Seed Dissection
Lab Activity
Reference Text p. 142

Name: ___________________________
Hour: _______ Date: _______________

**Background Information:** You have learned that a seed is a structure that holds a tiny young plant inside of a protective covering. The baby plant can exist within the seed for a very long time, waiting to grow into a mature plant. If conditions such as temperature, moisture, and light are just right, the young plant will begin to grow using the energy from the stored food inside of the seed. The embryo will eventually grow into the plant’s roots and stem, and the tiny cotyledons will grow into true leaves that can create food for the mature plant through photosynthesis.

**Procedure:**

1. Your teacher has a collection of different types of seeds that have been soaking overnight to make them soft and easy to dissect. Place one of each type of seed on a dish and bring them back to your lab table with a hand lens.

2. Choose one of the seeds and gently peel off the seed coat and set it aside. This is the protective layer of the seed. Describe the appearance of the seed coat in the chart below.

3. Pull apart the two halves of the seed. Be careful, the seed is very delicate!

4. Identify the stored food, which takes up most of the inside area of the seed. The young plant will use this stored food to grow until it can make its own food.

5. Identify the embryo. It should be near one of the edges of the seed. This is the young part of the plant that will eventually become the roots and stem.

6. Identify the cotyledon, which should be attached to the inside end of the embryo. The seed with either have one or two cotyledon leaves, which will eventually grow into mature leaves. Record the number of cotyledon leaves for this seed in the chart below.

7. Draw a diagram of what you observe inside of the seed in the chart below. Label the *seed coat, stored food, embryo, and cotyledon.*

8. Answer the analysis question at the end of the lab.
<table>
<thead>
<tr>
<th>Name of Seed</th>
<th>Description of Seed Coat</th>
<th>Number of Cotyledons (1 or 2)</th>
<th>Labeled Drawing of Seed</th>
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**Analysis Question:**

1. Explain why a seed is an excellent adaptation for a plant to have.