

Science (Lily & Lotus).

*Biology :-Project Title: "Cells, Cancer & Community"

"Investigating Biology for a Healthier Future."

*Student will investigate: How understanding cells and cell cycle helps society prevent diseases, improve health care access, and build a sustainable future?

*Part A: Concept Foundation (Biology understanding).

Explain with Diagrams

⊗ Difference between normal cell division and cancerous cell division.

*Part B: Investigation Project

Lifestyle and cell Health Investigation.

*Research Question: Which lifestyle habits in my family may affect healthy cell functioning?

*Investigate: Sleep patterns.

* Junk food consumption.

* Exercise habits.

* Screen time.

* Smoking / passive smoking exposure.

* Explain how these factors affect:

* Cell repair

* DNA damage

* Cell cycle regulation

* Cancer risk

*Research Question:

* What environmental factors in my locality may increase risk of abnormal cell growth?

*Investigate:

- * Air pollution
- * Plastic burning
- * Pesticide use
- * Tobacco shops
- * Excessive sun exposure.
- * Industrial waste.

--Explain: How carcinogens damage DNA?

* Mutation--Uncontrolled mitosis --tumor formation.

Stem cells and Future Medicine

Research Question: How can cell biology innovations create an Inclusive and sustainable healthcare future?

Investigation: Stem cells

* Regenerative medicine

* Organ growth research

* Cancer therapies

"Motion", find out the 50 internal questions. Write in holiday homework notebook.

Cell: The building block of life. Find out 50 internal questions. Write in holiday homework notebook.

Biography of J.J. Thomson, Ernest Rutherford, James Chadwick and Robert Hooke on A4 sheet.