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Universal Design for Instruction Lesson Reflection

The lesson plan I am using can be found at: <http://www.schools.manatee.k12.fl.us/072JOCONNOR/celllessonplans/the_cell__a_complete_unit.html>

(Some of the links are outdated, but can still be located.)

Universal Design for Instruction is a method of designing instruction that plans for inclusion of multiple learning styles and levels of learners. UDI requires some advanced planning, as well as continued reevaluation of the effectiveness of any assistive technologies used. Schools have been increasingly proactive identifying students learning disabilities, and working to provide accommodations that allow theses students to succeed. However, the use of accommodations for students with disabilities is usually something added in after the fact – hard copy notes given out a day or two later by a paraprofessional, or a student sent to another room during a test so they can have it read aloud to them, etc. While these accommodations help children succeed, it can also become overwhelming for the teacher to ensure she is following the many different accommodations for 10 to 15 students in a class of 25 or more. It can also single out the students receiving the accommodations.

Universal Design for Instruction cannot completely eliminate the need for individualized help and accommodations, it can ultimately help the teacher focus on good pedagogy and improve instruction for all learners. UDI requires a teacher to design their instruction so it can reach the most learners, and offers the most options for demonstrating learning.

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| Principle | Evidence/Modification |
| 1. Equitable Use | This lesson incorporates many online resources and links for additional information. The lesson also has suggestions for places to include downloadable videos as alternates to hands on labs and other activities. The lesson could also be easily coordinated with textbook resources. |
| 2. Flexibility in Use | This lesson has a wide variety of instructional methods, including lecture/discussion, web quest, PowerPoint/presentation creation, a microscope based lab activity and even a project involving circuitry to create a switchboard quiz of sorts. One disadvantage of some of these activities is that it would require extra classroom time to learn how to do the activity itself – such as the circuitry “poster” and the electronic presentation creation. However, this would present a good opportunity for collaboration between teachers, that would allow for students to learn how to do the activity in a different class (such as learning the presentation creation during a keyboarding applications class). |
| 3. Simple and Intuitive | This unit lesson does not have any rubrics. For this lesson to be more accessible, it should have clear rubrics outlined for each part. Also, I think the overall flow of the lessons should be shared with the students before starting, so they understand how some of the parts will build on others (ie. class discussion on cells leads to cell analogies, leads to creating the circuitry “poster” for quizzing each other on cell parts). |
| 4. Perceptible Information | The lessons many online resources will definitely make it easier to use assistive technologies for reading, or even translating to a different language. The lesson is clearly written for classrooms that have a 1-to-1 computing initiative. In a classroom such as mine, where I have limited computer access, and a limited number of students with home access, it would present more challenges. I would have to rely more on printed sources, which would make the accessibility more limited. I would have to use more traditional means for making the information accessible to individual students in need – such as printing in large print ahead of time, printing a translation, etc. I’m not sure if this fits here, or with principle 6, but another way to modify the microscope portion is to use a camera which can be attached to the microscope eyepiece and then projected, so students struggling to use the microscope on their own can still be accurately directed to the appropriate sites on the microscope. |
| 5. Tolerance for Error | Though not specifically built into this lesson, there are certainly many points for teachers to check student work. The group discussion and group work also allows for students to check their own work before presenting it to a teacher, which can help lower their fears when initially presenting ideas to a teacher. Some students have significant anxiety when discussing work with a teacher, even if it is ungraded, work-in-progress assessment. Allowing them a chance to check each other’s work can reduce this. This unit has so many pieces, the overall timeline should definitely allow for turning in parts to be graded. |
| 6. Low Physical Effort | Most of the student products in this unit can be created using a word processor. As previously stated, this lesson is designed for a class with 1-to-1 computing initiative, so the students even have the option of typing their labs, rather than handwriting. The circuitry poster creation would need some significant modification, or extra instruction, in order to make it easier for students to create. Perhaps pre-made circuit boards could be used, like snap circuits, and modified for the intended purpose. Another option might be for students to work in groups, based on ability and knowledge of the final required product. |
| 7. Size and Space for Approach and Use | While the physical setup of the classroom is not specifically addressed in the unit, the many discussions would be suited for rearranging seats so more can face each other. The lab setup is one to consider, based on the physical needs and abilities of the students. If possible, the microscopes should be set on tables that are low enough students can see easily without needing a boost – and for students unable to stand, would need to be placed low enough to be used from seated position. |
| 8. Community of Learners | The many projects allow for group work, and discussion is encouraged. Also letting students try out each other’s circuitry posters is a neat way for them to check each others work, and also work together to study and learn the cell parts. |
| 9. Instructional Climate | This unit has very high expectations for all parts. Students are expected to learn cells, and take it to a much higher level of thought – analyzing the parts of the cell, and even creating products to “teach” others in more authentic environments (such as online presentation and the circuitry quiz poster). |