Lesson Plan

Subject -	Integrated Science
Topic -	Using the microscope and microscope slides
Class -	Form 1
Date -	6th May 2008
Time -	40 mins
Prepared by:	Ms Marika Betts

Aims and Objectives:	Task Analysis using the LML Patterns
♦ Identify the different parts of the microscope.	Precision
♦ Experience the use of microscope slides and figure out how they work by documenting on a given handout in a sequential manner.	Technical Technical Precision Sequential
♦ Experience the use of the microscope as a tool for observing magnified living cells.	Technical Precision
♦ Foster self-confidence and responsibility in using different instruments found in a Science Laboratory.	Confluence Technical
♦ Observe and draw different structures of living cells from the slides provided.	Precision Technical
♦ Provide opportunities for the students to support each other while using their own LML pattern.	

Class Profile In Relation to Teacher's Profile

Due to the fact that my sequence learning pattern has the highest score and I use all patterns first, sometimes I tend to shift from one pattern to another. Keeping in mind that the majority of the students in class use the sequence learning pattern first, I find it easier for me and for the majority of the students to explain the steps to be taken as my first approach.

Resources

- Chart with a diagram of a microscope.
- Flashcards with the different parts of the microscope.
- Microscopes (for individual use).
- Plain Slides.
- Slides with various living cells.
- Charts with strategies of 'How we learn' using the four patterns of the LML.
- Word Wall of LML cue words.
- White board.
- Four Handouts - Instructions how to handle the microscope.
  - Labeling the microscope.
  - How to use a slide under the microscope.
  - Drawing of various structures of living cells as seen under a microscope.

Remote Preparation

♦ A microscope was shown to the students and the teacher asked whether : (a) Students knew what it was. (b) The purpose it is used for and (if they answered for) (c) Which instrument is used to magnify objects (challenging question).	Students had to Examine - Precision Figure Out - Technical Imagine - Confluence
♦ A chart with a labelled diagram of the microscope was explained.	Precise
♦ Handouts showing the various parts of the microscope and instruments how to handle it was given.	Sequential Precision
♦ Students are given the microscope to experience how it looks like.	Technical

Skeleton Plan

♦ Whole Class Explanation (referring to Remote Preparation)	Technical Sequential
♦ Brainstorming.	Confluence
♦ Experiencing what they have learnt so far.	Technical

Development

♦ Step 1 (3 mins): Teacher explains the steps taken during the lesson	Sequential
♦ Step 2 (5 mins): Students are referred to the remote preparation and asked to try to remember the different parts of the microscope, first orally, then flashcards showing the different parts of the microscope are stuck on the white board in a jumbles way. Different students stick them in their proper place. Resources: Chart of the microscope Flashcards.	This activity entails: Identify - Precision List - Sequential Label - Precision
♦ Step 3 (5 mins): Label the handout with the diagram of the microscope. Resources: Handout	Label: Precision. Students high in Precision and Sequential feel comfortable to do these activities but those high in Confluency can find it a bit boring. I think that before using the confluency pattern first, these type of activities need to be more precise and sequential than others.
♦ Step 4 (5 mins): Focusing the microscope. Students are asked to take out the handout given during the remote preparation and read points 2 and 3 and demonstrate what they have read. Resources: Individual Microscope	Sequential Precision Technical
♦ Step 5 (2 mins): Each student has a plain slide and they	Sequential Technical

are asked to read Step 4. Remind them to use the clips. Resources: Microscope Plain Slide.	Precision
♦ Step 6 (8 mins): Read steps 5 and 6 and look through the eyepiece lens. Students must co-ordinate their activity to what they have already learnt. The girls are asked to describe in short what they notice when they move the slide in different directions. They document this on the handout overleaf	Sequential Technical Precision Confluence
♦ Step 7 (10mins): It is now times to experience some unusual slides and look at them under the microscope. This activity is done individually. Students are given a particular slide each and one asked to observe and record on another handout. Resources: Slides with different living Cells. Microscope.	Confluence Technical Precision Some students who are not confident in technical can find this activity difficult but to compensate, I decided that if they wanted to, they pair up with another student who can help them out. Infact I can help out in this by pairing them accordingly to their patterns.

Conclusion (2mins): Students are asked to put the slides in their appropriate boxes and the microscopes back in the cupboards reminding them the importance of step 1 ' Carry the microscope by the handle and the base'	Students must instill self-confidence and responsibility especially when using equipment in the labs. Precision Confluence Technical