Capture and Keep: lecture slide and resource template to engage 1st year Biology students
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Lectures: LFS100, Cell Biology & LFS103, Introductory Bioscience
1. Lecture is broken down to 4 – 6 concepts that relate to the Learning Objectives.
2. Concept related slides are colour-coded in sequence.
3. Links to relevant readings [matching concept in the textbook readings].

1. Topic 1: Lecture Concepts
   1.1 Overview of the Cell [6.1, 6.2]
   1.2 Eukaryotic cells [6.2, 6.3]
   1.3 Organelles [6.4.5.6]
   1.4 Cytoskeleton & extracellular components [6.6.6.7]
   1.5 Prokaryotic cells [27.1, 25.5]

   Readings: Campbell Biology (10th Ed)
   Ch 6: Concepts 6.1, 6.2, 6.3, 6.4, 6.5
   Ch 7: Concept 25.5, pp 560-64 (Origin of eukaryotic cells)
   Ch 27: Concept 27.1, pp 560-84 (Prokaryotes: Bacteria)

2. Cell types – e.g. Human Cells
   - Cells are specialised for their functions
     - Sperm cell has a flagellum for motility
     - Adipose cell stores fat globule

3. Students: Note taking in lectures
   1. Print slides lecture in black and white.
   2. Colour code using highlighters.
   3. Use the colour coding in written notes during lecture/watching recording.

1. Students: Revision
   1. Revision question sets are colour coded.
   2. Mediasite lecture recordings easier to navigate – colour coded and post-edited to make chapters – ‘chapterised’.

2. Mediasite recording – ‘Chapters’

3. Student Survey Outcomes
   - 65% of students (n = 790) agreed “Yes, colour coding was useful”
   - 49% of students (n = 792) strongly agreed/agreed “slides were easier to navigate”; 4% disagreed/strongly disagreed; 37% neutral
   - As at Week 7 of semester only 39% of students (n = 763) had used the ‘chapterised’ function in the Mediasite lecture recordings
   - “Makes revision much less time-consuming, more effective study time. I have re-watched different ‘chapters’ many times to solidify particular concepts. Very helpful!”
   - “The chapterising of the lecture recordings is fantastic. Helping me focus my study/revision on the aspects I didn’t grasp in the lecture the first time.”
   - “Easy use of Mediasite as I watch the lectures online and is easy to refer back to a certain concept.”
   - I have used the colour coding on slides to double check what concept it refers to in text book.
   - The colour coding system is a good idea and a good tool for students as an optional way of learning.
   - “Colour blindness does not help the colour coding aspect. The writing is good though.” [Future: code G, O, B, P and Y for green, orange, blue, pink & yellow]
   - “This method has drastically helped my learning style, time management, organisation of the course & psychological investment as the colour-coordinating helps me to feel organised & under control. This will also help me organise my study notes when preparing for end-of-semester exam.”

4. - Campbell Biology
   - Biologists use microscopes and the tools of modern biochemistry to study cells
   - Eukaryotic cells have internal
   - The endomembrane system regulates
   - Mitochondria and chloroplasts function
   - The cytoskeleton is a network of fibres
   - Extracellular components and membrane transport includes
   - Key events in Life’s history include the origin of life, the evolution of oxygen, and the establishment of life on land
   - Structural and functional adaptations contribute to prokaryotic success