

SCIENCE KLA

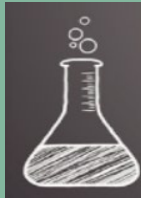
YEAR 10 INTO 11 PRESENTATION





Biology

Chemistry



**Environment
al**

Physics



Psychology

Talk to a member of the science team about your choices!

Mr Epi

Gary

Mrs Gill

Ms Hine

Mrs Toler

Georgie

Ms Bagley

Ms Richards

Mr Webb

Mr Hamilton

We recommend doing more than one science in VCE as they are complementary subjects

BIOLOGY

WHAT WILL I LEARN?

- Cells
- Plant and Animal Systems
- Genetics
- Adaptations and survival
- Indigenous knowledge of the Australian ecosystem

WHAT WILL I LEARN?

- Genetics
- Biochemical Pathways
- Immunology
- Natural Selection
- Human Evolution
- Scientific Inquiry

BIOLOGY

WHAT ACTIVITIES WILL I DO?

- Self- design scientific investigations
- Use genetic engineering techniques in the school laboratory
- Visit GTAC - Gene Technology Access Centre at The University High School Parkville
- Explore human evolution at Knox Innovation Opportunity & Sustainability Centre KIOSC

WHAT CAREERS DOES THIS LEAD TO?

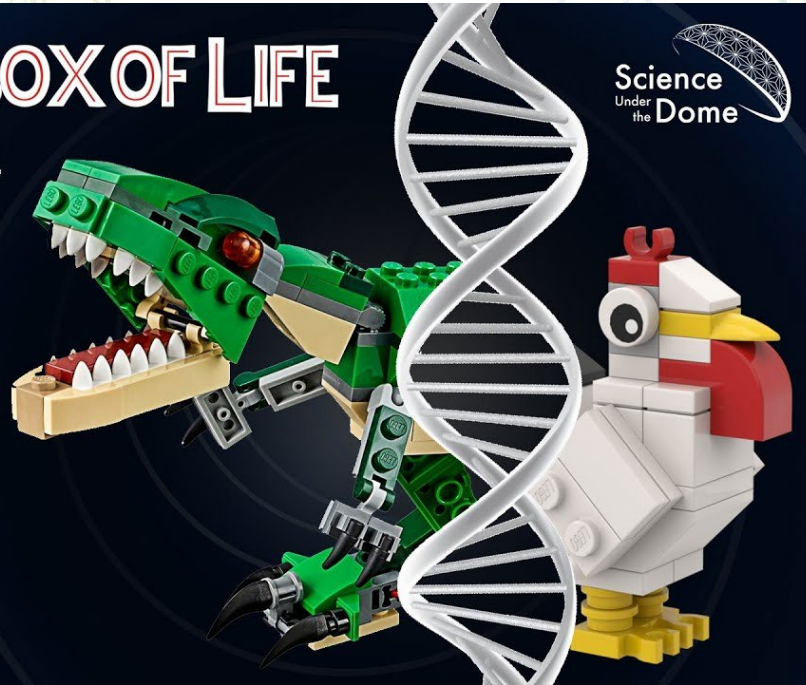
- Marine biology
 - Pharmacy
 - Physiotherapy
 - Medicine
 - Health
 - VET
- Nursing & Midwifery
 - Food Science
 - Paramedicine
 - Biomedical engineering

BIOLOGY

Genetics and Gene Technology

THE LEGO BOX OF LIFE

GENETIC ENGINEERING
& THE SCIENCE BEHIND
**JURASSIC PARK AND
GATTACA**

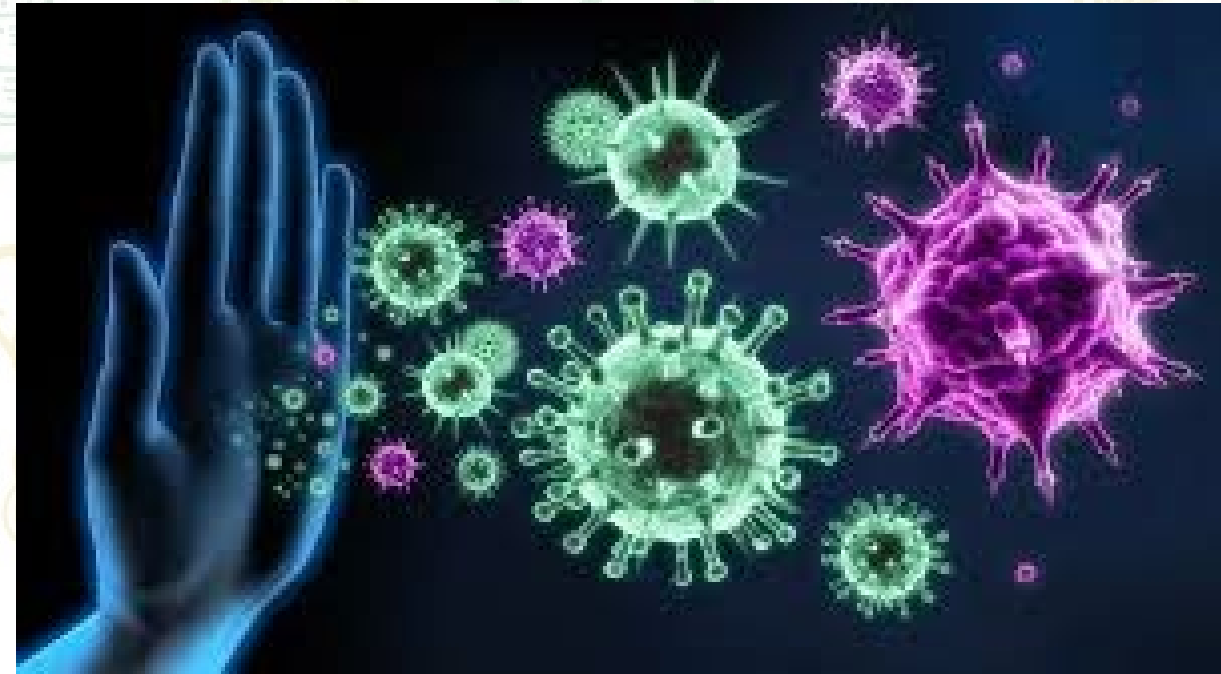


Science
Under
the
Dome

Zack Root
Live Stream:
Dec 3 @ 7 pm MST
Fiske Planetarium series: Science of SciFi

The image features a central white DNA double helix structure. To its left is a green and yellow LEGO T-Rex, and to its right is a white and red LEGO chicken. The background is dark blue with faint, light-colored illustrations of various biological and scientific concepts like a microscope, test tubes, and chemical structures.

Immunology



CHEMISTRY

WHAT WILL I LEARN?

Atom Structure
Properties of Materials
Chemical Reactions
All about Metals

WHAT WILL I LEARN?

New Materials
Sustainability
Analysis of unknown chemicals
Food chemistry

CHEMISTRY

WHAT ACTIVITIES WILL I DO?

- Turn a brass coin gold
- Make golden rain
- Design slime and plastics
- Titrate chemicals
- Design your own practical

WHAT CAREERS DOES THIS LEAD TO?

- Pharmacy
- Food Science
- Physiotherapy
- Medicine
- Radiography
- VET
- Paramedicine
- Chemical Engineering
- Biomedical engineering

CHEMISTRY

Golden Rain



Chemical titrations



ENVIRONMENTAL SCIENCE

WHAT WILL I LEARN?

How healthy are our local ecosystems?

- Living factors
- Non-living factors

How are Earth's four systems connected?

- Land, Lithosphere
- Air, Atmosphere
- Water, Hydrosphere
- Living things, Biosphere

WHAT WILL I LEARN?

How do Earth's systems change over time?

- Climate change
- Pollution
- Natural changes
- Developing solutions to challenges

ENVIRONMENTAL SCIENCE

WHAT ACTIVITIES WILL I DO?

- Measure the quality of our local wetland
- Visit Wilsons Promontory National Park
- Learn to identify macro-invertebrates
- Learn about ways to conserve biodiversity

WHAT CAREERS DOES THIS LEAD TO?

- Wildlife officer
- Park Ranger
- Meteorologist
- Agriculture
- Environmental Scientist
- Forestry
- Education
- Ecologist

ENVIRONMENTAL SCIENCE

Ecosystems



Pollution and climate change



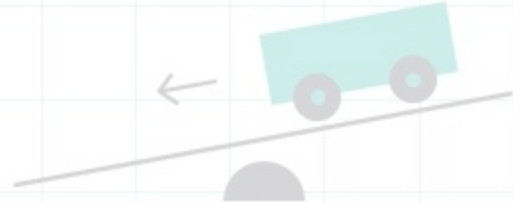
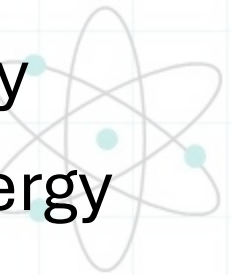
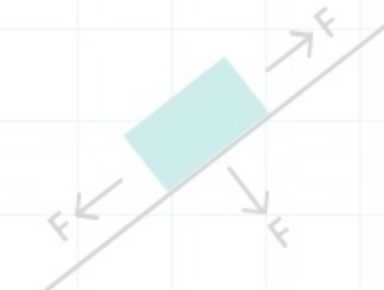
PHYSICS

WHAT WILL I LEARN?

Light
Thermodynamics
Electricity
Nuclear Energy

WHAT WILL I LEARN?

Motion
Flight
Science inquiry



$$E = mc^2$$

$$P = I^2 R$$

$$E = P \times t$$

$$E = Q \times V$$

$$V = I \times R$$

$$E = Q \times I \times t$$

$$Q = I \times t$$

$$F = ma$$

PHYSICS

WHAT ACTIVITIES WILL I DO?

- Construct electric circuits
- Study energy efficient houses
- Extended Investigation
- Build an aerofoil and test it in a wind tunnel
- Investigate common but often misunderstood Physics phenomena
- Understand Australia's Nuclear power options

WHAT CAREERS DOES THIS LEAD TO?

IT / Electronics
Medicine
Electrical Engineering
Civil Engineering
Mechanical Engineering
Aeronautical Engineering
Defence Forces
Architect

PHYSICS

Is there anybody out there?



IFly Indoor Skydiving



PSYCHOLOGY

The brain and nervous system



Human behaviour



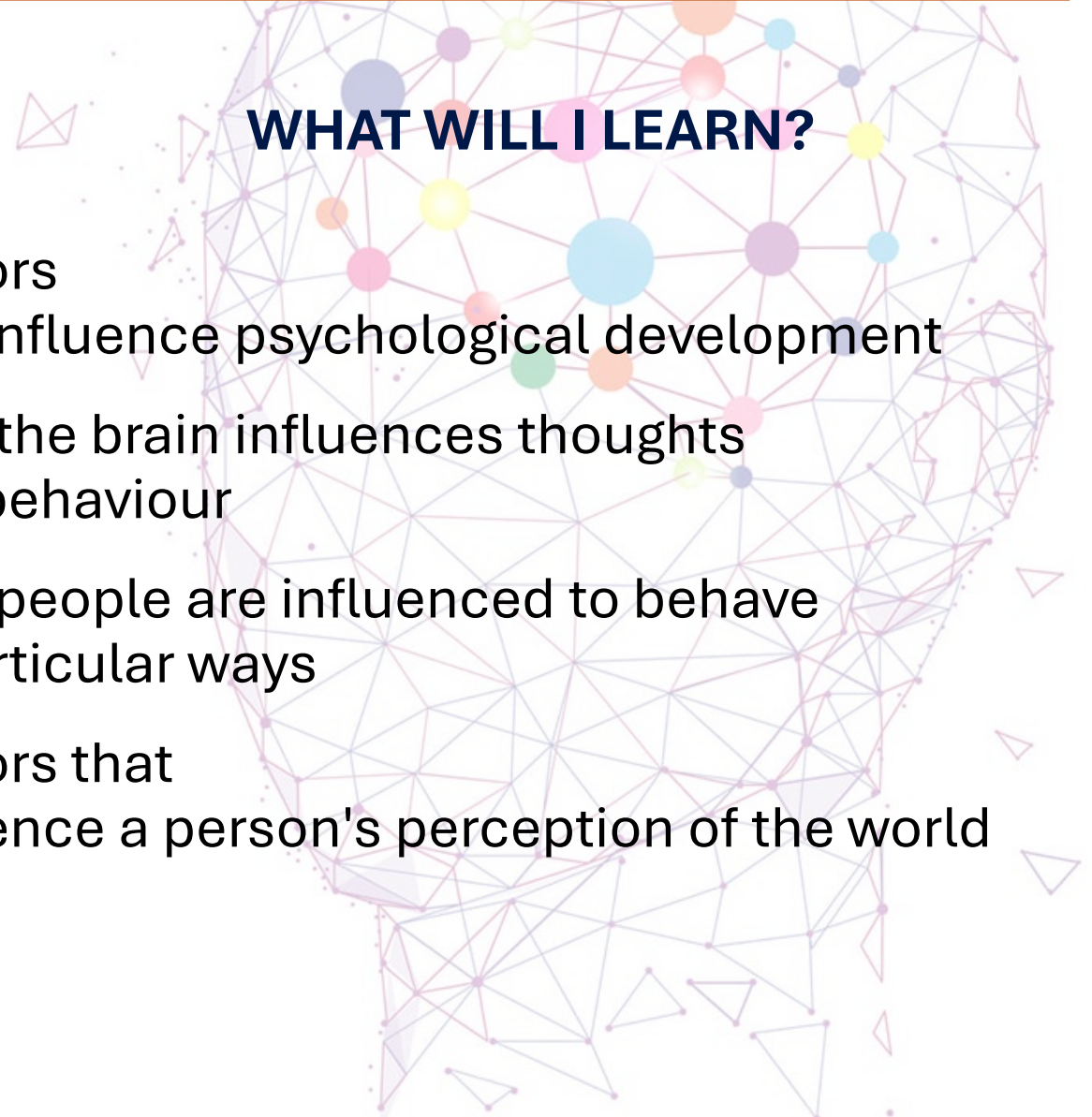
PSYCHOLOGY

WHAT WILL I LEARN?

- Brain
- Human Behaviour
- Neural Networks
- Memory
- Key science skills (inquiry)
- Learning techniques
- Ethics

WHAT WILL I LEARN?

- Factors that influence psychological development
- How the brain influences thoughts and behaviour
- How people are influenced to behave in particular ways
- Factors that influence a person's perception of the world



PSYCHOLOGY

WHAT ACTIVITIES WILL I DO?

- Complete short pracs that explore psych phenomena
- Conduct extended scientific investigations
- Watch films including Remember the Titans and The Stanford Prison Experiment

WHAT CAREERS DOES THIS LEAD TO?

- 
- Psychologist
 - Counsellor
 - Sports Psychology
 - Social Worker
 - Criminology
 - Neuroscience
 - Social scientist

EXPLORING CAREER PATHWAYS

Engineer

Recommended subject sequences

- VCE
 - Physics
 - Chemistry

Sports Science/Movement

Recommended subject sequences

- VCE
 - Physics
 - Chemistry
 - Biology

Physiotherapist

Recommended subject sequences

- VCE
 - Biology
 - Chemistry

Psychology and Psychiatry

Recommended subject sequences

- VCE
 - Biology
 - Chemistry
 - Psychology

MORE INFORMATION

- When choosing your VCE Sciences, don't just look at the prerequisites to enter a course but check out the first year of the course as well – some courses may require you to complete a fast-tracked version of a VCE subject if you haven't done it already

Key Contacts FOR SUPPORT

- 1. Your science teacher**
- 2. Year 11 and 12 coordinators**
- 3. Mr Owen (for university course advice, including prerequisites)**

Biology	Chemistry	Environmental	Physics	Psychology
Learn about				
Genetics Immunology Body Systems Cells Adaptations Evolution	Atom Structure Properties of Materials Chemical Reactions New Materials Sustainability Analysis of unknown chemicals Food chemistry	Conservation Pollution Habitats Monitoring Ecosystems Energy Efficiency Climate Change	Thermodynamics Electricity Motion Gravity Nuclear Energy Light General Relativity	Brain Human Behaviour Neural Networks Memory Science Inquiry Learning techniques Ethics
Careers				
Marine biology Pharmacy Physiotherapy Medicine Health VET Nursing & Midwifery Food Science Paramedicine	Pharmacy Food Science Physiotherapy Medicine Radiography VET Paramedicine Chemical Engineering	Wildlife officer Park Ranger Meteorologist Agriculture Environmental Scientist Forestry Education Ecologist Geology	IT / Electronics Medicine Electrical Engineering Civil Engineering Mechanical Engineering Aeronautical Engineering Defence Forces Architect	Psychologist Counsellor Sports Psychology Social Worker Criminology Neuroscience Social scientist