

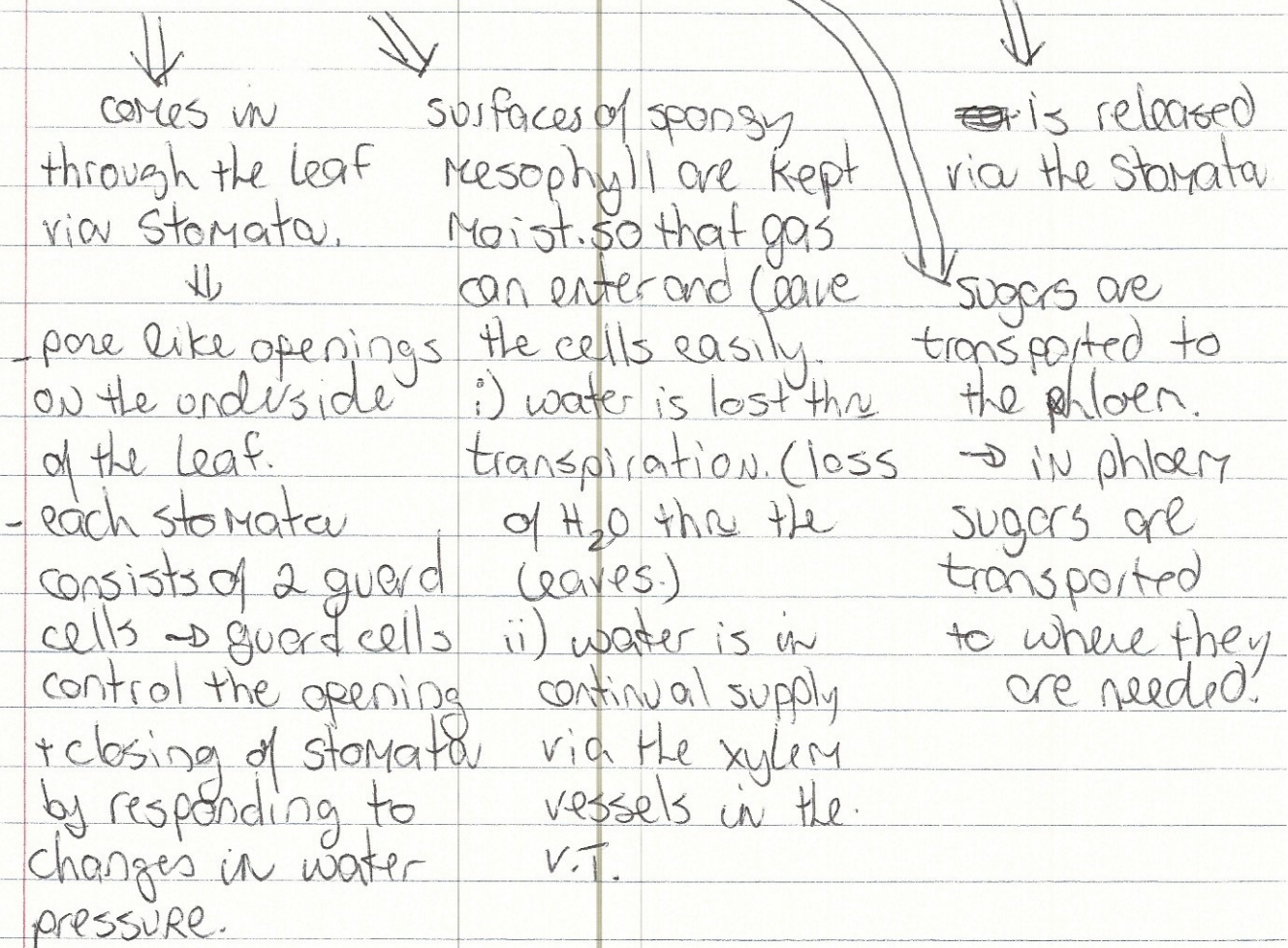
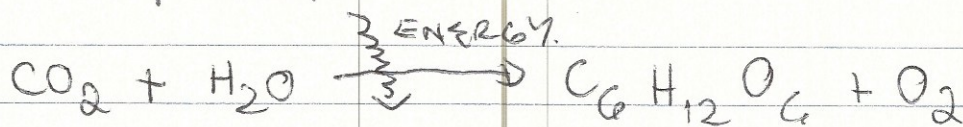
- specialized for photosynthesis.

SUBSYSTEMS of the leaf include tissues that:

- Bring gases
- Bring water + nutrients
- carry out photosynthesis.

### 1.) Photosynthesis

→ ground tissue known as mesophyll is where most photosynthesis occurs.



\* AIR SPACES BTW SPONGY MESOPHYLL IS WHERE GAS exchange occurs in a leaf.

\* Stomata are kept open just enough to allow photosynthesis to take place; usu. open during the daytime and closed at night; but stomata may be closed during the day in hot dry climates.



Biol 0871 A Leaf continuedAdaptations of Leaves (Fig. 23-20 p 598)

- Leaves vary in appearance due to adaptations to their environments.

## Ex Pitcher Plant.

→ Leaf is modified to attract + digest insects and other small prey. → plant lives in nutrient-poor soils + rely on insects as their source of Nitrogen.

## Cactus Plant

→ Leaves are nonphotosynthetic thorns that protect against herbivores.  
→ Most photosynthesis is carried out in the plant's stem.

## Pine Tree

→ narrow leaves contain a waxy epidermis as well as stomata that are sunken below the surface of the leaf.