

Science and the Wider Curriculum - Planning and Ideas



Week Commencing: 30.3.20

Year Groups: Year 5 and 6

	Monday	Tuesday	Wednesday	Thursday	Friday
Area of Learning	Subject: PE LC:	Subject: Music LC: To compose the lyrics to a song	Subject: Art LC: Can you complete a portrait in a style of John Singer Sargent?	Subject: Science LC: To identify and label the parts of a flower used in plant reproduction	Subject: Geography LC: To design a god/goddess that embodies a key world river
Activity	<p>Resources:</p> <ul style="list-style-type: none"> You will need plenty of space for your first PE activity this week. If it is a nice day, you might like to take your activity outside. Some comfortable clothes would also be helpful. If you have access to a stopwatch that would be great. Perhaps you could use one on a mobile phone. Pen or pencil. If you like a bit of competition, you might like to ask 	<p>Resources</p> <ul style="list-style-type: none"> You will need your imagination. Pen or pencil Paper. <p>Starter We would like you to think about a song that you enjoy listening to. This can be any song you like (appropriate song)</p> <p>If you have Youtube or an ipod etc, you might like to have this song ready.</p> <p>Now, imagine if you were to re write the lyrics to the first part of this song. What could the theme of the song be?</p>	<p>Resources</p> <p>-A pencil -If possible, a print out of the halved portrait below</p> <p>Starter: Firstly, can you define what a portrait is? Have you ever drawn a portrait before? Has anyone ever drawn a portrait of you?</p> <p>Task 1: John Singer Sargent was an American artist, who was considered to be the 'leading portrait painter of his generation'. Look at the portraits by John Singer Sargent in the resources below and brainstorm your</p>	<p>Resources</p> <ul style="list-style-type: none"> Internet access Worksheets (below) Pencils <p>Starter A-Z game – can you make a list of different plants and flowers that you know, one for each letter of the alphabet? For any letters you cannot do from memory, research these online.</p> <p>Input In this unit, we are going to be learning about plant reproduction – the transfer of pollen to allow reproduction is called pollination – watch this video to find out a little more about the key parts of a flower and how they are used in</p>	<p>Resources</p> <ul style="list-style-type: none"> Internet access to enable you to complete your research element Paper and colouring pencils / pens <p>Starter Use the online game to locate rivers from around the world https://online.seterra.com/en/vgp/3133</p> <p>Input The River Ganges is one of the most famous rivers in the world and is steeped in religious tradition and significance. Hindus believe it to be embodied by the Goddess Ganga (see the information below)</p>

a brother or sister or even an adult to help you.

Starter/Intro

Think about what happens to your body when you exercise? Imagine that you have completed one lap of the school field? How do you feel when you get to the finish line? Why do you think this happens?

What type of exercises make your heart beat quickly?

You need to be sitting for the next task.

Find your pulse. This can be usually felt in your wrist or your neck. You can also feel your heart beating if you put your hand on your chest.

When you are ready, you are going to count the number of times you feel the beat of your pulse. You need to count this over 30 seconds. After 30 seconds you need to double your pulse rate to find **bpm – beats per minute**

Record this on your sheet. This can be found attached to the planning.

Make a list of all of your ideas;
Eg. Peace, working together, positivity etc

Task

Your task is to rewrite the lyrics to the song you have chosen. Think about the original song- does it have a rhyme? Your lyrics might follow the same rhyming pattern.

You might even like to complete this task with an adult. You never know, they might have some great ideas and I am sure they would love to sing the song with you at the end.

Good luck and happy singing 😊

answers to the following questions: What can you see (think about the use of colour) ?

What kind of life do you think the person in the portrait led? How do you feel when you look at the artwork? Why do you think John Singer Sargent painted this/these persons?

Task 2:
Look at the portrait of Dr Pozzi at Home 1881. Can you use the original portrait to complete the half painting? (Do not worry if you don't half coloured pencils, used your pencil to shade in black and white).

Pretend that you are in an art gallery and can you review your own artwork? What do you like or dislike about the style of artwork?

the process:
<https://www.bbc.co.uk/bitesize/topics/zgssgk7/articles/zqbcxfr>

Complete the sheet below to label the key parts of the flower, based on what you have found out so far.

Task

Read through the information cards below to develop your understanding of the pollination process.

Use these to complete the sentence openers listed on the cards to explain the role of each part.

Next, use the information provided to draw a life cycle drawing of pollination using the template below OR make a 3D representation of the process.

A Sacred Icon

For Hindus, the River Ganges is sacred and revered, embodied by the goddess Ganga. Though iconography of the goddess varies, she is most often depicted as a beautiful woman with a white crown, riding the Makra (a creature with the head of a crocodile and the tail of a dolphin). She features either two or four arms, holding a variety of objects ranging from water lilies to a water pot to a rosary. As a nod to the goddess, the Ganges is often referred to as *Ma Ganga*, or Mother Ganga.

Because of the purifying nature of the river, Hindus believe that any **rituals** performed at the banks of the Ganges or in its water will bring fortune and wash away impurity. The waters of the Ganges are called *Gangaajal*, meaning literally "water of the Ganges".

The *Puranas*—ancient Hindu scriptures—say that the sight, the name, and the touch of the Ganges cleanses one of all sins and that taking a dip in the sacred river bestows heavenly blessings.

There are many different world religions that have a figure to embody a key natural landmark – your job is going to be to design our own version that matches your chosen river.

Task

Choose from one of the rivers below and design a god/goddess that could embody them. Draw and colour an image of your deity and add detailed labels about features that they have and how these are linked to the river – you may wish to research your rivers location and use by the people to give you some ideas for your design.

Rivers to choose from:

- The Amazon
- The Mississippi
- The Mekong River
- The Yukon
- The Nile

We'd love to see some of your finished designs, send us a picture 😊

	<p>Are you ready to exercise?</p> <p>Task There are 6 different exercises on the challenge sheet. You will complete each exercise for 45 seconds and you should ask your challenge partner how many repetitions you are able to complete. Record your total in the grid.</p> <p>If you have a partner, you can take turns with the counting and timing.</p> <p>Recheck your pulse Record on your sheet</p> <p>Cool Down At the end of each activity there should be a cool down. You are very good and you have lots of ideas for stretching out your muscles so you don't ache</p>				
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Where can I complete further work?

[Twinkl](#) – Subscription service used by schools is offering a free premium service for teachers, parents and children to use whilst schools are closed. Enter the code **UKTWINKLHELPS** for access to worksheets, powerpoints and interactive games to support all areas of learning.

[Classroom Secrets](#) – Free Maths, Reading and Grammar home learning packs and interactive resources for all ages.

[BBC Bitesize Primary](#) – Free learning resources available for KS1 and KS2 across all subjects.

Monday PE Lesson

Resting Pulse

Pulse after exercise

Exercise	Repetitions 1st Attempt	Repetitions 2nd Attempt
Star Jumps		
Speed Bounce		
Tuck Jump		
Shuttle Runs (Run back and forth in the space you have- one run is 'there and back')		
Burpees		
Sit Ups		

Art – Creating a Portrait

Task 1 - (There are more Singer Sargent portraits on the internet also)



Study for Lady Macbeth



Portrait of Edouard and Marie-Louise Pailleron, 1881
John Singer Sargent



A Dinner Table at Night, 1884

Task 2

Look at your 'half painting' and use the original painting to complete the missing half.

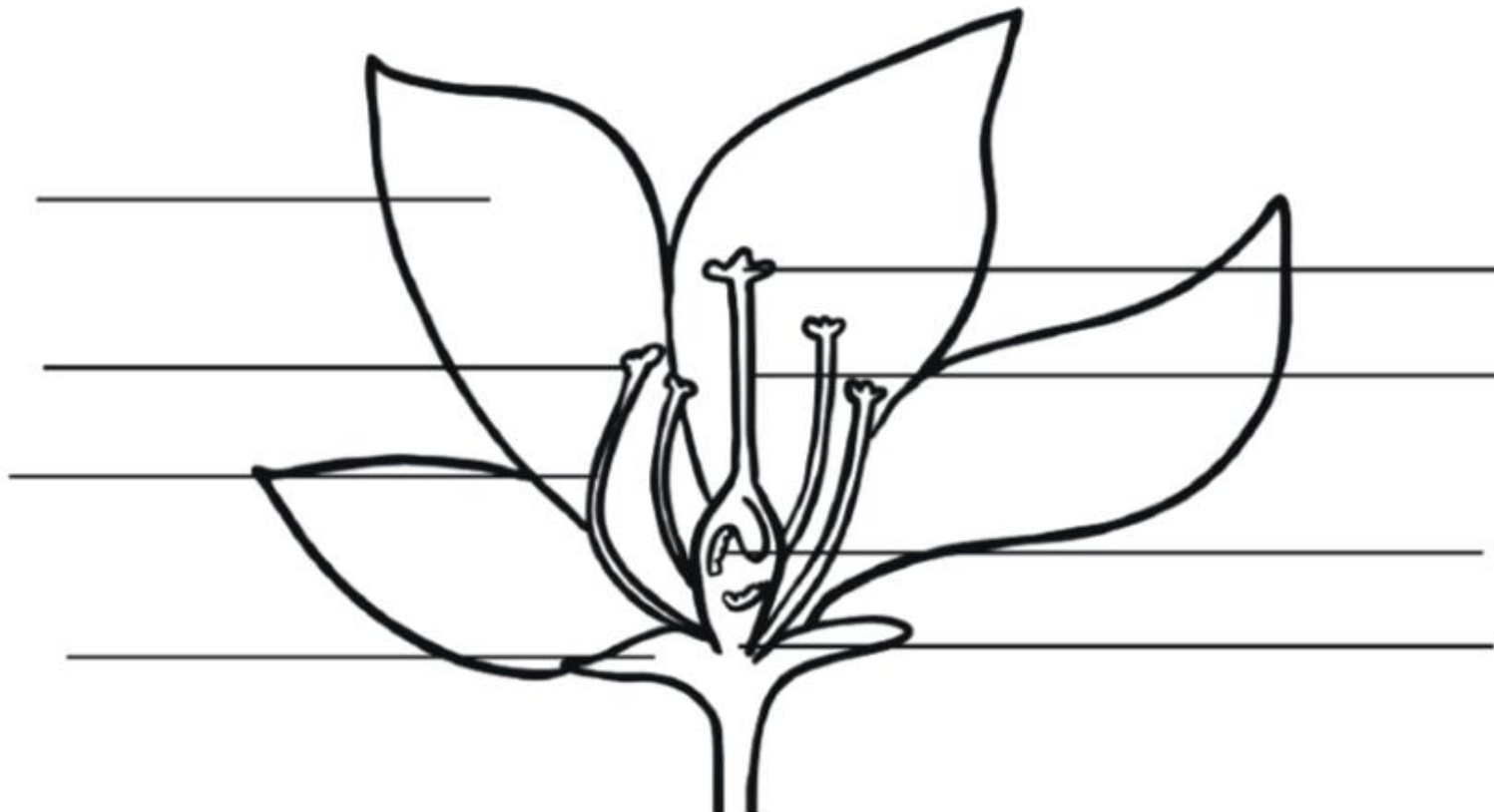


Dr. Pozzi at Home, 1881
John Singer Sargent

Science Activity Sheets

Parts of a Flower

Label the different parts of the flower.



Stamen

Style

Petal

Ovary

Filament

Ovule

Sepal

Anther

Recap

- Plants produce seeds in order to reproduce. To make a seed a flower must be pollinated.
- Pollen is made by the male part of the plant, which is called the stamen. The pollen needs to get to the female part of the plant, which is called the stigma. Most plants cannot pollinate themselves, but a large amount of orchids can. What might be an advantage of self-pollination?
- The pollen must then travel from one plant to another plant of the same species (e.g. from a rose to a rose or from a daffodil to a daffodil). This is called cross-pollination.



Petal

It is the petal's job to attract the insects towards the flower.

Interestingly, the colours that we see are not the same as the colours that the insects see. Insects see in ultraviolet, which is a type of light which is outside the range of what human eyes can see.



petal

Style

The style is above the ovary and its job is to hold up the stigma. The style, ovary and stigma all make up the female part of the flower, which is called the 'carpel' or 'pistil'.



style

Stigma

The stigma's job is to collect the pollen from other plants when insects brush by it. It has adapted to catch the pollen in different ways e.g. some stigma have tiny hairs on them to collect the pollen. It is on the stigma that growing process first begins.



stigma

Filament

The filament's role is to hold up the anther. If the anther was very low down, then insects might not be able to collect that flower's pollen. What would happen if pollen was harder for insects to collect?



filament

Anther

The role of the anther is to produce the pollen. It is important that this pollen is then carried to another plant.

Which part of the plant would the pollen need to be taken to?

anther



Ovary

It is the ovary's job to hold the ovules and to keep them safe until the flower gets pollinated.



ovary

Insects in Pollination

- Insects don't pollinate on purpose; it's just something that happens as they collect nectar from flowers to feed on. Insects are incredibly important when it comes to pollination. Here are some facts to prove it:
- 84% of crops in Europe are pollinated by insects. This is worth £12.6 billion a year.
- Honey bees account for 80% of all insect pollination.
- Nearly all chocolate relies on midges pollinating the cocoa plant, which might make them seem slightly less annoying!



The Pollination Process

1. The flower petal's bright colours and fragrant scents attract insects.
2. The insect arrives on the flower to collect nectar. This nectar is a sweet liquid which makes perfect insect food.
3. As the insect is gathering the nectar, it rubs against the anthers, which rub pollen onto the insect.
4. After the insect is done feeding on the flower's nectar, it gets hungry and gets attracted by another flower's bright colours.



The job of the **stigma** is to:

The Pollination Process

5. As the insect feeds on the nectar in this new flower, the pollen stuck to the insect from the first flower rubs off onto the female parts of the second flower (the stigma).
6. Part of this pollen travels down the style and then into the ovary.
7. The tiny piece of pollen joins onto an ovule in the ovary. The plant has now been fertilised.
8. The ovary of the flower turns into seeds which will then be dispersed so that new plants will be able to grow somewhere else.

The job of the **stigma** is to:

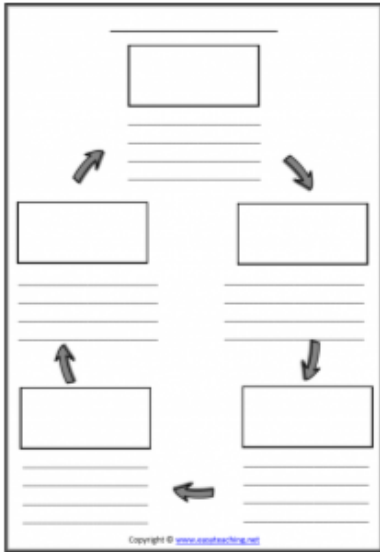
The job of the **stamen** is to:

The job of the **filament** is to:

The job of the **style** is to:

The job of the **anther** is to:

The job of the **ovary** is to:



Using this template as a guide, create a diagram to show the process of pollination

