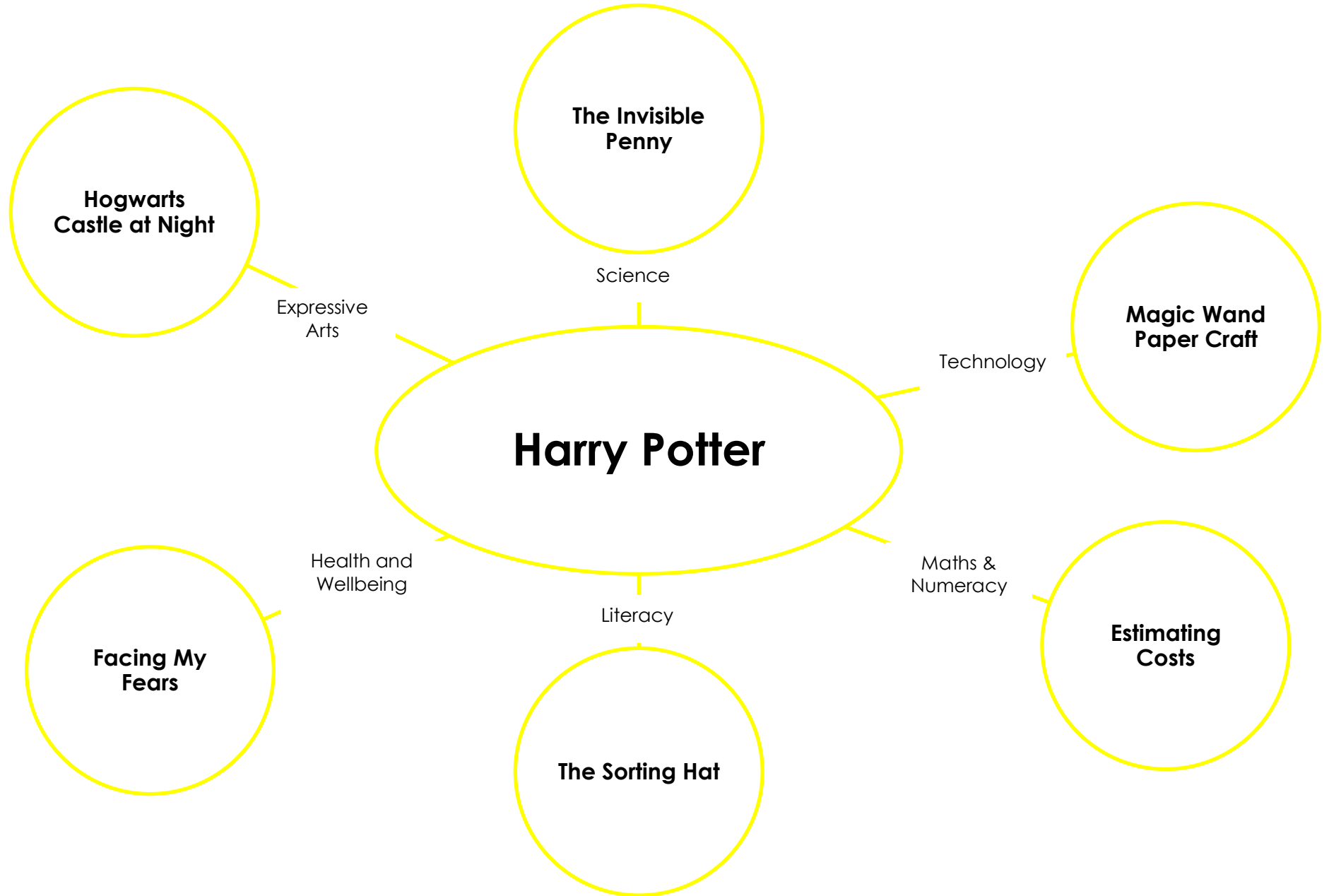


# Learning from Home



# Science Challenge



## The Invisible Penny

In **Harry Potter and the Philosopher's Stone**, Harry receives a gift of an invisibility cloak and when he wears it, he becomes invisible. In real life, sometimes things can appear invisible due to the way light behaves. Let's investigate this:

**You Will Need:** 2 coins, 2 clear glasses and some water (try to make the coins and glasses as similar to each other as possible to make this a fair test)

### Instructions:

1. Place one coin underneath a glass and place the other coin inside the other glass.  
Can you still see the coins?
2. Now pour some water into the glasses (the same amount in each) and watch from side on (not from above) – what happens to the coins? Can you still see them?

**The Science:** Light (from the sun, or an artificial light) travels in a straight line, bounces off objects and into our eyes, allowing us to see things. Generally, there is little or no refraction of light as it travels through air.

However, when you pour water into the glass the light is refracted ( it 'bends' ) and doesn't make it to your eyes which is why the coin seems to disappear.

**Watch:** <https://www.youtube.com/watch?v=8XzJrzJ43g4> to find out more.

**Light** = type of energy that travels in a straight line from a light source

**Reflection** = When light bounces off an object

**Refraction** = When a light wave changes direction as it moves from one material to another

**Extension:** Try the activity using different objects under the glass – does it matter if they are shiny or not? Why do you think that might be? Does it matter how much water you put in the glass? What happens if you view the glass from a different position – above the glass, side on etc.?

Can you think of a situation where it might be useful to appear invisible – talk to an adult about it.



Images from [www.clipart-library.com](http://www.clipart-library.com) and <https://teachers.thenational.academy/>

# Technology Challenge



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## Magic Wand Paper Craft

All wizards and witches need their own wands. Today's task is to make your own wand using paper. You will need to use a variety of folds and rolls to get your wand to 'open up' like magic!

Click here to watch how:

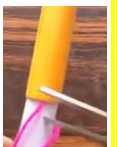
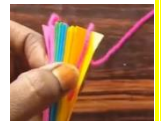
<https://www.youtube.com/watch?v=6Qd6SySxQmE>



**You Will Need:** several different pieces of paper (different colours), pencil, ruler, scissors, glue, piece of wool, string or thread, coloured pencils / pens, embellishments to decorate your wand (optional) **(Adult supervision for scissors)**

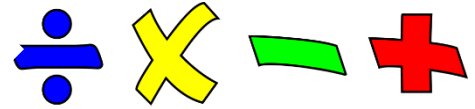
### Instructions:

- Put 4 pieces of paper together (different colours) and using your ruler draw a rectangle using one of the sides. (Approximately 15cm x 8cm)
- Cut out your coloured rectangles. **(Be careful using scissors)**
- Now fold each piece several times, back and forth, to make a fan.
- Glue the edge of one piece to the next, until all your paper is glued together into one long folding piece.
- Now cut a piece of A4 paper in half (width ways)
- Fold your 'fan' back together and place the end (about 1cm) onto the top of your white paper. Roll it together and secure the end of the entire piece of white paper with some glue.
- Cut your wool in half and glue the end of each piece to each outer inside edge of your fan.
- Now take your other half from your white paper and cut about 1/3 from it (widthways). Wrap this around the middle of your wand, securing the end with glue. This wrapped piece should not be stuck to your wand as it needs to be able to move up and down. Push it to the top of the wand, over the fan, and ensure that the wool is hanging down each side, over the top. Glue the wool in place.
- Now take a strip of coloured paper, the same width as your moveable piece, and wrap it around the moveable piece and wool. Glue the edge in place. Cut the remaining visible wool.
- Decorate your wand using the pens, pencils and embellishments if you choose. Now leave to dry for 10 minutes.
- To activate your 'magic' wand, pull down gently on the coloured paper at the top – your wand should be activated. Well done!



Activity and images from Kids Galore via YouTube

# Maths & Numeracy Challenge



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## Estimating Costs

Fred and George have set up their new joke shop, **Weasleys' Wizard Wheezes**.

A range of practical jokes are for sale. Can you estimate the cost?



### Fireworks

Basic Blaze Box.....	£291.60
Box O'Rockets.....	£67.40
Deflagration Deluxe.....	£83.50
Explosive Enterprises.....	£812.70
Wildfire Whiz-Bangs.....	£39.90

### Skiving Snackboxes

Fainting Fancy.....	£16.30
Fever Fudge.....	£692.10
Nosebleed Nougat.....	£37.80
Puking Pastilles.....	£49.30

### Magical Moustache Miracle Grow Collection

Dreary Whiskers.....	£12.10
Handsome Moustache.....	£71.50
Frenchman's Moustache.....	£101.70
Middle Age Beard.....	£450.30
Go Go Goatee.....	£26.60
Hairy Dame.....	£80.50
Weird Beard.....	£49.90
Instant Age.....	£62.30
Swift Stubble.....	£35.20

**Task 1:** Round each product to the nearest whole number. (Remember if an item is halfway in between, then round up. E.g., £71.50 → £72, £83.50 → £84)

**Task 2:** Estimate the price of the following using your rounded prices.

- 1 Deflagration Deluxe + 1 Fainting Fancy
- 2 Wildfire Whiz-Bangs + 1 Hairy Dame
- 1 Instant Age + 2 Weird Beards + 1 Nosebleed Nougat

**Task 3:** Find 3 items which might cost £799 altogether if estimating using the rounded prices.

Activity and image from TES

# Literacy Challenge



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## The Sorting Hat

### The Sorting Hat Song

Oh you may not think I'm pretty,  
 But don't judge on what you see,  
 I'll eat myself if you can find,  
 A smarter hat than me.  
 You can keep your bowlers black,  
 Your top hats sleek and tall,  
 For I'm the Hogwarts Sorting Hat  
 And I can cap them all.

There's nothing hidden in your head  
 The Sorting Hat can't see,  
 So try me on and I will tell you  
 Where you ought to be.

You might belong in Gryffindor,  
 Where dwell the brave at heart,  
 Their daring, nerve and chivalry  
 Set Gryffindor's apart;  
 You might belong in Hufflepuff,  
 Where they are just and loyal,  
 Those patient Hufflepuffs are true  
 And unafraid of toil;  
 Or yet in wise old Ravenclaw,  
 If you've a ready mind,  
 Where those of wit and learning,  
 Will always find their kind;  
 Or perhaps in Slytherin  
 You'll make your real friends,  
 Those cunning folk use any means  
 To achieve their ends.

So put me on! Don't be afraid!  
 And don't get in a flap!  
 You're in safe hands (though I have none)  
 For I'm a Thinking Cap!



Activity and image from TES

**Task:** Read the text then write a paragraph or two explaining which Hogwarts House you think you'd be in and why. Use the information from the song to explain the qualities you share with that house and why the sorting hat would place you there.

**Extension:** Write a poem or song of your own about your chosen house.





# Health & Wellbeing Challenge

## Facing My Fears

Everybody is frightened of something. Sometimes that is with good reason and at other times it might not make sense to other people, but it is real for you. Harry Potter, for example, is terrified of dementors.



In **Harry Potter and the Prisoner of Azkaban**, Professor Lupin gives Harry a lesson on how to defeat dementors using a boggart. Boggarts are creatures which can shapeshift (change) into whatever frightens a person the most.

This is a list of things that I am frightened of:



If I saw a Boggart it would turn into \_\_\_\_\_

My Boggart would make me feel \_\_\_\_\_

My Boggart would look like \_\_\_\_\_

It would have \_\_\_\_\_

What could you do if you saw a Boggart?

- 1.
- 2.
- 3.

Imagine you are Harry, what could you think of to help you feel less scared?

If I was Harry, I would think of \_\_\_\_\_

because \_\_\_\_\_

**Talk to an adult** about what scares you and what you can do to feel better.

Activity from TES

Images from [www.clipart-library.com](http://www.clipart-library.com)



# Expressive Arts Challenge



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## Hogwarts Castle at Night

Click here to watch the moment that Harry sees Hogwarts for the first time:  
<https://www.youtube.com/watch?v=PvdZjiQq8FI>



**Your Task:** Recreate an image of Hogwarts using chalk.

**You Will Need:** pencil, black paper, selection of chalks /chalk pastels

### Instructions:

1. Draw the outline of Hogwarts onto black paper using pencil. Think about the shapes that you can see.
2. Create the sky. Use blue, white, yellow, pink/purple, and black chalk. (Charcoal) Remember to leave a space for the moon, and to leave lots of black in the sky- it looks better like this! Use your fingers to blend and smudge the colours into one another. You could put lightning in too!
3. Add in the moon. Use white chalk. You could add a bit of yellow or blue as well. Only smudge it a bit.
4. Add in the lighter parts on the buildings. Use white and yellow, and blend the colours in. You want to leave a lot of the building black!
5. Finally, add in the windows. They are white and yellow. Don't smudge them - you want them to really stand out!

The picture below was created using the one above as inspiration.



**Note:** You can get very messy using chalks. You might want to wear old clothing and / or an apron, and keep away from soft furnishings at home. Wash your hands when you have finished and try not to touch anything other than your artwork until you have completed your task

Activity and images from TES

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