

5. Meristem Exploration

Summary: Students determine where the meristem is located on eelgrass by cutting plants at different points and seeing which continue growing.

Materials:

- Several eelgrass plants in tank outside for week or longer experiments
- Eelgrass plants in a small indoor container for 3-5 day experiments.

Background: The meristem is the part of the plant where new growth occurs.

Activity: Tell Students this story: “Students doing eelgrass restoration found something surprising about meristem growth. When tying the plants to the grids, they tied the plant to the grid right above the meristem, but when they returned to remove the grids, new rhizome roots were growing above the grid rather than under it into the mud. This led them to believe that the meristem moves up the plant as it grows.”

Ask students to think of experiments that they can you do to test this theory.

Try thgug experiment vq'iqecvg'vj g'o gtlugo "and/or one that students design: Try cutting back different eelgrass plants at various points on the stem. Monitor these plants to see which are still growing. Determine where the meristem is located based on which plants continue to grow and which don't. Have students draw and label the meristem on their plant in vj gk'uelpeg'lqwtpcn0Y kj "qvj gt'r rcpvu."j cxg'uwf gpv'f gxkug'c'y c{ "vq'o ctnly j gtg" vj g'o gtlugo 'ku'cv'vj g'dgi kppkpi "qh'vj g'r tqi tco 0Qdugt'g'kh'k'j cu'o qxgf "cv'vj g'gpf "qh'c'y ggmu'vko g."cpf "cv' vj g'gpf "qh'vy q'y ggmu'vko g0P qvg'kh'vj ku'y cu'gpqwi j "vko g"vq"qdugt'g'c'ej cpi g'lp'vj g'o gtlugo lu'r qukkqp0"Uj ctg { qwt'tguvnu'qp'vj g'Ugci tcuugu'kp'Encuugu'Drqi #"