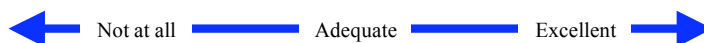




UNIT EVALUATION

Your thoughts on these lessons/activities will be critical to the continued refinement of these specific topics, as well as to the development of future teaching units.

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Grade(s)	<u>ISCI 2001 (Earth and Life Science for Elementary Education Majors)</u>	Class Size	<u>3 separate lab sections (24 students per lab)</u>
Unit Taught	<u>Hardware Sort (Classification)</u>	Subject/topic	<u>Life and Earth Science</u>



Component	Rating	0	1	2	3	4
A. OVERALL TEACHING UNIT						
1. Unit is clearly written		0	1	2	3	X
2. Objectives are well-defined and relevant to topic		0	1	2	X	4
3. Instructions are easy-to-follow		0	1	2	3	X
4. Provides adequate background information for teachers		0	1	2	X	4
5. Includes appropriate sequence of lessons/activities		0	1	2	3	X
6. Easily integrated with national standards		0	1	2	3	X
7. Grade appropriate and/or adaptable to grade level; comprehensible to students		0	1	2	3	X
8. Interesting/motivating/compelling to students		0	1	2	3	X
B. ACTIVITIES						
1. Consistent with unit objectives		0	1	2	3	X
2. Include hands-on components		0	1	2	3	X
3. Include inquiry-based/problem-solving components		0	1	2	3	X
4. Engage students in the scientific process		0	1	2	3	X
5. Incorporate real-time data in an authentic way		X	1	2	3	4
6. Integrate technology appropriately		0	X	2	3	4
7. Offer low-tech/alternative implementation options		0	1	2	3	X
8. Appropriate for a variety of learning styles		0	1	2	3	X
9. Include sufficient extension activity(ies)		0	1	2	X	4
10. Teaches described concepts		0	1	2	3	X
C. CULMINATION/MASTERY						
1. Includes information on product/process assessment		0	1	2	3	X
2. Specifically measures the unit objectives		0	1	2	3	X
3. Offers ways to assess students' thinking about the topic.		0	1	2	3	X
4. Results in creative, authentic student work		0	1	2	3	X
5. Provides opportunities for student reflection on learning		0	1	2	X	4

What are the strengths of this topic/lesson?

This exercise is a great introduction for the concept of classification. This activity allows students to explore this concept with familiar objects prior to introducing taxonomy.

What are the weaknesses of this topic/lesson?

I would add the sections that I describe below (next question) to help students understand that the more scientists learn about organisms the more accurate or detailed a classification system becomes and that classification systems can be modified over time with the acquisition of new information about the subject in question. The sections described below would allow students to apply their hardware sort experience to the act of classifying organisms.

What modifications are needed to improve this topic/lesson?

I would add a task under the procedure section asking students whether they observed any correlation between the level of classification and their familiarity with the objects being classified. Hopefully the students will connect the above observation with the idea that as scientists learn more about the subject in question, their placement (category) sometimes changes, which gives rise to a classification system that is modified over time (i.e, 5 Kingdom system to 3 Domains system, etc). More advanced students could explore how Kingdom Monera once held all of the Prokaryotic Organisms and with better technology and research, scientists discovered that not all prokaryotic organisms were alike, hence the 2 new Domains for Prokaryotic organisms). Students may have experienced the same phenomena during the activity when possibly lumping items into one category that they were either unfamiliar with or that just didn't fit with characteristics shared by other groups.

I would also add a section of familiar plant or animal classification as a part II, which would logically follow the local hardware sort exercise. I would ask the students to sort the animals based upon their knowledge and compare their system with the current accepted system offered by the instructor or their book (just make sure that it is a relatively current book).

Please include any additional comments that you think will be useful to you and others at next year's workshop.

I would have the age group that the unit is targeted at somewhere on the print out and website.

Please let us know of any resources (Web sites, materials, etc.) that you used or think would be useful to enrich/enhance the unit.

Instead of visiting a hardware store, I found pictures on the internet of many items that you would find in a hardware store. I printed them out and had the students cut them out and create their own classification system. However, I would recommend spending the time and finding quality pictures and possibly laminating them.

Thank you very much for your time and assistance with this evaluation. If you are interested in participating in future EARTH workshops, please let me know. Using an activity and completing this rubric are requirements for participation. We will be discussing these evaluations and looking at the existing activities, as well as creating some new ones.

Please return this form to me either in hardcopy or electronic format.

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