Key knowledge

Cell growth and cell differentiation

1.4.1. the types and function of stem cells in human development, including the distinction between embryonic and adult stem cells and their potential use in the development of medical therapies

1.4.1.1. What are stem cells?

1.4.1.2. What is the unique property that stem cells possess?

1.4.1.3. Use a flow diagram to indicate the various stages of the development of the human zygote.

1.4.1.4. Distinguish between totipotent, pluripotent multipotent and unipotent stem cells including examples where each is found.

Totipotent

Pluripotent

Multipotent

Unipotent

1.4.1.5. Distinguish between adult stem cells and embryonic stem cells.

1.4.1.6. Complete the table summarizing the different types of adult stem cells.

Type	Location	Cell lines
Neural		
Haematopoietic		
Mesenchymal		
Intestinal		
Endothelial		
Bone marrow		

1.4.1.7. Outline how stem cells could be used in therapeutic cloning.