

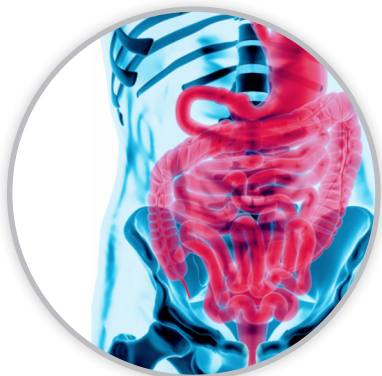


Film List for Form 1 Science Education (Unit 4~6)

Hong Kong's Science Curriculum-matched

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NOT FOR SALE



Film List for Form 1 Science Education (Unit 4~6)

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or



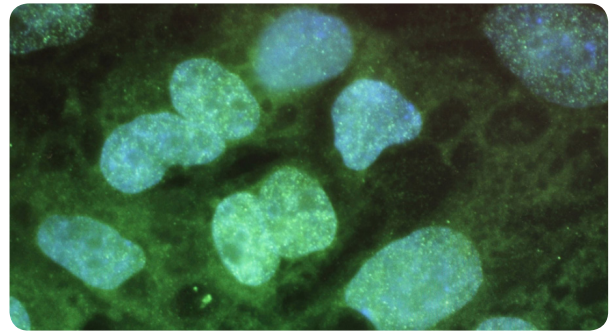
Cells, Human Reproduction and Heredity

Cells - The Basic Units of Living Things



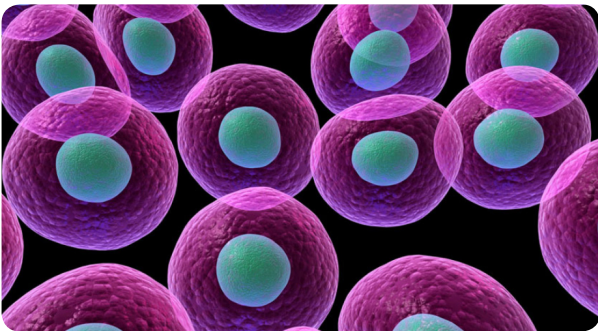
THE HISTORY OF THE MICROSCOPE

How were microscopes invented?



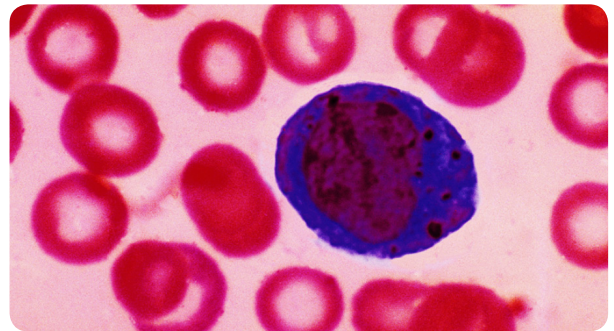
WHAT IS A CELL?

An introduction to the building blocks of life - cells.



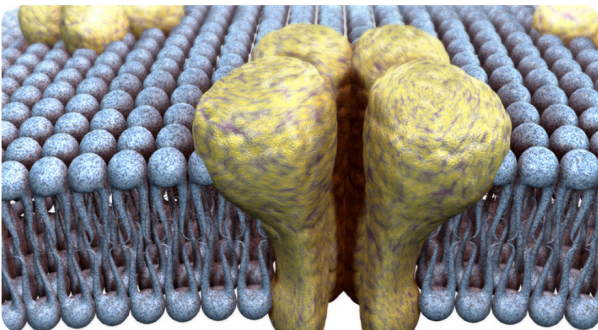
THE VERY FIRST CELL

How did life on Earth begin billions of years ago?



DIFFERENT TYPES OF CELL

What different types of cell are there and what do they do?



THE CELL MEMBRANE

How do cells protect themselves from the external environment and take in the nutrients they need?



WHAT IS DNA?

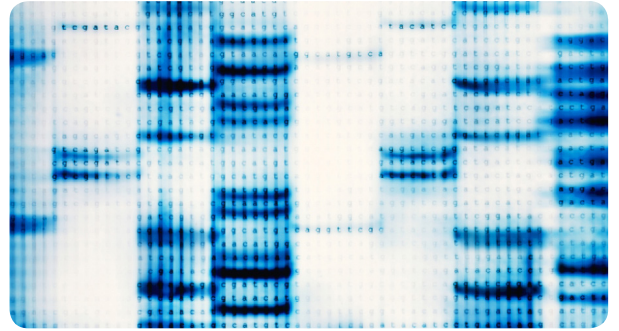
Find out how our DNA makes us unique.





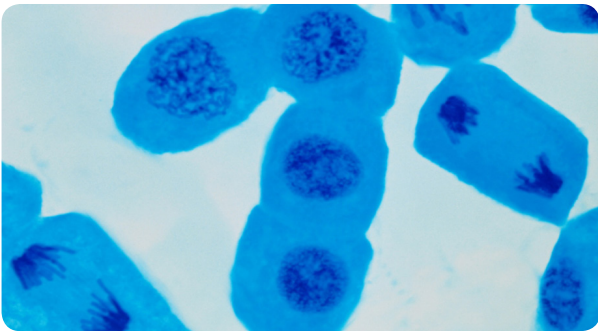
DISCOVERY OF DNA

The amazing race to discover the structure of DNA.



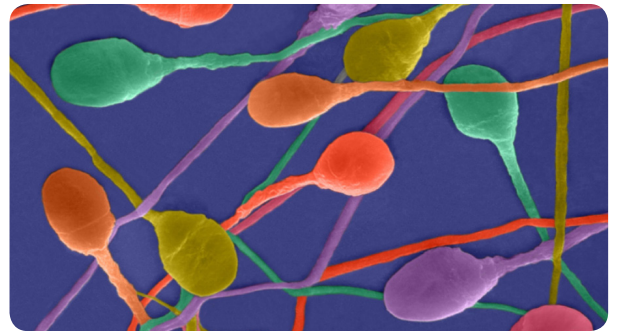
FACTPACK: DNA

What is DNA? Discover the blueprint for life.



CELL DIVISION: MITOSIS

The formation of new cells.

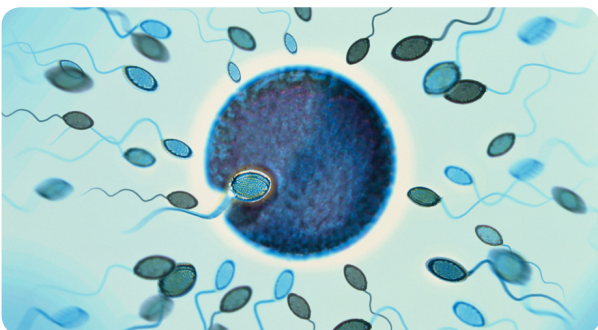


CELL DIVISION: MEIOSIS

The formation of sex cells.

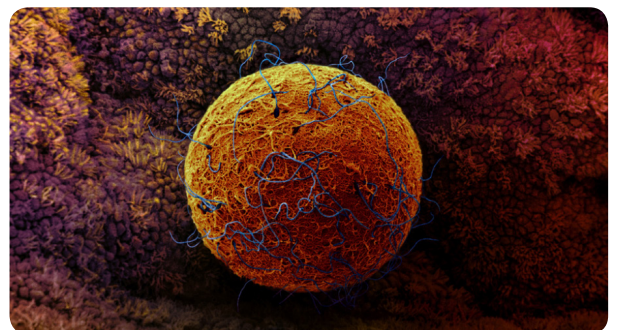


Human Reproduction



SPERM

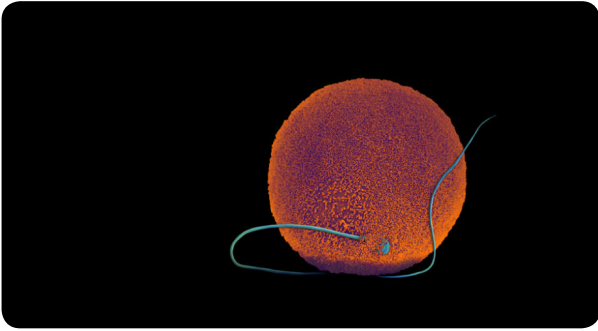
The trials sperm face getting to the egg.



EGG

What are human eggs and how are they released?





FERTILISATION

Find out why the egg and sperm have to race against time to begin a new life.



PLACENTA

What is the placenta and what does it do?



MEDICAL MARVELS: IVF

How IVF treatment works.



MEDICAL MARVELS: ULTRASOUND

The discovery of ultrasound and how it works.



WAR IN THE WOMB

The fight for nutrition between a mother and her unborn child.



PREGNANCY: FIRST TRIMESTER

What happens in the first three months of pregnancy?





PREGNANCY: SECOND TRIMESTER

What happens between the third and sixth months of pregnancy?



PREGNANCY: THIRD TRIMESTER

What happens in the last three months of pregnancy?



BIRTH

After nine months of pregnancy, how does the body prepare for and endure labour?



FACTPACK: PREGNANCY TIMELINE

See what happens at each stage of pregnancy.



WHY ARE WE BORN SO HELPLESS?

Baby elephants can walk at birth; why can't we?



CONTRACEPTION: HISTORY OF THE PILL

How the pill has changed from the time of its invention to the modern day.





**CONTRACEPTION:
BARRIER METHODS**

How barrier methods, such as condoms and coils, work.



**CONTRACEPTION:
CHEMICAL
CONTRACEPTION**

How chemical contraception, such as the pill or IUS, works.



■ Heredity and Variation



**MENDEL AND
INHERITANCE**

What is DNA? Discover the blueprint for life.



INHERITANCE: PART 1

The genes we inherit make us who we are. How does this happen?



INHERITANCE: PART 2

The difference between dominant and recessive genes.



VARIATION

See how variation allows certain organisms to thrive in different environments, and makes each individual unique.





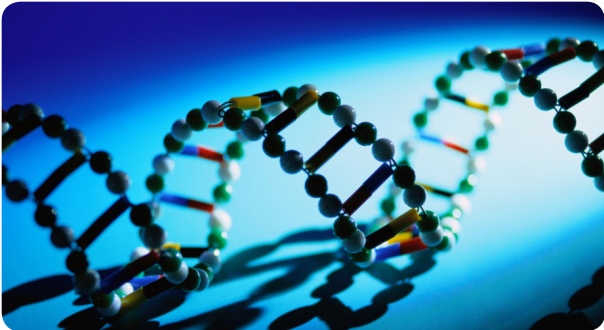
FACTPACK: TWINS

Why not all twins are the same.



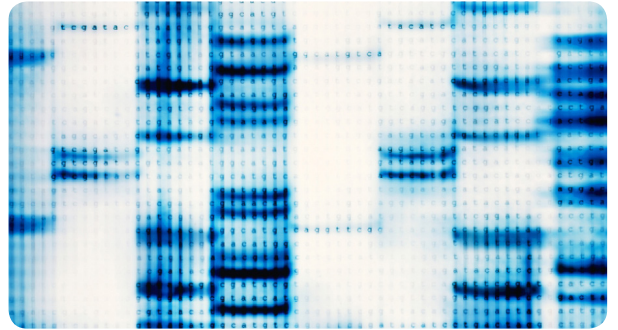
DISCOVERY OF DNA

The amazing race to discover the structure of DNA.



WHAT IS DNA?

Find out how our DNA makes us unique.



FACTPACK: DNA

What is DNA? Discover the blueprint for life.



Unit 5

Energy

Energy Changes



FORMS OF ENERGY

What forms does energy take?



ENERGY TRANSFORMATION

Discover how energy is recycled into different forms.



POTENTIAL ENERGY

Discover the three ways in which energy can be stored.



ROLLERCOASTERS

How do forces combine to create a thrill-packed ride?



HI-FI ENGINEERING

How do hi-fi speakers convert electrical signals into sound waves?



STEAM POWER

How do steam engines use heat to produce motion?





THE ENERGY OF FORMULA 1

The energy-converting engine that powers Formula 1 cars round the track.



FACTPACK: HORSEPOWER

Find out how one man used horses to measure energy use.



RED HOT: EMERGENCY STOP

The everyday process of braking uses extraordinary energy conversion.



PERPETUAL MOTION

Is there a machine that can power itself forever?



Heat Transfer



HEAT TRANSPORT

Discover the three ways heat energy can travel.



LAWS OF THERMODYNAMICS

Discover the fundamental principles of energy use.

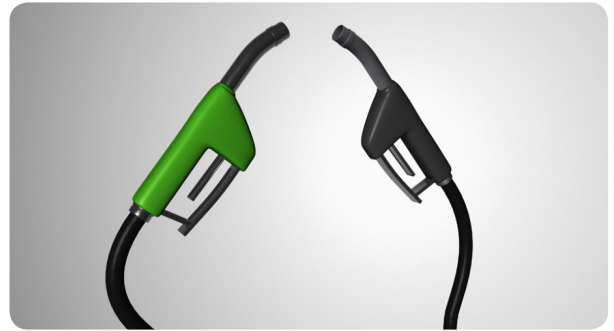


Energy Sources



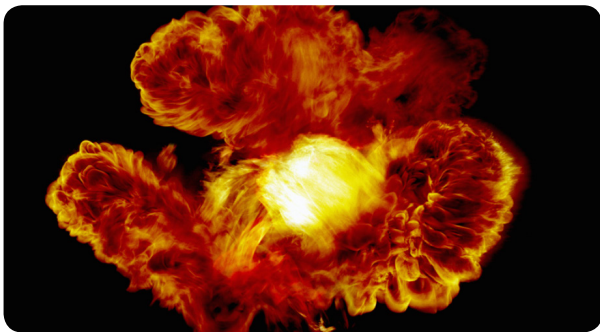
VEGETABLE OILS AS FUEL

How can the oil we cook with also be used as fuel to run a car engine?



LEADED AND UNLEADED PETROL

Why was lead banned from petrol?



OXYGEN AND COMBUSTION

What is combustion and why is it essential to life on Earth?



FACTPACK: GLOBAL ELECTRICITY SUPPLY

How do different countries around the world generate their electricity?



ENERGY TRANSFORMATION

Discover how energy is recycled into different forms.



STEAM POWER

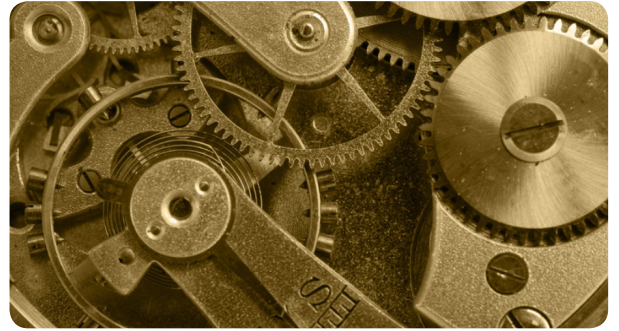
How do steam engines use heat to produce motion?





THE ENERGY OF FORMULA 1

The energy-converting engine that powers Formula 1 cars round the track.



PERPETUAL MOTION

Is there a machine that can power itself forever?



FACTPACK: HORSEPOWER

Find out how one man used horses to measure energy use.



RED HOT: EMERGENCY STOP

The everyday process of braking uses extraordinary energy conversion.



COLONISING THE MOON

Could we colonise the Moon and who would get there first?



HOW DO GENERATORS WORK?

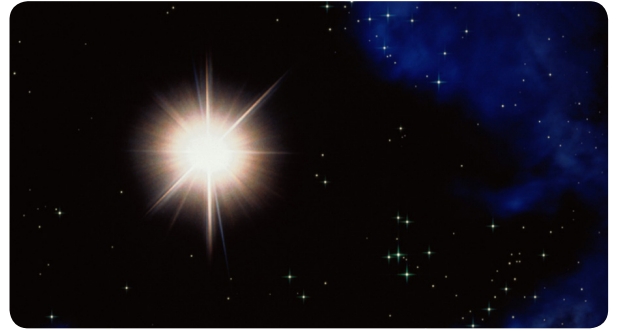
The simple principle that brought electricity into everyday use.





REDUCING RADIATION RISK

How can we work safely with radioactive materials?



NUCLEAR FUSION: THE HOT AND COLD SCIENCE

Can nuclear fusion be achieved through two methods?



Matter as Particles

Particle Model for the Three States of Matter



SOLIDS, LIQUIDS AND GASES

Discover the three states in which all matter on Earth exists.



CHANGING STATES OF MATTER

How does matter change into different states?



THE RACE FOR ABSOLUTE ZERO: LIQUEFYING GAS

Discover how scientists reached supercool temperatures in the race to liquefy gases.



HOW TO MAKE FAKE SNOW

Understand the technology that makes snow indoors.



Dissolving



SOLUTIONS

Understand the physical process of dissolving.



■ Thermal Expansion and Contraction



EXPANSION AND CONTRACTION

Why does heat cause objects to change shape?



■ Gas Pressure



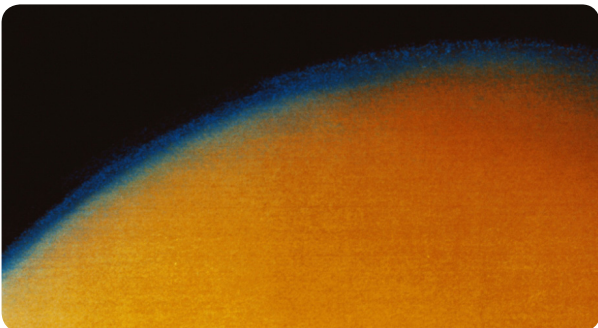
PRESSURE AND SURFACE AREA

Discover the relationship between pressure and surface area.



FACTPACK: PRESSURE AND ALTITUDE

The extreme changes in pressure with altitude.



VENUS 1: ATMOSPHERE

Would probes sent to Venus discover an Earth-like planet?



GAS LAWS

What happens when gases expand?





THE BENDS

Discover the potentially lethal dangers of changing pressure.



Density



HOT AIR BALLOONS

How is flight made possible with little more than hot air?



BUOYANCY

Why do objects float or sink?

