



PIVOT^{4A}

LEARNER'S MATERIAL

EPP (Agriculture and Fishery Arts) **G6**



DepEd CALABARZON
Curriculum and Learning Management Division

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EPP

(Agriculture and Fishery Arts)

Grade 6

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Guide in Using PIVOT 4A Learner's Material

For the Parents/Guardians

This module aims to assist you, dear parents, guardians, or siblings of the learners, to understand how the materials and activities are used in the new normal. It is designed to provide information, activities, and new learning that learners need to work on.

Activities presented in this module are based on the Most Essential Learning Competencies (MELCs) in **EPP (Agriculture and Fishery Arts)** as prescribed by the Department of Education.

Further, this learning resource hopes to engage the learners in guided and independent learning activities at their own pace. Furthermore, this also aims to help learners acquire the essential 21st century skills while taking into consideration their needs and circumstances.

You are expected to assist the children in the tasks and ensure the learner's mastery of the subject matter. Be reminded that learners have to answer all the activities in a separate sheet of paper.

For the Learners

The module is designed to suit your needs and interests using the IDEA instructional process. This will help you attain the prescribed grade-level knowledge, skills, attitude, and values at your own pace outside the normal classroom setting.

The module is composed of different types of activities that are arranged according to graduated levels of difficulty—from simple to complex. You are expected to :

- a. answer all activities in your notebook;
- b. accomplish the **PIVOT Assessment Card for Learners on page 38** by providing the appropriate symbols that correspond to your personal assessment of your performance; and
- c. submit the outputs to your respective teachers on the time and date agreed upon.

Parts of PIVOT 4A Learner's Material

	K to 12 Learning Delivery Process	Descriptions
Introduction	What I need to know	This part presents the MELC/s and the desired learning outcomes for the day or week, purpose of the lesson, core content and relevant samples. This maximizes awareness of his/her own knowledge as regards content and skills required for the lesson.
	What is new	
Development	What I know	This part presents activities, tasks and contents of value and interest to learner. This exposes him/her on what he/she knew, what he/she does not know and what he/she wants to know and learn. Most of the activities and tasks simply and directly revolve around the concepts of developing mastery of the target skills or MELC/s.
	What is in	
	What is it	
Engagement	What is more	In this part, the learner engages in various tasks and opportunities in building his/her knowledge, skills and attitude/values (KSAVs) to meaningfully connect his/her concepts after doing the tasks in the D part. This also exposes him/her to real life situations/tasks that shall: ignite his/ her interests to meet the expectation; make his/her performance satisfactory; and/or produce a product or performance which will help him/her fully understand the target skills and concepts .
	What I can do	
	What else I can do	
Assimilation	What I have learned	This part brings the learner to a process where he/she shall demonstrate ideas, interpretation, mindset or values and create pieces of information that will form part of his/her knowledge in reflecting, relating or using them effectively in any situation or context. Also, this part encourages him/her in creating conceptual structures giving him/her the avenue to integrate new and old learnings.
	What I can achieve	

This module is a guide and a resource of information in understanding the Most Essential Learning Competencies (MELCs). Understanding the target contents and skills can be further enriched thru the K to 12 Learning Materials and other supplementary materials such as Worktexts and Textbooks provided by schools and/or Schools Division Offices, and through other learning delivery modalities, including radio-based instruction (RBI) and TV-based instruction (TVI).

Importance of Planting and Propagating Trees and Fruit-bearing Trees and Marketing of Seedlings

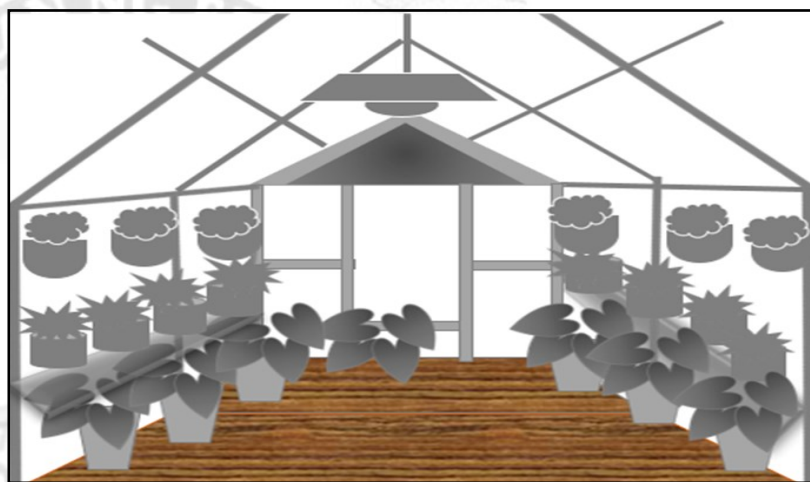
Lesson

I

Trees are one of the important sources of life on earth. If the trees did not exist, we wouldn't have such a beautiful environment to live in. Their importance cannot be taken for granted. In humans, plants are the major source of food as in the case of many fruit-bearing trees. They also provide a better and healthier environment by giving off oxygen.

In this lesson, you will know the importance of planting and propagating trees and fruit-bearing trees and how to market their seedlings.

Look at the picture below. Imagine the things you need to prepare, as well as the steps you have to take in planting the seedlings. What do you have to prepare first? What are the steps you have to take?



Importance of planting trees and fruit-bearing trees to the family and community

Trees are valuable to the family and the community for the products and amenities they give such as:

1. food like fruits, vegetables, nuts, and sugar;
2. wood used as fuel for cooking and heating;
3. construction materials which include lumber, plywood, and board;
4. fiber for the production of pulp and paper; and
5. chemical products such as resin, rubber, and turpentine.

Other Benefits Derived from Trees. There are benefits derived from trees to maintain a healthy environment. Some of these are:

1. They provide shade, fresh air to breath in the house and along the streets and surroundings.
2. They protect the soil from erosion.

3. They help maintain high quality water supply.
4. The root system promotes soil stability.
5. They serve as valuable wildlife habitats.
6. They serve as windbreakers during typhoons and storms, thus, reducing the destruction of home and agricultural crops.
7. They help reduce pollutions in congested urban areas.
8. They contribute to the beautiful landscapes in the city and the countryside.
9. They improve the atmosphere of a place by giving a feeling of freshness and coolness as they reduce temperature.
10. They prevent river and lake sedimentation.
11. They prevent flood.

A seedling is a very young tree, perhaps 1 or 2 years old, that has been grown from seed or other plant parts in a nursery until such time it is ready to be planted/transplanted in the field.

Nowadays, many people realized the value of planting home-grown vegetables and even fruits especially if they have enough space in their backyard. Some of them even decide to turn their hobby of planting vegetables and fruit-bearing trees into a source of additional income.

Strategies on marketing seedlings

1. Plan a marketing strategy-a plan of action designed to promote and sell a product or service.
2. Read as many articles/ information as you can or research on how to grow seedlings and care for them.
3. Know what kind of seedlings are in demand in the market.
4. Choose seedling varieties to grow and sell.
5. Choose the right container for your seedlings.
6. Label the seedlings.
7. Decide on how you will advertise these seedlings
8. Be able to determine the market price for your seedlings considering your expenses in growing them.
9. Choose an appropriate marketing strategy (ex. Home garden display, market selling or online selling)

D

Learning Task 1: Write **FACT** if the statement is correct and **BLUFF** if it is incorrect. Write your answer on a sheet of paper.

- _____ 1. Trees are man's source of food.
- _____ 2. Trees are source of carbon dioxide
- _____ 3. Many trees cause pollution.
- _____ 4. Trees intake carbon dioxide from air and breathe out fresh oxygen for our life support.
- _____ 5. The roots of the tree hold the soil and water preventing soil from erosion.

E

Learning Task 2: Read the statement carefully and choose the letter of the correct answer and write them in your Answer Sheet.

- 1. _____ is a tree which bears fruit that is consumed or used by humans and some animals.
 - A. Fruit-bearing tree
 - B. Plant propagation
 - C. Seedling
 - D. Tree
- 2. _____ a young plant, especially one raised from seed and not from a cutting.
 - A. Fruit-bearing tree
 - B. Plant propagation
 - C. Seedling
 - D. Tree
- 3. _____ is the process of reproducing a new plant or seedling.
 - A. Tree
 - B. Plant propagation
 - C. Seedling
 - D. Tree
- 4. The following statements are the strategies in marketing the seedlings except for one.
 - A. Plan a Marketing Strategy.
 - B. Choose variety of seedlings to grow.
 - C. Sell the seedlings through home-based display, online selling, etc.
 - D. Segregate waste.

5. What are the importance of trees and fruit-bearing trees in our lives?

- I. They release oxygen that we breathe.
- II. They pollute the air.
- III. They are a major source of food and medicine
- IV. They contribute to flood and soil erosion.
- V. All of the statements above are importance of trees.

A. I only B. I and III only C. I, III, IV D. V only



Learning Task 3: Read the situation. Plan a Marketing Strategy for your Seedlings. Copy the table on your pad paper. Write down your strategies.

Your Mother has a nursery in your backyard. She has different varieties of seedlings like mango, santol, sampaloc, guava, and jackfruit. How will you help your mother market her seedlings?

Products	Target Customers	Strategies	Budget	Place of Selling

Rating Scale: Clarity of the Marketing Strategy

- 5-Excellent 2- Unsatisfactory
- 4-Very satisfactory 1- Poor
- 3-Satisfactory

Orchard Gardening

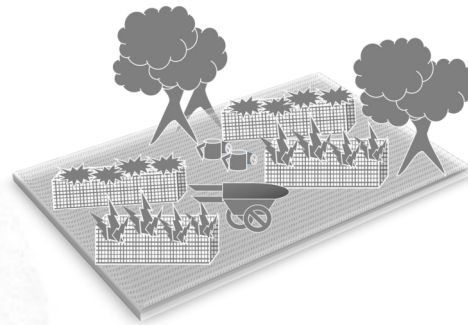
Lesson

I

In this lesson, you will learn the use of technology in the conduct of survey to find out the following:

- Elements to be observed in planting trees.
- Market demands for fruits.
- Famous orchard farms in the country.

Growing fruit trees require lots of things, but your efforts will be rewarded with a delicious crop of mangoes, jackfruits, bananas or another tasty treat. To obtain good harvests, you need to understand the different environmental factors that affect the growth of trees. The natural habitat of a given tree is a combination of environmental factors which includes the physical and chemical properties of the soil, air, light, rainfall, temperature, gravity as well as other plants and animals.



Elements to be observed in planting trees

1. Proper care of plants and soil — Choose the best place for planting and the best seeds that best suit the season and the soil. Put sufficient fertilizers in the soil before planting. Take care of the soil and the plants regularly.
2. Methods of planting - different trees are planted in different ways- Direct planting- the seed or any propagating part of a plant is directly planted in the soil where it will germinate and grow into full-grown trees. Indirect planting- the newly germinated seedlings are allowed to grow in the nursery until such time that they are ready to be transplanted in the field.
3. Preparing seeds for planting — different seeds have different preparation before planting (ex. Placing the seeds under the sun, removed from their hard shells before planting, dried before planting, soaked in water , etc.)
4. Preparation of seedlings before planting- A. Thinning- to produce strong plants, pull out some crowded seedlings. B. Pricking- this is done when transferring seedlings from one seed box to another to provide more space for proper development. C. Hardening-the process of gradual exposure of seedlings to sunlight which is done 7 to 15 days before transplanting.

Market Demands for Fruits

To ensure success in selling fruits, the farmer or seller should consider the following market demands:

1. Buyer selects fruits and other products of good quality, usually based on size, shape and appearance.
2. Good quality fruits have the same appearance, size, stage of maturity, state of freshness and shape.

Market Demands for Fruits

To ensure success in selling fruits, the farmer or seller should consider the following market demands:

1. Buyer selects fruits and other products of good quality, usually based on size, shape and appearance.
2. Good quality fruits have the same appearance, size, stage of maturity, state of freshness and shape.
3. Fruits should be in the freshest state when being sold. They can command higher prices.
4. Pack fruits properly in good container to maintain their freshness and to avoid cuts, bruises and blemishes.
5. Price your products based on the current price on the market. Going with the current market price makes your product competitive.

Famous Orchard Farms in the Country

1. Rosa Farms – A sprawling 12.5-hectare farm located at Km. 156 National Highway, San Marcelino-San Antonio Boundary, Zambales. The property was purchased by David Jacson and Rosa Magsaysay way back in the 1920s. By 2011, the farm was renamed as Rosa Farms under the management of Ding and Nelda Zulueta. Today, it is not just an ordinary mango orchard but an agri-tourism destination, as well as venue for team building, and corporate events, camping and family outing, educational tours, rest and recreation.
2. Gapuz Grapes Farms – Cirilo Gapuz started the business in the 1980s to provide for his family. Thirty years on, the farm has produced beyond expectations. The family also helped neighboring famers and interested locals in planting grapes. The farm is in Barangay Urayong, Bauang, La Union.
3. Rock Farm - If you are from Sunkist, Hamlin, and ponkan variety – then visit Rock Farm at Café Bodega in Staunton Road, Sagada, Mountain Province. Entrance fee is Php. 50.00 (you can eat as much as you want inside the farm). Orange picking season is from November to February.

4. **Philippine Mango Seedling Farm Corp.** (PMSFC)- A family-owned and operated agricultural enterprise situated in the border of Candaba, Pampanga and Baliuag, Bulacan. The company was established mainly for three objectives: 1.) environmental preservation through youth education; 2.) strengthening of the mango industry by ensuring the constant and sustainable supply of mango produce; and 3.) livelihood enhancement through corporate involvement by promoting mango farming.

D

Learning Task 1. Draw a happy face 😊 if the statement shows elements to be observed in planting trees and fruit- bearing, a sad face if ☹️ the statement is wrong. Do this on a separate sheet of paper.

- _____ 1. Put insufficient fertilizers in the soil before planting.
- _____ 2. Proper care of plants and soil is important for a healthy and bountiful harvest.
- _____ 3. Newly germinated seedlings are allowed to be transplanted in the field.
- _____ 4. Pricking is the process of gradual exposure of seedlings to sunlight
- _____ 5. Take care of the soil and the plants regularly.

E

Learning Task 2: Read the statement carefully. Choose the letter of the correct answer and write them in your Answer Sheet.

- _____ 1. It is one of the most challenging activities in orchard gardening.
A. planting B. harvesting C. marketing D. selling
- _____ 2. What are the characteristics of fruits to be harvested to reach the market in a good condition?
A. unripe fruits B. with bruises and blemishes
C. fruits of good quality and maturity D. fruits that are very ripe

- _____3. Why fruits should be harvested carefully?
- A. to avoid cuts that may lead to rotting B. to sell easily in the market
C. to consume time D. to meet the market demand

_____4. These are the elements to be observed in planting trees.

- I. Proper care of plants and soil. III. Preparing Seeds for planting
II. Methods of planning IV. Preparation of seedlings before planting

- A. I and II B. I, III, IV C. I, II and III D. All of the above

_____5. The following statements are the market demands for fruits except one. Which does not belong to the group?

- A. Buyer selects fruits and other products of good quality, usually based on size, shape and appearance.
B. Good quality fruits have the same appearance, size, stage of maturity, state of freshness and shape.
C. Fruits should be in the freshest state when being sold.
D. Pack fruits improperly in good container to maintain their freshness and to avoid cuts, bruises and blemishes.



Learning Task 3: Fill out the table with the information of the famous orchard farms in the country. Write your answer in a whole pad paper.

Name of the Orchard/ Farm	Location	Owner	Kind of Trees/ Plants Planted
Rosa Farm			
Agapuz Grapes Farm			
Rock Farm			
Philippine Mango Seedling Farm Corp			

Types of Orchard Farms and Sources of Fruit-Bearing Trees

Lesson

I

In this lesson, you will know the types of orchard farms, trees appropriate for orchard gardening based on location, climate and market demands, proper way of planting/ propagating trees and fruit-bearing trees (budding, marcotting, grafting), sources of fruit-bearing trees, how to care for seedlings and prepares layout design of an orchard garden using the information gathered.

Have you been to a market/ supermarket recently? Were you amazed with the different fruits found in the fruit and vegetables section? Have you ever wondered where are all those fruits coming from?

Most probably those fruits come from a local orchard in your community. Orchards abound in the countryside where mangoes, bananas, jackfruits, guavas, santol (cotton fruits), and many other tropical fruits grow.

Types of Orchards

1. **Fruit Orchards-** Fruit orchards include any facility focused on growing tree-bearing fruits. Citrus trees, such as those bearing lemons, limes or oranges, may be grown all together in large citrus orchards, or individually in smaller facilities. Plantations that grow fruit-bearing bushes generally don't fall under this category. These include fruits not grown on trees.

Example of Fruit Orchards- Banana Plantation, Mango Plantation, Citrus (Calamansi) Plantation, Durian Plantation

2. **Nut Orchards-** Nut orchards include a large variety of facilities that produce nut bearing trees. These include orchards that grow popular nuts like cashews, walnuts and almonds. This category also includes cocoa and chocolate-producing nuts, as well as coconuts. Some orchard owners produce pine trees for their edible cashew nuts.
3. **Seed Orchards -**Seed orchards focus primarily on growing trees that produce seeds rather than nuts or fruit. These seeds are then sold to commercial distributors for resale to the public in small seed packets .

Proper way of Propagating Trees and Fruit-Bearing Trees

1. **Budding** - The process by which a scion with a bud is inserted into the rootstock to unite and grow as one. It is done by choosing and cutting a bud from one plant and attaching it to another plant. The bud must fit well to the mother plant. When the bud grows big enough it will become part of the plant.

2. **Grafting** — In this method, a new plant is grown by inserting a scion into the stock so that they will form a union and grow together. The scion and the rootstock should come from the same specie or family.

3. **Marcotting or Air Layering** — Air layering is a propagation method for woody plants that allows you to root branches while still attached to the parent plant. It is useful for plants that are hard to propagate by cutting.

Trees suited for orchard gardening based on:

Sources of Fruit-bearing Trees

Fruit-bearing trees are available and sold in different stages of growth and ready to be transplanted. Among their sources are:

1. Commercial Nursery – Run by private individuals usually offering landscaping materials and services.

LOCATION			
Hill side	Sloping Area	In the Valley	Plains
Coconut Mango Pili nut Palm tree	Mango Pili Nut Coconut Cashew Palm Tree	Durian Banana Papaya Mangosteen	Banana Jackfruit Dragon Fruit Mango Guava Coconut Citrus Star Apple Santol
CLIMATE			
Elevated (cold)	Lowly (warm)	Dry Season	Wet Season
Grape Pomelo	Mango Coconut Banana Guava Durian	Banana Star apple Pili nut guava Palm tree papaya Dragon fruit	Durian Banana mango
MARKET DEMAND			
Banana Mango	citrus dragon fruit	Jackfruit Guava	Santol Star Apple Coconut

2. Agricultural Institution – A school that offers a course related to agriculture and other plant studies.
3. Department of Agriculture – Responsible for any agricultural activities in terms of vegetables and fruits.
5. Bureau of Plant Industry – They develop scientific improvement for each plant species in a locality and adjacent places.

Ways to Care for Seedlings

Always use fertile soil medium for planting. Water the seedlings every morning and afternoon. Check for possible pest infestation and apply immediate remedy. Arrange the seedlings in an organized manner. Make sure to follow proper layout of guidelines for a convenient working area.

Considerations in Preparing an Orchard Lay out

1. Prepare the land-Till the soil adequately but do not over-cultivate to the point of destroying earthworms and other beneficial fungi.
2. Create a planting system- Compute the number of trees to be planted. Examples: square shape pattern, rectangular shape pattern, triangular shape pattern, quincunx pattern.
3. Establish a greenhouse- This will serve as the nursery of the seedlings.
4. Check the soil according to type- The type of soil will help you decide what trees to plant.
5. Ensure water source and drainage- The site must have an abundant supply of water and good drainage to ensure availability of air in the soil.
6. Sufficient sunlight- The site must be exposed to morning and afternoon sunlight to help maintain the food making process of the plant (photosynthesis)
7. Availability of fertilizer -Fertilizer is a substance added to soil to improve the plant health condition.
8. Accessibility to market-The plan site should be near the market and transportation must be available to bring products to the market.

D

Learning Task 1: Write **YES** if the statement shows the type of orchard farms, and **NO** if it is not. Write your answer in a sheet of pad paper.

- _____ 1. Fruit orchards include any facility focused on growing cashew, almond and cacao.
- _____ 2. Seed orchards focus primarily on growing trees that produce seeds rather than nuts or fruit.
- _____ 3. Orchard is a piece of land where herbs are maintained for commercial production.
- _____ 4. Cashew, almond and cacao are plants found in the fruit orchard.
- _____ 5. Papaya and mango orchards are example of Fruit Orchard.

E

CV

Learning Task 2: Read the statement carefully. Choose the letter of the correct answer and write them in your answer Sheet.

1. A government agency responsible for the promotion of agricultural development by providing framework, public investments, and support services needed for domestic and export-oriented business enterprises.
A. Commercial Nursery C. Department of Agriculture
B. Agriculture Institution D. Bureau of Plant industry
2. This type of orchard farm focuses primarily on growing trees that produce seeds rather than nuts or fruit.
A. Fruit Orchard B. Nut Orchard C. Seed Orchard D. Herbal Orchard
3. In this method, a new plant is grown by inserting a scion into the stock so that they will form a union and grow together.
A. Grafting B. Budding C. Marcotting D. Cutting
4. These are ways on how to care for seedlings except one.
A. Water the seedlings every morning and afternoon.
B. Always use unfertile soil medium for planting.
C. Check for possible pest infestation and ignore the pests afterwards.
D. Arrange the seedlings in an organized manner.
5. Choose the considerations in preparing for an orchard layout.
I. Sufficient Sunlight III. Establish a tree house
II. Availability of Fertilizer IV. Accessibility to Market
A. I and II B. I, II, IV C. I, II, II D. IV

A

Learning Task 3 : Answer the following questions in your answer sheet.

1. Why is it important to conduct a survey and determine the appropriate trees for orchard gardening based on location, climate, type of soil, and market demands?
2. Why is there a need to prepare an orchard lay out before you start to do an orchard gardening project?

Propagates trees and Fruit -bearing Trees

I

Lesson

In this lesson, you will learn how to propagate trees and fruit-bearing trees using scientific processes, identifies the appropriate tools and equipment in plant propagation and their uses, demonstrates scientific way of propagating fruit-bearing trees, and observes healthy and safety measures in propagating fruit bearing trees.

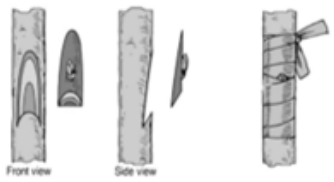
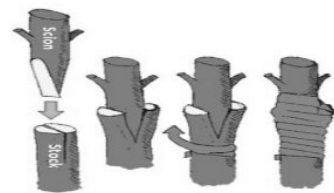
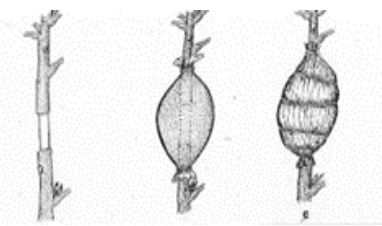
Among the top exported fruits that are popular in the Philippines like mango, banana, pineapple and papaya, which is your most favorite? Least favorite? Do you know you can enjoy your very own fruit without buying in the grocery by simply planting your favorite fruit tree right in your backyard? The downside of using seeds and directly planting them is that it may take very long time for the trees to start bearing fruit. Fortunately, there are scientific processes that shorten the waiting time for the trees to bear fruits.

Ways of Propagating Fruit-Bearing Trees

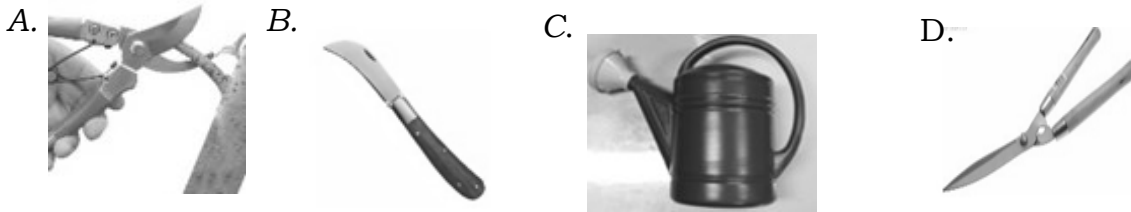
1. **Sexual propagation**- propagation using viable seeds or seeds containing live embryo that will give rise to a new plant. These seeds have the capacity to germinate and grow. This is the most common and easiest method of propagating plants.
2. **Asexual propagation**- method of plant propagation that is done without the help of the sexual organ of the plant. It is the production of the new plants from leaves, stems and roots. It can be done manually, either naturally or using scientific approach.

Methods of Asexual Propagation

Method	Procedure
1. Budding In this method, a single bud forced to grow on the stock. It uses one bud as the scion, instead of the stem bearing several buds.	a. Select a smooth area of the tree and cut T-shaped slit through the bark. b. Insert a well-developed bud from the bud stalk. c. Slip the bud on the T-shaped bud stalk and securely tie with a soft cord and plastic.

	<p>d. Cut the plastic on the side away from the bud to prevent girdling once you see a new bud formed.</p> <p>e. Carefully cut the stock when it reaches the height of 30 centimeters and paint the surface to prevent decay.</p>
<p>2. Grafting</p> <p>In this method, a scion or top portion of a stem of a plant is joined with or inserted into the rootstock of another plant, to make them grow together into one plant.</p> 	<p>a. Saw a clean, smooth limb between 2-3 centimeters in diameter.</p> <p>b. Split the stub through the middle to make a clean slit.</p> <p>c. Cut two scions, about 10-15 centimeters long, and sharpen the lower end to form a long, evenly tapering wedge.</p> <p>d. Open the cleft in the stub and insert the wedge-shaped end of a scion so that the innermost bark lies against the innermost bark of the split stub.</p> <p>e. Tie the united stem with plastic strip and let it grow for 1 – 2 years.</p>
<p>3. Marcotting</p> <p>A method that allows the stem to develop roots while still attached on the mother plant.</p> 	<p>a. Remove a ring at the back of the branch of a healthy tree below the node 3-5 centimeters long.</p> <p>b. Wrap the cut surface with a moist soil and wrap with coconut husk.</p> <p>c. Cover both ends with plastic and tie around with a twine to prevent drying of the rooting medium.</p> <p>d. Cut off the marcot, when enough roots grow, just below the ball of the soil that holds the roots, then place it in a pot big enough to provide enough room for the roots to develop a branch.</p> <p>e. Remove some branches or leaves for fast growing of its roots before transplanting to the field.</p>

Tools and Equipment used in Plant Propagation



- A. Pruning shear— is used for cutting small branches including the unnecessary branches.
- B. Budding Knife -is used for cutting and slicing planting materials.
- C. Sprinklers- used to water seedlings and young plants
- D. Garden scissors- used for cutting grass and shaping the plant or shrub.

Additional tools and equipment in plant propagation: wooden matches /stakes for marcotting or air layering; tape used to keep wrapper in placed; rooting hormone used to promote growth; and pots for young newly-rooted plants.

Healthy and Safety Measures in Propagating Fruit-Bearing Trees

1. Before working make sure you have refresh yourself (like taking a bath) in order to work well.
2. Always wear complete personal protective equipment which includes hairnet, hand gloves, apron, boots if needed, protective eyeglass, and face mask.
3. Make sure tools and equipment are working properly before using them.
4. Always follow instructions for use of equipment.
5. Focus on the work at hand. Do not allow yourself to get distracted.
6. Know your limits in working, seek help whenever necessary.
7. Work in proper position. Make sure you do not strain your back while working.

D

Learning Task 1: Read the statement carefully. Choose the letter of the correct answer and write them in your answer Sheet.

- ___ 1. It is one of the asexual propagation methods that allows the stem to develop roots while still on the mother plant.
- ___ 2. Is a method wherein a scion or top portion of a stem of a plant is joined with or inserted into the rootstock of another plant, to make them grow together into one plant.
- ___ 3. In this method, a single bud is forced to grow on the stock.
- ___ 4. A method that allows the stem to develop roots while still attached on the mother plant.

A. Budding	B. Marcotting	C. Grafting	D. Planting
------------	---------------	-------------	-------------

E

cv

Learning Task 2: Match Column A to Column B. Write the letter of the correct answer on a whole sheet of pad paper.

Column A

Column B

- | | |
|--------------------------|---|
| _____ 1. Garden scissors | a. used in keeping the wrapper in placed |
| _____ 2. Budding Knife | in grafting |
| _____ 3. Sprinklers | b. used for cutting and slicing plant |
| _____ 4. Pruning shears | c. used to water seedlings and young plants |
| _____ 5. Tape | d. used for cutting small branches |
| | e. used for shaping the plant or shrub |

A

Learning Task 3: Solicit the help of the member of your family in doing this activity. Choose one method of asexual propagation that you will do. Write a narrative as to the progress of your asexual propagation activity from the beginning until the plant has grown. Make sure to include the step by step process in your narrative.

Indicators	1	2	3	4	5
1. Followed the step by step procedures in the chosen method of asexual propagation.					
2. Used appropriate tools and equipment in plant propagation					
3. Observed health and safety measures in plant propagation					
4. Manifested Makakalikasan attribute					

16-20 Very remarkable

11—15 Remarkable

6—10 Satisfactory

1—5 Unsatisfactory

Systematic and Scientific Ways of Caring Orchard Trees/Seedlings

I

Lesson

In this lesson, you will learn how to perform systematic and scientific ways of caring orchard trees/ seedlings such as watering, cultivating, preparing, and applying organic fertilizer, marketing fruits and seedlings and developing a plan for expansion of planting trees and seedling production.

Growing fruit trees is also important just like planting vegetables because fruits contribute to the nutritional needs of everyone. Selling of fruits can also be a source of income. That is why many people nowadays engage in orchard gardening.

But do you know that orchard gardening is not as easy as backyard gardening? There is a lot of work involved and many processes that must be learned and strictly followed. But your experiences in backyard gardening can be of help if you and your family are thinking of starting an orchard gardening project especially if your family owns a big parcel of land.

Systematic Ways of Caring for Orchards

1. Natural. This is nature's way of providing water for plants through rain.
2. Manual. This is with the use of water pail and dipper or water sprinkle.
3. Artificial. Water supply is artificially produced from deep well, ditches and river with the use of water motor pump.
 - a. Surface or furrow irrigation. Here, water is distributed to each row so it is applicable only for row crops with uniform slope.
 - b. Sprinkler irrigation. This includes the line, rotating, and micro sprinklers in which artificial rain is generated through special devices that wet the entire field.
 - c. Drip-or trickle irrigation. A special water source designated to discharge water close to the plant, wetting only that area and leaving the rest dry.
 - d. Sub-irrigation- this type of irrigation is very expensive because the water source is under the ground.

Proper ways of Cultivation

Cultivating the land is practiced to help promote the growth of roots and improve aeration for fast absorption of nutrients by the soil.

1. Off-barring- cultivating the soil in rows.
2. Hilling-up- cultivating the soil towards the base of the plant.

When cultivation is undertaken properly, the growth of weeds can be controlled. Soil texture will improve plant's growth and destructive microorganisms found in the soil will eventually die.

1. Discharge water close to the plant, wetting only that area and leaving the rest dry.
2. Sub-irrigation- this type of irrigation is very expensive because the water source is under the ground.

Proper ways of Cultivation

Cultivating the land is practiced to help promote the growth of roots and improve aeration for fast absorption of nutrients by the soil.

1. Off-barring- cultivating the soil in rows.
2. Hilling-up- cultivating the soil towards the base of the plant.

Preparing and Applying Organic Fertilizer

Fertilizer is any substance added to the soil that promotes the healthy growth of the plants. Fertilizers are classified into two types:

1. Inorganic- artificial fertilizer made from chemicals (liquid, soluble, gaseous and granular form). There are advantages in using inorganic fertilizer such as odorless and handy, always available in the market and fast production but there are also disadvantage in using this kind such as hazardous to animals, made of chemicals, expensive and makes the soil unfertile, unproductive and acidic.
2. Organic natural fertilizer are materials from decayed matter, animals and other natural resources. These organic natural fertilizers are natural, easy to produce, promote the growth of beneficial organism, adds more nutrients to the soil and very high in production. There are also disadvantages in using organic fertilizer such as foul odor and it takes time to prepare. soil. Pulverized eggshell, oyster shell, bone meal, and any lime will neutralize the acidity of the soil of the soil. It helps the development of roots, flowers, shoots and fruits.

Marketing Your Products

Marketing is one of the most challenging activities in an orchard gardening. It is a business activity of presenting products or services to make them desirable. One of the first steps in this undertaking is to make sure your products are marketable. To do this, you need to come up with specific standards for inspecting and ensuring quality control.

Marketing Strategies

Once your products have undergone quality control inspection and are deemed marketable, you may start promoting them. Below are some ways one can promote and market a product:

1. Conduct a survey to find the needs of the community. What fruits are in demand?
2. Prepare and distribute pamphlets, flyers and brochures that contain information about the location and the picture of products.
3. Use online marketing tools.
4. Post contact numbers for clients who want to order or inquire about the product.
6. Keep a Record of Sales.

Plan for Future Expansion

Every business should have a future plan for expansion. A successful orchard is important to the community and environment. Its benefits stand as evidence that expansion is necessary.

Tips for Future Expansion

Community survey and symposium to find the needs of the locality. Build relationship with stakeholders of the community, the local government unit, schools and private sectors that run related business. Real market status understands the demand-What is the fruit rate of sales? Open for investment and franchising. Conduct survey of the availability of experienced/skilled orchard technician.

D

Learning Task 1: Please read the following incomplete sentences below and fill the blanks with appropriate word. Write your answer in a sheet of pad paper. Choose your answer inside the box.

1. _____ is any substance added to the soil that promotes the healthy growth of the plants.
2. _____ is a way of watering the plant through rain.
3. _____ is a way of watering the plant that use water pail and dipper or water sprinkle.
4. _____ is a business activity of presenting products or services to make them desirable.
5. _____ is a practice of loosening the soil to help promote the growth of roots and improve aeration for fast absorption of nutrients.

Artificial	Marketing	Cultivation	Natural	Manual	Fertilizer
------------	-----------	-------------	---------	--------	------------

E

CV

Learning Task 2: Write **YES** if the statement is correct and **NO** if it is incorrect. Write your answer in a sheet of pad paper.

- _____ 1. Before you market the seedlings, there is a need to come up with specific standards for inspecting and ensuring quality control to know whether the seedlings are ready for sale.
- _____ 2. Create and maintain a system of tracking production and sales called Record of Liabilities.
- _____ 3. Inorganic fertilizers are natural from decayed matter, animals and other natural resources, easy to produce, promote the growth of beneficial organism, adds more nutrients to the soil and very high in production.
- _____ 4. One of the marketing strategy is to use online marketing tools.
- _____ 5. Cultivating the soil towards the base of the plant is called off-baring.

A

Learning Task 3: Perform simple orchard gardening in your backyard/ container garden. Record and observe the growth progress of the seedlings using the given table below then, graph the result.

Samples of seeds (fruit bearing trees)	Growth Progress of seedlings (in centimeters)					
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
1.						
2.						

Raising Four-legged Animals and Fish as Means of Livelihood

Lesson

I

In this lesson, you will learn to conduct survey to find out the persons in the community whose occupation is animal (four legged)/fish raising, kinds of four-legged animals/fish being raised as means of livelihood, possible hazards that animal raising can cause to the people and community, ways to prevent hazards brought about by raising animals, market demands for animal/fish and by products.

Raising animals for many Filipinos is not only a hobby but also as a source of income for their families. For an elementary pupil just like you, taking care of animals can help you develop positive values like sense of responsibility, love, care, industry and hard work.

Conducting a Survey

After you have decided on the kind of farming (four legged animal/ fish farms) you want to do, it is best to scout the area where you are situated by conducting a survey.

It is best to know or do the following to start off.

1. Know your area – Are there other farms of the same kind in your area?
2. Know the local animal or fish industry – What other animals/fish are raised in other farms?
3. Know the people in the community– Make sure that you have been cleared to put up a farm or raise animals in your area.
4. Know your market– Know the local market and middle men.
5. Learn from others– Learn from other people's previous experiences.

Persons in the community whose occupation is animal (four-legged) / fish raising:

1. Animal Raisers- Those people in the community whose occupation is to raise four-legged animals.
2. Fish Farmers- Those people in the community whose occupation is to raise a fish.

Kinds of Four-legged animals/ fish being raised as a means of livelihood

Raising Swine

1. **Swine** is one of those types of animals that can be sold live or as meat or meat products. It is important to choose the right breed to raise and keep your animals healthy and free from diseases.
2. **Cattle** - can be sold live, as meat, or as meat and dairy products. Cattle farming requires a substantially larger area for the animals to roam around or graze—a major consideration in cattle raising.
3. **Goat** - Goat's meat and milk are comparable to cattle meat and milk. In the Philippines, goat meat is relatively more expensive than chicken, pork or beef.
4. **Tilapia** - Tilapia grows rapidly. It can reproduce all year round and requires no special kind of feeds. Tilapia can be harvested after three to four months of feeding.
5. **Milkfish** - also referred to as the national fish of the Philippines, milkfish or bangus is very popular for its milky taste. Like tilapia, milkfish requires no special kind of feed for its diet. Milkfish can be harvested after seven to ten months of feeding.
6. **Carp** - Carp do not reproduce as quickly as tilapia so during harvest time, a fish farmer is guaranteed of large-sized fish.
7. **Catfish** - Catfish are named for their prominent barbels which resemble a cat's whiskers. Catfish can be harvested between four to six months of feeding.

Possible Hazards that Animal Raising can cause to the People and Community

1. **Infectious Diseases** - Several infectious diseases that may be transmitted to humans are ascariasis, animal influenza, scabies, ringworm, salmonellosis, and other animal diseases.
2. **Insect and Pest Infestation** - If not controlled, flies and other insects can multiply fast and spread out in the community. This will cause disturbances, stress and diseases. Likewise, sick animals, if not properly treated, can pose danger to the health of the people.

3. **Physical Injuries** – Animals that are stressed uncomfortable and unfamiliar with humans tend to be wild. They may end up kicking, biting, rushing and trampling people including their handlers/owners.

4. **Air Pollution** – Chemical pesticides and animal waste that is not properly disposed and left exposed in the backyard can produce a very unpleasant smell causing air pollution that is harmful to people's health.

Ways to Prevent Hazards brought about by Raising Animals

Farmers and Animal raisers are exposed to numerous hazards daily. Serious injuries may be prevented by following appropriate preventive measures.

1. Proper handling and disposal of animal waste.
2. Use gloves and other tools such as rake and shovel.
3. Avoid or refrain from inhaling animal fur.
4. Observe proper distancing from animals.
5. Proper handling of animals.
6. Isolate infected animals to prevent the spread of disease; use warning signs to label pens containing infected animals.
7. Provide PPE for employees working with sick animals.
8. Test and quarantine new, incoming animals to the farm.
9. Use sharps containers to prevent accidental needle sticks.
10. Maintain orderliness and cleanliness in the workplace.
11. Remind employees to wash hands with soap after handling animals.
12. Provide soap and hand washing areas for employees.
13. Avoid unpasteurized milk that could be contaminated; do not allow employees to consume unpasteurized milk.

Market Demands for Animal/Fish and By Products

The Philippines' livestock and fishery production expanded rapidly during the past decade because of increasing demand for quality and safe food products. While outputs of carabeef, beef, chevon and fishery products rose steadily.

Products - refers to the materials from the body of the four-legged animals/ fish that have not undergone any process like fat, meat, skin, organs, bloods, milk, hair, bones and hooves.

By-Products - materials derived from a production process, manufacturing process or chemical reaction like soap, canned goods, crayons, omega fish oil, string instruments and many more Products-are materials derived from a production process, manufacturing process or chemical reaction like soap, can goods, crayons, omega fish oil, string instruments and many more.

Benefits that can be derived from Animal/Fish Raising

1. Fish and animals' meat serve as human food.
2. Animal fats is used for soap production, lubricating oil and drug synthesis while fish fats have fatty acids like omega-3 fatty acids used for making fish oil.
3. Animal and fish raising creates employment especially in rural areas.
4. Reduce the importation of fish and meat by local production.
5. Animal manure can be used as fertilizers by farmers or for methane gas production and fertilizers from seafood products.
6. Provides high quality animal protein for human consumption.
7. Fish by products used as animal feed.
8. Biochemical and pharmaceutical products from animals and fish .

Successful Stories of Entrepreneurs in Animal/Fish Raising

Leonora D. Jukni - She started farming by raising goats, chickens, and native cows in her five (5.0) hectare coconut-based farm at Barangay Datagan, Pagadian City. Mrs. Jukni joined the Danlugan Multi-Purpose Cooperative and was able to avail of the GMA Dairy CARES Program of the National Dairy Authority . Mrs. Jukni and 9 others out of the 400 members of the Danlugan Multi-Purpose Cooperative.

Oscar Garin – who was a politician, devoted his retirement time to farming in San Joaquin. His profession as a civil engineer did not stop him from going back to his original passion, raising sews or fully-grown pigs in his backyard. He named it Octagon Farm Product and Supply later known as Garin Farm.

He continued to raise other livestock animals like goat, cattle, sheep and even ventured into a production of poultry animals such as turkey, ducks and game fowl.

Ronnel Pascual - He holds a degree in physical therapy, but instead of treating physical injuries and illnesses of people, Ronnel Pascual, 32, of Brgy. Poblacion, Vintar, Ilocos Norte finds contentment – and financial success – in taking care of his 35 sow fatteners, 10 breeders, four purebred boars and hundreds of piglets. Physical Therapist turned “pig tycoon”, Ronnel is the owner-manager of a modernized piggery farm located in Bacarra, Ilocos Norte.

Celestino Mananguit – He is the owner of Jocel’s Farm located at Sta. Catalina Bata, San Ildefonso, Bulacan. When he was in high school, he found farming difficult so he went to Manila to study. After graduating from College, he got married and worked as an OFW. In 2016, he was awarded as National Gawad Saka Winner of Outstanding Large Animal raisers in San Ildefonso, Bulacan.

Nominisa Rarang Ragasa - A lady nurse who went to work abroad to get away from the boring life, she had in the fishing village has gone back to the village she disliked after 20 years. Now, 16 years later she has become a big-time producer, harvesting an average of 20 tons everyday. She was called as “Bangus Queen” of Anda, Pangasinan.

Implements Plan on Animal /Fish raising

The following points out the schedule of work when you put up a farm.

Plans for the Family’s Animal Raising Project

Starting to operate a farm, like any other business endeavor, requires research, critical thinking, educational background or technical know-how, and sufficient funding.

1. Prepare a work schedule.
2. Draft your action plan using bullet points of what you want to do, how you want to do it, and what you are willing to do to get to your goal.
3. Set a concrete attainable goal.

4. Determine how you plan to attain that goal that you set.
5. Prepare your SWOT Analysis table. The SWOT Analysis will show you where you are at present, where you plan to be in the future, and how your goals can be achieved by making use of the resources available to you.

Monitors growth and progress

As with any business, it is important to monitor the growth and progress by keeping records to assess whether your farm business yield income or not.

RECORD OF PRODUCTION'S INCOME, EXPENSES & GAIN/PROFIT				
DATE	ITEM/S (PARTICULAR ACTIVITY)	QUANTITY	AMOUNT	REMARKS

Keeps an updated record of growth/progress

Make sure to keep your record book updated. List down the daily receipts of both income and expenses so you will not forget them. Be specific in recording all transactions and keep every receipt for proper filing in a folder or envelope for auditing purposes.

Expands/enhances one's knowledge of animal/fish raising using the Internet

Strengths	Weaknesses	Opportunities	Threats
(areas you do well or advantages of your business)	Areas to be improved	(external factors that may contribute to your business and can build up your strengths.	Potential problems/ risks caused by external factors that your business may face.

Research and Development-It is best to keep learning and take in new ideas and practices that can help improve your daily operation. The internet is a good source of free information not only from local but international sources as well.

Other Suggestions in enhancing your knowledge in animal/fish raising

1. Attend seminars sponsored by government agencies
2. Read journals or magazines on livestock raising.
3. Interview person's authority or experts in animal raising

D

Learning Task 1: Please read the following incomplete sentences below and fill the blanks with appropriate word. Write your answer in a sheet of pad paper. Choose your answer inside the box.

Cattle	swine	goat	tilapia	milkfish
survey		animal raisers	fish raisers	

1. Brahman, Ongole/Nellore, Santa Gertrudis, Bali or Banteng, Brown Swiss, Holstein Freisian, Sahiwal, Tharparkar are some of the breed of _____.
2. Hampshire, Duroc, Yorkshire, Landrace, Hypor, Poland China, Tamworth are some of the breed of _____.
3. _____ helps a new entrepreneur because it gives vital information that one needs to know before starting any business.
4. _____ can reproduce all year round and requires no special kind of feeds. They can be harvested after three to four months of feeding.
5. _____ are people in the community whose occupation is to raise four-legged animals.

Learning Task 2: Match **Column A** with **Column B**. Write the letter of the correct answer in your answer sheet.

A

- _____ 1. She was called as “Bangus Queen” of Anda, Pangasinan.
- _____ 2. He was awarded as National Saka Winner Outstanding Large Animal Raisers
- _____ 3. She started farming by raising goats, chickens, and native cows in her five (5.0) hectare coconut-based farm.

B

- a. Vicente B. Lugagay
- b. Celestino Mananguit
- c. Leonora D. Jukni

_____ 4. He was a politician, devoted his retirement time to farming in San Joaquin.

d. Nominisa Rarang Ragasa

_____ 5. He owns JAVE Farm produces 300, 000 to 500, 0000 fingerlings a month

e. Oscar Garin

f. Ronnel Pascual

E

cv

Learning Task 3 Write **H** if the statement is about the hazards in animal raising then write **P** if the statement is about preventive measures to avoid physical harm/injuries. Write your answer in your answer sheet.

_____ 1. Maintain orderliness and cleanliness in the workplace.

_____ 2. Insect and pest infestation in the farm.

_____ 3. Thoroughly disinfect tools, clothing, etc. that come in contact infected animals.

_____ 4. Chemical pesticides and animal waste that is not properly disposed and left exposed in the backyard can produce a very unpleasant smell causing air pollution.

_____ 5. Provide PPE (Personal Protective Equipment) for employees working with sick animals.

A

Learning Task 4: Assume that you and your family have decided to raise 5 goats in your backyard. Plan for operation by preparing a one- week work schedule with the assignment of the members of your family.

Activities	Members of the Family who will perform the task						
	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1.							
2.							
3.							
4.							
5.							

Markets Animals/Fish Harvested Captured

Lesson

I

In this lesson, you will learn to manage marketing of animal/fish raised, discusses indicators for harvesting/capturing, demonstrates skill in harvesting/capturing animal/fish, prepares marketing strategy by asking help from others or using the internet, markets animals/fish harvested/captured, compute the income earned from marketed products ($\text{Gross Sale} - \text{Expenses} = \text{Net Income}$) and prepares plans for expansion of animal raising venture.

Have you been to the market? Which is more in demand, pork, beef, chicken or fish? The market demands for meat and fish are increasing due to increasing population. Many people nowadays engage in livestock farming (raising of four legged animals) or fish farming because these businesses were proven to be financially rewarding if done the right way. The animal raising/fish farming industry can lead to different entrepreneurial endeavors ranging from the sale of live animals and fish to the production of by-products.

Manages Marketing of animal/fish raised

1. **Direct Farm Sales.** Sell the animals or by-products to the consumers directly from your farm guarantees the biggest earnings because all expenses of commission and extra handling is cut out.
2. **Farmers Market/Livestock Auction Market.** Look for events such as livestock auction markets or similar events in your area where people from nearby provinces come to buy livestock direct from raisers themselves.
3. **Farm to Market.** Some farming families or entrepreneurs also have a meat shop or fish stall in the nearby wet market to sell their own products.
4. **Restaurant.** One possible livestock client can be the nearby restaurants in your area.
5. **Selling through the internet/ Online Marketing.** The internet can prove to be a big help to animal raisers in marketing animals and animal products.
6. **Selling through Middlemen–** There are entrepreneurs and there are people who work with entrepreneurs to make deals with other entrepreneurs, resellers and dealers.

To market pork, beef and by-products, it includes the following:

1. distributing in the supermarkets and groceries;
2. directly selling to stores or selling them in open markets;
3. wholesale basis;
4. ordering by delivery; and
5. selling online.

Marketing Fish

Fish is sold in the market whether wholesale or retail. It can be sold in various forms such as fresh, frozen, live, choice cut, preserved like dried fish or tuyo, tinapa, daing and bottled or canned fish. Fish can be sold by kilo, piece or in small batches for retail selling. While in wholesale selling, it is sold in large containers. The retailers usually buy wholesale in fish ports like in Navotas City, where fishermen bring their catch in “banyeras” or styro boxes. One way of buying is through “bulungan” whisper, a kind of bidding process where a buyer whispers to the middle-man the price he or she is willing to pay. Usually the highest bidder gets the catch.

Indicators for harvesting/capturing fish

- St. Peter’s Fish (Tilapia) can be harvested after three to four months of feeding.
- Milkfish (Bangus) can be harvested after seven to ten months of feeding.
- Catfish (Hito) can be harvested between four to six months of feeding.

Harvesting Fish

Fish is an important part of the Filipino diet. The nutritional content, cheapest cost, availability and abundance of fish in the market have made it popular in our diet. Fish is the major source of high-quality protein without the presence of saturated fat found in meat which is not good for the health. There are several methods used to harvest fish:

1. Use of Salakab or Taklob - this is commonly used by fishermen who catch fish on brooks or streams.
2. Use of Baited Hook and Line-the hook catches only one fish at a time and it takes time to catch many fishes.
3. Use of Net - the most common and practical method used by the fishermen and the commercial fishing boats in rivers, lakes, seas and fishponds.
4. Total Drainage-the pond is drained of its water and a long fishnet is used to catch the fish.

There are two kinds of net:

1. The dip net is shaped like a square and is lowered at the bottom of the pond and then lifted as fast as possible.
2. The lift net is a large version of the dip net and would require about four persons to hold the net on four sides for faster lifting.

3. Water	Ex. 1 unit water pump	
4. Purchase of Feeds	Ex. 20 sacks for 3 months	
5. Additional Caretaker	Ex. 1 person	
6. Medicine Supplies	Ex. Assorted medicine supplies	
7. Electricity	Ex. Additional monthly bill	

D

Learning Task 1 : Draw a happy face 😊 if the statement is correct and a sad face ☹️ if the statement is wrong. Do this on a whole sheet of pad paper.

_____ 1. Direct farm sales is a type of marketing strategy in which some farming families or entrepreneurs also have a meat shop or fish stall in the nearby wet market to sell their own products.

_____ 2. Milkfish (Bangus) can be harvested after seven to ten months of feeding.

_____ 3. There are entrepreneurs and there are people who work with entrepreneurs to make deals with other entrepreneurs, resellers and dealers. This marketing strategy is called selling through middlemen.

_____ 4. Use of Salakab or Taklob is a method of harvesting fish wherein the pond is drained of its water and a long fishnet is used to catch the fish.

_____ 5. Pork and beef are sold in the following forms: fresh, frozen, choice cuts, and cured as in tocino, tapa, longganisa, and hotdogs.

E

cv

Learning Task 2: Read the statement carefully and choose the letter of the correct answer and write them in your answer sheet.

1. Here are the required requirements in the planning of expansion of animal raising business **except one**.

A. additional land area

C. medicine supplies

B. additional caretaker

D. purchase of organic fertilizer

2. The hook catches only one fish at a time and it takes time to catch many fishes. What type of harvesting is being described?

A. Use of Net

C. Use of baited hook and line

B. Total drainage

D. Use of salakab /taklob

3. Eden wants to have more sales in her farm products. She wants to widen the coverage of her market and advertise her farm products and services. What method of marketing she will use?

A. direct farm sales

C. selling through internet

B. farm to market

D. selling through middleman

4. The following are ways on how to market pork, beef and by-products **except one**.

- A. distributing in the supermarkets and groceries
- B. directly selling to stores or selling them in open markets
- C. wholesale basis
- D. indirect selling

A

Learning Task 3: Read the sentences, compute and answer the question below. Show your computation. Write your answer on a whole sheet of pad paper.

Your parents raised 10 hogs(piglets) in your backyard. The average weight of each hog is 120 kilos. The total expenses in raising the 10 hogs in 5 months is Php 30,000.00. She wants to gain a profit of at least 100%. How much should she sell per kilo of pork?

Rubrics in Computation

Criteria	Score
Show the correct computation and correct answer.	5
Did not show 1 step in computation with correct answer	4
Did not show 2 steps in computation with correct answer	3
Did not show 3 steps in computation with correct answer	2
With computation but wrong answer	1

PIVOT Assessment Card for Learners

Personal Assessment on Learner's Level of Performance

Using the symbols below, choose one which best describes your experience in working on each given task. Draw it in the column for Level of Performance (LP). Be guided by the descriptions below.



- ★ - I was able to do/perform the task without any difficulty. The task helped me in understanding the target content/lesson.
- ✓ - I was able to do/perform the task. It was quite challenging but it still helped me in understanding the target content/lesson.
- ? - I was not able to do/perform the task. It was extremely difficult. I need additional enrichment activities to be able to do/perform this task.

Distribution of Learning Tasks Per Week

Week 1	L	Week 2	LP	Week 3	LP	Week 4	LP
Learning Task 1		Learning Task 1		Learning Task 1		Learning Task 1	
Learning Task 2		Learning Task 2		Learning Task 2		Learning Task 2	
Learning Task 3		Learning Task 3		Learning Task 3		Learning Task 3	
Learning Task 4		Learning Task 4		Learning Task 4		Learning Task 4	
Learning Task 5		Learning Task 5		Learning Task 5		Learning Task 5	
Learning Task 6		Learning Task 6		Learning Task 6		Learning Task 6	
Learning Task 7		Learning Task 7		Learning Task 7		Learning Task 7	
Learning Task 8		Learning Task 8		Learning Task 8		Learning Task 8	

Week 5	LP	Week 6	LP	Week 7	LP	Week 8	LP
Learning Task 1		Learning Task 1		Learning Task 1		Learning Task 1	
Learning Task 2		Learning Task 2		Learning Task 2		Learning Task 2	
Learning Task 3		Learning Task 3		Learning Task 3		Learning Task 3	
Learning Task 4		Learning Task 4		Learning Task 4		Learning Task 4	
Learning Task 5		Learning Task 5		Learning Task 5		Learning Task 5	
Learning Task 6		Learning Task 6		Learning Task 6		Learning Task 6	
Learning Task 7		Learning Task 7		Learning Task 7		Learning Task 7	
Learning Task 8		Learning Task 8		Learning Task 8		Learning Task 8	

Note: If the lesson is designed for two or more weeks as shown in the ear tag, just copy your personal evaluation indicated in the first Level of Performance found in the second column up to the succeeding columns, ie. if the lesson is designed for weeks 4-6, just copy your personal evaluation indicated in the LP column for week 4, week 5 and week 6. Thank you.

Department of Education Region 4A CALABARZON. (2020). *PIVOT 4A Budget of Work in all Learning Areas in Key Stages 1-4: Version 2.0*. Cainta, Rizal: Department of Education Region 4A CALABARZON.

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<https://tinyurl.com/Concerns-on-PIVOT4A-SLMs>

