CLASS ACTIVITY - DICOTYLENDONOUS STEM

1. What are the functions of the internodes and nodes.

2. What caracteristics of a dicotyledonous stem will help you identify a microscope slide of a cross section through a stem.

3. What is a vascular bundle that contains cambium known as?

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1. The node is where the leaves and side branches develop. The internode is the region between the two nodes
2. The xylem and phloem are arranged in vascular bundles. The vascular bundles are arranged in a circle. Pith is present. Root hairs are present.
3. Open vascular bundle.

CLASS ACTIVITY - SECONDARY THICKENING

1. Explain the process of secondary thickening

2. When you look at year rings in a cross section of a perennial woody stem. Why would the width of the rings be an indication of rainfall during a specific year?

3. What do bark consist of?

ANSWERS

1. - Fasicular and interfasicular cambium join up to form an unbroken ring of cambium tissue.

- Active cell division takes place in the cambium ring.

- Secondary xylem is formed on the inside of the cambium ring, secondary phloem is formed on the outside of the cambium ring.

- the secondary xylem now forms a continuous ring on the inside of the cambium ring and the secondary phloem forms a continuous ring on the outside of the cambium ring.

- each year the cambium forms a new ring of secondary xylem and phloem

2. With a wider ring, it would indicate that lots of water was availible because more growth took place.

3. The bark of a tree includes all the tissues outside the cambium ring, the secondary phloem, primary phloem, cortex, cork layer, and flaking epidermis