PLANT REPRODUCTION Lesson Plans

Janet Huguet

January - March 2009



	-	ECEONE			1 6//61 .
TOPIC: LIVING IMING	5: HOW	LESSUINS 1 &	,	1 IMING 2 cassions	LEVEL: 5 th
TO CLASSIFY THE TWO K	INGDOMS	1 4 1	-	2 263210113	5
KEY SKILLS: Pupils will be able	· · · · · · ·				
 To consider that scientific provides a means for the s 	classification is	s important be af living thing	cause it i: 	s a worldwide labeling s	ystems, and
TRANSFFRABLE SKILLS : Pupils v	vill be able	or nong	5.		
Communicative skills:					
• To ask and answer questior	ns, and to select	relevant infor	mation fi	rom the topic.	
Methodological skills:					
 To develop strategies to ur 	nderstand the c	ontent: summa	rising, co	mparing and organising.	
Personal skills:	llective project	a with creativit	the confid	lance normanaihility and	enitical thinking
	lective projects	S WITH Creation	iy, connu	lence, responsibility and	i criticai minking.
• To describe classification	as the process l	ov which things	s are arou	ined	
 To observe and recognise s 	some simple cha	racteristics of	animals (and plants.	
• To explain that all livingthi	ngs can be class	sified into five	major kir	ngdoms	
• To name some of the diffe	rent typesof liv	ing things four	nd in the	plant kingdom.	
TEACHING OBJECTIVES	LEARNI	NG OUTCOM	ES		
	Learners	s will be able ·	to:	COMMUNI	ICATION
A.CONTENT	A.CONTENT			Language OF learning	:
* Present the two kingdoms by	* Identify imp	ortant informa	tion.	Key vocabulary:	
offering:	* Share information found. Living, non-living, animal & plant				al & plant
- Stragegies to classify living	* Justify why a	inimals / plants	5	Kingdom, invertiebrates amphibians rentiles b	, verteorates, tish, irds mammals non-
Things	are living thing * Use scientifi	S.	A	seed & seed plants, alg	ae. mosses, ferns.
things	thinking skills Key phrases nedeed:				
	* Memorise Ke	y vocabulary.		I think a is a becc	iuse
		, ,		Can it? Is it? Does	it have?
		•		Language FOR learnin	g:
B.COGNITION	B.COGNTITOP	N		* Classroom language,	Following
To allow opportunities for pupil		LL		INSTRUCTIONS.	+ worksheets and
to discuss and decide:	*Apply memoria	sed Key vocadu	ilary in	discussion tasks	WUNKSHEETS UNU
- why animals and plants are		EXIS		* Doing an oral present	tation
livina thinas.	* Analyze the importance of planta Language THROUGH learning:				
- how to carry out an	for life.		lunis	* Questions that come	across the lesson.
investigation.					
CULTURE: Pupils will appreciate better:					
Appreciate better English	as a language to	or learning.			
 How no lake care of anima How and why plants are imit 	portant to all liv	a why that is n ve on Earth.	mportant		



ASSESSMENT CRITERIA:

- Ensure that students can differentiate living things from non-living things.
- Observe that they know the basic features of inert and of living things.
- Sort animals and plants into groups using observable features.
- Able to explain likeness and differences between each group. e.g. they all have six legs, these have flowers, these do not
- Able to explain likeness and differences between each group using some scientific vocabulary e.g. this is an amphibian it can live on water and on land, these are flowering plants.

TOPIC: PARTS OF A FLOWER AND	LESSONS	TIMING	LEVEL: 5 th
THEIR FUNCTIONS	3, 4 & 5	3 sessions	
KEY SKILLS:			
 To name and explain the functions of some 	e parts of a flower.		
TRANSFERABLE SKILLS: Pupils will be able			
Communicative skills:			
 To relate observations, give accounts of e 	expreriences and develop	p argument.	
Methodological skills:			
 To access and communicate information us 	sing different supports	including ICT tools to le	earn.
Personal skills:			
 To interpret and use the knowledge about 	facts and processes to	predict consequences of	and take reflexive
action in order to preserve and improve li	ving conditions.		
Aims:			
 To recognise the parts of the flower and pollinated. 	their functions. Flowers	s have structures that o	allow them to be
 To deconstruct and analyse a flower, observed. 	erve and discover the di	fferent parts of a flow	er
 To Learn that plants produce flowers which the male organ fertilises the ovum (female) 	ch have male and female e)	e organs, seeds are forn	ned when pollen from
 To explain the life cycle of flowering plan dispersal and germination 	ts including pollination, t	fertilisation, seed prod	uction, seed



TEACHING OBJECTIVES	LEARNING OUTCOMES Children will be able to:	COMMUNICATION
A.CONTENT - The flower and its parts. - Functions of the parts of the flowers. - Recognise the flower parts on a real one.	 A.CONTENT Name the parts of the flower eg stamen, stigma, style, petal, sepal, ovary, carpel. Describe and explain the functions of each part of a flower. 	Language OF learning: <u>Key phrases nedeed</u> : - I think is a - Why? Because. is called consist of which <u>Key vocabulary</u> : - Parts of a plant: - Functions of parts of plants.
B.COGNITION - Aply newly undersrtood concepts. - Identify by observation the	B.COGNITION Identify the main elements of a flower. Relate the functions of each part 	Language FOR learning: – Language to answer questions. – Language to express their opinions. – Language to explain the functions of a flower.
parts of a flower. - Illustrate the functions of each different part in a flower.	 * Use discussion to gain and understanding the functions of parts of flowers. * Apply memorised key vocabulary and phrases in different contexts 	Language THROUGH learning: - Use of dictionaries for vocabulary

CULTURE: Pupils will appreciate better:

- To value the importance of plants
- Respect for living things and realise the need of taking care of plants.
- How to be responsible and accurate in carring on an investigation.
- Appreciate and demonstrate working in a cooperative group.
- Recognize some plants from their own country and from England.

ASSESSMENT CRITERIA:

- Pupils should be able to name the different parts of a flower, recognise if it is a simple or complex flower and justify why it is.
- Prepare a report identifying each part of a flower and its functions.
- See whether they can explain the reproduction process of a plant, identifying the different parts of flower.
- Students will be collecting observations work in a folder as well as keeping notes of what they learn on their Science notebook.



TOPIC: POLLINATION, LESSONS 1 Mulke LEVE: 5 FERTILISATION & SEED DISPERSAL 6, 7 & 8 3 sessions KS 2 year1 KEY SKILLS Collidren are expected to learn how the events taking place at pollination lead to seed formation and how seeds are dispersed. TRANSFERABLE SKILLS Communicative skills: • Report observations giving accounts of experiences and develop arguments. Methodological skills: • Provide practical classroom investigations about plants. Personal skills: • Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds cane be dispersed in a variety of ways • Describe the processes of pollination and cross-pollination. • Compare self-pollination and cross-pollination, fertilisation, germination, seed dispersed in a variety of ways • To understand that there are distinct processes and related to plant pollination, fertilisation, germination, fertilisation, germination, seed dispersed in averian germination, seed dispersed in averian germination, seed dispersed in a variety of ways • To understand that there are distinct processes and related to plant pollination, fertilisation, germination, seed dispersed in averian germi					
REMILLSATION & SEED DISPERSAL 0, 400 0 statute KEY SKILLS Children are expected to learn how the events taking place at pollination lead to seed formation and how seeds are dispersed. TRANSFERABLE SKILLS Communicative skills: • Report observations giving accounts of experiences and develop arguments. Methodological skills: • Provide practical classroom investigations about plants. Personal skills: • Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways • Describe the processes of pollination, fertilisation, seed dispersal and germination. • Compare self-pollination and cross-pollination. • Use terminology and processes are distinct processes and related to plant pollination, fertilisation, germination, fertilisation, germination, fertilisation, germination, fertilisation, germination, seed dispersal edispersal edispersal edispersal edispersal: animals. Wind, how the seed dispersal: animals. Wind, recycle, spread, insects &flowers names. • To learn why some plants • Self. dispersal: animals. Wind, recycle, spread, insects &flowers names. • To learn why some plants • Self dispersal: animals. Wind, recycle, spread, insects &flowers names. •	TOPIC: POLLINATION,		6788	1 IMING 3 sessions	KS 2 year 1
KEY SKILLS Children are expected to learn how the events taking place at pollination lead to seed formation and how seeds are dispersed. TRANSFERABLE SKILLS Communicative skills: • Report observations giving accounts of experiences and develop arguments. Methodological skills: • Provide practical classroom investigations about plants. Personal skills: • Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination, seed dispersal and germination. • Compare self-pollination and cross-pollination. • Compare self-pollination and cross-pollination. • TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: A.CONTENT A.CONTENT • To understand that there are distinct processes and related to plant pollination, fertilisation, germination at cross-pollination at cross-pollination and cross-pollination are self alignersal is/are pollinated by • To learn why some plants have flowers but not all. - Self.pollination and cross-pollination and cross-pollination are sel dispersal. • To luderstand the importance of pollen for plant reproduction in flowering plants. - Self.pollination and cross-pollin	FERTILISATION & SEED	DISPERSAL	0, 7 4 0	5 363310113	
formation and how seeds are dispersed. TRANSFERABLE SKILLS Communicative skills:	KEY SKILLS Children are a	expected to le	arn how the events to	aking place at pollinat	tion lead to seed
TRANSFERABLE SKILLS Communicative skills: • Report observations giving accounts of experiences and develop arguments. Methodological skills: • Provide practical classroom investigations about plants. Personal skills: • Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways • Describe the processes of pollination, fertilisation, seed dispersal and germination. • Compare self-pollination and cross-pollination, fertilisation, seed dispersal and germination, atages in every life-cycle. • To uderstand that there informed plants have flowers but not all. • To Understand the importance of pollen for plant, recognise the huge variety of seed dispersal. • To Understand the importance of pollen for plant, recognise the huge variety of seed dispersal. • Explain reproduction in flowering plants. • Explain reproduction in flowering plants.	formation and how seeds are d	ispersed.			
Communicative skills: Report observations giving accounts of experiences and develop arguments. Methodological skills: Provide practical classroom investigations about plants. Personal skills: Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination, fertilisation, germination and seed dispersal To understand that there are distinct processes and related to plant pollination, fertilisation, germination and seed dispersal Self. pollination and cross-pollination.	TRANSFERABLE SKILLS				
 Report observations giving accounts of experiences and develop arguments. Methodological skills: Provide practical classroom investigations about plants. Personal skills: Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. Communication that there are distinct processes and edispersal To learn why some plants Self.pollination and cross-pollination. Self.pollination and cross-pollination. Seed dispersal: animals. Wind, are need dispersal: animals. Wind, reproduction and diversity. Seed dispersal: animals. Wind, reproduction and diversity. To luderstand the importance of pollen for plant reproduction in flowering plants. Trecognise the huge variety of seed from which plants arow 	Communicative skills:				
Methodological skills: Provide practical classroom investigations about plants. Personal skills: Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. Compare self-pollination and cross-pollination, fertilisation, germination and seed dispersal To understand that there are distinct processes and related to plant pollination, fertilisation, germination and seed dispersal Self.pollination and cross-have flowers but not all. Seed dispersal. <	 Report observati 	ions giving acc	ounts of experiences	and develop argumen	ts.
 Provide practical classroom investigations about plants. Personal skills: Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways 	Methodological skills:				
Personal skills: • Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways • Describe the processes of pollination, fertilisation, seed dispersal and germination. • Describe the processes of pollination and cross-pollination. • Communication. • TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: COMMUNICATION • To understand that there a distinct processes and fishinct processes and flowers but not all. • Use terminology and processes needed ispersal Key phrases nedeed: • To learn why some plants reproduction and diversity. • Self pollination and cross-pollination. · Called ispersal. · · • To Understand the importance of pollen for plant • Self dispersal. ·	 Provide practical 	classroom inv	estigations about pla	nts.	
 Can apply study skills that include strategic thinking, cooperation and self-evaluation skills. Aims: Children should be able to: Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: COMMUNICATION To understand that there a distinct processes and stages in every life-cycle. To learn why some plants have flowers but not all. Self pollination. Self dispersal: animals. Wind, e-To Understand the importance of pollen for plant reproduction and diversity. To Understand the importance of pollen for plant reproduction and diversity. To compare self of plant reproduction in flowering plants. Tecoming plants. Tecoming plants. Tecoming plants. Tecoming plants. To every high cycle, spread, insects & flowers names. To learn why some plants To understand the importance of pollen for plant reproduction and diversity. To water, self dispersal. Texplain reproduction in flowering plants. Tecoming plants. Tecoming plants. Tecoming plants. Tecoming plants. Tecoming plants. Tecoming plants.	Personal skills:				
Aims: Children should be able to: • Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. • Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways • Describe the processes of pollination, fertilisation, seed dispersal and germination. • Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: COMMUNICATION A.CONTENT A.CONTENT - Use terminology and processes are distinct processes and stages in every life-cycle. - Use terminology and processes and steed dispersal Key phrases nedeed:is/are pollinated by - To learn why some plants have flowers but not all. - Self.pollination and cross-pollination. - Self.pollination and cross-pollination. - To Understand the importance of pollen for plant reproduction and diversity. - Seed dispersal: animals. Wind, flowering plants. - recognise the huge variety of seed s from which plants arow.	Can apply study s	skills that inclu	ude strategic thinking	g, cooperation and sel	f-evaluation skills.
 Learn about the life cycle of a flowering plant - pollination, seed production, dispersal and germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES <i>COMMUNICATION</i> COMMUNICATION A.CONTENT To understand that there are distinct processes and stages in every life-cycle. To learn why some plants have flowers but not all. - To Understand the importance of pollen for plant reproduction and diversity. 	Aims: Children should be abl	e to:			
germination. Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways • Describe the processes of pollination, fertilisation, seed dispersal and germination. • Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: COMMUNICATION A.CONTENT A.CONTENT Leaterminology and processes are distinct processes and stages in every life-cycle. Leaterminology and processes related to plant pollination, fertilisation, germination and seed dispersal Language OF learning: Key phrases nedeed: is/are pollinated by - To learn why some plants have flowers but not all. - Self.pollination and cross- pollination. - Self.pollination in flowering plants. takes place when is called / is done by Key vocabulary: Pollination, fertilisation, germination in flowering plants. - To Understand the importance of pollen for plant reproduction and diversity. - Explain reproduction in flowering plants. - recognise the huge variety of seed from which plants arow. seed dispersal, life-cycle, spread, insects &flowers names.	 Learn about the 	life cycle of a	flowering plant - poll	ination, seed product	ion, dispersal and
 Explain that seeds are formed after pollination when pollen fertilises the ovum and that seeds can be dispersed in a variety of ways Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: A.CONTENT To understand that there are distinct processes and size dispersal To learn why some plants Self.pollination and cross-pollination, fertilisation, germination and cross-pollination. Self.pollination and cross-pollination. Seed dispersal: animals. Wind, Explain reproduction in flowering plants. recognise the huge variety of seeds from which plants arow. 	germination.				
 Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: A.CONTENT To understand that there are distinct processes and stages in every life-cycle. To learn why some plants have flowers but not all. Seed dispersal: animals. Wind, importance of pollen for plant reproduction and diversity. To Understand the importance of pollen for plant Explain reproduction in flowering plants. recognise the huge variety of seeds from which plants arow. 	 Explain that seed 	ds are formed	after pollination whe	n pollen fertilises the	e ovum and that
 Describe the processes of pollination, fertilisation, seed dispersal and germination. Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: A.CONTENT To understand that there are distinct processes and stages in every life-cycle. To learn why some plants have flowers but not all. - To Understand the importance of pollen for plant reproduction and diversity. - To Understand the importance of pollen for plant - To compare self and the importance of pollen for plant - To understand diversity. - To Understand the importance of pollen for plant - To compare self and the importance of pollen for plant - To understand the importance of pollen for plant - Explain reproduction in flowering plants. - recognise the huge variety of seeds from which plants orow. 	seeds can be dis	persed in a vai	riety of ways		
• Compare self-pollination and cross-pollination. TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: COMMUNICATION A.CONTENT A.CONTENT Lose terminology and processes are distinct processes and stages in every life-cycle. Learguage OF learning: - To learn why some plants have flowers but not all. - Use terminology and processes related to plant pollination, fertilisation, germination and seed dispersal Key phrases nedeed: is/are pollinated by This is so that - To learn why some plants have flowers but not all. - Self.pollination and cross- pollination. - Seed dispersal: animals. Wind, water, self dispersal. Key vocabulary: Pollination, fertilisation, germination, seed dispersal. - To Understand the importance of pollen for plant reproduction and diversity. - Explain reproduction in flowering plants. - recognise the huge variety of seeds from which plants orow. Key vocabulary: Pollination, seets &flowers names.	Describe the pro	cesses of poll	ination, tertilisation,	seed dispersal and ge	ermination.
TEACHING OBJECTIVESLEARNING OUTCOMES Children will be able to:COMMUNICATIONA.CONTENTA.CONTENTLanguage OF learning: Key phrases nedeed: is/are pollinated by tare dispersed by this is so that this is so that takes place when takes place when 	Compare self-pol	lination and cr	oss-pollination.		
TEACHING OBJECTIVES LEARNING OUTCOMES Children will be able to: Contents A.CONTENT A.CONTENT Language OF learning: - To understand that there are distinct processes and stages in every life-cycle. - Use terminology and processes related to plant pollination, fertilisation, germination and seed dispersal Key phrases nedeed: is/are pollinated by - To learn why some plants have flowers but not all. - Self.pollination and cross- pollination. This is so that - To Understand the importance of pollen for plant reproduction and diversity. - Seed dispersal: animals. Wind, flowering plants. Key vocabulary: Pollination, fertilisation, germination, seed dispersal, insects &flowers names.				COMMUN	
A.CONTENT A.CONTENT Language OF learning: - To understand that there are distinct processes and stages in every life-cycle. - Use terminology and processes related to plant pollination, fertilisation, germination and seed dispersal Key phrases nedeed: - To learn why some plants have flowers but not all. - Self.pollination and cross-pollination. takes place when - To Understand the importance of pollen for plant reproduction and diversity. - Seed dispersal. takes place when - To Understand the importance of pollen for plant - Explain reproduction in flowering plants. - Explain reproduction in flowering plants. iscalled ispersal.	TEACHING OBJECTIVES			common	ALCATION
A.CONTENTA.CONTENTLanguage OF learning:- To understand that there are distinct processes and stages in every life-cycle Use terminology and processes related to plant pollination, fertilisation, germination and seed dispersalKey phrases nedeed: is/are pollinated by This is so that This is so that To learn why some plants have flowers but not all Self.pollination and cross- pollination. - Seed dispersal: animals. Wind, water, self dispersal. - Explain reproduction in flowering plants. - recognise the huge variety of seeds from which plants arow.Language OF learning: Key phrases nedeed: is/are pollinated by is/are pollinated by This is so that can be dispersed by This is so that is called / is done by Key vocabulary: Pollination, fertilisation, germination, seed dispersal, life-cycle, spread, insects &flowers names.		Children	WIII DE ODIE TO:		
 To understand that there are distinct processes and stages in every life-cycle. To learn why some plants have flowers but not all. To Understand the importance of pollen for plant reproduction and diversity. Use terminology and processes related to plant pollination, fertilisation, germination and seed dispersal. Self.pollination. Seed dispersal: animals. Wind, water, self dispersal. Explain reproduction in flowering plants. recognise the huge variety of seeds from which plants arow. 	A.CONTENT	A.CONTENT		Language OF learni	na:
 To understand that there - Ose terminology and processes are distinct processes and related to plant pollination, fertilisation, germination and seed dispersal To learn why some plants - Self.pollination and cross-pollination. Seed dispersal: animals. Wind, water, self dispersal. Seed dispersal. Seed	To understand that there			Key phrases nedeed	I:
 are distinct processes and related to plant pollination, stages in every life-cycle. To learn why some plants have flowers but not all. - To Understand the importance of pollen for plant reproduction and diversity. - To Understand the importance of pollen for plant reproduction and diversity. - Tecognise the huge variety of seeds from which plants arow. - To understand the importance of pollen for plant - Explain reproduction in flowering plants. - recognise the huge variety of seeds from which plants arow. 	- To understand that there	- Use termine	biogy and processes	is/are pollinated	<u>.</u> bv
 To learn why some plants Self.pollination and cross-pollination. Self.pollination and cross-pollination. Self.pollination. Seed dispersal: animals. Wind, water, self dispersal. Explain reproduction in flowering plants. recognise the huge variety of seeds from which plants arow. 	are distinct processes and	related to pla	ant pollination,	can be dispersed	by
 To learn why some plants have flowers but not all. _ To Understand the importance of pollen for plant reproduction and diversity. _ To Understand the importance of pollen for plant reproduction in flowering plants. _ recognise the huge variety of seeds from which plants arow. 	stages in every ine-cycle.	rennisation,	germination and	This is so that	
have flowers but not all. To Understand the importance of pollen for plant reproduction and diversity. To understand the importance of pollen for plant reproduction and diversity. To understand the importance of pollen for plant reproduction and diversity. To understand the importance of pollen for plant To understand the To understa	- To learn why some plants	- Self polling:	tion and cross-	takes place wher	۱
To Understand the importance of pollen for plant reproduction and diversity. To Understand the importance of pollen for plant reproduction and diversity. recognise the huge variety of seeds from which plants arow.	have flowers but not all	- Serr.polling	non und cross-	is called / is	s done by
- To Understand the importance of pollen for plant reproduction and diversity. - recognise the huge variety of seeds from which plants arow.	nave nowers but not un.	- Seed disner	sal: animals Wind	Key vocabulary:	,
importance of pollen for plant reproduction and diversity. - recognise the huge variety of seeds from which plants arow.	- To Understand the	water self d	ispersal	Pollination, fertilisat	tion, germination,
reproduction and diversity. - recognise the huge variety of seeds from which plants arow.	importance of pollen for plant	- Explain reproduction in seed dispersal, life-cycle, spread.			cycle, spread,
 recognise the huge variety of seeds from which plants arow. 	reproduction and diversity	flowering pla	nts.	insects &flowers nar	nes.
seeds from which plants arow.	,	- recognise 1	he huge variety of		
		seeds from w	hich plants grow.		



B.COGNITIONLanguage FOR learning: - Learning how to learn: pair and group work Children will know that flowering plants reproduce. Children will know that insects pollinate some flowers and how this is done Explain that seeds are formed after pollination when pollen fertilises the ovum - Use math skills by using a ruler to measure Analysing and checking previous hypothesis. - Sharing and comparing information Children will know that seeds can be dispersed in a variety of ways. Children will be able to make careful observations of fruits and seeds, to compare them and use results to draw conclusions Identify different ways of seed and fruits. - Order correctly the steps in the life cycle of a plant Understand the development of seed a plant.	TOPIC: POLLINATION, FERTILISATION & SEED	DISPERSAL	LESSONS 6, 7 & 8	TIMING 3 sessions	LEVEL: 5 th KS 2 year 1
	 B.COGNITION Children will know that flowering plants reproduce. Children will know that insects pollinate some flowers and how this is done. Children will know that seeds can be dispersed in a variety of ways. Children will be able to make careful observations of fruits and seeds, to compare them and use results to draw conclusions. 	B.COGNITIC - Explain the after pollin fertilises the - Use math sh to measure. - Identify dif seed disperse - Understand seeds and fru - Order cor the life cycle	DN at seeds are formed ation when pollen covum kills by using a ruler fferent ways of al the development of uits. rectly the steps in of a plant.	Language FOR learn - Learning how to lea work. - Analysing and che hypothesis. - Sharing and compa Language THROUGH - Use of dictionaries for extension reseau - Language revised b the learners during	hing: arn: pair and group cking previous aring information. H learning: s, bocklets, ICT och. by the teacher and the lesson.

CULTURE:

- The importance of plants to human beings to survive (eat, provide oxygen, monitor pollution levels, source of medicine...).
- We need to protect habitat around the world.
- Students develop understanding that many characteristics of an organism are inherited from the parents of the organism.

ASSESSMENT CRITERIA:

- Mainly through observation and questioning - a printout of the pupils work at various stages can be kept as a record of achievement.

- I will use students' activity worksheets, flower diagrams, displays.
- Their participation in the class discussion to assess their understanding of the topic.



TOPIC: ASEXUAL REPRO	DUCTION	LESSONS	SESSION	
		9 & 10	2 sessions	5‴
KEY SKILLS	Extracting c	onclusions that ma	ke it possible to to	ake decisions for
acting.				
TRANSFERABLE SKILLS				
Communicative skills:				
 To report obse 	rvations givin	g accounts of expe	riences and develop	arguments.
Methodological skills:				
 To apply study evaluation skills 	skills that ind	lude strategic thin	king and cooperatio	n and self-
Personal skills:				
 To create, dev and critical this 	elop and ass nking	ess collective proje	ects with confidenc	e, responsability:
 Describe various types of asexual reproduction that occurs in plant species vatious methods for the asexual propagation of plants. Students will be able to explain that asexual reproduction results in increase of cells that are identical to the parent. They will be able to disc advantages and disadvantages associated with sexual and asexual reproduct To grow a plant by vegetative propagation and understand why it m 				it species and esults in a rapid ble to discuss the reproduction. why it might be
TEACHING OBJECTIVES	LEARNIN Children	IG OUTCOMES will be able to:	COMMUNI	CATION
A.CONTENT	A.CONTEN	Г	Language OF learn	ing:
- Identify different	Identify different - Explain how one plan		Key phrases nedeo	<u>ed</u> :
methods of reproduction in	nethods of reproduction in both sexual and asexua			°е.
flowering plants.	reproduction	٦.	reproduces fr	°om
- Describe that in asexual - Name some of the asexual rep			reproduce by	•••••
reproduction all the	methods of	plant reproduction	<u>Key vocabulary</u> :	
inherites traits come from	and explain [.]	them.	Asexual (vegetativ	e) reproduction,
a single parent.			offspring, rhizome	s,tubers,
			runners, plantlets,	bulbs, corns,
			cutting,grafting, so	oil,
			geranium(pelargoni	iums).



 B. COGNITION To select a propagation method which is appropriate for the plant to be propagated. 	B.COGNITION - Successfully start a new plant by any means of vegetative propagation, from cuttings.	Language FOR learning: - Language to express opinions and hypothesis: <i>I think that In my opinion</i> - Language to express cause-effect and conclusions.
 How to carry out an investigation Compare how sexual and asexual reproduction passes genetic information from parent to offspring. 	- Identify different ways of asexual reproduction. - Transfer key language.	Language THROUGH learning: - Language to ask for something. - Language to carry on worksheets and presentations. - Language to report the project done.

CULTURE:

- We need to protect habitat around the world.
- Develop understanding that many characteristics of an organism are inherited from the parents of the organism.
- Respect for the principles of turn-taking.
- Interest in helping other pupils.

ASSESSMENT CRITERIA:

- Class participation and work.
- Observation during the activities.
- Peer and self-evaluation.
- Conduct an investigation to demonstrate the asexual reproduction of a geranium from a cutting.



Exploring Plant Reproduction and Seed Dispersal

http://www.evergreen.ca/en/lg/lessons/seed-prod.html

- Students should have prior knowledge of the following terms and processes: sexual reproduction in angiosperms, gymnosperms and spore-bearing plants; asexual reproduction in plants (from roots, stems and leaves); flower parts and functions (receptacle, corolla, petals, calyx, sepals, stamen, anther, filament, pistil, stigma, style, ovary); adaptations for plant reproduction and seed dispersal.
- Angiosperms are flowering plants that contain both the female reproductive organ (pistil) and the male reproductive organ (stamen). The seeds form inside the flower and become enclosed in a case when mature.
- Gymnosperms do not produce flowers. Most produce seeds inside cones. The seeds have a protective coat but they are not enclosed in a case (e.g. conifers such as pine and spruce).
- Mosses, liverworts and ferns reproduce sexually through spores.
- Asexual reproduction, or vegetative propagation, involves forming new plants from pieces of root (e.g. poplar trees), stem (e.g. strawberry) or leaf (e.g. Bryophyllum).
- The colour, shape and size of flowers is related to how they are pollinated. Insect-pollinated flowers usually have very showy, large colourful corollas that attract insects visually and act as landing platforms. They are usually scented and often contain nectar. Flowers pollinated by butterflies are frequently red. Those pollinated by moths are often white.
- Flowers that attract birds and bats often need to have large petals for landing.
- Wind-pollinated flowers are designed differently. They are often missing the calyx and corolla and have no nectar. Their stigmas are frequently large and feathery. They produce large amounts of pollen. Maple trees produce their flowers in clusters at the tips of branches in early spring.
- There are many mechanisms for seed dispersal:
 - *Wind* helicopter blades of maple seeds; silky white tufts of dandelion and milkweed seeds act like parachutes.



- Animals spines, hooks and barbs help some seeds to hitch hike on fur, feathers and clothes (e.g. burdock burr); some seeds have sticky substances that cling to passing animals; seeds may be dispersed through bird and mammal droppings; uneaten buried caches of seeds and nuts made by mice, squirrels and some birds develop into plants.
- *Water* floating coconuts, water lilies and purple loosestrife use water to disperse seeds.
- Tossed by Plants touch-me-not (jewel weed) and pea plant toss their seeds when the pods explode.
- Conifers reproduce by seeds that are formed in cones. A cone is made of scales. Scales are modified leaves. Cones are produced by the sporophyte, usually in the spring. A sporophyte is a life-cycle phase of plants which have diploid nuclei; during this phase, spores are produced. The wind transfers pollen from male cones to female cones that display open scales.
- The pine tree produces soft male cones in clusters at the base of the new spring shoots. These cones last only one or two weeks. Each of their scales produces haploid male spores by meiosis. These spores are called pollen grains. Before a pollen grain is shed, the cell inside divides to form the male gametophyte. This gametophyte is protected by a thick wall around the pollen grains. In pine, part of the wall bulges to form two wings.
- The female cones, (or seed cones), of conifers are much larger and harder than the male cones. In many species, they become quite woody as they mature. The typical "pine cone" that one might collect on a forest floor is a woody female cone.
- Once some pollen reaches the female cones, the scales close up. The pollen grains germinate inside the cone.



+

Example of sentences that you can use
1. I can definein English.
2. I can recognise
3. I can name thein English
4. I can identifyusing a key.
5. I can remember
6. I know the main features of
7. I know whatis/are.
8. I can describein English
9. I can classify
10. I know about
11. I know how
12. I can collect
13. I can find information about
14. I can present that information in English.
15. I work cooperatively
16. I can list
17. I can explain
18. I know where
19. I can help my classmates.
20. I need some classmates' help.
21. I can divide
22. I understand the teacher explaining in English.