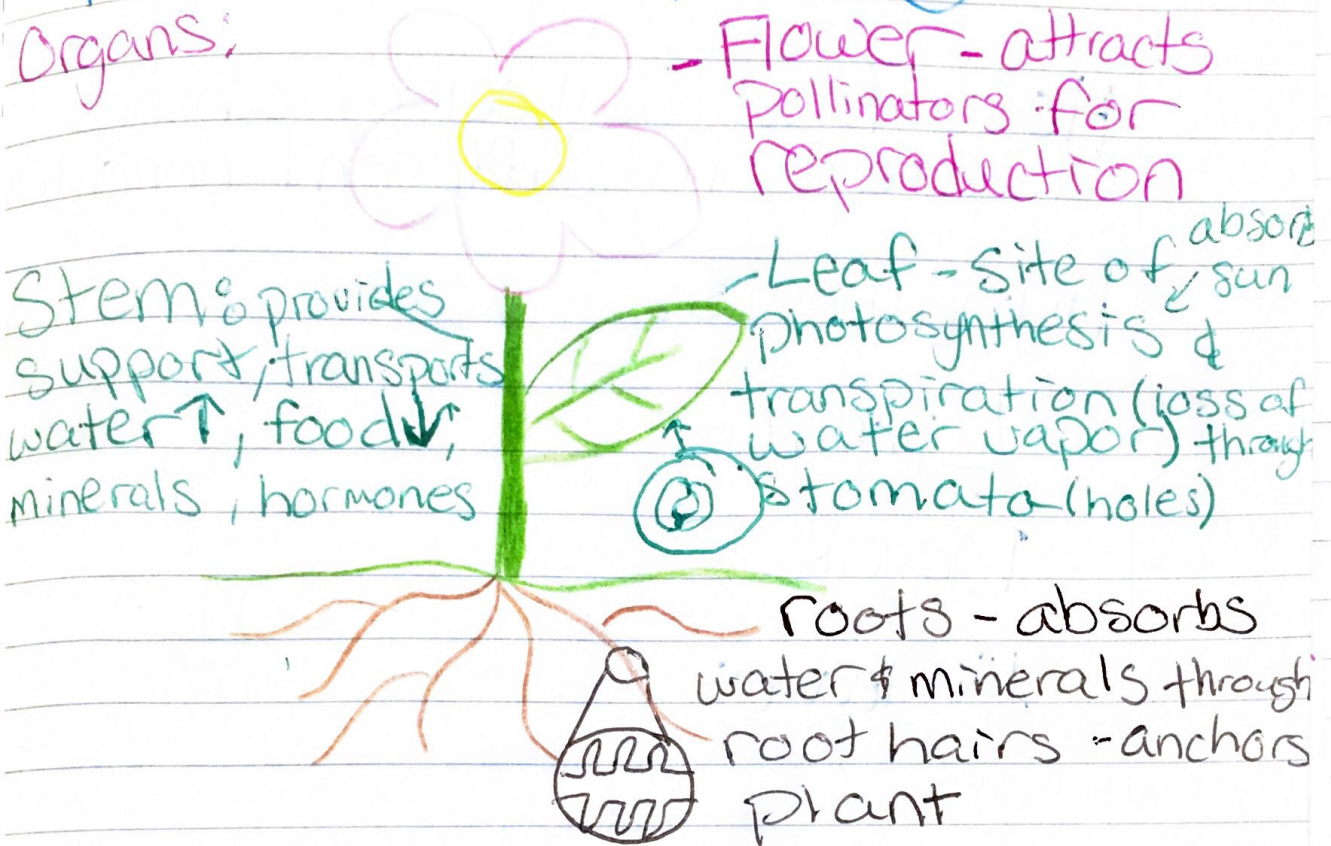


Plant Intro 65

Organs:



Three main functions / systems

Reproductive: sexual or asexual
male + female - flowers, seeds, fruit
plattets, runners

Response - plants respond to stimuli by releasing hormones (Auxins)
Tropisms - movement of plant in response to stimulus

Transport - movement of water, minerals, hormones & food throughout plant

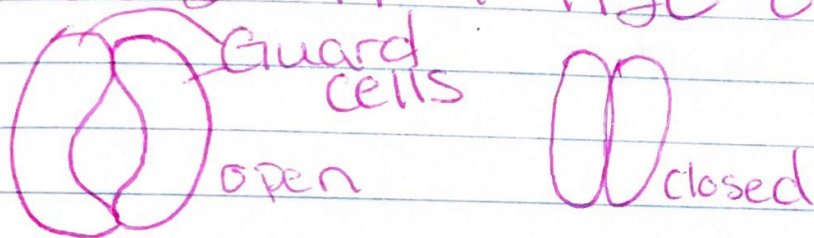
Transport System (7)

Material is transported through the vascular system/tissue

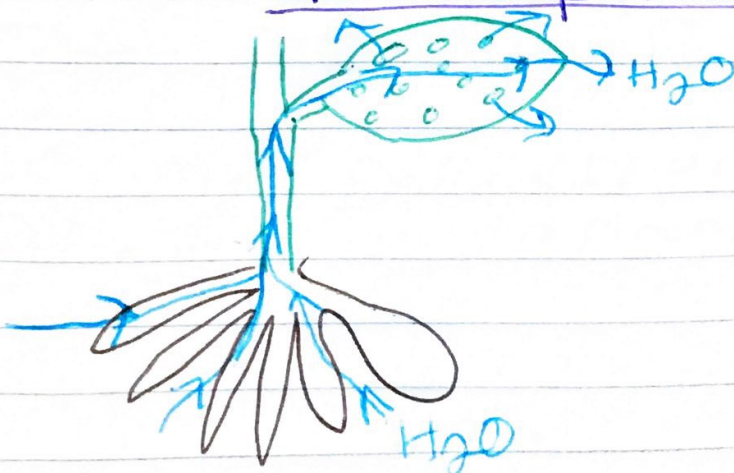
Xylem - H_2O
roots \rightarrow stem \rightarrow leaves
only \uparrow

Phloem - food
leaves \rightarrow rest of plant
mostly \downarrow

Stomata - holes in underside of leaves - surrounded by cells that can open & close to allow CO_2 in & H_2O out



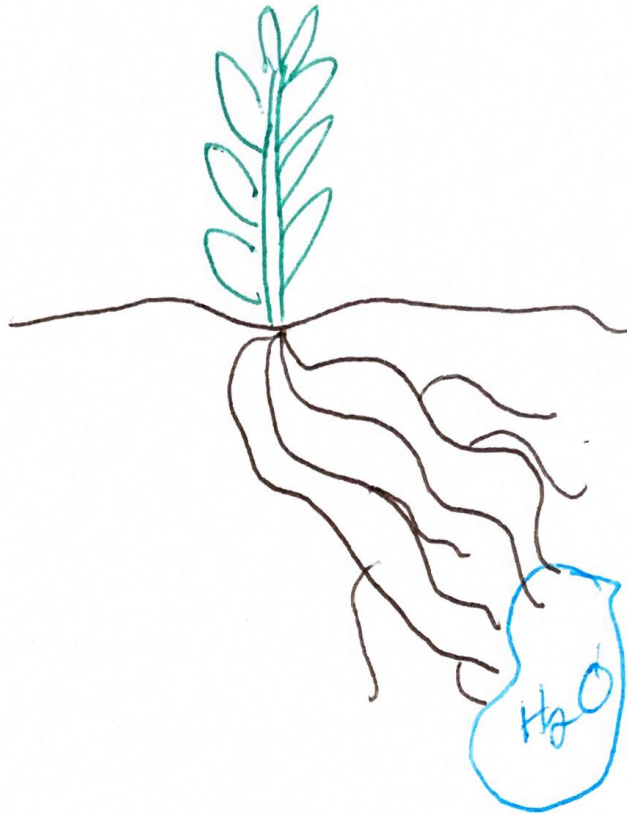
- b/c stomata allow CO_2 in - H_2O will diffuse out
- loss of water from stomata pulls more water up xylem from roots
- Called Transpiration



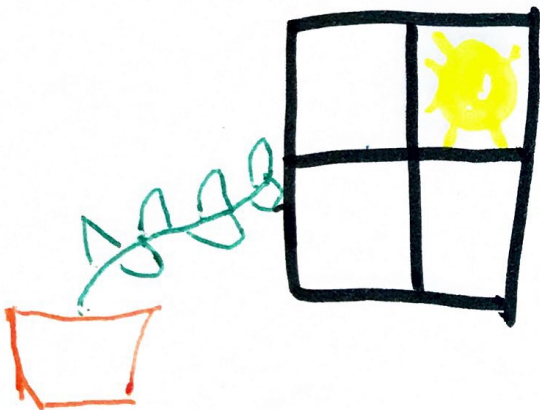
Thigmotropism



Hydrotropism



Phototropism



Geotropism Gravi-



Response to: Touch

How it works:
Hormones released in response to touch that cause cells to expand/contract

EX:
mimosa leaves closing
vines twisting around objects

Response to: Water

How it works:
Hormones cause roots to bend towards water

EX: roots grow towards water sources

Response to: Light

How it works:

Auxins accumulate in dark side - cause that side to grow



EX:
Sunflowers follow Sun

Plants lean towards Light sources

Response to: Gravity

How it works:

Hormones
positive: roots
negative: stem

EX:
roots go down
Stem goes up

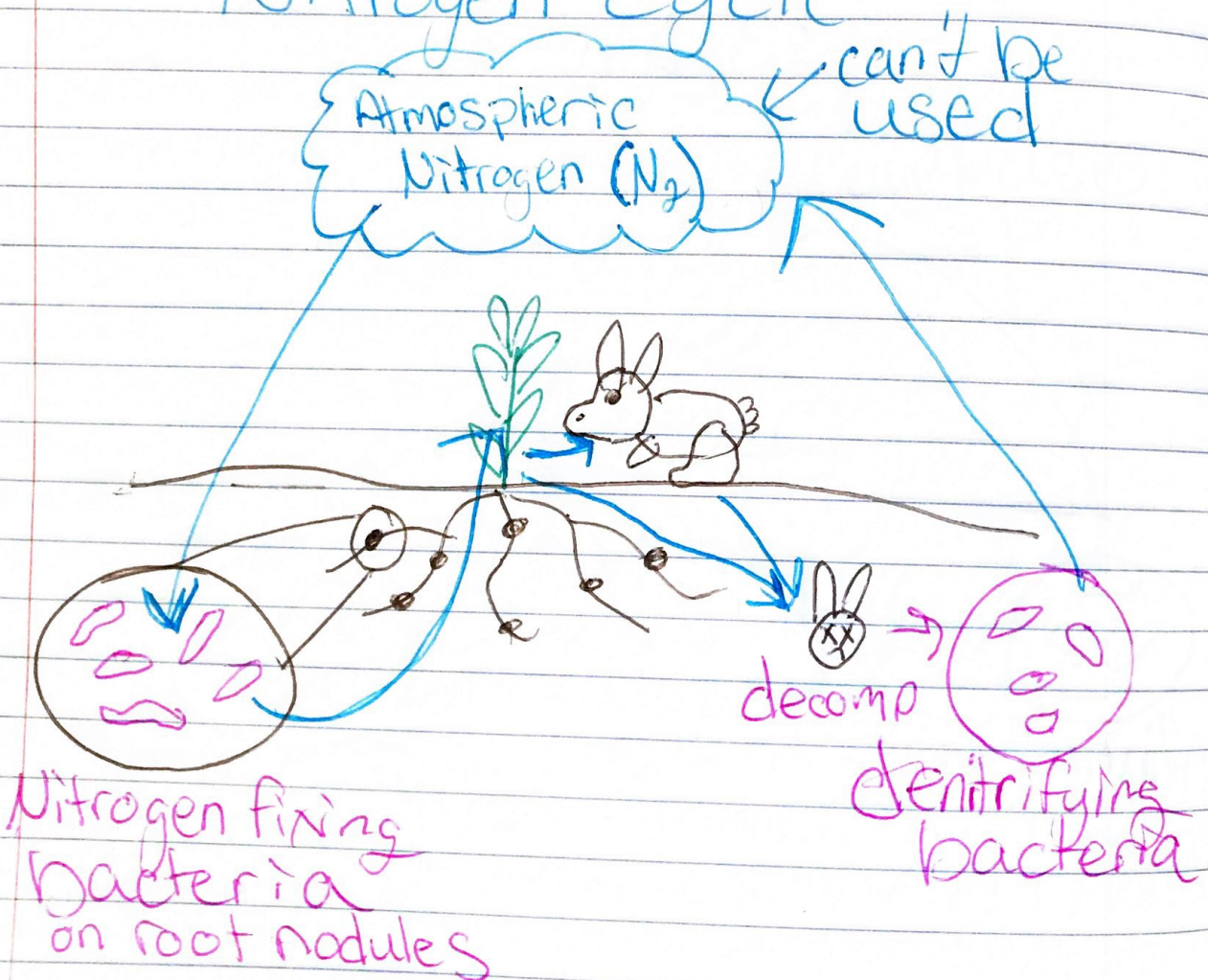
70 Microbes & The Nitrogen Cycle

Microbe - microscopic organisms (1 cell)
bacteria

Can be:
harmful beneficial
Staph. a (MRSA) gut bacteria

In plants: bacteria are needed to fix nitrogen into the soil for plants to use

Nitrogen Cycle



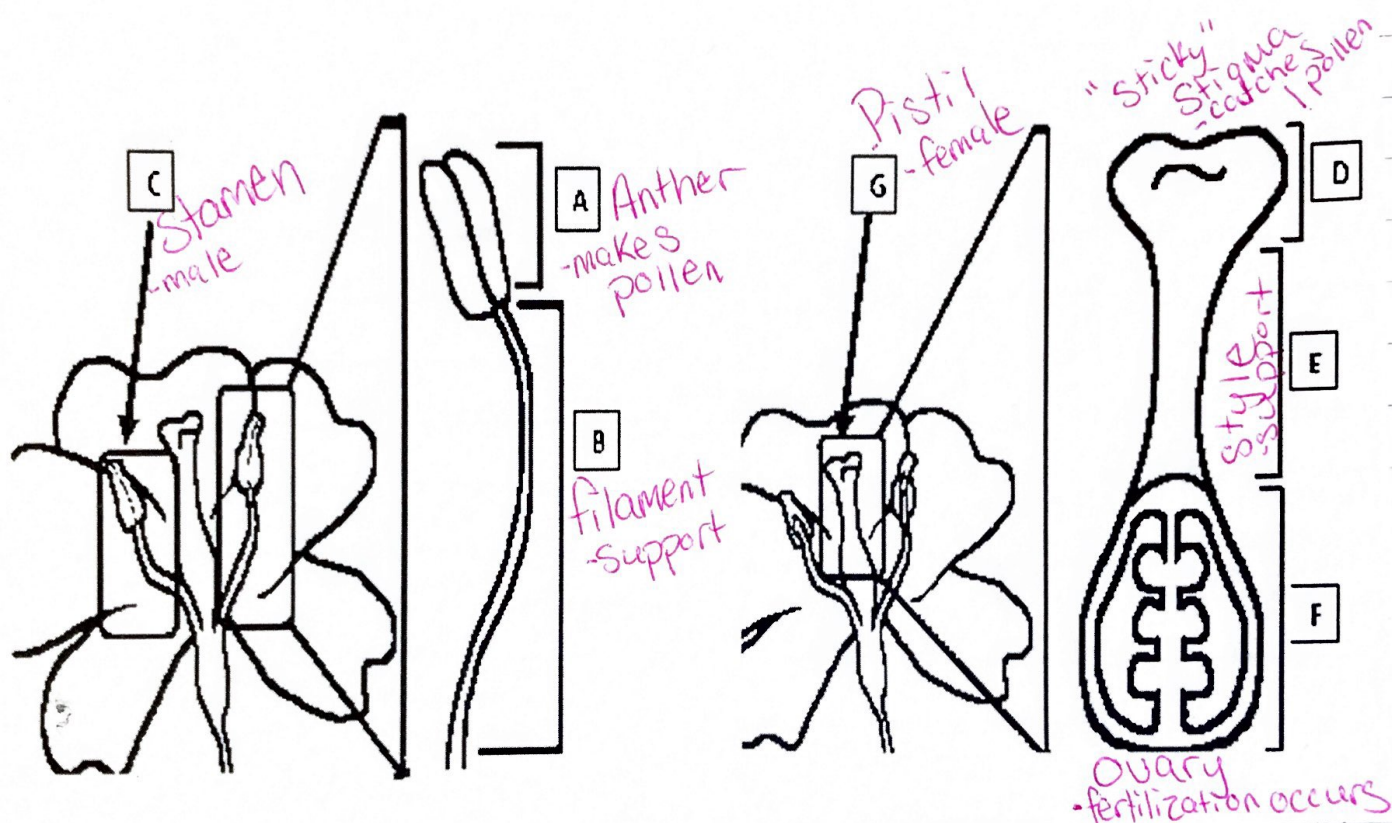
Plant reproduction:

71

Angiosperm - flowering plant

Define Fruit: develops from ovary

Flower parts:



Pollination: pollen transferred from anther to stigma

Pollen Tube: goes from stigma down the style to move sperm → ovary

Fertilization: sperm + egg = seed
ovary becomes fruit