Introduction
The vascular tissue system in plants is the transport system made up of two primary specialized tissues: xylem, which carries water from the roots upwards to the leaves of the plant as it is needed for photosynthesis, and phloem, which carries glucose/manufactured food from the leaves to the rest of the plant. Xylem and phloem arrange themselves in vascular bundles. Cutting a cross-section through stem usually shows the xylem on the inner side of the vascular bundle in a stem, while the phloem is found on the outer side of the vascular bundle.

Purpose
Conduct an experiment in which you observe the location of the xylem tissue within the stalk of celery, thus showing the movement of water through xylem.

Materials
Plastic knife or scalpel
Celery stick
100ml Beakers/cups
Food Dye
Hand lens/Microscope

Conclusions
Xylem vessels run along the ________________ of the celery stick stem, while the phloem vessels run along the ________________.

Questions
1. Name the tissue that was stained by the dye.
2. What can you conclude regarding the function of xylem tissue?
3. What surprised you about this lab?
4. Summarize what you learned from this lab in 3 complete sentences.

This lab is modified from Lighthouse Academy Fredericksburg: http://www.kids4af.com/