















# Victoria

Activity 1.1 Introducing... stem cells!
Activity 1.2 Tuning in – stem cell word splash
Activity 1.3 What are stem cells?
Activity 2.1: The two main categories of stem cells
Activity 2.2 Visualising thinking about stem cells
Activity 2.3 Consolidating knowledge about stem cells
Activity 2.4: Potent lingo
Activity 2.5 So what's so special about stem cells?
Activity 3.1 Forming an embryo – from egg to blastocyst
Activity 3.2 MF – how does it work?
Activity 3.3 Reprogramming cells – plants can do it naturally, why can't we?
Activity 3.4 Reprogramming cells – IPS stem cells and somatic cell nuclear transfer
Activity 3.5 How are stem cells specialised into different cell types?
Activity 4.1 What are stem cells currently being used for?
Activity 4.2 Uses of stem cells – media review
Activity 4.3 Stem cell research assignments
Activity 5.1 Stem cell opinion poll
Activity 5.2 Stem cells – fact or fiction
Activity 5.3 Commonly asked questions about stem cells
Activity 5.4 Newspaper splash – stem cells in the media
Activity 5.5 Medical tourism – not always a happy holiday
Activity 6.1: Its stem cells – the issues
Activity 6.2: Its topical – stem cells issues essay
Activity 6.3: Its printable – writing media articles
Activity 6.4: Its ethical – role play an ethics committee
Activity 6.5: Its presentable – presentations on stem cells
Activity 6.6 – Its personal – blogs, chats and discussion activities

## VIC – Biology Year 11

Skills		Apply biological understanding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		Communicate biological information and understanding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Knowledge	Unit 1, AOS 1	Cell structure: prokaryotic and eukaryotic cells at light and electron microscope levels; cellular organisation	✓	✓		✓	✓			✓	✓	✓		✓	✓	✓					✓	✓					
		Cell replication: purposes of cell replication (mitosis and cytokinesis); cell growth, cell size and cell division	✓	✓		✓	✓			✓	✓	✓		✓	✓	✓											
	Unit 1, AOS 2	Reproduction: asexual and sexual reproduction; mechanisms and systems of reproduction in unicellular and multicellular organisms										✓	✓														
Assessment	Unit 1, AOS 1	Multimedia or web page presentation																							✓	✓	
		Oral presentation																								✓	
		Annotated poster											✓													✓	
	Unit 1, AOS 2	Problem solving task															✓	✓									
	Unit 1, AOS 2	Same as above														✓	✓								✓	✓	

## VIC – Biology Year 12

Skills	Unit 3 and 4	Apply biological understanding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		Communicate biological information and understanding	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Content/knowledge	Unit 3, AOS 2	Coordination and regulation: roles of nervous and endocrine systems																									
		Signalling molecules and signal transduction												✓		✓						✓					
		Detecting 'self' and 'non-self' molecules															✓	✓	✓								
		Pathogens: non-cellular agents, cellular agents; controls															✓	✓	✓								
		Immune response: specific immune response															✓	✓	✓								
	Unit 4, AOS 1	Disorders of the immune response: autoimmunity																								✓	
Tools and techniques: gene cloning, gene transformation; gene delivery systems																								✓			
		Cell reproduction: cell cycle, gamete production; inputs and outputs of meiosis																									
Assessment	Unit 4, AOS 2	Human intervention in evolutionary processes: stem cell differentiation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	



