



ST NINIAN'S HIGH SCHOOL
NATIONAL 4 BIOLOGY
LEARNING INTENTIONS

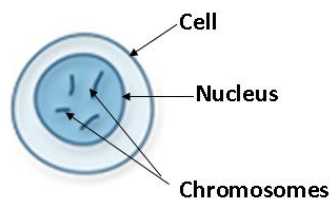


UNIT 1: CELL BIOLOGY

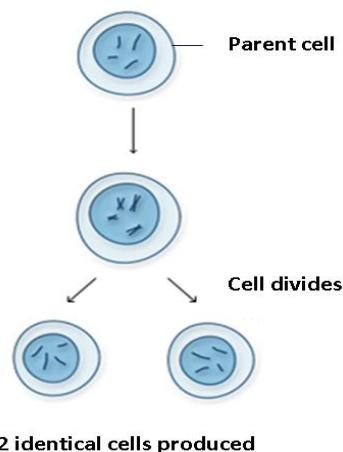
SECTION 1A CELL DIVISION

CELL DIVISION

- ☐ 1. Know that **Micro-organisms** grow by cell division.
- ☐ 2. Cell division is essential to allow organisms to grow and repair by replacing damaged cells with new ones.
- ☐ 3. Give examples of the importance of cell division to multicellular organisms
 - a. Multicellular organisms use cell division to grow.
 - b. Multicellular organisms use cell division to repair damaged parts like cuts, broken bones.
- ☐ 4. Grow colonies of bacteria and yeast using aseptic techniques such as
- ☐ 5. Use aseptic techniques to grow colonies of **bacteria** and **yeast** on agar.
- ☐ 6. Label a cell to show the **NUCLEUS** and **CHROMOSOMES** in it.



- ☐ 7. State that when a **PARENT CELL** divides it produces two **IDENTICAL** cells.
- ☐ 8. Know that the two identical cells produced by cell division have the **SAME NUMBER** of **CHROMOSOMES** as the parent cell.



- ☐ 9. State that **CANCER** is the result of **UNCONTROLLED CELL DIVISION**.



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TISSUE CULTURES

- ☐ 10. Know that **ANIMAL, PLANT and MICROBIAL CELLS** can be **GROWN** in a laboratory as **TISSUE CULTURES**.
- ☐ 11. State that **ANIMAL TISSUE CULTURES** can be used for:
- **RESEARCHING CANCER**
 - The production of **ANTIVIRAL VACCINES**
 - Developing new **DRUGS**
- ☐ 12. State that **PLANT TISSUE CULTURES** can be used to:
- Produce identical copies of plants that produce good **FLOWERS** or **FRUITS**
 - **QUICKLY** produce **MATURE** plants
- ☐ 13. State that **MICROBIAL CULTURES** can be used for the **MASS PRODUCTION OF INSULIN** to give to **DIABETICS**

