

# **Výukový materiál zpracovaný v rámci operačního programu Vzdělávání pro konkurenceschopnost**



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

**Registrační číslo: CZ.1.07/1. 5.00/34.0084**

**Šablona: II/2 Inovace a zkvalitnění výuky cizích jazyků na středních školách**

**Sada: 2 AJ**

**Číslo: VY\_22\_INOVACE\_PRO\_1.,2.,3.,4.,ROC\_16**

# Technical English



|                |   |
|----------------|---|
| Předmět:       | Anglický jazyk                                      |
| Ročník:        | 1.,2.,3.,4.,ročník                                  |
| Klíčová slova: | stem, bud, photosynthesis                           |
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# Technical English

## plants

### 1) Plants (kingdom Plantae)

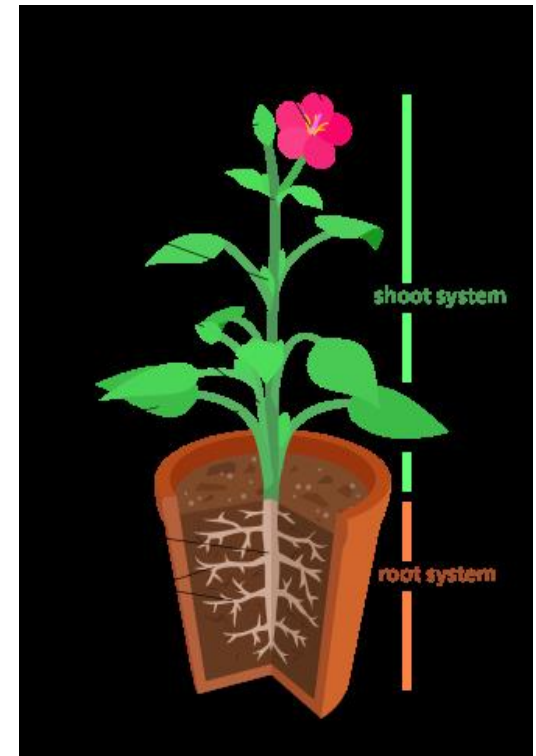
- Plants are one of the two groups into which all living things were traditionally divided; the other is animals.
- They don't move.
- They take nutrients in liquid form.
- For its growth, the plant requires sufficient light, water and carbon.
- By the means of photosynthesis a plant uses light to convert water and carbon dioxide into food.

# Technical English

## plants

The basic parts of a plant are:

- The root system  
( below the ground)
- The shoot system  
(above the ground)

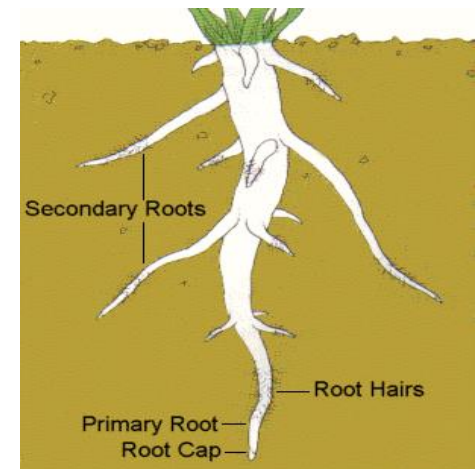


# Technical English plants

## 1) The root system

4 main functions:

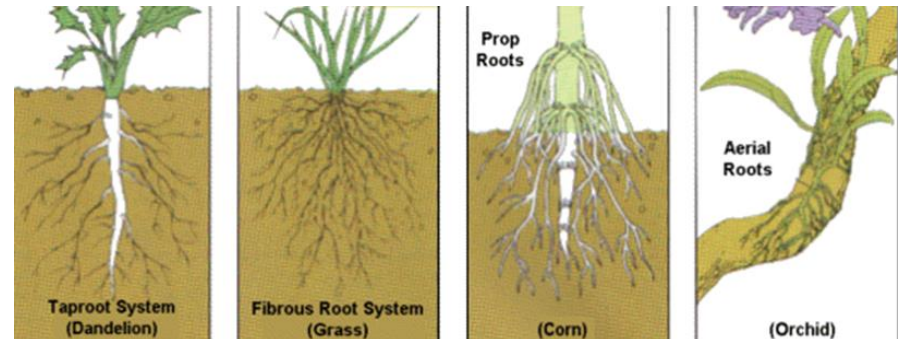
- a) absorption of water and minerals from the soil.
- b) anchoring of the plant body to the ground, and supporting it.
- c) storage of food and nutrients.
- d) vegetative reproduction.



# Technical English plants

## Parts of the root system:

- Primary roots that develops from the radicle of the embryo, normally the first root to emerge from the seed as it germinates.
- Root Hairs very small roots, often one cell wide that do most of the water and nutrient absorption.
- Secondary roots forming off of the primary root, often called branch roots.



# Technical English

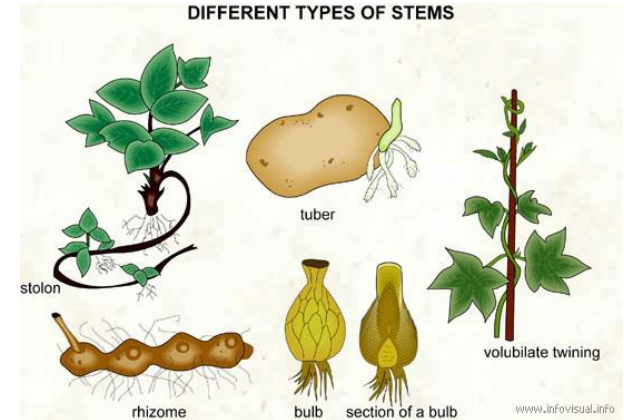
## plants

### 2) The shoot system

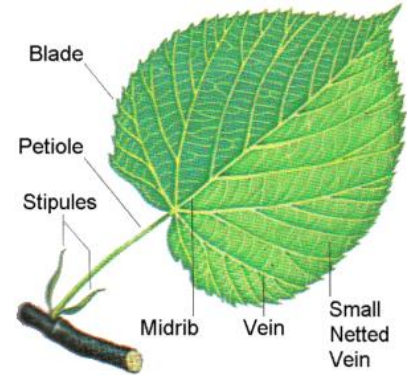
Parts: **stem**, leaf, flower, fruit

#### Stem

- **Stem** supports the elevation of leaves, flowers and fruits.
- The stems keep the leaves in the light and provide a place for the plant to keep its flowers and fruits.
- Transport of fluids between the roots and the shoots.
- Storage of nutrients.



# Technical English plants

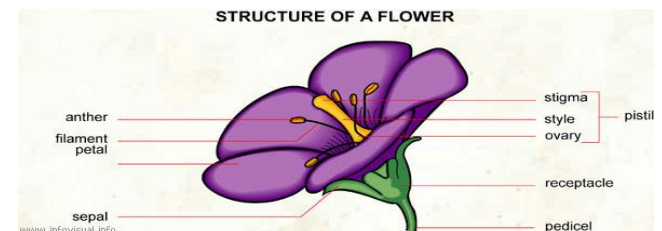


## Leaf

- A flat part of a plant that grows from the stem.
- Their main job is to make food for the plant by the process known as photosynthesis.

## Flower

- Is the reproductive structure found in flowering plant.
- The biological function of a flower is to effect reproduction by providing a mechanism for the union of sperm with eggs.
- give rise to fruit and seeds.



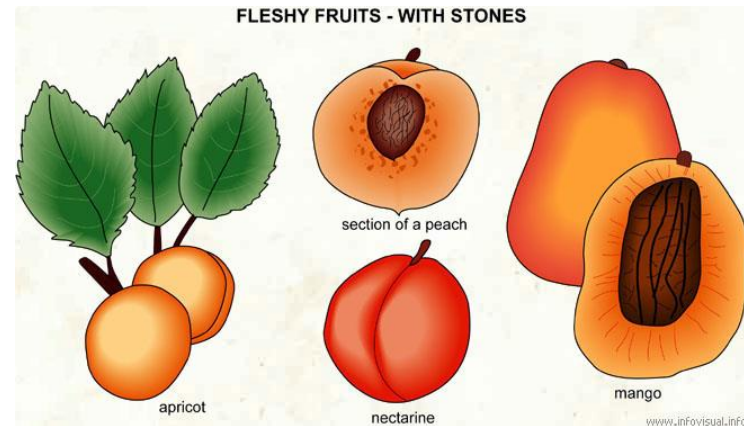
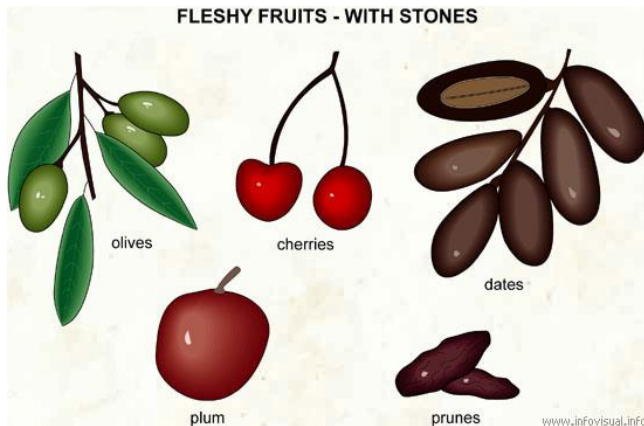


# Technical English

## plants

### Fruit

- is a part of a flowering plant that derives from specific tissues of the flower.
- is the mean by which the plants disseminate seeds.
- it is the ripen ovary of the flower, encloses the seeds and protects them while they are developing.

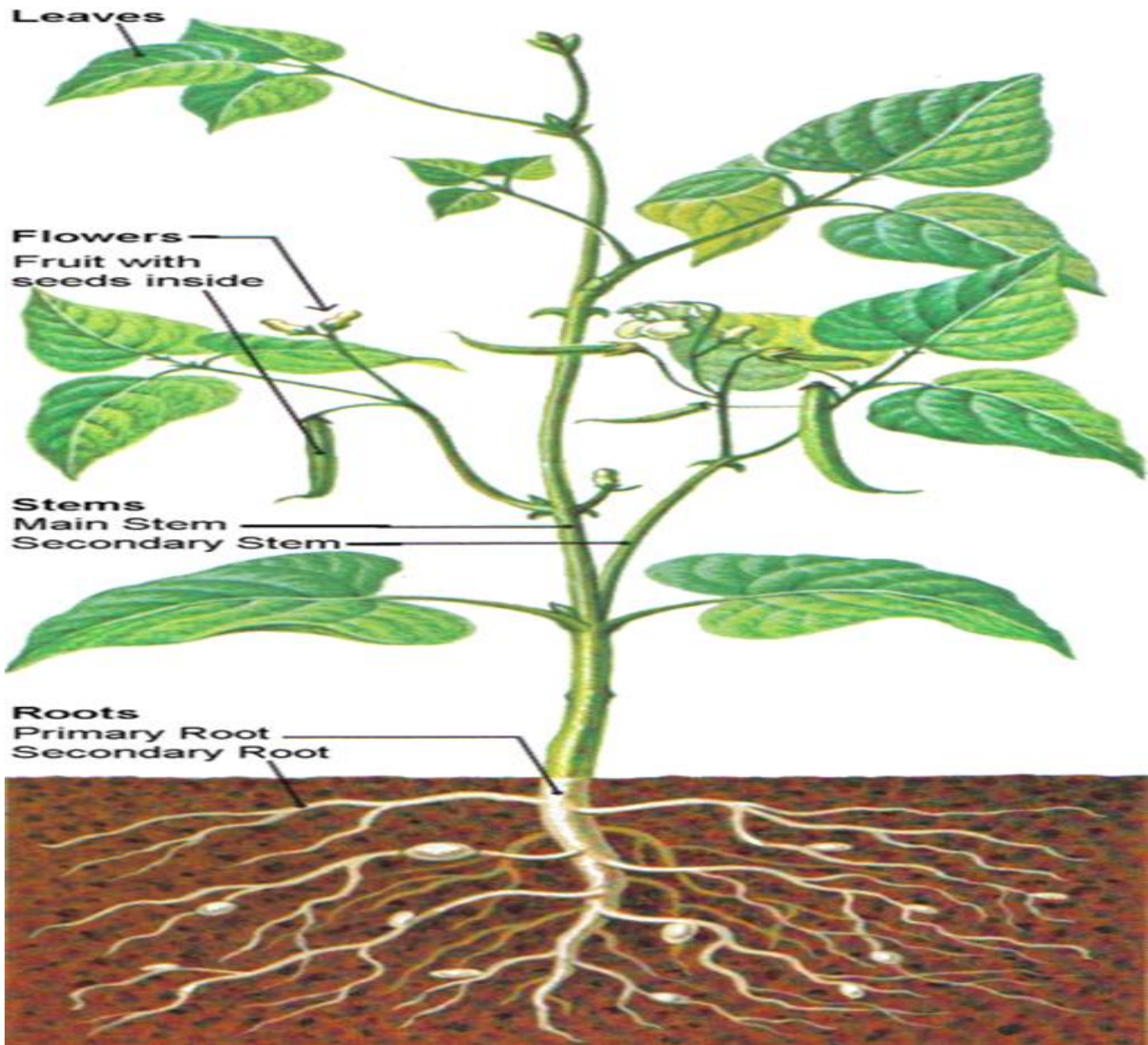


**Leaves**

**Flowers**  
**Fruit with seeds inside**

**Stems**  
**Main Stem**  
**Secondary Stem**

**Roots**  
**Primary Root**  
**Secondary Root**



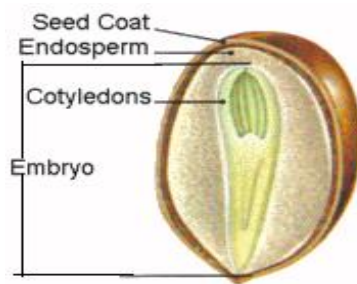
# Technical English

## plants

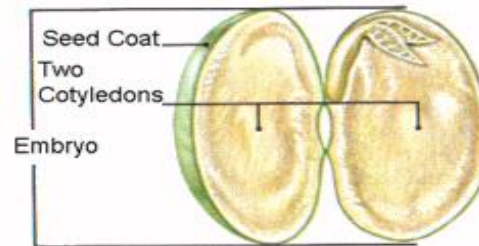
### Seed

- Is a small, usually hard, object from which a plant grows.
- It consists of embryo and foodstore.

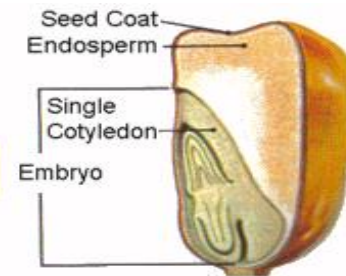
(Embryo is the part which will develop into another plant and the foodstore is necessary to provide nourishment for the young plant.)



A Pine Seed



A Dicot (Bean)



A Monocot (Corn)

# Technical English

## plants

**The stages of the life cycle of a typical plant are:**

**1) Germination** = seeds start to grow.

To germinate the seeds need right amount of moisture and suitable temperature. In the first stage of germination the primary root, or radical appears. Then the stem pushes its way upward above the surface of the soil and the root system grows downward and begins to spread through the soil. In the early stages the seedling is depended on the foodstore in the seed but as soon as the first leaves are produced, it is able to make food for itself. The seedling begins photosynthesis.

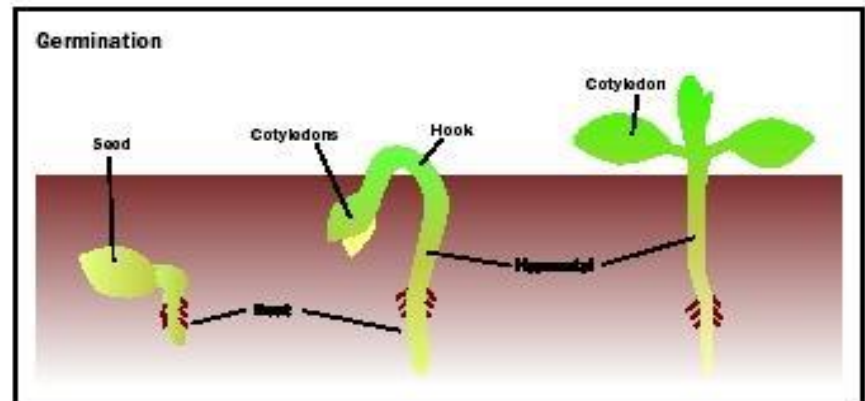
# Technical English

## plants

### 2) Rapid growth

In this stage the plant begins to grow to its full size. When it is mature enough, it flowers and when it happens pollination and fertilization take place.

In the process of pollination, the pollen is carried by wind or insects from the stamens to the stigma of the carpel.





# Plant Life Cycle

Seeds (1)



Germination (2)



Stems and Roots (3)



Leaves (4)



Flowers (5)



Pollination (6)



# Summary

## Parts of a plant

**Shoot system = naťový systém**

**Stem** = stonek, nať

**Petiole** = řapík

**Blade** = čepel

**Leaf** = list

**Vegetative shoot** = nový výhonek

**Another apical bud** = další koncový pupen

**Axillary bud** = postranní pupen

**Internode** = část mezi 2 místy, ze kterých raší postranní stonky

**Apical bud** = koncový pupen

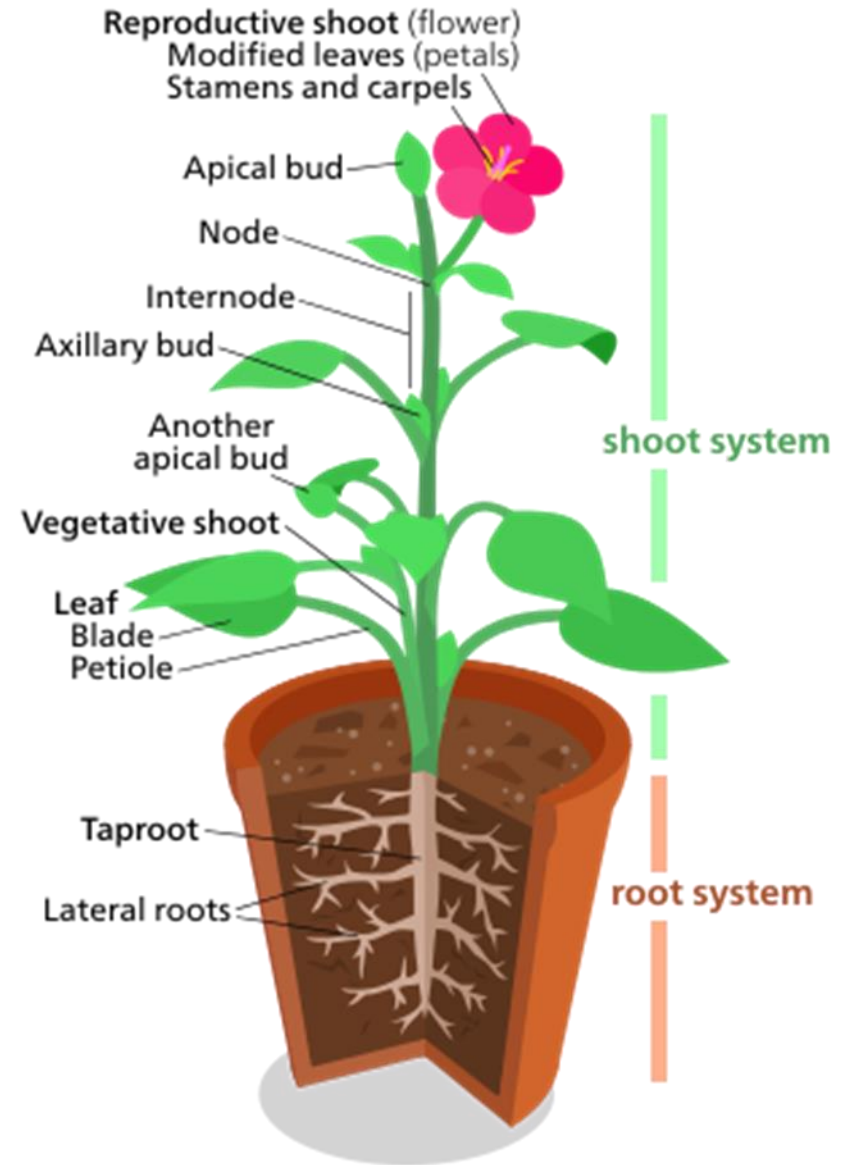
**Stamens and carpels** = tyčinky a pestíky

**Modified leaves** = okvětní lístky

**Root system = kořenový systém**

**Taproot** = hlavní kořen

**Lateral roots** = vedlejší kořeny



# Technical English

## plants

### Practice 1

- 1) What is a plant?
- 2) Name 2 main parts of a plant.
- 3) Name at least 3 parts of a shoot system.
- 4) What is fruit ?
- 5) What is seed?
- 6) What is germination?
- 7) Describe plant life cycle.



# Technical English plants

## Practice 2

- 1) Řapík
- 2) List
- 3) Koncový pupen
- 4) Výživa
- 5) Hlavní kořen
- 6) Postranní pupen
- 7) zárodek

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# Check your answers

## Practice 1

Slides 3-15

## Practice 2

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# Použité zdroje



- Veškeré použité obrázky (kliparty) pocházejí ze sady Microsoft Office 2010.
- Všechny fotografie pochází z archivu autora
- Voráček J., *Zemědělská angličtina*, Profi Press s.r.o., Praha:2004
- O'Sullivan N., DiLibbin J., *Agriculture*, Express Publishing, 2011

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Financováno z ESF a státního rozpočtu ČR.*