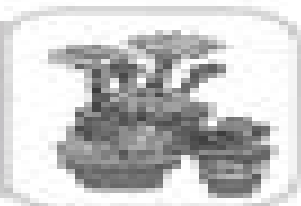


## Laboratory Activity #1 — Student Laboratory Packet

**Relationships and Biodiversity**

A Laboratory Activity for the Living Environment

**Introduction**

*Broomrape* is a valuable plant because it produces *Clavell*, a compound used for treating certain kinds of cancer. *Clavell* cannot be produced in the laboratory. *Broomrape* grows very slowly and is an endangered species. Yet, in its ability to provide *Clavell* in large quantities in Britain.

Species that are more closely related to *Broomrape* are more likely to produce the important substance *Clavell*. Three similar plant species that are plantlike (X, Y, and Z) may be related to *Broomrape*. You will work as a researcher to:

- gather structural and molecular evidence to determine which plant species is most closely related to the hypothetical species, *Broomrape*.
- use this evidence to decide which plant species is most likely to serve as a source of the important substance *Clavell*.

**Safety**

- You will need to wear goggles while conducting Tests 1 and 2.
- Do not eat or drink anything in the laboratory while doing this laboratory activity.

**Important Note:** Record all of your data and answers on these laboratory sheets. You will need to keep them for review before the Regents Examination. Later, you will need to transfer your answers to an separate Student Answer Packet. Your teacher will use the packet to grading your work, and the school will retain it as evidence of your completion of the laboratory requirement for the Living Environment Regents Examination.

**Structural Evidence for Relationships**

Perform the following tests and record your observations in Table 1 on page 8 of this packet. Use a hand lens or microscope as needed.

**Test 1—Structural Characteristics of Plants**

- a. Do not remove the plant samples from the plastic bags/cups.
- b. Compare the structural characteristics of the plant samples. Record your observations in Table 1 (see page 8).

**Test 2—Structural Characteristics of Seeds**

- a. Do not remove the seed samples from the plastic bags/cups.
- b. Compare the structural characteristics of the seed samples. Record your observations in Table 1.



# State Mandated Biodiversity Lab Answers

**Yi-Tong Ma**



## **State Mandated Biodiversity Lab Answers:**

## Unveiling the Magic of Words: A Overview of "**State Mandated Biodiversity Lab Answers**"

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