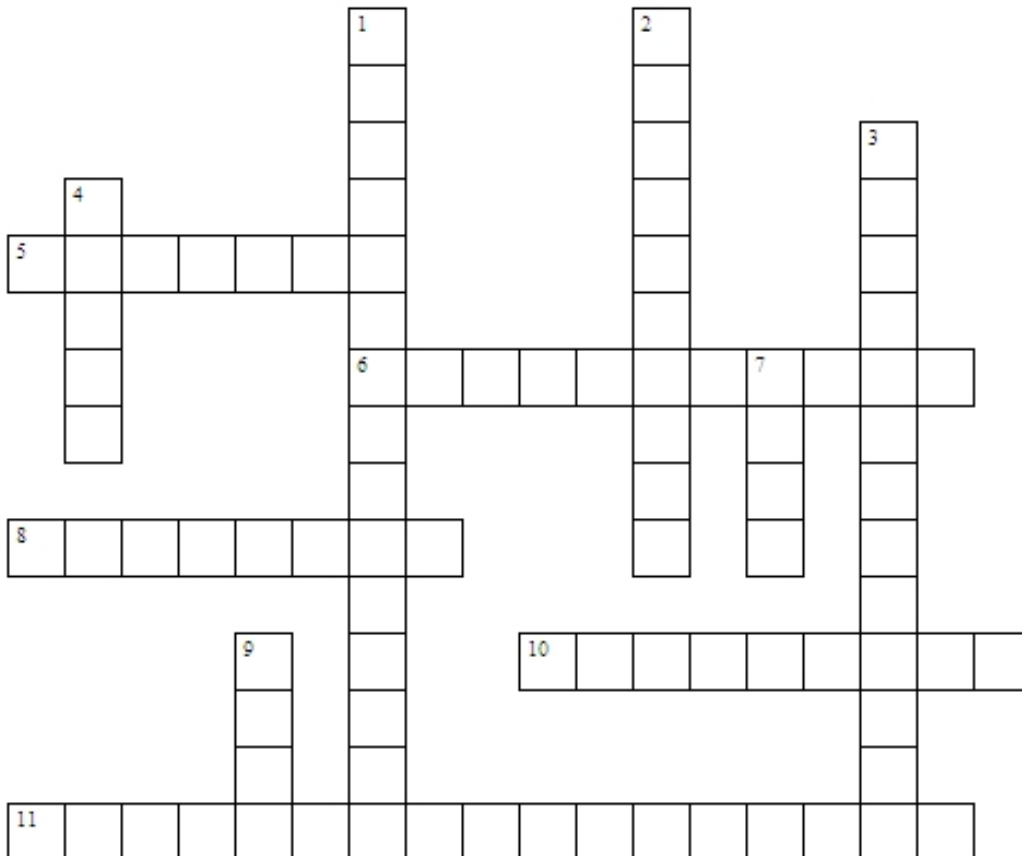


Objective: Understanding stem cells and their therapeutic value

(Scottish curriculum: Higher biology Unit 1: the molecular biology of medicine; 2di and 2dii)

About stem cells

Stem cells are one of the most amazing types of cells because they can (1) make copies of themselves and (2) make specialized cells like skin cells, red blood cells or liver cells.

**ACROSS**

- 5** Any condition that causes pain, dysfunction and/or death to a person; scientists study stem cells to understand a broad range of these conditions and to find treatments.
- 6** Specialized cell that contains haemoglobin, cell type made by blood stem cells.
- 8** Granular leucocyte that releases histamine and heparin; involved in some allergic reactions and in inflammation.
- 10** Series of events that takes place in a cell leading to its division; scientists study stem cells to understand this process better.
- 11** Stem cell found only in very early embryos.

DOWN

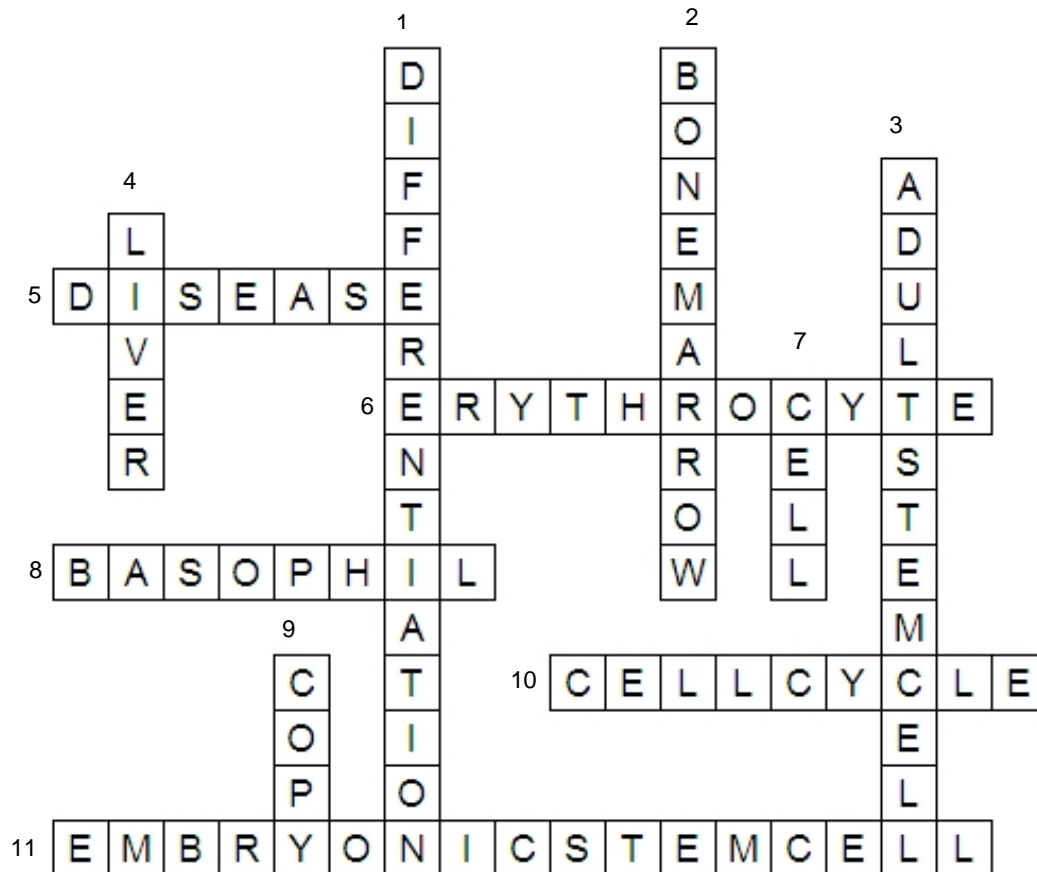
- 1** The process by which a stem cell becomes a specialized cell type.
- 2** Place in the body where you find blood stem cells.
- 3** Stem cell found in a fetus, a baby, a child or a grown up person, but not in an early embryo.
- 4** Organ that detoxifies the body; scientists want to use stem cells to grow cells found in this organ to test new drugs for treatments.
- 7** What your body is made up of; it has an average size of 10 μm and a typical mass of 1 nanogram.
- 9** When a stem cell replicates, it makes a ... of itself.

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Answer sheet

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