sieve, a sieve lined with the scourer pad holding sand and a sieve holding a piece of filter paper. You will be passing the dirty salty water through each filter in turn, one after the other. You must decide the best order to make the water clean and keep the filters working for as long as possible. Write your predictions in a results table like this one.



3. Stir your dirty water, then hold your first filter above a clean plastic cup and pour three-quarters of it through. Compare the filtered water to the unfiltered water. Record the result.

4. Take the water you have filtered. Hold your second filter above a new plastic cup and pour three-quarters through. Compare this filtered water to the water that came through the first filter.

5. Take the water you have filtered through filter two. Hold your third filter above a new plastic cup and pour three-quarters through. Compare this filtered water to the water that came through the second filter. Record your result. What have the different filters removed? Is the water at the end clean?

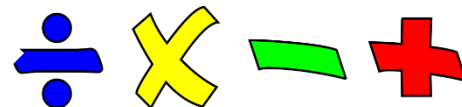
6. Repeat, using the filters in a different order. Does this make any difference? Why?

**WARNING:** Do not drink the water at the end, even if it looks clean. It could still contain dangerous bacteria and other harmful substances.

Filter name	Which order for filters?	Prediction I predict this filter will remove ...	Results What substances has this filter removed?



# Maths & Numeracy Challenge



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## Joined Up Joiner

**You will need:** some card (A4 or cut from a cereal box), pencil, ruler and a grown up to discuss the problem with.

A joiner is helping build a new house. Part of their job is to cut the wood for the roof. The roof is made up of different size pieces of wood. The length of the pieces of wood required to build the roof are **1m, 2m, 3m, 4m, 5m, 6m, 7m, 8m, 9m, and 10m**.

On the Monday they cut the **2m, 3m** and **7m** pieces. Unfortunately, on Tuesday the joiner forgets their measuring tape but still has to cut the other pieces of wood so that the roof can be built. They realise, that by using just the **2m, 3m** and **7m** pieces of wood they can still measure all the other wood sizes required to build the house.

After some thought, they lay out the **2m** and **3m** pieces and use them to cut a 1m length of wood.



Help the joiner to measure all the pieces of wood using only the **2m, 3m** and **7m** pieces of wood.

### The problems:

- Measure, using a ruler, and cut three pieces of cardboard. Make the first **2cm**, the second **3cm**, and the third **7cm**. Label all the pieces with the sizes so that you do not get confused. **Now put the ruler away.**
- Use the pieces of cardboard to measure another piece of card **10cm** long and cut it out. (You do not have to use all the three pieces.) Label the piece of card **10cm**.
- Now do the same for **9cm**. (Remember you can only use the **2, 3** or **7cm** pieces.)
- Talk to a grown up about how you could measure **8cm** using only the **2cm, 3cm** and **7cm** pieces. Now measure and cut out the **8cm** piece.
- Talk to a grown up about how you could measure **6cm** using only the **2cm, 3cm** and **7cm** pieces. Now measure and cut out the **6cm** piece.
- Finish the task by doing the same for **5cm, 4cm** and **1cm**.
- Check that you now have 10 pieces of cardboard measuring from **1cm** to **10cm**

Activity adapted from  
<http://www.mathematicshed.com/>  
 Images from <http://clipart-library.com/>





# Literacy Challenge



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## Tam O' Shanter

Robert Burns wrote Tam O' Shanter in 1790 while he was living in Dumfries. Tam O' Shanter is a narrative poem, meaning that it tells a story. Some might find the poem a bit scary as it tells the story of farmer Tam, who encounters a coven of witches. A beautiful witch, Nannie, wears a 'cutty sark' or short dress and angrily pursues the spying Tam. He manages to narrowly escape but not before Nannie has ripped the tail from Tam's poor horse, Maggie. (See the image below)

Click here to watch a short animated version of the poem <https://www.youtube.com/watch?v=3nKXaoMQDdc>

The poem is one of Burns' longest, containing 228 lines, so we won't read the whole thing today.

Instead, click on the link below for an extract plus an interactive comprehension activity for Tam O' Shanter.

The extract will be read out for you but also try reading out the passage yourself before completing the activity. Good luck!

<https://www.scotslanguage.com/learning?activity=5367>



Image cc creative commons



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



# Health & Wellbeing Challenge

## Primary School Jig

At this time of year, children will often spend time learning different Scottish country dances. When the dances have been learned and practised, people have great fun performing them during Burns Night celebrations.

Burns Night is held on the 25<sup>th</sup> of January each year (the anniversary of Robert's death) and it is an annual celebration of the Scottish poet and songwriter Robert Burns. People celebrate all over the world!

Today you are going to learn the **Primary School Jig**. (With a focus on rhythm and timing)

Ask a family member to join in with you or you might want to dance with your favourite teddy.

Click here for the video: <https://www.youtube.com/watch?v=RIPsFhDWCKM>

After you complete the Primary School Jig, why not use the dance steps you have learned to make up your own dance or you could try the dance with a different type of music – Scottish, pop music or even rock music.



Image from <https://clipart-library.com/>

# Social Studies Challenge







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## About Robert






Robert Burns was a famous Scottish poet. He was born on the 25<sup>th</sup> of January 1759 – that is 263 years ago. His birthday is celebrated around the world on Burn's Night. Click here to find out more about Robert's life. <https://www.youtube.com/watch?v=qMxIBqpryG0>

Burns wrote many poems on different subjects from politics to mice! One of his best-known poems is Auld Lang Syne, which is sung across the world on New Year's Eve.

The tradition of Burn's Night started 5 years after Robert's death, when his friends gathered to honour him with a special supper. Bagpipes are played, poems are read and traditional Scottish grub (food) – haggis is served. Robert even wrote a poem about that! (Information from [www.natgeokids.com](http://www.natgeokids.com))

								
	<b>1774</b>		<b>1785</b>	<b>1788</b>		<b>1791</b>		<b>1801</b>
	Writes his first song, 'O Once I Lov'd a Bonie Lass'.	Robert Burns' father, William, dies.	Meets Jean Armour. He writes 'To A Mouse'.	Writes 'Auld Lang Syne'.	Writes 'Tam o' Shanter'.			

**Task:** Use the information from the grid below to complete the timeline above of Robert's life.

1784	1796	1790	1759			
Dies in Dumfries, aged 37.	Friends hold the first Burn's Supper	Writes his first song, 'O Once I Lov'd a Bonie Lass'.	Born in Alloway, Ayrshire on 25th January.			

Activity adapted from Twinkl.

Images from Twinkl and clipart-library.com



# Expressive Arts Challenge



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## Address to the Haggis

A Burns Supper is started with the piping in of the guests by bagpipes. The guests then take their seats at the dining table and are welcomed by the host. The Selkirk Grace (a prayer) is read, and the first course is served. After that the haggis, a traditional Scottish dish, is piped in from the kitchen. Before the haggis is cut the host or an invited guest reads Burn's famous poem, Address to A Haggis. The haggis is then cut with a large knife.



Today you are going to take on the role of the invited guest and you will deliver the first three verses of the **Address to a Haggis**. Many of the words may be unfamiliar to you but try to appear confident and enthusiastic as you speak. Ask the grown-ups (and / or siblings) at home if they would be your audience. Enjoy yourself!

Click here to watch a video of the address: <https://www.youtube.com/watch?v=2XifuHP2RnE&t=58s>

### Address to a Haggis

Fair fa' your honest, sonsie face,  
Great chieftain o the puddin'-race!  
Aboon them a' ye tak your place,  
Painch, tripe, or thairm:  
Weel are ye wordy o' a grace  
As lang's my arm.

The groaning trencher there ye fill,  
Your hurdies like a distant hill,  
Your pin wad help to mend a mill  
In time o need,  
While thro your pores the dew's distil  
Like amber bead.

His knife see rustic Labour dight,  
An cut you up wi ready slight,  
Trenching your gushing entrails bright,  
Like onie ditch;  
And then, O what a glorious sight,  
Warm-reekin, rich!



Images:  
commons.wikimedia.org

### Address to a Haggis Translation

Good luck to you and your honest,  
plump face,  
Great chieftain of the sausage race!  
Above them all you take your place,  
Stomach, tripe, or intestines:  
Well are you worthy of a grace  
As long as my arm.

The groaning trencher there you fill,  
Your buttocks like a distant hill,  
Your pin would help to mend a mill  
In time of need,  
While through your pores the dew's distill  
Like amber bead.

His knife see rustic Labour wipe,  
And cut you up with ready slight,  
Trenching your gushing entrails bright,  
Like any ditch;  
And then, O what a glorious sight,  
Warm steaming, rich!