Pathfinder Seeds Honour

The Seeds Honour

SAC Simon Facey

BUC E–Honours Sunday 21th June

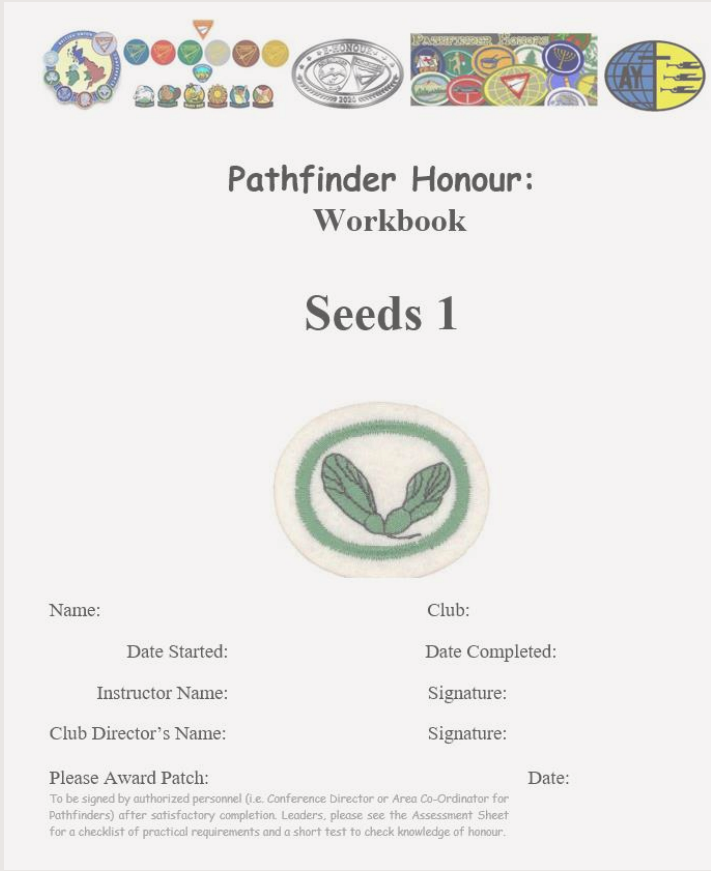
Honour Worksheet

During this E-Honour session we will be using a Workbook to complete this honour.

Document

Please click on the icon or link to download your E-Honour Worksheet for this presentation.

PLEASE DOWNLOAD YOUR WORKSHEET



Pathfinder Honour:
Workbook

Seeds 1

Name: Club:

Date Started: Date Completed:

Instructor Name: Signature:

Club Director's Name: Signature:

Please Award Patch: Date:

To be signed by authorized personnel (i.e. Conference Director or Area Co-Ordinator for Pathfinders) after satisfactory completion. Leaders, please see the Assessment Sheet for a checklist of practical requirements and a short test to check knowledge of honour.

Honour Requirements

Seeds		
Nature General Conference See also Seeds - Advanced	Skill Level 1 Year of Introduction: 1961	

The requirements for the Seeds Honour:

1. What is the main purpose of a seed?
2. What foods were first given to man in the Garden of Eden?
3. Identify from a seed or drawing and know the purpose of each of these parts of a seed: seed coat, cotyledon, embryo?
4. List from memory four different methods by which seeds are scattered. Name three kinds of plants whose seeds are scattered by each method.
5. List from memory ten kinds of seeds that we use for food.
6. List from memory five kinds of seeds that are used as sources of oil.
7. List from memory five kinds of seeds that are used for spices.
8. What conditions are necessary for a seed to sprout?
9. Make a collection of 30 different kinds of seeds of which only 10 may be collected from commercial seeds packages, the other 20 you are to collect yourself. Label each kind as follows: seeds name, date collected, locations collected, and collector's names.

Honour Overview

Intro to Seeds

The characteristics, types, purposes of seeds

The First Seeds

Seeds in the Garden – Bible Story

Seed Identity

Identifying and committing seeds to memory

Seed Collection and Growth

Types of seeds to collect and cultivating their growth

Seeds in the Bible

Where do we find Seeds in the Bible

Working on the Allotment – Planting Seeds

Introduction to Seeds

"Any fool can count the seeds in an apple. Only God can count all the apples in one seed."— Robert H. Schuller

Seeds and their purpose

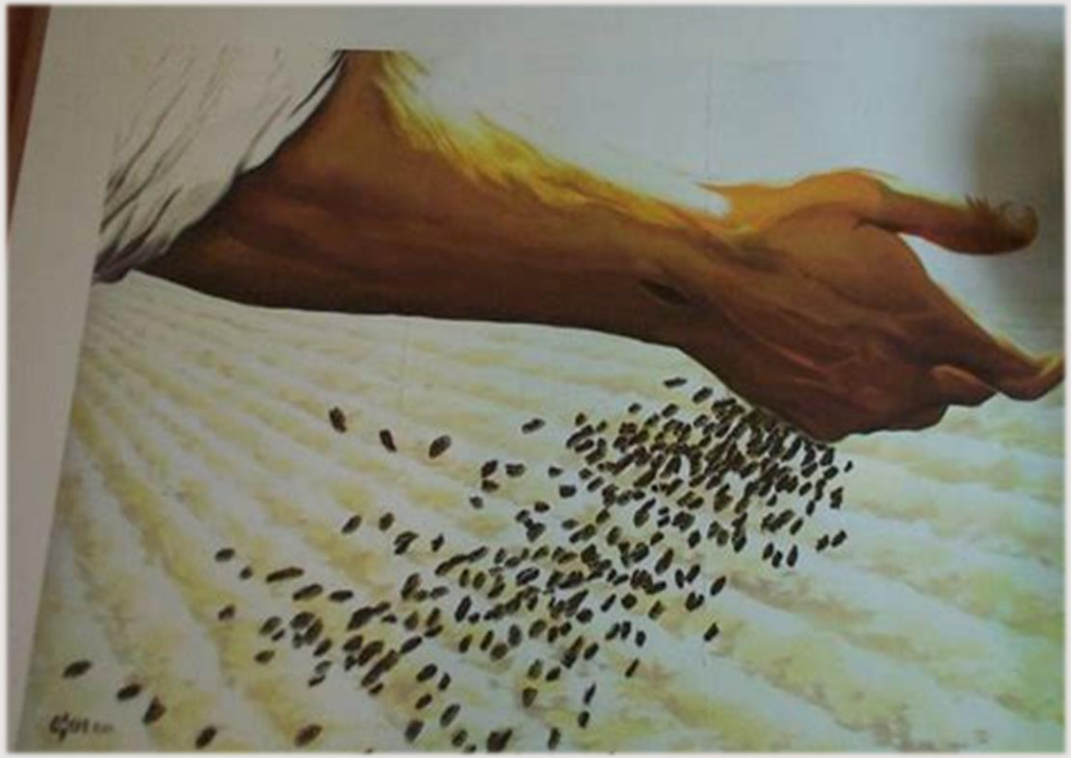
The main purpose of a seed is to grow a new plant, thus propagating the species.

Requirement 1

What is the purpose of a seed?

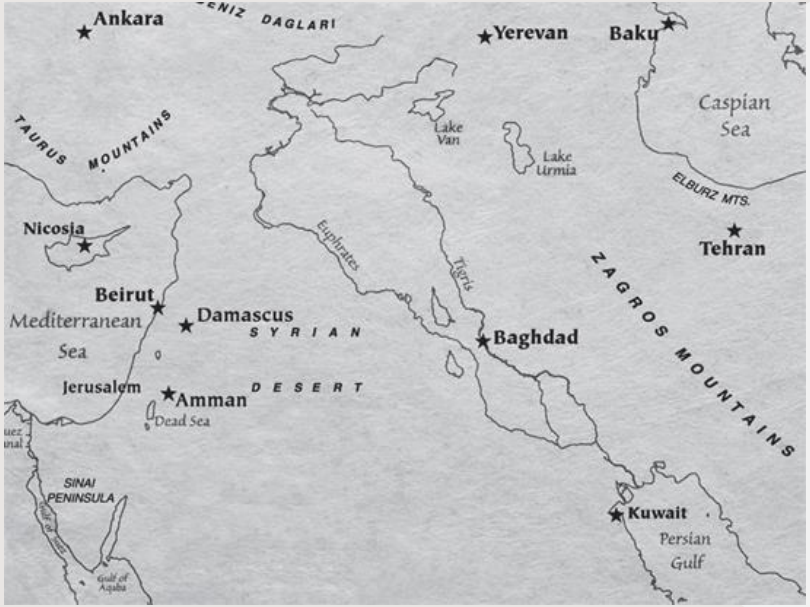
Garden of Eden

Jesus' parables



Many of the parables that Jesus used contained seeds or plants. Matt 13 with the parable of the sower and the different soils is a good example.
Also found in this chapter is the parable of the wheat and tares.

Garden of Eden



Moses says that one river flowed to water the garden, which afterwards would divide itself into four heads. It is sufficiently agreed among all, that two of these heads are the Euphrates and the Tigris; for no one disputes that . . . (Hiddekel) is the Tigris. But there is a great controversy respecting the other two. Many think, that Pison and Gihon are the Ganges and the Nile; the error, however, of these men is abundantly refuted by the distance of the positions of these rivers. Persons are not wanting who fly across even to the Danube; as if indeed the habitation of one man stretched itself from the most remote part of Asia to the extremity of Europe. But since many other celebrated rivers flow by the region of which we are speaking, there is greater probability in the opinion of those who believe that two of these rivers are pointed out, although their names are now obsolete. Be this as it may, the difficulty is not yet solved. For Moses divides the one river which flowed by the garden into four heads. Yet it appears, that the fountains of the Euphrates and the Tigris were far distant from each other.[1]

From this difficulty, some would free themselves by saying that the surface of the globe may have been changed by the deluge. . . .[2]

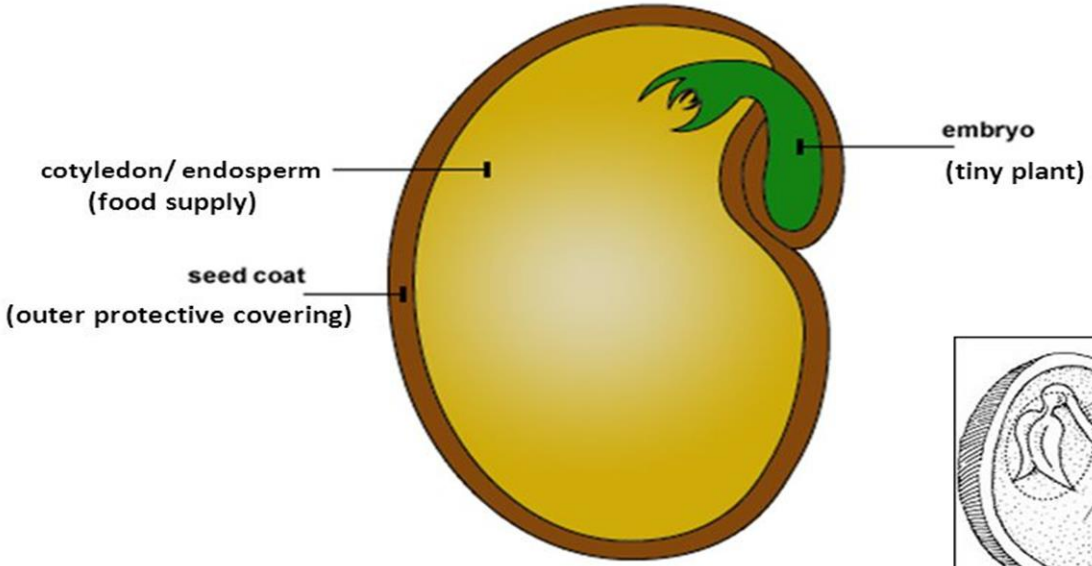
Perfect Place for a Garden, where plants, trees cultivated. The seeds were perfect, in Gods creation.

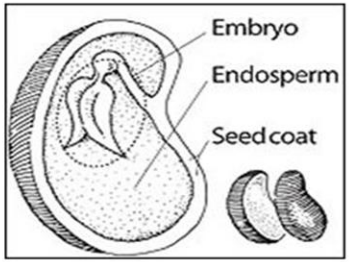
Requirement 2

What foods were first given to man in the Garden of Eden?

Identifying Seeds

Three Main Parts of a Seed

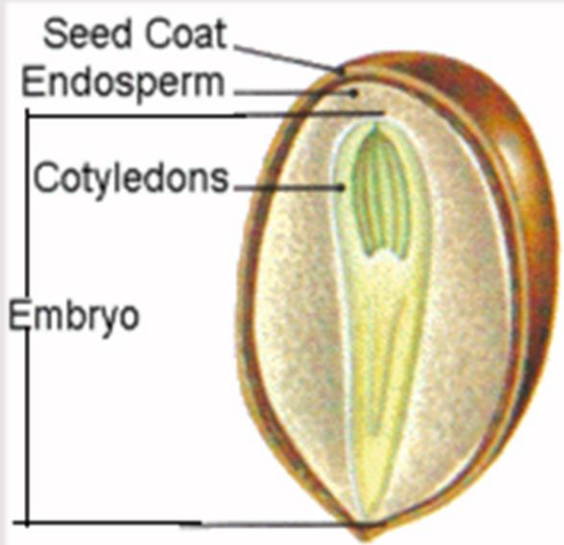




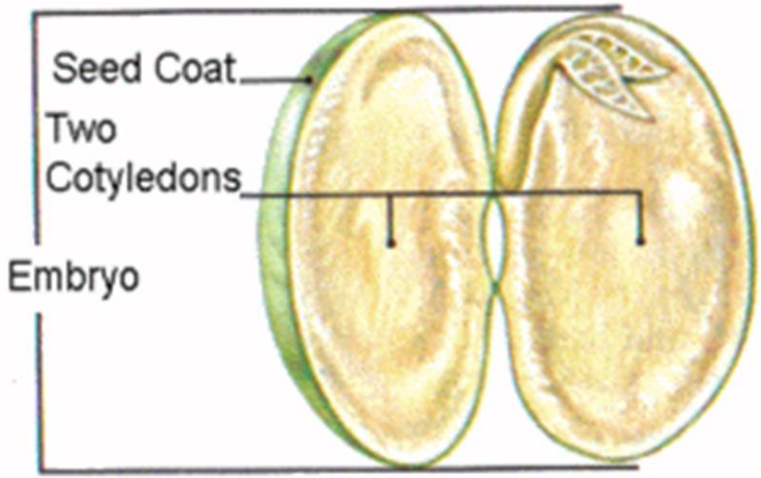
THEORY
PRACTICE

Requirement 3

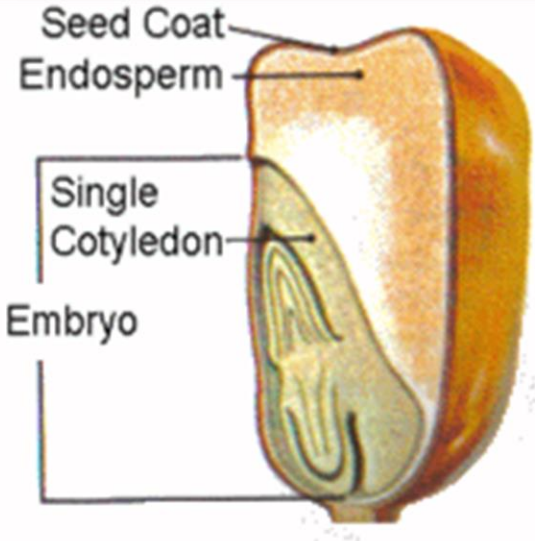
Identify from a seed or drawing and know the purpose of each of these parts of a seed: seed coat, cotyledon, embryo.



A Pine Seed



A Dicot (Bean)



A Monocot (Corn)

Scattering of Seeds

- Gravity
- Mechanical Dispersal
- Wind
- Water
- Animal Dispersal

Scattering of seeds over a wide area by animals or other means is **called** dispersal. Growing of a new plant from **seed** under the favourable condition is **known as** germination.

Seeds Scattering Methods, Benefits & Examples

Scattering of seeds over a wide area by animals or other means is **called** dispersal.

Growing of a new plant from **seed** under the favourable condition is **known as** germination.

Gravity

Also for gravity seed dispersal, Pine Trees (Left Picture), Conifers (Right Picture)

Gravity

Gravity: Apple and Passionfruit photos are for seed dispersal gravity. Also Fir Tree

Picture going to an apple orchard. As you walk through the trees, you see many apples on the ground, as well as in the trees.

Seed dispersal by **gravity** occurs when fruits, and their seeds, fall from the tree in a process called **abscission**. As fruit ripens, it gets heavier, and combined with chemical signals inside the plant, the fruit falls.

Some fruit may roll further from the tree, whereas others will then be carried away by other dispersal methods.

Mechanical Dispersal

Dandelion Seeds

The flower heads mature into spherical seed heads sometimes called blowballs or clocks (in both British and American English) containing many single-seeded **fruits** called achenes. Each achene is attached to a pappus of fine hair-like material which enables wind-aided dispersal over long distances.

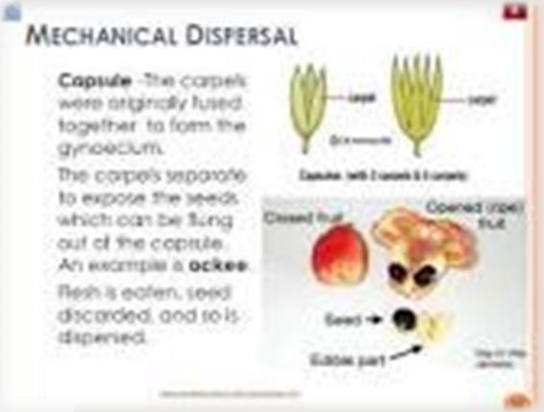
Scattering of Seeds

Sycamore Seedling

Mechanical Seed Dispersal. the scattering of **seeds** by splitting fruits.

Mechanical seed dispersal is characteristic of the Siberian pea tree, squirting cucumber, snapweed, and similar plants whose ripe fruits open suddenly (by cracking or bursting), discharging and scattering the **seeds**.

Scattering of Seeds



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Scattering of Seeds

Spotted Touch-me-not

The common name (**Spotted Touch-me-not**) is a reference to the **seed** pods popping open at a **touch**, a characteristic which also explains two other common names – Snapweed and **Spotted** Snap Weed.

The plant is also known as Jewelweed and **Spotted** Jewelweed. There are several competing explanations for these names.

Wind Dispersal

Cottonwood tree.

Cottonwood in greater detail. It has tiny hairs on it.

Seeds from **plants** like dandelions, swan **plants** and **cottonwood trees** are light and have feathery bristles and can be carried long distances by the **wind**.

Some **plants**, like kauri and maple **trees**, have 'winged' **seeds**. They don't float away but flutter to the ground.

Wind Dispersal

Weeping willow tree.

Ash tree - wind dispersal

Here are a few examples of wind dispersal showing a Weeping willow and Ash Tree

Water Dispersal

Mangroves - water dispersal

Mangroves again

Waterlily seed pod - water dispersal

Seeds dispersed by **water** are contained in light and buoyant fruit, giving them the ability to float.

Coconuts are well known for their ability to float on **water** to reach land where they can germinate.

Similarly, willow and silver birches produce lightweight fruit that can float on **water**.

Water

Coconut, water dispersal

Waterlily

Animal dispersal

A barbed seed caught in the fur of a cat.

Seeds on a pair of jeans when out walking.

Animal Dispersal

Tomatoes

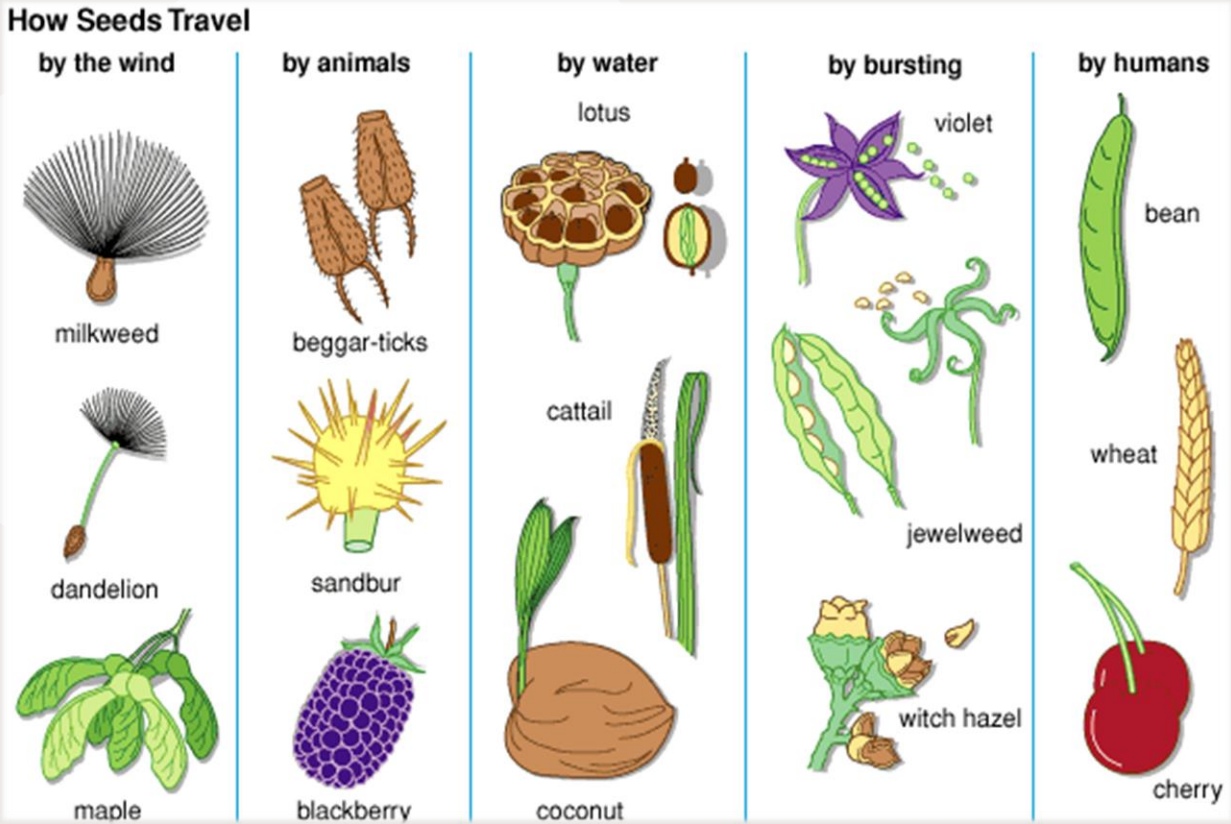
Strawberry

Requirement 4

THEORY PRACTICE

TIME for ACTION!

List from memory four different methods by which seeds are scattered. Name three kinds of plants whose seeds are scattered by each method.



Seeds used for foods

- Save money!
- Food Security begins in your backyard.
- Healthy, Pest & Disease Resistant Plants.
- Preserve the Genetic Diversity of Heirloom Plant Varieties.
- Seed Saving is Rewarding and Easy.

Seeds used for foods

Genetically modified seeds contaminate organic seeds – know what you are growing and eating

Heirloom seeds are hardy varieties grown with love over many generations

Herb Seed Packets produced by our local seed saving group

Watermelons are a mine of seeds that can be saved and replanted

Melon seeds ready for saving and replanting

Seeds used for foods

Organic Whole Almonds

Chestnuts Seeds

Brazil Seeds Pieces

Barley Seeds

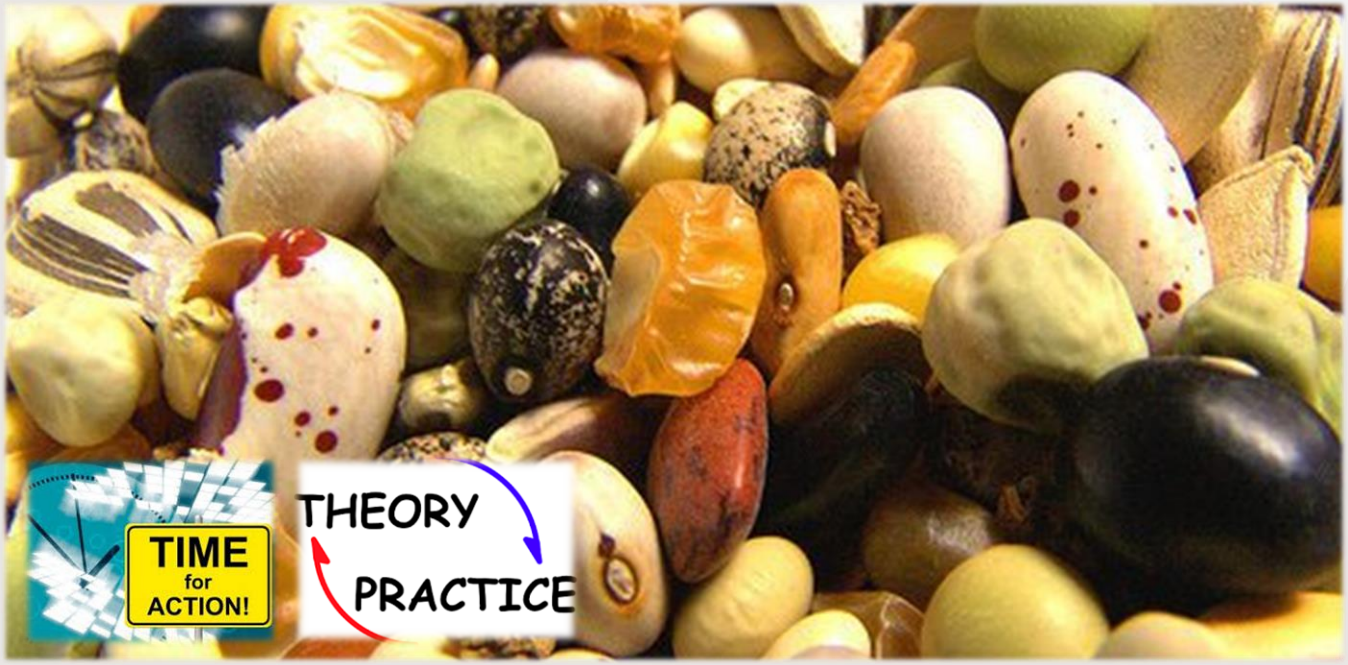
Coconut Nuts

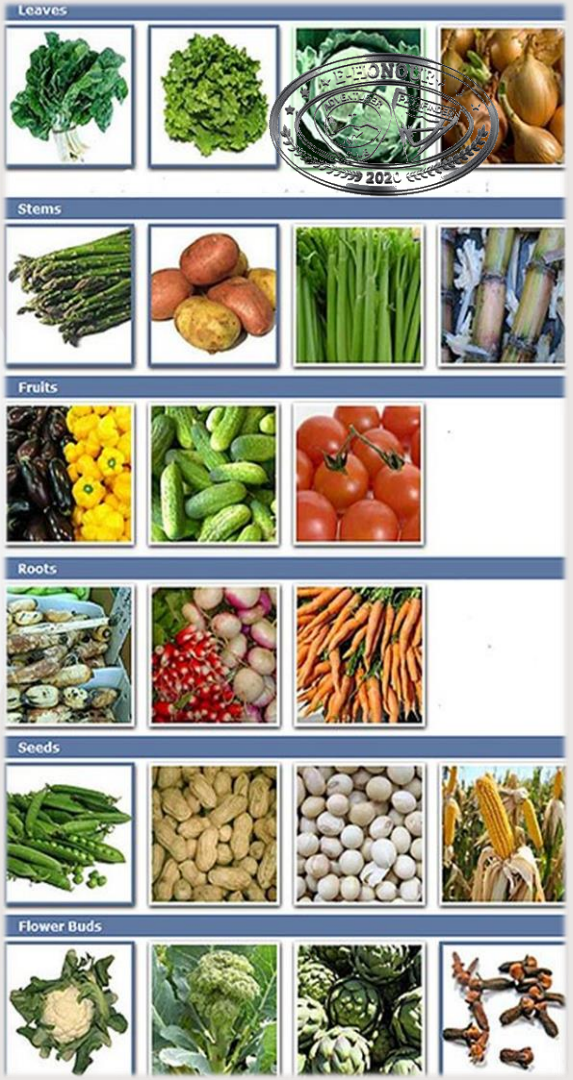
Cashew Nuts

Pomegranate

Requirement 5

List from memory ten kinds of seeds that we use for food.





Seeds used for oil

Sunflower oil
Coconut
Safflower
Olive
Corn
Rapeseed

Requirement 6

List from memory five kinds of seeds that are used as sources of oil.


Seeds used for spices

Cocoa seed leads to chocolate

Anise
Cardamom
Coriander
Fennel
Nutmeg

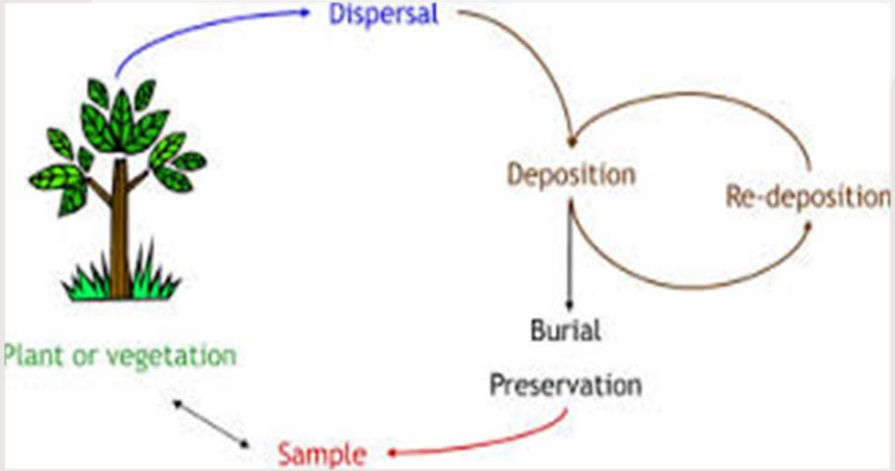
Requirement 7

- List from memory five kinds of seeds that are used for spices.

Conditions and Environment

External factors (things outside the seed)

- Water
- Oxygen
- Temperature and light
- Stratification



Internal factors (things inside the seed)

- Damaged seed
- Age of the seed
- Genetics
- Presence of mould

Water

- Seeds need moist conditions before they can sprout.
- Seeds are generally very dry especially the older they are.
- When you put a seed in moist conditions it absorbs the surrounding water.
- This causes the seed to swell.

Water

Water also softens the seed coat allowing it easier for the embryo to burst through.

Water is also needed to activate the metabolic pathways for the seed to grow.

The seed stores all of the starch and nutrients within it.

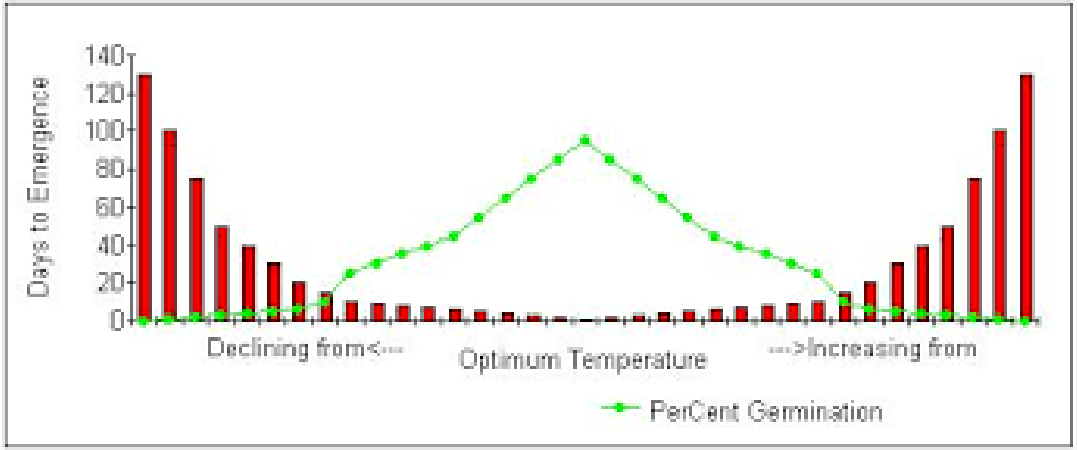

GROWN IN LIGHT
GROWN IN DARKNESS
Life At The Zoo

Stratification

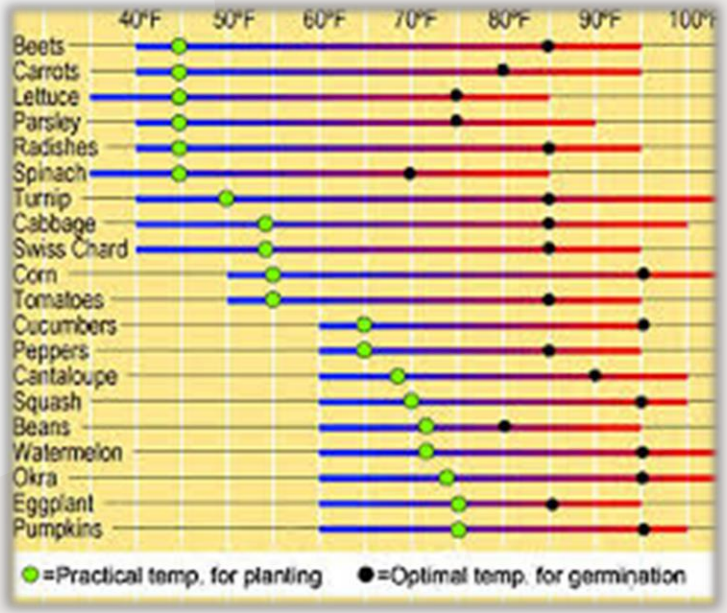
In horticulture, stratification is a process of treating seeds to simulate natural conditions that the seeds must experience before germination can occur.

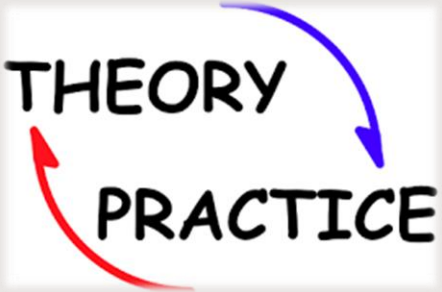
Many seed species have an embryonic dormancy phase, and generally will not sprout until this dormancy is broken.

Requirement 8



- What conditions are necessary for seed to sprout?





Collecting Seeds

Requirement 9

- Now that you have the information, knowledge.
- Put this into actions and practice by doing the following.

Collections of Seeds (30 Different Types)

- Make a collection of 30 different kinds of seeds.
- Only 10 of them can be from commercial seed packages.
- The other 20 you are to collect yourself.
- Label each kind as follows: seed name, date collected, location collected, and collector's name.

Do we have any further questions

Please do send in your questions related to the topic

Honour is Complete

Thank you all for participating in the Honour today.

Remember to keep your worksheets within your participation.

We thank you very very very much.

—Someone amous

The END