

**Overall lesson topic/title:** Celery Stalk Experimentation

**Teacher:** Devon Orrin

**Lesson date:** 03/03/13

**GLCEs for this lesson:**

- Describe the function of the following plant parts: flower, stem, root, and leaf (L.OL.03.31).
- Make purposeful observations of the physical characteristics of plants using the appropriate senses (S.IP.03.11).

**Rationale:**

These activities will give students experiences with stems. Students will *Explore Phenomena and Patterns* will have an opportunity to examine the celery, make observations and look for patterns among celery stalks. They will *Explore Ideas about Patterns* when they get together to share their ideas about these patterns, and how these patterns may inform them about the function of the plant. The students will *explain patterns* by providing their own ideas about the function of stems.

**Connection:** This will be the second experience with discussing patterns and revising their thinking about plant part functions. The previous day, the students will go through the same process, looking at flowers, discussing patterns, listening to a read aloud and revising their thinking. Eventually, they will have an opportunity to discuss their long-term observations of the leaf and root experiment, so that they are able to come to conclusions with more evidence and patterns.

**Materials & supplies needed:**

- Celery stalks
- Red food coloring
- 3 cups
- Water
- Scientific Process Poster
- Chart paper
- Marker
- Observation journal sheet
- Pencils
- ELMO
- Screen

**Formative Assessment:**

I will collect their observation journal worksheets daily, and use them as an assessment to see if they are depicting what they see, making accurate observations, and connecting their observations to the teaching point, or the "why."

I will also conference and listen in on my students' conversations with their partners and with their group members when they discuss their original ideas, and how their ideas have changed. If the students seem to have lingering misconceptions, I will reread parts of the book that target that particular misconceptions.

**Connections with Funds of Knowledge:**

Celery is a familiar plant to my students. They eat it for lunch regularly, and have many experiences with it. This will be very relevant to their lives, and they will likely be surprised that celery is a plant.

***Academic, Social, and Linguistic Support during assessment:***

The visuals in the scientific process chart and the scientific process poster will help both visual learners and ELLs make connections to the language of the teacher and their classmates.

The discussion of the previous day's lesson will serve as review for those who have trouble remembering, as well as a quick mini-lesson catch-up for those who were absent.

The observation journal will have dotted line paper in order to help students with their handwriting, and to remind them to use their best sentence structures and stretch out their spelling words.

Students will be allowed to use a drawing to supplement their observations, in order to depict their understanding. This will benefit students who struggle to quickly craft their thoughts into written word.

***Opportunities for Enrichment:***

Students will be pushed to make predictions to what they think will happen. They will also be asked to think about what experiments they could create to test the function of the other parts of the plant.

If students do all of this, they will be encouraged to "check out" a book from the science unit library, which will be stocked with varied level plant books from the Troy Public Library.

## ***Procedures and approximate time allocated for each event***

### • **Introduction to the lesson** (5 minutes)

Teacher will direct attention to the scientific process poster, and discuss how they will construct this experiment in line with the scientific process. She will have the question portion of the chart already filled out.

She will tell the students that they will be using the scientific process to identify the function of plant stems. She will remind them that she already set up the experiment that morning, and that they were to remember their observations of the stem at that time. They will be taking time to evaluate the results together.

### • **OUTLINE of activities during the lesson** (30 minutes)

Teacher will call the students to the carpet, and ask the students about their previous observations of roots in order to collect background information from their prior experiences.

Teacher will work with the students to construct a hypothesis for the experiment, by explaining what she did in her experiment preparation, and what they remembered her doing in the morning.

Possible questions:

- What did the celery stalk look like this morning?
- Why did Miss Orrin decide to put the stalk in colored water?
- Why did she let a stalk sit, dry?

Teacher will bring out the stalks, which will have red streaks through them. The students will have an opportunity to look at them at the carpet. Students will discuss, knee to knee and eye to eye what they see. She will move the stalks to the back table, and students will have an opportunity to come up in groups to make their observations in their observation journals.

While the students are at their seats, they will practice setting up the scientific process by writing the plan in their neatest handwriting.

Teacher will call the students back to the carpet, and write down the collected data on the chart. She will have the students discuss why they believe the red streaks are in the celery, in partners. The students will be prompted to explain the patterns they saw in all of the celery stalks, and what those patterns mean.

Students will share their thinking with the class, and the teacher will write down their observations and initial thinking, which will be revisited the following day.

### • **Closing summary for the lesson** (10 minutes)

Teacher will review the scientific process chart, and the student explanations for the patterns. The teacher will tell the students that they will be working with these initial thoughts, and comparing them to information they will receive from a nonfiction book about stem functions.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Observation of: \_\_\_\_\_

Detailed picture

Sentence describing what you **saw**

Picture that shows what happened

Sentence describing what **happened**

**Why did it happen?**