NAME _____

DATE _____

Carolina LabSheets™

Investigating a Lethal Trait

In this activity, you will study two contrasting phenotypes, one lethal, through an observation of corn seedlings.

Planting

Fill a planting tray with moist potting soil to a depth of at least 4 cm (1 ½"). Deeper is better. Place your corn seeds on the surface of the potting soil about 2 cm (¾") apart, in rows also spaced about 2 cm apart. Cover the seeds with a 1.5 to 2 cm (⅝ to ¾") layer of moist potting soil. Mark your tray with your group number and the current date. Put a plastic cover on your tray and leave the tray in the place indicated by your teacher.

Initial Observation of Seedlings

1. Observe the germinated seedlings. What two phenotypes do you observe?

   _____ and _____

2. Count the number of seedlings of each phenotype and the total number of seedlings, and record the results here:

   _____

   _____

   Total:_____

3. What do you think will happen to the seedlings over the next several days of growth? Explain your thinking.

   _____

   _____

   _____

   _____

Final Observation of Seedlings

1. Count the number of seedlings of each phenotype and the total number of seedlings, and record the results here:

   _____

   _____

   Total:_____

©Carolina Biological Supply Company
Carolina Biological Supply Company grants teachers permission to photocopy or reproduce by other means this document in quantities sufficient for the students in his/her classroom. Also for the purposes of classroom use only, teachers may make an electronic file or overhead transparency of any or all pages in this document.

2. Do these results meet your expectations for what would happen to the seedlings?

3. What is a lethal trait? How do your results illustrate lethality?

4. Under cultivation, the lethal allele for albino has been maintained in a population of corn for decades. How is this possible?

5. Suppose the seedlings were part of a wild (i.e., uncultivated) population. What would you expect to happen to the lethal allele over several generations of plants? Explain your thinking.

Carolina Biological Supply Company
2700 York Road, Burlington, North Carolina 27215
Phone: 800.334.5551 • Fax: 800.222.7112
Technical Support: 800.227.1150 • www.carolina.com
CB212481408