Now we are ready to apply what we have learned about flowering plants.

1 **You are flower experts and consultants on a radio programme about flowering plants. A listener calls you asking for your advice. In your groups, answer the listener's question.**

Good morning! I have a common holly bush, also called Christmas holly, growing in my garden. This bush has been there for more than five years and although it produces a kind of tiny yellowish flowers every year, it has never produced any kind of fruit, like red or orange berries, typical of this plant.

My question is: The holly bush blooms during the season but why has it never produced any fruit?

2 **In groups of four, decide on your roles for the radio performance.**

ROLES	NAMES and TASKS
The editor	_____ will check that the language used is adequate and the pronunciation is correct.
The consultant	_____ will check that the information mentioned is scientifically correct.
The radio presenter	_____ will introduce the radio programme and the plant experts.
The experts	_____ and _____ will answer the listener's question in a scientific way.
The caller	_____ will ask the question.
All members of the group will participate in writing the explanation and finding the solution(s). They will also speak during the recording of the radio programme.	

3 **Plan your explanation using your knowledge about flowers. Use the following chart.**

Parts	Development	Name(s)
PROBLEM	The problem is _____ _____	
HOLLY BUSH PLANT CHARACTERISTICS	There are two types of _____ : _____ and _____ All flowers _____ have _____ All flowers _____ have _____ Each female flower has _____ . The ovaries in the _____ contain _____	
DISTINGUISHING MALE AND FEMALE HOLLY BUSHES	It is very difficult to differentiate between _____ and _____ plants when they don't have _____ Flowers in _____ are very _____ . They have _____ petals with radial _____ and the calyx _____ We can tell if the plant is a male or female when _____ _____	
IDENTIFYING THE REASONS FOR THE PROBLEM	The bushes don't produce _____ because: **1** The listener has a _____ **2** _____ but its flowers _____ The life cycle of _____	
ADVICE TO SOLVE THE PROBLEM	First, identify _____ by carefully looking at the _____ : **1** If the plant has male flowers _____ because _____ . Plant _____ _____ **2** If the plant is a female holly bush, _____ Plant _____ In both cases pollination _____ . _____ will fertilise _____ and the _____ The life cycle of flowering plants _____	

4 **Finally, record your scientific explanations and the solution, in a radio programme format. Follow the instructions.**

Hello and welcome to a new edition of "All about flowering plants". On today's programme we are going to talk about …

What?	Who?
1 **Music** (to use at the beginning of the programme)	
2 **Introduce the radio programme** (see the speech bubble above)	
3 **Introduce the experts** (names, jobs, etc.)	
4 **Introduce the caller** (name, phone call location, age, etc.)	
5 **Present the problem** (see exercise 1)	
6 **Give an explanation and advice** (see exercise 2)	
7 **Thank the audience in general**	
8 **Thank the experts and congratulate the radio programme**	
9 **Say goodbye to everybody** (experts and audience)	
10 **Remind the audience about the next programme** (day and hour)	
11 **Music** (to finish the programme)	

This portfolio is for you to keep a record of your learning. You will include:

1 The objectives of the module, linked to the activities that cover each one of them
2 Opinions about the tasks
3 Final assessment results
4 Peer assessment on the final task
5 Self assessment of the work done

1 Objectives and activities

Objectives	Activities

2 Portfolio cards

Title of the activity _____

This activity is important for me because _____

_____

Title of the activity _____

This activity was a big challenge for me because _____

_____

Title of the activity _____

I'm very proud of my work because _____

_____

_____

At the beginning I thought that _____

_____

And now I know that _____

_____

3 Final test

Mark	Comments	Improvement

4 Peer assessment and oral presentation

	Very Good	Good	Needs improvement	Recommendations
Organisation of the information.				
Clear oral presentation.				
Degree of participation of all group members.				
Performance of the group members.				

5 Self Assessment. What do I know? What can I do?

I can …	Very Well	Well	Needs improvement
I can distinguish flowering and non-flowering plants.			
I can name the parts of a flower.			
I can name the reproductive organs of a flower.			
I can classify different types of flowers using the right tools.			
I can describe and draw a flower in a scientific way.			
I can recognise flowers as living things.			
I can name the main phases of the life cycle of a flowering plant.			
I can use simple texts to find out information.			
I can work with my classmates in a collaborative way: • I can put forward my own ideas. • I can contribute to group discussions. • I can draw conclusions. • I can listen to the members of my group.			
I can communicate what I have learned about flowering plants in a scientific way.			
I can talk and write in English about flowering plants.			
I can do the tasks with interest and commitment.			
I can suggest how I can improve my work.			

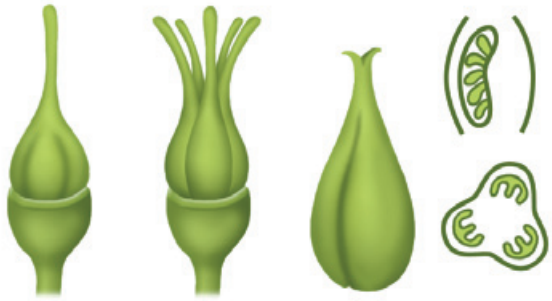
6 Things I want to improve on in the future

bloom	the blossoming or opening of a flower
carry	to transport or take something from one place to another
charcoal	a hard black substance, similar to coal, which can be used as fuel
clustered	the formation of a group of similar things that are close together
cup-like	having the form of a cup
fused	when something is joined together or combined
genetic code	the arrangement of information which controls the development of characteristics and qualities of a living thing
grain	a relatively small, hard particle or substance, similar to a seed
pod	a long, narrow, flat part of some plants, such as beans and peas, that contains the seeds and usually has a thick skin
remain	to stay in the same place or in the same condition
ripen	to become completely developed and ready to be collected or eaten
rough	a non-perfect, irregular surface
scalpel	a kind of very sharp knife used for cutting, especially in laboratories
scatter	to throw substances in different directions in order to separate them
scent/scented	having a pleasant smell
seed	a small round or oval object produced by a plant and from which a new plant can grow
shoot	the first part of a plant to appear above the ground as it develops from the seed, or any new growth on an already existing plant
spike	a narrow thin shape with a sharp point at one end
stalk	the stem of a plant
store	to put or keep things somewhere
surround	to be everywhere around something
swell	to increase in size
symmetry	the quality of having parts that match each other
tweezers	a small instrument made of two narrow strips of metal joined at one end

My words

STAMENS	They are the reproductive structures of flowering plants.
ANTHER	It has only one of the reproductive organs, the male or the female.
FILAMENT	Part of the carpel that connects the stigma and the ovary.
CARPEL	These have calyx, corolla, stamens and carpel.
STIGMA	These have both, male and female reproductive organs.
STYLE	Any of the usually brightly coloured leaves of the corolla.
OVARY	It is formed by a group of leaves, mainly green, called sepals.
POLLEN	It is the male reproductive organ.
OVULES	It is formed by a group of coloured leaves called petals.
COROLLA	It is the female reproductive organ.
PETALS	**FINISH**
CALYX	Any of the outer leaves of flowers, usually green, that surround* the petals.
SEPALS	They are the carpel and the stamens.
PERFECT FLOWERS	The female reproductive structure in the ovary of flowering plants that develops into a seed.
COMPLETE FLOWERS	It is where the seeds form. It develops into a fruit.
SEXUAL ORGANS	The stalk that supports the anther in a stamen.
FLOWERS	The part of the stamen that contains pollen.
UNISEXUAL	It is at the top of the carpel it receives pollen.
START	It is an ornamental flower.
CARNATION	The male reproductive grains inside the anther.

Carpels



one single carpel

free carpels

fused carpels

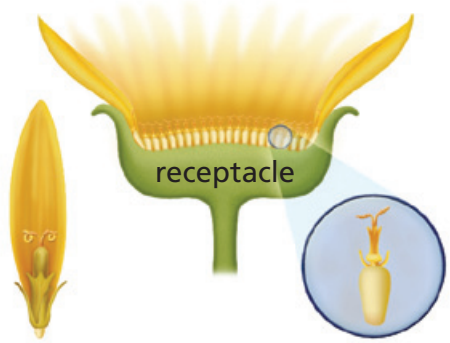
Petals

no petals only sepals

petals and sepals look similar

petals are fused

Inflorescence

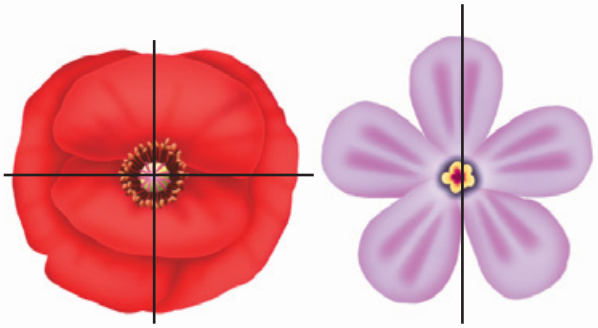


flower

flower

Many small flowers are clustered together to appear to be a large flower. This is called INFLORESCENCE.

Corolla symmetry



radial symmetry

bilateral symmetry