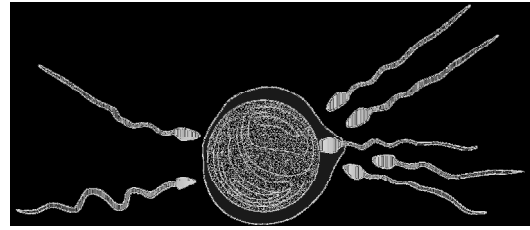


St. Peter's Catholic High School & 6th
Form Centre
Additional science GCSE: B5 Task Sheet
**How did I grow from a sperm
and egg?**



Introduction

A sperm meets an egg. From this zygote the cell divides. The cells then specialise into different cells that build all the tissues and organs to make a complete functioning human being.

Task

Design two pages for a GCSE revision book that summarises the key points to answer, "How did I grow from a sperm and egg?" To complete this task, you must demonstrate understanding of:

- Cell division by mitosis and meiosis.
- The stages of human embryo development from zygote to foetus.
- Gene switching - what is it and why it is important.
- What are stem cells? Where do they come from? What do they do?
- Potential uses of stem cells.

Key words

Cancer, cell, cell division, chromosomes, diploid, embryo, foetus, gametes, genes, growth, haploid, inheritance, meiosis, mitosis, nucleus, ovum, sperm, stem cell, gene switching.

To get grade	You need to:
E	<p>State where sperm and eggs are made.</p> <p>Describe the major steps in the growth of a foetus from fertilisation to birth.</p> <p>Draw a simple diagram to show cell division by mitosis.</p> <p>Define stem cells.</p> <p>Describe simply one possible use of stem cells to treat diseases.</p> <p>State one ethical reason for not using stem cells.</p> <p>Use simple key words correctly.</p> <p>Write your ideas in simple sentences.</p> <p>Use one source of information.</p>
C	<p>Describe where sperm and eggs are made.</p> <p>Describe the major steps in the growth of a foetus from fertilisation to birth, using a range of key words correctly.</p> <p>Draw a diagram to show cell division by mitosis, showing the chromosomes.</p> <p>Describe simply what stem cells are and the process of differentiation, given some examples of adaptations of differentiated cells.</p> <p>Describe some possible uses and problems of using stem cells to treat diseases.</p> <p>State some ethical reasons for not using stem cells.</p> <p>Write your ideas in all your own words, using proper sentences.</p> <p>Use at least two sources of information.</p>
A	<p>Explain how and where sperm and eggs are made.</p> <p>Draw detailed cell diagrams to explain cell division by meiosis and mitosis.</p> <p>Describe the major steps in the growth of a foetus from fertilisation to birth, using a wide range of key words correctly.</p> <p>Compare the two types of cell division.</p> <p>Explain the role of stem cells and cell differentiation, giving some detailed examples of adaptations of differentiated cells.</p> <p>Discuss some possible uses and problems of using stem cells to treat diseases.</p> <p>Discuss some ethical reasons for not using stem cells.</p> <p>Write your ideas in all your own words, using proper sentences and paragraphs.</p> <p>Use at least two sources of information.</p>