Early Level - Week 2;aricahallenges - 02/05/22

## Learning from Home



# Science Challenge 

## Colour Changing Flowers

Would you like to change plain white coloured flowers into coloured flowers as if by magic? Today's task will help you do just that.

You Will Need: white flowers, glass jars, scissors, food colouring, water


Make sure that you cut the stems diagonally across the bottom so they can drink up the coloured water easily. It is also important to make sure that the flowers are fresh, this experiment won't work so well if the flowers are beginning to wilt.

## Instructions:

1. Before you start try to predict what will happen. Draw a picture of what you think your flowers will look like at the end.
2. Fill the glass jars to about halfway with water and add a different colour of food colouring to each. The more colouring you add the deeper the colour the flower petals should be.
3. Prepare the flowers by cutting them so that they are slightly taller than your jars. You will need to cut the bottom of each stem with a diagonal cut so that the flower can easily drink up the coloured water. (Ask an adult for help)
4. Place the flowers into the coloured water - one in each jar. Now wait!
5. Check back after 10 minutes - can you see any changes yet? Recheck in an hour, 2 hours etc. How long does it take to change the colour of a flower with food colouring?

Draw a picture of what happened underneath your prediction drawing. What have you learned?

The Science: The flowers won't change colour instantly, but after an hour or so you should start to see some colour appearing on the petals. After a few hours the petals should all begin changing colour and if you leave the flowers in the coloured water overnight the colour will continue to get deeper. Plants drink water. The coloured water used in this experiment demonstrates how water is sucked up through a plants stem and then travels to the different parts of the plant including the flower (petals).

Extension: Try out some different white flowers to see which work best. Does the amount of food colouring you use affect the result? Does one colour work better than any of the others? Does it matter how far up the stem you make the cut?

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## Technology Challenge



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## Harry Potter Glasses

Task 1: Try to look like Harry Potter by making yourself a pair of glasses to wear like his.

All you need to make a very simple pair of Harry Potter glasses are some black pipe cleaners and nimble fingers!

## You will Need:



5 black pipe cleaners, nimble fingers

## Instructions:

1. Start by twisting two round circles.
2. Use a short piece of pipe cleaner to join them together in the middle - make sure the finished result is the right size to fit over your nose!
3. Now join one pipe cleaner onto each side and bend the other end to fit over your ears.
Note: You might want to double over the very end of the pipe cleaner so that it isn't too sharp, or even wrap a little sticky tape around the very end for safety.

Task 2: Make a scar, like the one on Harry's forehead, and attach it to your glasses so that it appears on your forehead when you put the glasses on. Think about the materials you will use and how you will make the attachment. You don't want anything to stick into your face, eyes or skin so how can you make a smooth join?

Extension: Explore other materials you could use to make the glasses - which materials are the best? Why? Which are the easiest to work with? Which properties are most important for a pair of glasses frames - strong, flexible, waterproof, smooth or rough? Talk to an adult about your ideas.

# Maths \& Numeracy Challenge 

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## Potions

Can you adapt the recipe for this potion I found in a dusty old magic book?

Write down the new amounts of each ingredient in each scroll.


Potion for 2 teachers


## Remember:

Half $=$ Divide ( $\div$ ) by 2
Double $=$ Times ( x ) by 2

## Potion for 4 teachers

A Student's Potion:
Adapt the potion for 4 teachers. (Double the amounts)



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## Character Descriptions

The three main characters (people) in Harry Potter, are Harry, Hermione and Ron. Read the descriptions of them below (ask an adult for help if you need to) and use the words from the word bank to complete each passage.

His name is $\qquad$ Weasley. He is eighteen years old. His birthday is April the $14^{\text {th }}$. He is tall and thin with short $\qquad$ hair and green eyes. He has five brothers, a sister and a rat named Scabbers. He's smart and a little shy, but he's also very funny. His friends are called Harry and Hermione. He likes to collect cards. He loves Hermione!


Her name is Hermione Granger. She is seventeen $\qquad$ old. Her birthday is December the 23rd. She has $\qquad$ hair, which is long and curly. She has blue eyes. She doesn't have brothers or $\qquad$ but she has a cat called Crookshanks. She is very smart and is also
$\qquad$ , friendly and loyal. Her friends $\qquad$ Harry and Ron. She loves $\qquad$ and she loves Ron!

He is called $\qquad$ . He is eighteen. His birthday is the 23 rd of $S$ $\qquad$ He is tall and slim with $\qquad$ hair and green eyes. He has a $\qquad$ on his forehead. He doesn't have any $\qquad$ or sisters. Sadly, his parents died when he was a $\qquad$ . He has an owl called
$\qquad$ —.

| Harry Potter | years | blonde | scar | black |
| :--- | :---: | :--- | :---: | :---: |
| September | sisters | Hedwig | red | school |
| brave | baby | brothers | are | Ron |



Extension: Write a character description for either yourself, a family member or a close friend. Ask an adult to read it - can they guess who you are describing?

# Health \& Wellbeing Challenge 

 The Triwizard Tournament

## Adult Support Required

The Triwizard Tournament was first established some seven hundred years ago as a friendly competition between the three largest European schools of wizardry: Hogwarts, Beauxbatons, and Durmstrang.

A champion was selected to represent each school, and the three champions competed in three magical tasks. The schools took it in turns to host the tournament once every five years, and it was generally agreed to be a most excellent way of establishing ties between young witches and wizards of different nationalities.

In Harry Potter and the Goblet of Fire, Harry is entered (without his knowledge) into the TriWizards contest as a second entrant from Hogwarts. The tournament is very dangerous, and competitors must be over the age of 17. (Harry is younger than this at the time)

Harry's friends do not believe him when he tells them that he did not enter the contest and he doesn't know how his name was selected. Even Ron does not believe him, and he says some very hurfful things to Harry.

Task: Talk to an adult about the following questions:

1. How might Harry have felt when his friends did not believe him?
2. The tournament was very dangerous, people had died competing, how do you think Harry would be feeling knowing he was going to have to do something so terrifying? 3. Have you ever been accused of doing something you hadn't? How did that make you feel?
3. Cedric Diggory is the other competitor from Hogwarts. His supporters start wearing badges that say, 'Potter Stinks!' This is a form of bullying. Have you ever been bullied by anyone? What happened? What could you do if someone tries to bully you, who could you speak to?

Extension: Make a poster showing what someone could do if they were being bullied.

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## Expressive Arts Challenge

## Design a Quidditch T-Shirt

Quidditch is a team sport played by wizards and witches while they fly around on their broomsticks.

At Hogwarts, each of the four houses - Gryffindor, Ravenclaw, Hufflepuff and Slytherin, have their own team.

Your Task: Design a T-Shirt for the players in your own quidditch team. You can choose one of the teams from Hogwarts, or you could make up your own. Think about the colours you will use and any emblems (symbols) you might want to add.


Extension: Design the rest of the outfit - does it include leggings, shorts, a cape or a helmet to protect players from injury? What does the broomstick look like?


[^0]:    Image from https://harrypotterfanon.fandom.com/ Information from https://harrypotter.fandom.com/wiki/Triwizard_Tournament

