

Capture and Keep: lecture slide and resource template to engage 1st year Biology students

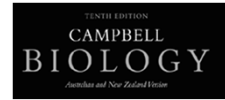
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Lectures: LFS100, Cell Biology & LFS103, Introductory Bioscience

- Lecture is broken down to 4 – 6 concepts that relate to the Learning Objectives.
- Concept related slides are colour-coded in sequence.
- Links to relevant readings [matching concept in the textbook readings].

3.



CONCEPT 6.1
Biologists use microscopes and the tools of histology to study cells

CONCEPT 6.2
Eukaryotic cells have internal

CONCEPT 6.3
The eukaryotic cell's genetic instructions

CONCEPT 6.4
The endomembrane system regulates

CONCEPT 6.5
Mitochondria and chloroplasts channel

CONCEPT 6.6
The cytoskeleton is a network of fibres that organizes structure and activities

CONCEPT 6.7
Extracellular components and connections between cells help

CONCEPT 25.3
Key events in life's history include the

CONCEPT 27.1
Structural and functional adaptations contribute to prokaryotic success

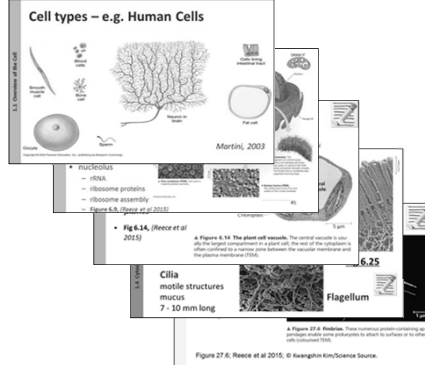
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Topic 1: Lecture Concepts

- 1.1 Overview of the Cell [6.1, 6.2]
- 1.2 Eukaryotic cells [6.2, 6.3]
- 1.3 Organelles [6.4, 6.5]
- 1.4 Cytoskeleton & extracellular components [6.6, 6.7]
- 1.5 Prokaryotic cells [27.1, 25.3]

Readings: *Campbell Biology* (10th Ed)
Ch 6: Concepts 6.1, 6.2, 6.3, 6.4, 6.5
Ch 25: Concept 25.3 pp 531-32 (origin of eukaryotic cells)
Ch 27: Concept 27.1, pp 580-84 (Prokaryotes: Bacteria)

2.



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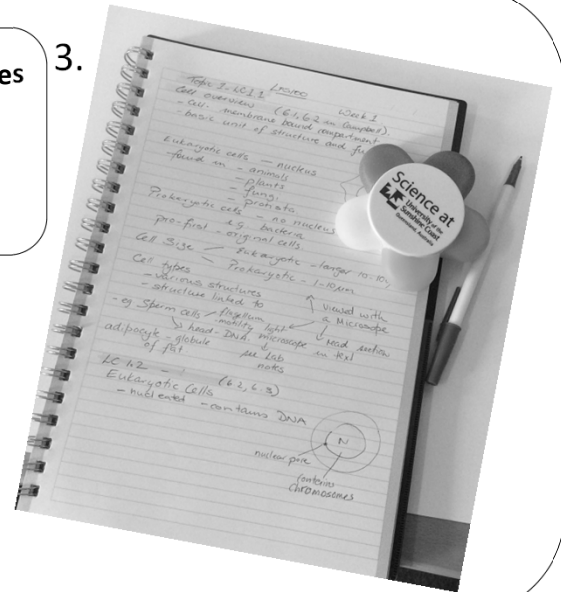
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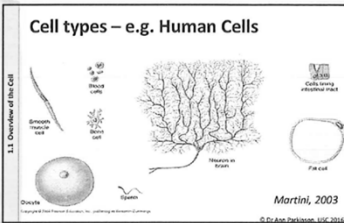
Students: Note taking in lectures

- Print slides lecture in black and white.
- Colour code using highlighters.
- Use the colour coding in written notes during lecture/watching recording.

3.



2.



• cells are specialised for their functions
eg. sperm cell has a flagellum for motility
• adipose cell stores fat globule

Students: Revision

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

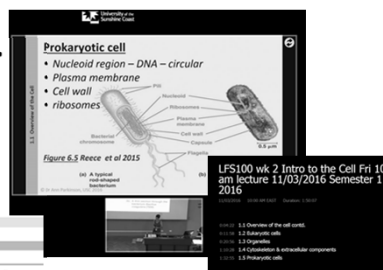
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LFS100 Revision Questions

Topic 1: Cell structure and function
Version: Key Terms:

Chapter	584
1.1 Overview of the Cell	
animal	plant
prokist	eukaryotic cells
light microscope	plasma membrane
nucleoid region	cell wall
	ribosomes
1.2 Eukaryotic cells	
animal	plant
prokist	eukaryotic cells
	plasma membrane
	cell wall
	ribosomes
Revision Questions	
1.1 Overview of the Cell	
1. Complete the following table:	
Prokaryotic cells	Eukaryotic cells
1.2 Eukaryotic cells	
3. What is a nucleus? What is normally contained within the nucleus?	
4. What is the purpose of the pores in the nuclear envelope?	

2.



Mediasite recording – ‘Chapters’

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 prepping for end-of-semester exam.”