

21CLD Learning Activity Description

Please fill in one of these sheets and attach it to **EVERY** learning activity you submit. Choose the learning activities that you feel **provided the best learning opportunities for students**.

1. Title of Learning Activity & Average Age of Students

Title: SCIENCE LAB #8 - MUNTING MUNGGO (tiny mung bean)

Average Age of Students: 11 years

2. What did you hope your students would learn from this learning activity?

Students would learn to (a) conduct a simple experiment, (b) make and record observations, and (c) describe their results. They will do this experiment as preparation for our lesson on seed germination and the effects of liquids on the process.

3. Did you have learning goals from more than one discipline (for example, literature and history, or science and math) for this learning activity?

No.



4. Were students required to work in pairs or as a group on any part of this learning activity?

- No
- Working in groups was *optional*. Please describe below the work that students did together.
- Working in groups was *required*. Please describe below the work that students did together.

At the beginning of the school year, students choose a lab partner. All the experiments in our science lab are conducted with their partner. They submit one worksheet per pair – like they did in this experiment.

5. Were students allowed to work with technology (ICT) such as computers or digital cameras for any part of this learning activity? Please describe.

- No technology was used for this learning activity.
- Students *could* use technology for this activity
- Students were *required* to use technology for this activity

I allowed students to type their answers to the final worksheet that they submit so it is neater.

6. What criteria did you use to judge the quality of students' work on this learning activity? Were students aware of the criteria in advance of completing the learning activity?

I checked to make sure that they completed the entire worksheet. I gave more credit for the completion of part B where they record their daily observations.

7. How long did the learning activity take?

- a. Completed in a single class period
- b. Completed in 2-4 days
- c. Required one week or more to complete

8. What verbal instructions did you give to students?

I reminded students that they should visit their stations every day to record their observations even if it is not a lab day.

9. Is there any other information you would like to include to help another teacher using this learning activity be successful?

I let students choose their partners at the start of the school year so they will like working with them. It has been working well in the last 3 months, and they are used to conducting their experiments together. They know that I will not give them credit if only 1 of them is doing all the work.

PLEASE REMEMBER TO INCLUDE:

- *Instructions for the learning activity*
- *Handouts and materials*
- *Grading rubrics*



SCIENCE LAB #8 – MUNTING MUNGGO

Objective:

To observe how liquids affect the growth (germination) of the mungo bean

Materials:

Mungo beans, plastic cups, tissue paper, marker, water, vinegar, ruler.

Procedure:

1. Brainstorm the similarities and differences between water and vinegar. Write the answers in your worksheet part A.
2. Set up your two growth stations.
 - a. Take a plastic cup, 5 mungo beans and tissue paper for each one.
 - b. For the water station, dip 3 sheets of tissue paper in 3 tablespoons of water from the faucet. Put this at the bottom of the cup. Place the mungo beans on top of the wet paper. Label the cup “water.” Write your group number also.
 - c. For the vinegar station, dip 3 sheets of tissue paper in 3 tablespoons of vinegar. Put this at the bottom of the cup. Place the mungo beans on top of the wet paper. Label the cup “vinegar.” Write your group number also.
 - d. Put both stations side-by-side along the window of our lab room to make sure it gets enough sunlight.
3. Record your observations for the next 4 days. Write this on worksheet part B. If you see any growth, measure it using a ruler. Also check if the tissue paper is still moist. If it is dry, add a little water or vinegar. Add the same amount of liquid to each station.
4. At the end of Day 4, summarize what happened to the mungo bean in each station. By Friday, submit your worksheet to your lab teacher.



SCIENCE LAB #8 – MUNTING MUNGGO

GROUP NUMBER: _____

STUDENT NAMES: _____ + _____

A. SIMILARITIES & DIFFERENCES OF WATER & VINEGAR

WATER	VINEGAR

B. OUR OBSERVATIONS

	WATER	VINEGAR
Day 1		
Day 2		
Day 3		

C. SUMMARY

--