STRATEGIC INTERVENTION MATERIAL (SIM) IN SCIENCE 5

BEYOND ITS EXISTENCE

(MODES OF REPRODUCTION OF FLOWERING PLANTS)

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LA PURISIMA CONCEPCION ELEMENTARY SCHOOL

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BEYOND ITS EXISTENCE
(Modes of Reproduction of Flowering Plants)

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SNEAK PEAK!!!

Hello Little Explorer!

Kikay is always ready for an adventure but she needs your help to explore her world. She's a ten-year-old explorer with a positive attitude. She goes on journeys, makes new friends, discovers new worlds, and learns new things. Kikay's new mission is to keep our surroundings refreshing, fruitful and beautiful by planting more plants. Do you want to join her?

Plants give us food, shelter, fresh air, shade, and add color and beauty to our surroundings. But have you ever asked how plants reproduce?

LET'S START IT UP!

TASK: Modes of Reproduction of Flowering Plants.(S5LT-IIg-7)

Hooray!!! Let's get our map and ourselves ready to explore. We will be your tour guides all throughout this mission. So, set back, relax, enjoy and have fun!!!

SUB TASK

We will explore in Kikay's and Kokoy's garden and help them discover the modes of reproduction of flowering plants.

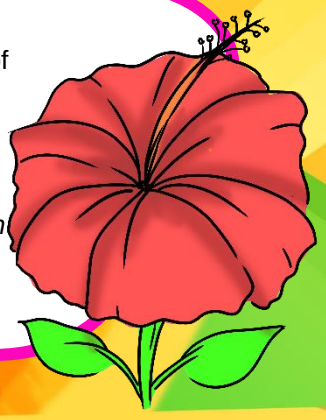
1. Identify the Modes of Reproduction of Flowering Plants.
2. Differentiate sexual reproduction from asexual reproduction.
3. Develop appreciation and how to take good care of our plants.

GUIDE CARD

ACTIVITY 1

A starter activity helps pupils to familiarize words and know its meaning related to Modes of Reproduction of Flowering Plants.

The teacher will give a map with words associated with the modes of plant reproduction to pupils and allow them to write their answer on the space provided below the map.



ACTIVITY 2

"Fix and complete me my Friend"

In this activity pupils can develop social interaction with peer and be able to help each other to arrange the jumbled letters and come up with the correct answer.

The teacher will let the pupils find a partner and let them collaborate to rearrange the jumbled letters to find the correct answer to complete the sentence related to reproduction.

ACTIVITY 3

"**Group Me In**"

Another fun activity with classmates by helping each other to look for the definition of sexual and asexual reproduction.

The teacher will group the pupils into three and they will be given statements related to sexual and asexual reproduction. They are to make two columns labelled it as sexual and asexual reproduction. The pupils will identify the statements whether it describes sexual or asexual reproduction and they are to write it below each column. Finally, the assigned reporter for each group will post and present their output.

ACTIVITY 4

"Check In, Cross Out"

In this activity, pupils are able to identify whether the plant is sexually or asexually reproduce.

The teacher will give an individual activity sheet to each pupils where they can apply their learnings on sexual or asexual reproduction. They are to identify how plants reproduced by putting a check in the box before it if the plant reproduces sexually and cross out if it reproduces sexually.

ACTIVITY 5

"Turn Around"

A fun and exciting activity towards self-realization of knowing other plants that plants to all living things including us humans.

The teacher will group the pupils into 5 and let them visit their school garden where they can observe and identify/name the plants they have seen. Let the pupils discuss and cooperatively answer the guide questions given to them.

"Mini Me"

A manipulative activity which will enhance and develop the creativity of the pupils in making a mini-garden of flowering plants. Fun and excitement await!

The teacher will let the pupils make a mini garden creatively using indigenous and recyclable materials where flowering plants that reproduced sexually and asexually can be found. A rubric will be presented to them as their guide on how they will be assessed.

ASSESSMENT

ACTIVITY 1

I'm on the MAP

Let's do this. Search the map for words that you think are related to or has relationship to the Lesson! Write your answer on the number below the map .Let's start it off!

1._____
2._____
3._____
4._____
5._____

6._____
7._____
8._____
9._____
10._____

ACTIVITY 2

"Fix and complete me, my Friend"

Directions: Look for your partner and help each other to arrange the jumbled letters in the box and write the correct answer to complete the sentence.

EXSULA RPEROUDCITION

1._____ starts in the flower which produces seeds.

SAEXALU RPEROUDCITION

2._____ is producing new plants wherein no sex cells, no seeds are involved.

LLOPINITONA

3._____ is the transfer of pollen grains from the anther to the stigma of the same or of another flower of the same kind.

NOITAZILITREF

4._____ takes place in the ovary when the sperm cell unites with the egg cell.

WEOLFRNGI

5._____ plants reproduce sexually and asexually.

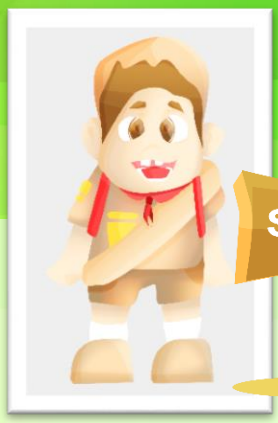
"GROUP ME IN"

ACTIVITY 3

Directions: Group yourselves into three. Choose your leader, secretary and reporter. Read the statements below. Make two columns for sexual and asexual reproduction. List down the statement that describes each column. After 3 minutes, post and report your output.

SEXUAL	ASEXUAL

1. Only one parent plant is involved.
2. Both male and female parents are involved
3. Occurs in bisexual plants
4. No need of seeds
5. Seeds are used to get new plants from a flower.
6. Occurs in unisexual plants
7. Occurs in lower plants
8. Reproductive organs are not present.
9. Occurs in higher plants
10. Fully developed reproductive parts are not present



Start

ACTIVITY 4

"Check In, Cross out"

Directions: Tell whether the following plants produce sexually or asexually. Put a check ☑ inside the box if the mode of reproduction is Sexual and cross out ☒ the box if it is Asexual.

1. ☐ onion
2. ☐ ampalaya
3. ☐ santol
4. ☐ camote
5. ☐ potato
6. ☐ eggplant
7. ☐ mango
8. ☐ ginger
9. ☐ rose
10. ☐ papaya

Excellent! You're just about to master the lesson.

Finish

ACTIVITY 5

"TOUR AROUND"

Directions: Work with a small group, preferably 5 members per group. Connect yourself to the wonderful creation of God! Tour around for 3 minutes. During the tour, appreciate the beauty of all the plants that surrounds you. Remember the name of the plants you have seen. After which, be with your group for a short discussion. Share your ideas and observations with your group and answer the following question.

1. List down at least 5 flowering plants that produce sexually and 5 flowering plants that produce asexually.
2. Differentiate sexual reproduction from asexual reproduction.
3. What are your observations about the plants while having a tour together with your classmates?
4. What did you feel about the tour?
5. As a pupil, how will you help protect the plants?

Congratulations! They are still on the right track, they certainly did well today!

ASSESSMENT CARD

"Test Your Wits, Let's Find Out Your Understanding"

PUPIL'S NOTES

HOW MUCH DID I LEARN?
PUT A CHECK ON THE BOX.

☐  **Much more**

☐  **More**

☐  **Less**

☐  **Nothing**

I. Directions: Read the questions carefully. Encircle the correct answer.

1. When plants reproduce through other plant parts like stems and leaves, _____ takes place.
   a. sexual reproduction c. asexual reproduction
   b. fertilization d. pollination
2. What type of reproduction happens in mango and santol trees?
   a. sexual reproduction c. asexual reproduction
   b. fertilization d. pollination
3. Which of the following plants do not grow from seeds?
   a. guava c. rambutan
   b. kangkong d. avocado
4. Plants that reproduce sexually and asexually are called?
   a. trees plants c. shrub plants
   b. flowering plants d. non-flowering plants
5. Which of the following does not describe sexual reproduction in flowering plants?
   a. Flowering plants reproduce through seeds.
   b. Flowering plants reproduce through other plant parts.
   c. Sexual reproduction takes place when there is fertilization.
   d. Sexual reproduction takes place when flowers produce seeds.

II. Directions: Connect the plants to where they belong.

6. lanzones
7. rose
8. squash
9. gumamela
10. papaya

 Sexual reproduction

 Asexual reproduction

ENRICHMENT CARD

"Mini me"

Directions: Make a mini-garden out of indigenous and recyclable materials, where we can find flowering plants that reproduce sexually or asexually. Be creative enough in making your mini-garden using the rubrics below. (Note for teacher: Optional, you may give 3-5 days to finish their work).

GO GUYS! YOU CAN DO IT!

RUBRICS

CRITERIA	5 POINTS	3 POINTS	1 POINTS
1.Creativity	Demonstrates creative thinking and the performance has innovative and unique qualities/concepts	Demonstrates moderate creative thinking and the performance has innovative and unique qualities/concepts	Lacks imaginative thinking and the performance lacks/has no innovative and unique qualities/concepts
2.Content Organization	Concepts presented are very substantive and well-organized and conveyed very clear message.	Concepts presented are moderately substantive and well-organized and conveyed ambiguous message.	Both the concepts presented and the message conveyed are not well-organized and ambiguous message.
3.Neatness	Cleanliness and orderliness is very evident.	Cleanliness and orderliness is moderately evident	Cleanliness and orderliness is not evident
4.Timeliness	Submits the work before the deadline.	Submits the work on time.	Submits the work after the deadline.

PUPIL'S NOTES

For this task. I want to do it.
Draw a box on the picture.

Alone

With one of  **my classmate**

With a group

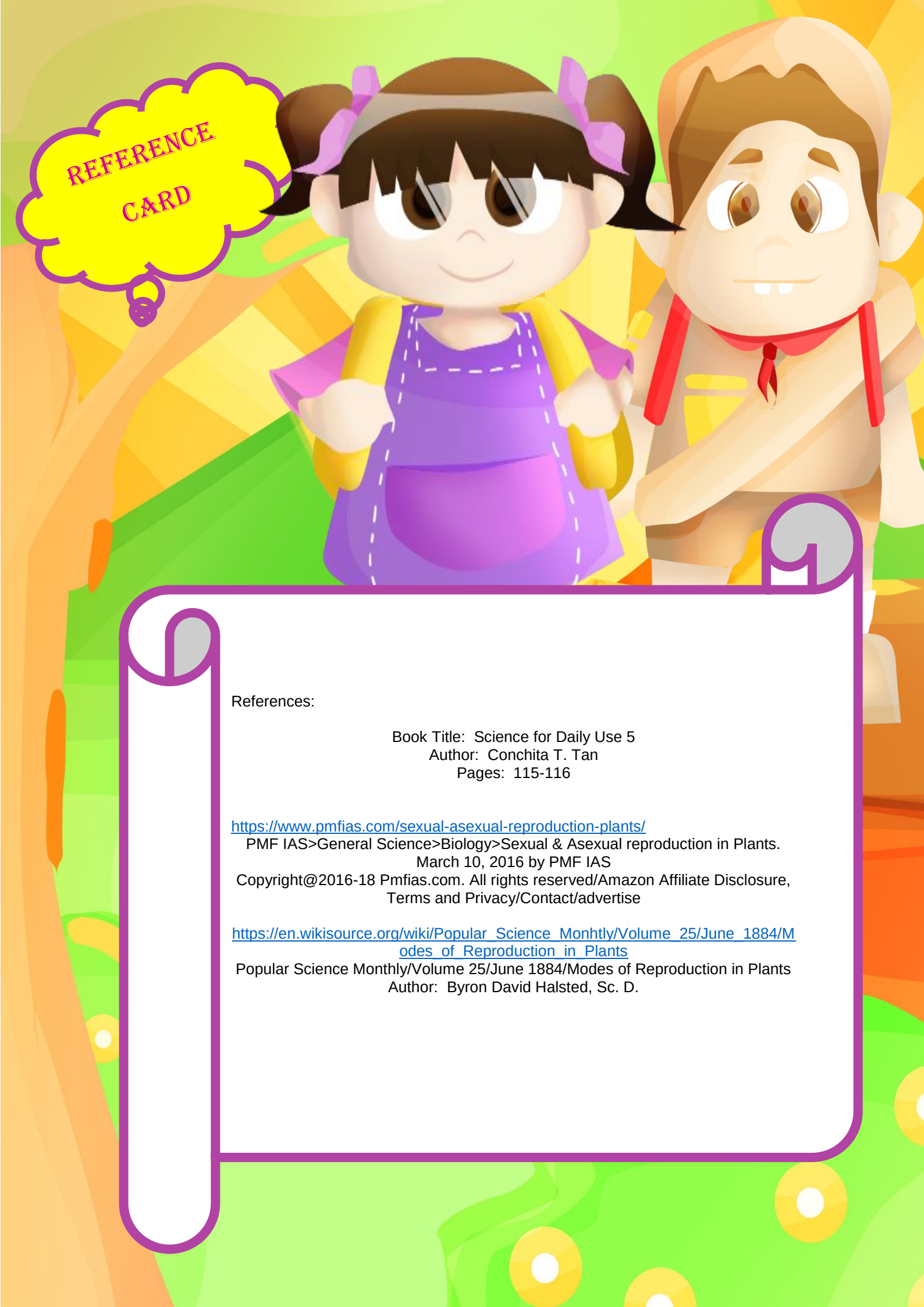
REFERENCE CARD

CONCEPTS

Plant reproduction is the production of new individual or offspring in plants, which can be accomplished by sexual or asexual reproduction. In Sexual reproduction new plants are detained from seeds while in Asexual reproduction, plants can give rise to new plants without seeds. Sexual reproduction produces offspring by the fusion of gametes, resulting in offspring genetically different from the parent or parents. Asexual reproduction produces new individuals without the fusion of gametes, genetically identical to the parent plant and each other. In seed plants, the offspring can be packaged in a protective seed, which is used as an agent of dispersal. Sexual reproduction involves two fundamental processes: meiosis, which rearranges the genes and reduces the number of chromosomes and fertilization, which restores the chromosome to a complete diploid number. In between these two processes, different types of plants undergo alternation of generations, with two different multicellular structures (phases), a gametophyte and sporophyte. Asexual reproduction may happen through budding, fragmentation, fission, spore formation and vegetative propagation.

CHARACTERISTICS OF SEXUAL & ASEXUAL REPRODUCTION

ASEXUAL	SEXUAL
➢ Only one parent plant is involved.	➢ Both male and female parents are involved.
➢ Occurs in unisexual plants	➢ Occurs in Bisexual plant
➢ Occurs in lower plants	➢ Occurs in higher plants
➢ Reproductive organs are not present.	➢ Fully developed reproductive parts are present.
➢ In most of the methods the original parents disappear.	➢ Original parents remain alive after process of reproduction
➢ Process like gamete formation on fertilization is not seen.	➢ Fertilization of gametes give rises to zygote.
➢ Characteristics of only one parent is inherited	➢ Characteristics of both parents are inherited
➢ No need of seeds.	➢ Seeds are used to get new plants from a flower.



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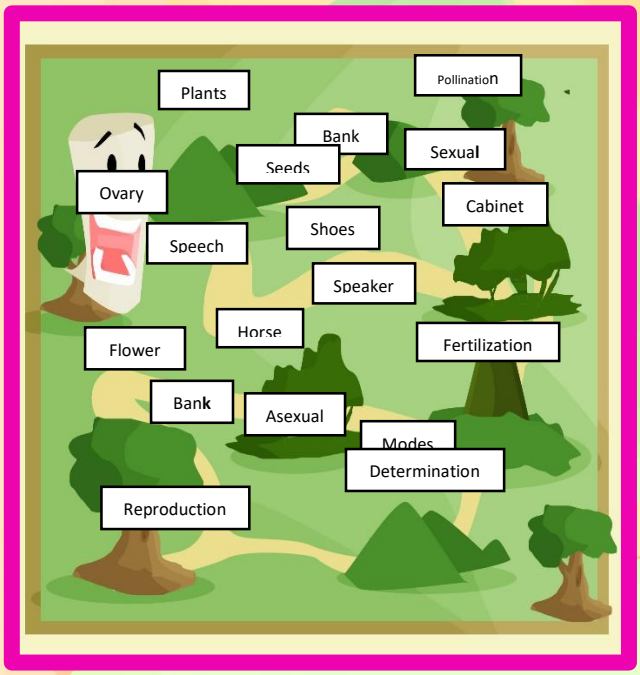
Author: Byron David Halsted, Sc. D.

LET'S CHECK IT OUT, LITTLE EXPLORER!!!

ANSWER KEY

ACTIVITY 1: I'M ON THE MAP



1.Plants
2.Ovary
3.Sexual
4.Asexual
5.Modes
6. Pollination
7. Seeds
8. Flower
9. Reproduction
10. Fertilization

ACTIVITY 2: FIX & COMPLETE ME, MY FRIEND

1. SEXUAL REPRODUCTION starts in the flower which produce seeds
2. ASEXUAL REPRODUCTION is producing new plants wherein no sex cells, no seeds are involved.
3. POLLINATION is the transfer of pollen grains from the anther to the stigma of the same or of another flower of the same kind.
4. FERTILIZATION take place in the ovary when the sperm cell unites with the egg cell.
5. FLOWERING plants reproduce sexually and asexually.

ACTIVITY 3: GROUP ME IN

ASEXUAL	SEXUAL
1. Only one parent plant is involved.	1. Both male and female parents are involved.
2. Occurs in unisexual plants	2. Occurs in Bisexual plant
3. Occurs in lower plants	3. Occurs in higher plants
4. Reproductive organs are not present.	4. Fully developed reproductive parts are present.
5. No need of seeds.	5. Seeds are used to get new plants from a flower.

ACTIVITY 4: CHECK IN, CROSS OUT

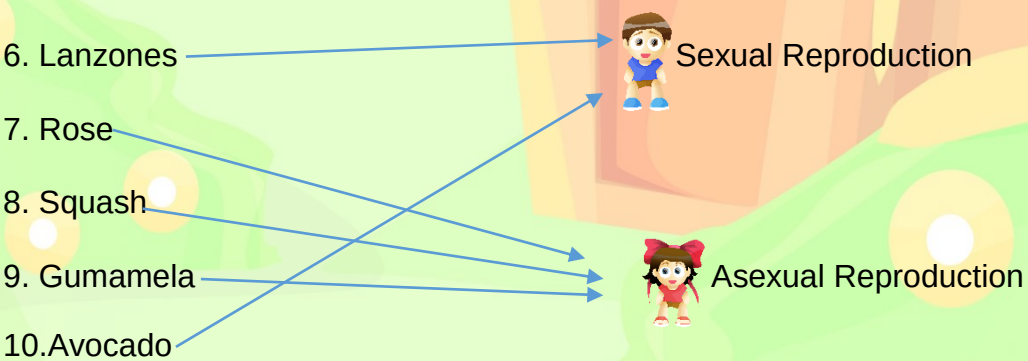
1. ☒ onion
2. ☑ ampalaya
3. ☑ santol
4. ☒ camote
5. ☒ potato
6. ☑ eggplant
7. ☑ mango
8. ☒ ginger
9. ☒ rose
10. ☑ papaya

ACTIVITY 5: TURN AROUND

1. Answers vary
2. Answers vary
3. Answers vary
4.Answers vary
5.Answers vary

ASSESSMENT: **"Test Your Wits, Let's Find Out Your Understanding"**

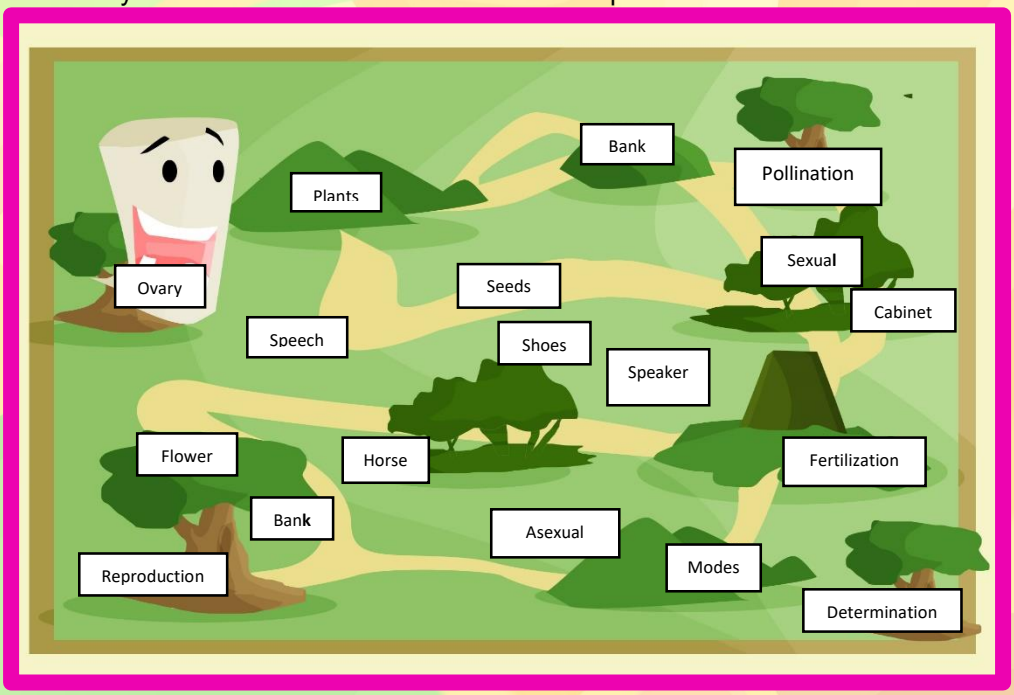
1.b 2.a 3.b 4.c 5.b



NAME:_____ GRADE & SECTION_____

ACTIVITY 1: I'M ON THE MAP

Directions: Let's do this. Search the map for words which you think are related or has relationship to the Lesson!!!! Write your answer on the number below the map. Let's start it off!



1._____
2._____
3._____
4._____
5._____
6._____
7._____
8._____
9._____
10._____

NAME:_____ GRADE & SECTION_____

ACTIVITY 2: FIX AND COMPLETE, ME MY FRIEND

Directions: Look for a partner and help each other to arrange the jumbled letters in the box and write the correct answer to complete the sentence.

EXSULA RPEROUDCITION

1._____ starts in the flower which produce seeds.

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2._____ is producing new plants wherein no sex cells, no seeds are involved.

LLOPINITONA

3._____ is the transfer of pollen grains from the anther to the stigma of the same or of another flower of the same kind.

NOITAZILITREF

4._____ take place in the ovary when the sperm cell unites with the egg cell.

WEOLFRNGI

5._____ plants reproduce sexually and asexually.

NAME:_____ GRADE & SECTION_____

ACTIVITY 3: "GROUP ME IN"

Directions: Group yourselves into 3. Choose your leader, scribe and reporter. Read the statements below. Make two columns for sexual and asexual reproduction. List down the statement that describes each column. After 3 minutes post your output and have a reporting.

SEXUAL	ASEXUAL

1.Only one parent plant is involved.
2.Both male and female parents are involved
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8.Reproductive organs are not present.
9.Occurs in higher plants
10.Fully developed reproductive parts are not present

NAME:_____ GRADE&SECTION_____

ACTIVITY 4: "CHECK IN, CROSS OUT"

Directions: Tell whether the following plants produce sexually or asexually. Put a check inside the box ☑ if the mode of reproduction is Sexual and cross out the box if it is Asexual. ☒

1. ☐ onion
2. ☐ ampalaya
3. ☐ santol
4. ☐ camote
5. ☐ potato
6. ☐ eggplants
7. ☐ mango
8. ☐ ginger
9. ☐ rose
10. ☐ papaya

NAME:_____ _____GRADE & SECTION_____

ACTIVITY 5 : "TOUR AROUND"

Directions: Work with a small group, preferably, 5 members per group. Connect yourself to the wonderful creation of God! Tour around for 3 minutes. During the tour, feel the beauty of all the plants that surrounds you. Remember the name of the plants you have seen.

After which, be with your group for a short discussion. Share your ideas and observations with your group and answer the following collaboratively.

1.List down at least 5 flowering plants produce sexually and 5 flowering plants asexually.

2.Differentiate sexual reproduction from asexual reproduction.

3.What are your observation about the plants while having a tour together with your classmates?

4.What did you feel about the tour?

5.As a pupil, how will you help protect our plants?

NAME:_____GRADE & SECTION_____

ASSESSMENT:

I. Read the questions carefully. Encircle the correct answer.

1. When plants reproduce through other plant parts like stems and leaves, _____ takes place.
   a. sexual reproduction c. asexual reproduction
   b. fertilization d. pollination
2. What type of reproduction happens in mango and santol trees?
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4. Plants reproduce sexually and asexually is called?
   a. trees plants c. shrub plants
   b. flowering plants d. non-flowering plants
5. Which of the following does not describe sexual reproduction in flowering plants?
   a. Flowering plants reproduce through seeds.
   b. Flowering plants reproduce through other plant parts.
   c. Sexual reproduction takes place when there is fertilization.
   d. Sexual reproduction takes place when flowers produce seeds.

II. Connect the plants to where it belongs.

6. lanzones
7. rose
8. squash
9. gumamela
10. apaya


Sexual reproduction


Asexual reproduction