Teaching of Origins Scrutinized (TOS)

The case for corrective action in teaching origins/evolution in Victorian schools

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Rev. E: ??/??/19

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1. Preface

1.1. Personal introduction

I am a qualified engineer and school teacher (VIT no. 199913) in my 60s.

I have taught at various grade levels but mostly at Year 11 and 12 in public and independent schools for over 8 years. For the last 10 years I have been teaching engineers and technicians how to design, maintain and operate a leading computer control system for a large multinational organization.

I have been uncomfortable in the way that evolution has been taught for many years - but lacked the motivation to contribute in making improvements. After becoming a grandfather and sensing my responsibility to my "little buddies" and to all children, I have transitioned from indifference to action. This document is the result.

1.2. The end goals

There are many factors contributing to the educational experience of students, they include:

- Teachers
- Principals
- School policies
- DET policies
- Textbooks
- Parents
- Other students

This document identifies a flaw in the Victorian education system which misleads students and is probably deleterious to their emotional well-being. Parents would be disturbed if they were aware. The question of who is to blame naturally emerges. I want to state from the outset that it is NOT my intention to blame the teacher, or any of the above. My earnest desire is to fix the problem and not lay blame.

It is intended that this document will be reviewed by the Minister of Education with the hope that he/she will trigger a review of the current way that origins/evolution is taught in Victorian schools and facilitate positive corrective change, such that:

- The curriculum and textbooks become free of unsupported assumptions, equivocation, scientific overreach and deception.
- Students are better at thinking critically and applying the scientific method fully.
- Students' well-being is preserved.

I would be pleased to dialog and co-operate with the Minister and/or his representatives to contribute toward these objectives.

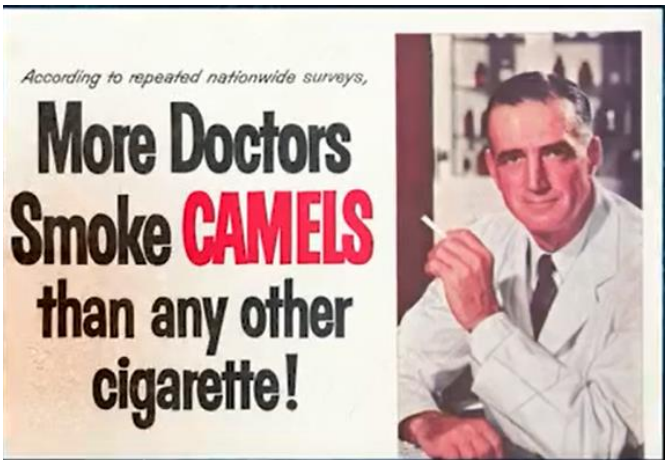
2. Section 1: Introduction

The Department of Education and Training (DET) website contains comprehensive and detailed information. The following are especially inspiring:

- "Integrity", "Responsiveness" and "Accountability" as core values.[1]
- "Always focus on the well-being and outcomes of the children, young people and families they serve" - a commitment from its leaders. [1]
- A whole section on "Critical and creative thinking capability".[2]

These are admirable; however, for these to be manifested in our schools we need some lateral thinking as well as an honest and critical review of the existing paradigm.

History is littered with examples where the prevailing thought (status quo) is overturned by new evidence. However, the transition is never easy or painless. Changing the status quo is usually slow and agonizing. Once a false idea becomes the **prevailing assumption**, it is hard to overcome. The people who initially speak out against the falsehood get harassed and attacked by the 'keepers' of the status quo.



One recent example is cigarette smoking. In the 1950-90s smoking was considered fashionable and trendy even though studies in the 1940s were indicating a link between smoking and lung cancer. Cigarette manufacturers had a vested interest in maintaining the status quo and thereby orchestrated attacks on the studies and people suggesting that smoking was injurious.

There are some parallels between smoking and the teaching of macroevolution as a scientific fact to trusting students:

- Both were the status quo.
- Both were based on a false assumption of scientific support.
- Both have a somewhat elusive link between cause and effect
  - Not everyone who smoked, got lung cancer.
  - Not every child who is taught evolution exhibits negative consequences.

[1] https://www.education.vic.gov.au/about/department/Pages/vision.aspx

[2] https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/capabilities/Pages/criticalcreative.aspx

This document provides detailed and credible evidence to show that the current way that origins are taught contains many deceptions and is deleterious to the emotional well-being of students. It is time to see if the Department of Education and Training (DET) is sincere about its proclamations:

> "Science knowledge is **contestable** and is **revised**, refined and extended as new evidence arises."[3]

> "Always focus on the well-being and outcomes of the children, young people and families they serve."[4]

Is DET willing to honestly review the way that evolution is taught in Victorian schools?

Will DET take the corrective action to increase curriculum integrity and optimize student well-being?

[3] VCAA: Victorian Curriculum Foundation-10; science; (Rationale)

[4] http://www.education.vic.gov.au/about/department/Pages/default.aspx

3. Overview in seven key statements

The following seven statements describe the issue clearly in a logical and coherent manner. Statements 3,4 and 5 are contentious, hence, the remainder of this document is dedicated to substantiating them with specific and detailed supportive data.
Links are included to enable the reader to jump conveniently to the section of interest.

1 **DET (Department of Education and Training) has ultimate authority and responsibility for student well-being.**
- DET has a duty of care to students, to protect them from physical, emotional and psychological harm.

2 **The school curriculum should be of high integrity.**
- It should **not** contain errors, deceptions or damaging content.

3 **DET and the curriculum facilitate macroevolution being taught as an implied scientific fact.**
Substantiation ➔

Macroevolution can be defined as an equation:

Simple beginning (e.g. 1 primitive cell, probably a bacterium.)

+ natural forces (rain, wind, radiation gravity etc.)

+ many mutations (DNA copying mistakes)

+ lots of time

+ lots of natural selection

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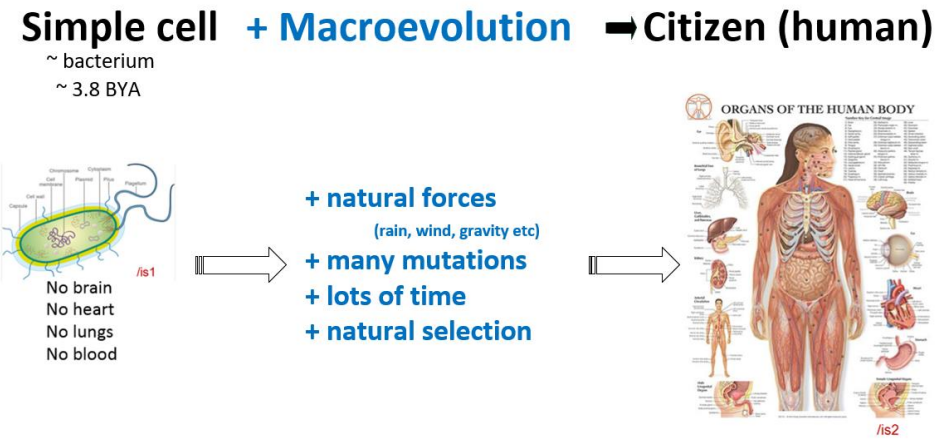
Equals an extremely complex organism
(e.g. human with brain, nervous system, blood, reproductive system etc.)

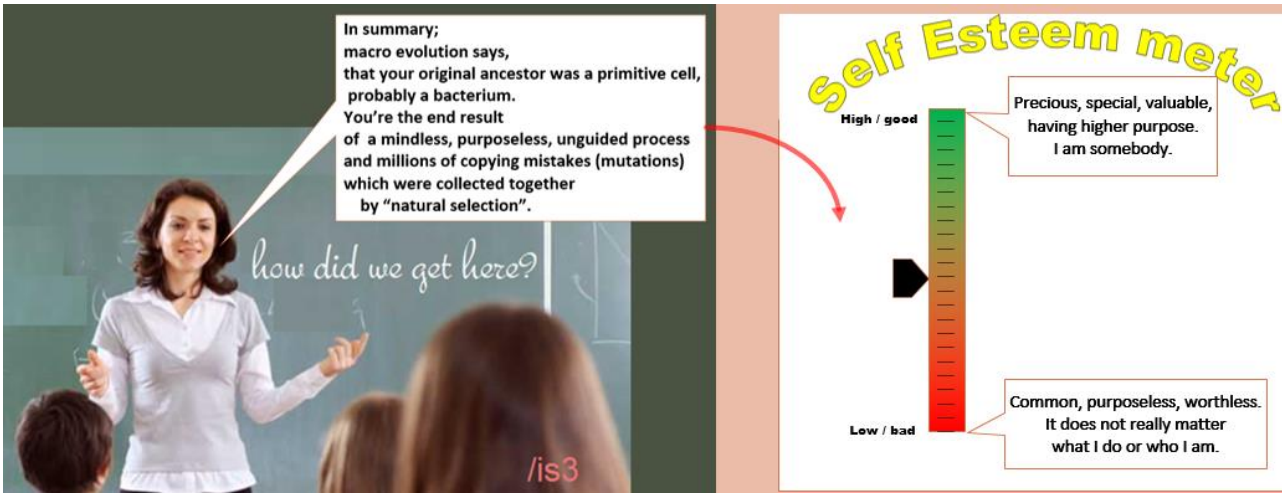
- It can be shown diagrammatically as:



4 Students are being deceived in the teaching of evolution. [Substantiation ➔]

- Macroevolution is taught as an implied fact even though it has never been observed or proven. The evidence is completely circumstantial and open to alternative interpretations.
- Various techniques are used to propagate the false impression that macroevolution is a scientific fact, they include: equivocation, fraud, scientific overreach (unwarranted extrapolation) and omission of conflicting evidence.
- Facilitating this deception of students is a violation of DET's Duty of Care.

5 The current way of teaching evolution is deleterious to student psychological and emotional well-being. [Substantiation ➔]



- How can the end product of a mindless, unguided, purposeless process and millions of copying mistakes have a higher purpose or intrinsic value?
- Many students will experience feelings of reduced self-worth and increased feelings of meaninglessness and despair as a result of being taught evolution.

6 DET must take corrective action to remove the deception and preserve student well-being.

- Unless DET can show factual errors and logic flaws in the arguments presented here, it is bound by its own stated values to take corrective action.
  These values are communicated in DET statements including:
  - "We use evidence to make decisions."[5]
  - "Always focus on the well-being and outcomes of the children, young people and families they serve"[6]

[5] https://www.education.vic.gov.au/about/department/Pages/vision.aspx - 'Our principles'

[6] https://www.education.vic.gov.au/about/department/Pages/vision.aspx - 'Our leaders' commitment to Victorians'

- The corrective action would include:
    - ♦ Removing the ambiguity, equivocation, overreach and deceptions.
    - ♦ Students being encouraged to practice critical and scientific thinking, honestly and critically scrutinizing the evidence for and against a theory.

7 **Failure of DET to take corrective action will constitute a violation of its duty of care to the students.**

- Having been advised of the hazards, DET needs to take corrective action.

4. ---------- Section 2 ----------

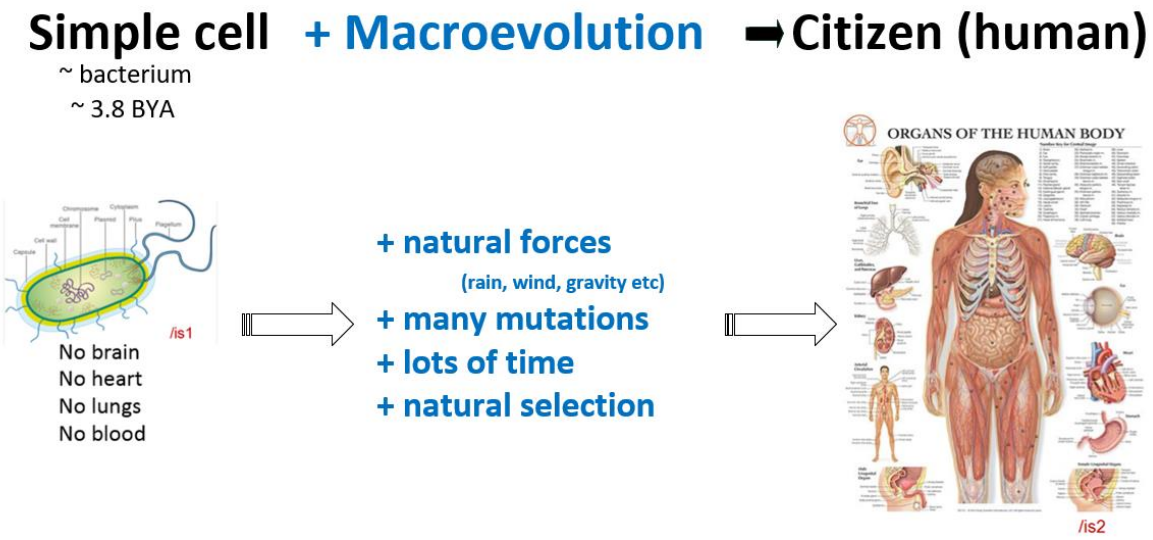
Substantiation: Macroevolution is taught as an implied scientific fact.

The scientific method requires clarity and precision in the terminology. The evolutionary literature suffers badly in this regard. The word "evolution" is used widely but rarely defined. Rather, the meaning is implied in a vague and piece-meal manner. The reason for this evasiveness is probably because stating it simply and clearly would reveal its scientific implausibility and negative emotional repercussions.

This section endeavours to substantiate that the following definition of 'evolution' is presented to students as scientific 'fact'. The evidence is drawn from curriculum documents, textbooks and other pertinent documents the students are likely to encounter.

- **Macroevolution** can be stated as the following equation:
  Simple beginning (e.g. 1 primitive cell, probably a bacterium.)
  + natural forces (rain, wind, radiation gravity etc.)
  + many mutations (DNA copying mistakes)
  + lots of time
  + lots of natural selection
  ==========
  Equals an extremely complex organism (e.g. human, brain, blood circulatory system)

- It can be represented diagrammatically as:



5. Curriculum references

5.1. Science levels 7-10 | Biological Sciences

Curriculum extract	Comments
"The theory of **evolution** by natural selection **explains** the diversity of living things and is supported by a range of scientific evidence" [7]	• This is a definitive statement; it states that evolution explains the diversity of living things • It clearly represents evolution as a scientific fact; not speculation or conjecture. • It is called a 'theory', but evolutionists assert that it is like the 'theory' of gravity or electricity. They remove all speculation and conjecture from the word and imply that it is an observable, definite fact.

5.2. Biology study design

Curriculum extract	Comments
"Despite the diversity of organisms and their many adaptations for survival in various environments, **all** life forms share a degree of relatedness **and a common origin"** [8]	• This clearly asserts a universal common ancestor. • This is a statement of fact, not speculation or conjecture.
"The accumulation of changes over time is considered as a mechanism for biological evolution by natural selection that leads to the rise of **new species**."[9]	• Clear reference to new species being produced by natural selection. • 'Species' is not defined, but it is clearly asserted that new and novel body parts emerge due to 'evolution by natural selection'.

[7] http://victoriancurriculum.vcaa.vic.edu.au/science/introduction/scope-and-sequence

[8] Biology Study Design-2016.pdf : Scope of Study (page 5)

[9] Biology Study Design-2016.pdf : Unit 4 (page 26)

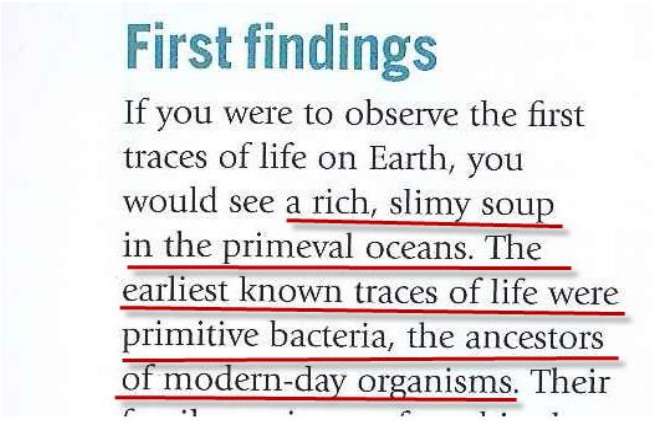
Curriculum extract	Comments
"Students learn that **all** cells are derived from pre-existing cells through the cell cycle."[10]	• Common ancestry initially starting off as a bacterium like creature. • It is interesting that there is no mention of how the first cell came into existence. Earlier textbooks included the transition from non-living matter to the first living cell as part of 'evolution'. The scientific problems with this are so huge that evolutionist have retreated on this and now are claiming that it is a separate field of study 'abiogenesis'. The question therefore remains: How did the first cell come into existence?

6. Textbook References

Here are some sample quotations where the textbooks are presenting macroevolution as a scientific 'fact'.

6.1. Science Quest 10 (Jacaranda, a Wiley brand)

- Page 102 – reference to bacteria as the starting point



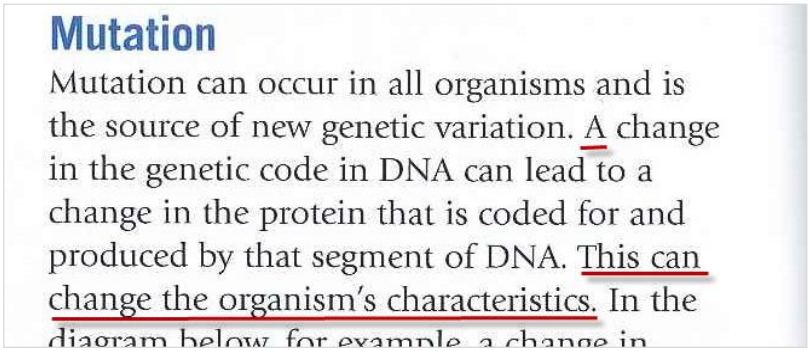
First findings

If you were to observe the first traces of life on Earth, you would see a rich, slimy soup in the primeval oceans. The earliest known traces of life were primitive bacteria, the ancestors of modern-day organisms. Their

/IS20 pg 102

[10] Biology Study Design-2016.pdf : Unit 2: How is continuity of life maintained? (page 17)

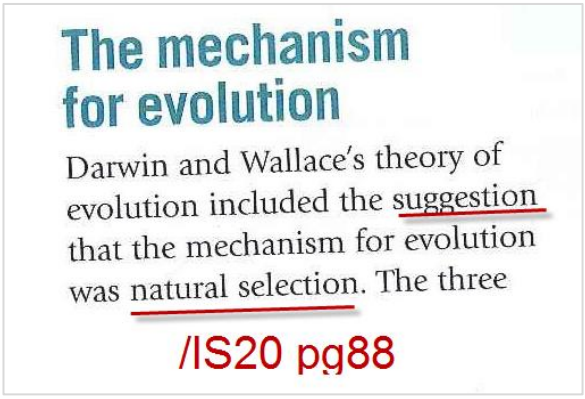
- Page 78 – Reference to mutuations



Mutation

Mutation can occur in all organisms and is the source of new genetic variation. A change in the genetic code in DNA can lead to a change in the protein that is coded for and produced by that segment of DNA. This can change the organism's characteristics. In the diagram below, for example, a change in

- Page 88 – reference to natural selection



The mechanism for evolution

Darwin and Wallace's theory of evolution included the suggestion that the mechanism for evolution was natural selection. The three

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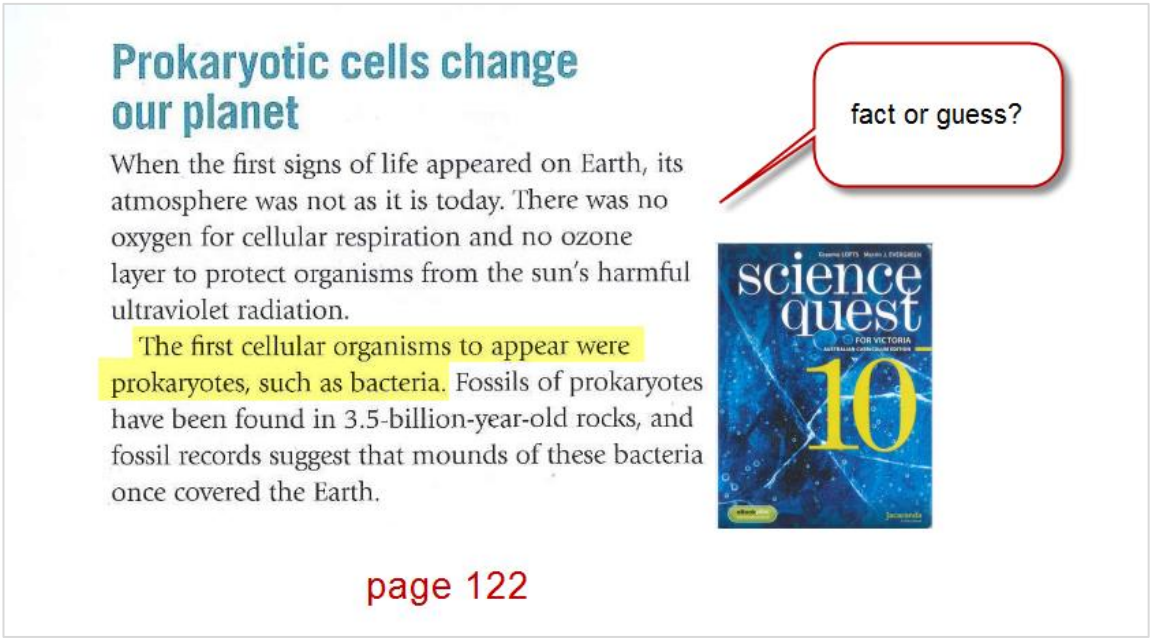
- Page 122 – reference to bacteria as the starting point



Prokaryotic cells change our planet

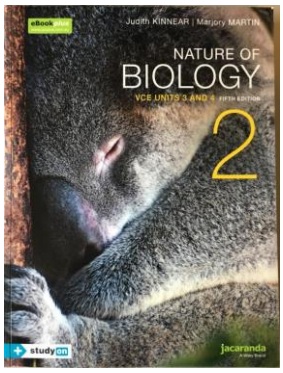
When the first signs of life appeared on Earth, its atmosphere was not as it is today. There was no oxygen for cellular respiration and no ozone layer to protect organisms from the sun's harmful ultraviolet radiation.

The first cellular organisms to appear were prokaryotes, such as bacteria. Fossils of prokaryotes have been found in 3.5-billion-year-old rocks, and fossil records suggest that mounds of these bacteria once covered the Earth.

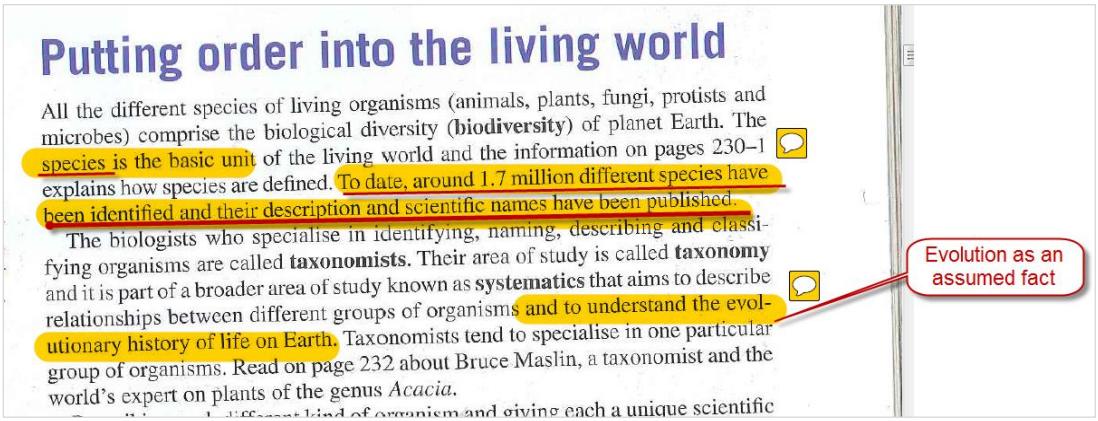
fact or guess?

page 122

6.2. Nature of Biology 2 (Year 12 textbook)



- Page 229 - Evolution as an assumed fact



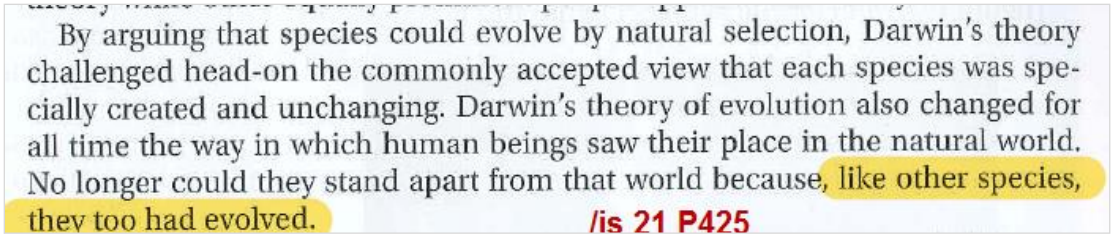
Putting order into the living world

All the different species of living organisms (animals, plants, fungi, protists and microbes) comprise the biological diversity (**biodiversity**) of planet Earth. The species is the basic unit of the living world and the information on pages 230–1 explains how species are defined. To date, around 1.7 million different species have been identified and their description and scientific names have been published.

The biologists who specialise in identifying, naming, describing and classifying organisms are called **taxonomists**. Their area of study is called **taxonomy** and it is part of a broader area of study known as **systematics** that aims to describe relationships between different groups of organisms and to understand the evolutionary history of life on Earth. Taxonomists tend to specialise in one particular group of organisms. Read on page 232 about Bruce Maslin, a taxonomist and the world's expert on plants of the genus *Acacia*.

Evolution as an assumed fact

- Page 425 – Evolution stated as an assumed fact



By arguing that species could evolve by natural selection, Darwin's theory challenged head-on the commonly accepted view that each species was specially created and unchanging. Darwin's theory of evolution also changed for all time the way in which human beings saw their place in the natural world. No longer could they stand apart from that world because, like other species, they too had evolved.

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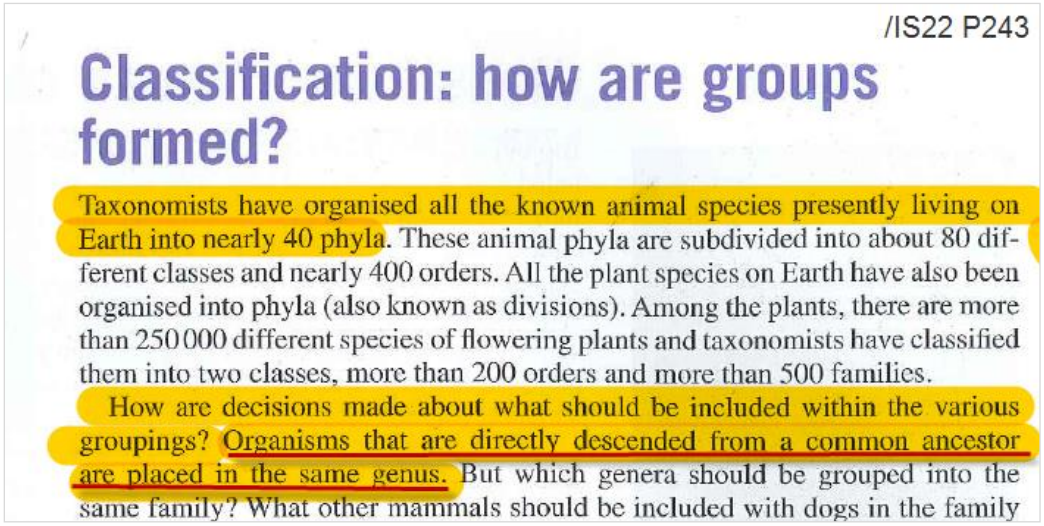
- Page 243: Evolution as a fact and common ancestor



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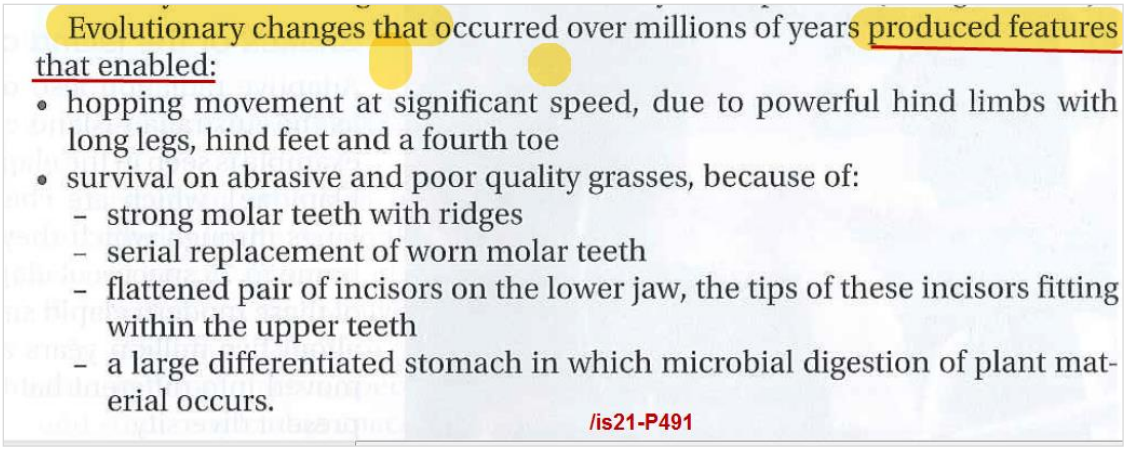
Classification: how are groups formed?

Taxonomists have organised all the known animal species presently living on Earth into nearly 40 phyla. These animal phyla are subdivided into about 80 different classes and nearly 400 orders. All the plant species on Earth have also been organised into phyla (also known as divisions). Among the plants, there are more than 250 000 different species of flowering plants and taxonomists have classified them into two classes, more than 200 orders and more than 500 families.

How are decisions made about what should be included within the various groupings? Organisms that are directly descended from a common ancestor are placed in the same genus. But which genera should be grouped into the same family? What other mammals should be included with dogs in the family

- Page 491: Evolution as an assumed fact



Evolutionary changes that occurred over millions of years produced features that enabled:

- hopping movement at significant speed, due to powerful hind limbs with long legs, hind feet and a fourth toe
- survival on abrasive and poor quality grasses, because of:
  - strong molar teeth with ridges
  - serial replacement of worn molar teeth
  - flattened pair of incisors on the lower jaw, the tips of these incisors fitting within the upper teeth
  - a large differentiated stomach in which microbial digestion of plant material occurs.

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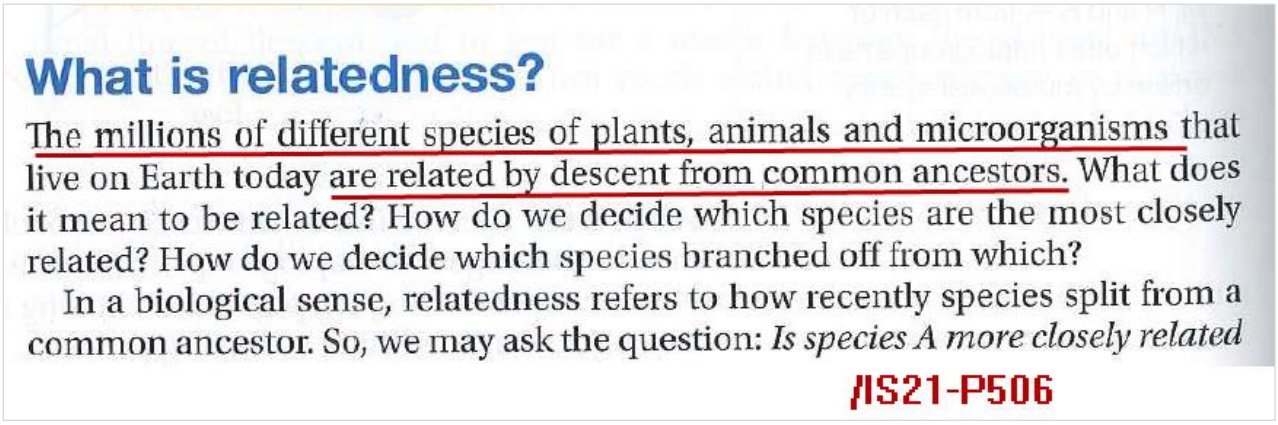
- Page 506: Common ancestor



What is relatedness?

The millions of different species of plants, animals and microorganisms that live on Earth today are related by descent from common ancestors. What does it mean to be related? How do we decide which species are the most closely related? How do we decide which species branched off from which?

In a biological sense, relatedness refers to how recently species split from a common ancestor. So, we may ask the question: *Is species A more closely related*

/IS21-P506

- Page 511: Common ancestor stated as a fact

The genome of each species contains DNA sequences and distinctive features that have been conserved over millions of years of evolution. Because living species have evolved from common ancestors, the genomes of related species exhibit similarities. The more recent the divergence of two related species from a common ancestor, the greater the number of conserved DNA

/IS21-P511

- Page 521: Common ancestor

A diagram of this type is called a **phylogenetic tree**. Figure 11.20 shows the phylogenetic tree of life that captures all groups of living organisms. This tree is a product of Darwin's evolutionary theory that illustrates the inter-connectedness of all life forms through evolution.

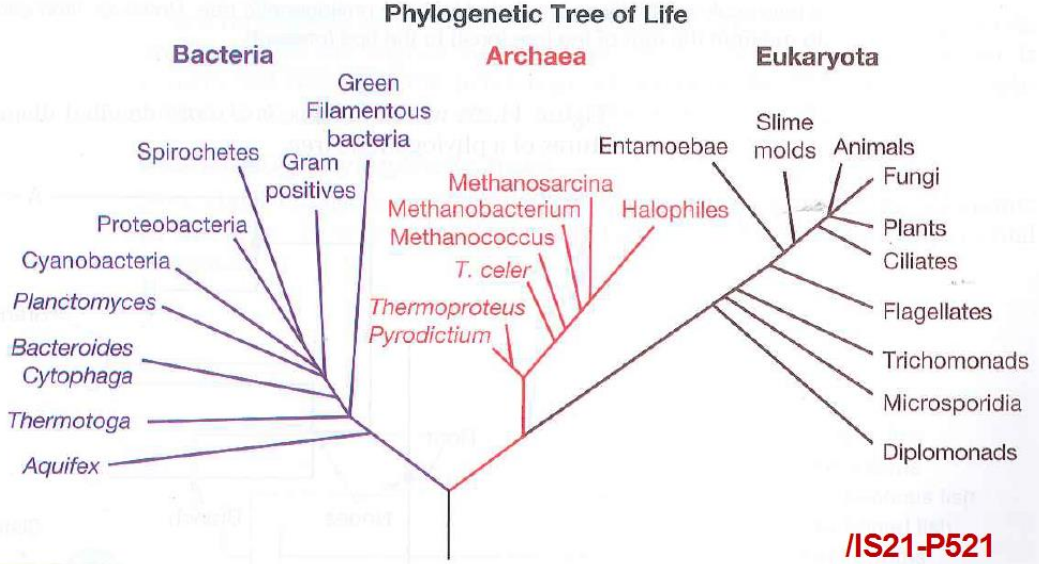


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FIGURE 11.20 A tree of life is a diagram that shows the degree of evolutionary relatedness of all the groups of life forms on planet Earth. Diagrams like this are called phylogenetic trees.

7. Non-textbook references

These additional sources may be referenced in the evolution unit or viewed by students as extra-curricular materials. They act to re-enforce the textbook key assertion that macroevolution is a scientific 'fact'.

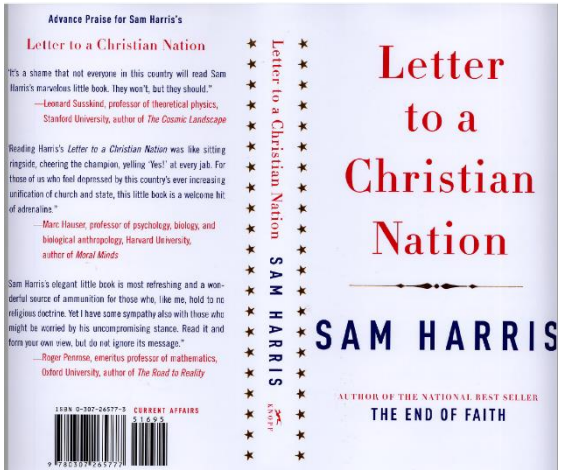
7.1. BBC website

- "The **history of life** on Earth began about 3.8 billion years ago, initially with single-celled prokaryotic cells, such as bacteria." [11]

7.2. Richard Dawkins

- "Evolution is a fact. It's a fact which is established as securely as any other fact in science. … It is completely right to say that since the evidence for evolution is so absolutely, totally overwhelming. Nobody who looks at it could possibly doubt that, if they were sane, and not stupid."[12]

7.3. Sam Harris – Letter to a Christian Nation



"All complex life on earth has developed from simpler life forms over billions of years.
This is a fact that no longer admits of intelligent dispute"[13]

"We know that all complex organisms on earth, including ourselves, evolved from earlier organisms over the course of billions of years."[14]

7.4. Charles Darwin

"It is a truly wonderful fact....
That all animals and all plants throughout all time and space should be related to each other."[15]

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[11] http://www.bbc.co.uk/nature/history_of_the_earth

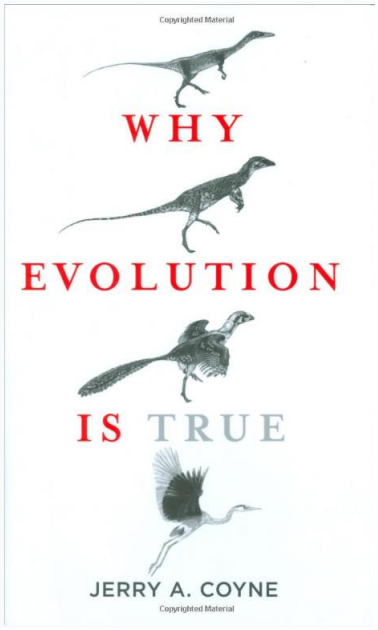
[12] "Expelled No Intelligence allowed" documentary

[13] Letter to a Christian nation, Sam Harris, page 68

[14] Letter to a Christian nation, Sam Harris, page 70

[15] On the Origin of Species; page 170

7.5. Jerry Coyne



“, the modern theory of evolution is easy to grasp. It can be summarized in a single (albeit slightly long) sentence:
Life on earth evolved gradually **beginning with one primitive species** — perhaps a self-replicating molecule—
that lived more than 3.5 billion years ago; it then branched out over time, throwing off many new and diverse species;
and the mechanism for most (but not all) of evolutionary change is natural selection.

When you break that statement down, you find that it really consists of six components:

- Evolution
- Gradualism
- Speciation
- Common ancestry
- Natural selection
- And non-selective mechanism of evolutionary change.”[16]

[16] Coyne, Why Evolution is True, 2009, page 3

8. ---------- Section 3 ----------

Substantiation: Students are being deceived in the teaching of evolution.

The DET documentation sets a high standard in expecting students to be **critical thinkers** who scrutinize the source materials, as opposed to passively accepting what is being presented. Some indicative statements include:

> "Analyze patterns and trends in data, …, **identifying inconsistencies in data**, …. and drawing conclusions that are consistent with evidence …. to **evaluate investigation conclusions**, including assessing the approaches used to solve problems, **critically analyzing the validity of information obtained from primary and secondary sources, suggesting possible alternative explanations.**"[17]

> "… develop key science skills and interrogate the links between theory, knowledge and practice. They pose questions, formulate hypotheses and collect, analyze and **critically interpret** qualitative and quantitative data…. **They analyze the limitations of data,** evaluate methodologies and results, **justify conclusions** …. students develop capacities that enable them to **critically assess the strengths and limitations of science,** respect **evidence-based conclusions**."[18]

Merriam Webster dictionary defines **deception** as:

"**the act of causing someone to accept as true or valid what is false or invalid".**

This section provides compelling evidence that this is exactly what is happening in Victorian schools regarding the teaching of origins and evolution. It contains indicative examples of the textbooks clearly leading students to false or unsubstantiated conclusions – in short, to highlight where the students are being deceived.

9. The evolutionist playbook

As we explore the deceptions, it is important to have a broad understanding of the techniques that are used to perpetuate them. Few people (and even fewer students) are aware of them, which is why they are so effective.

The evolutionist playbook includes the following techniques/rules:

- Just **assume** macroevolution is a proven fact (even though it has **never** been observed or proven). Boldly assert that:
  - The controversy is over, macroevolution has been proven "ages ago".
  - Macroevolution is overwhelmingly supported by all "real scientists".

[17] Science Levels 7 – 10: Analysing and evaluating

[18] VCE Biology Study design; Scope of study [formatting mine]

- The only people doubting macroevolution are religious bigots.
- Natural selection has the power to design complex and novel body parts.

♦ Present downright frauds as science provided they are couched in lots of esoteric scientific jargon and irrelevant details.
- Most readers will conclude that they just don't understand it because they are not sufficiently educated and "qualified".
- It helps to repeatedly emphasize that all credible scientists believe it.
  Having a Nobel Prize winner endorsing it will ensure acceptance from all but the most discerning readers.
- A clear example of this is Haeckel's deception which is covered below (link).

♦ Use **equivocation** at every turn
- This is a wonderful word and technique; it is used daily in politics and advertising.
  So, what is it?
- The Cambridge dictionary defines it as:
  - "To speak [communicate] in a way that is **intentionally not clear and confusing** to other people, especially **to hide the truth**" [19]
  - It is sometimes called "spin"
- Drowning the reader in tedious and irrelevant detail makes it easy for them to accept the claim and ignore the need for supporting evidence.
- Some people think that school should make the complex simple – but evolutionists make the simple complex. The complexity will make students brains hurt – when they feel the pain, they will accept any conclusion that is fed to them.

♦ Do **NOT** define key terms like "evolution" or "species".
Without these being defined, falsification and critical thinking of evolution is virtually impossible.

♦ Continually appeal to authority while affirming that "virtually everyone believes in evolution".

♦ Transition from fact to fiction seamlessly – few will notice.

♦ Create and attack straw man arguments. Examples include:
- "Objections to evolution are based on the literal interpretations of Genesis."
- "Only creationists object to evolution and only for religious reasons."
- "Creationists think natural selection is not true."
- "Intelligent Design is only Creationism in disguise"

♦ Ignore the scientific fatal flaws of macroevolution; pretend they do not exist.

[19] https://dictionary.cambridge.org/dictionary/english/equivocate

10. EXHIBIT 1: Deception through vague and changing terminology

- The scientific method requires clarity and precision in terminology; vague and changing meanings are not acceptable. The evolution literature suffers badly in this regard. The VCAA Curriculum speaks out against this shortcoming by requiring students to:

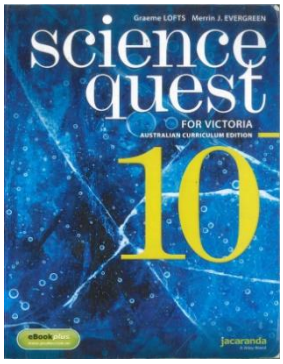
  "Communicate and explain scientific ideas – use clear, coherent and concise expression"[20]

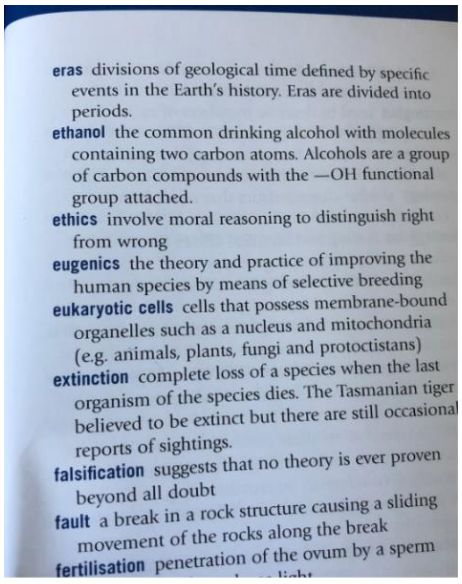
- If the evolutionist claims are vague and ambiguous, then the supporting evidence can be equally vague and ambiguous. Falsifying such claims is virtually impossible. Two key words stand out as failures in this regard: '**Evolution'** and '**Species'**

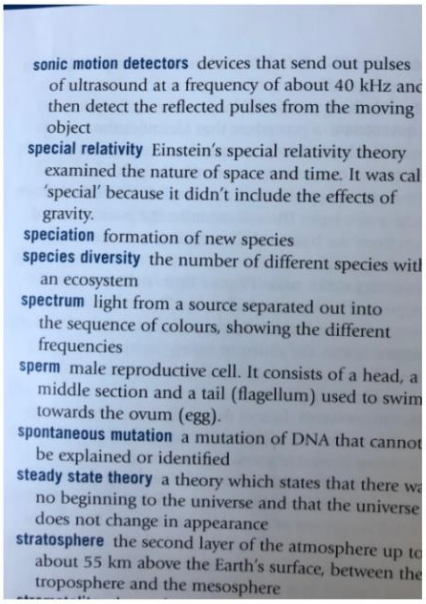
- The curriculum documentation does not contain a definition of either 'evolution' or 'species'. Further, writing to VCAA requesting clarity on this issue yielded the response:

  "The VCAA does **not** provide a prescriptive curriculum nor does it provide definitions of terms or specific references."

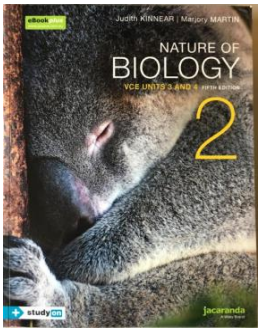
- The following textbooks are also guilty of this shortcoming.
  Both 'evolution' and 'species' are conspicuous by their absence in their glossaries and also in the content section.

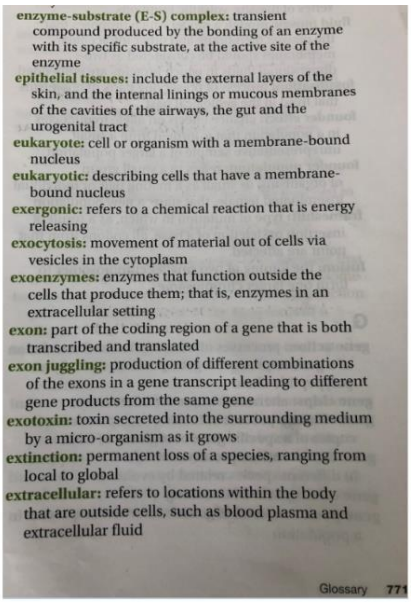



eras divisions of geological time defined by specific events in the Earth's history. Eras are divided into periods.
ethanol the common drinking alcohol with molecules containing two carbon atoms. Alcohols are a group of carbon compounds with the —OH functional group attached.
ethics involve moral reasoning to distinguish right from wrong
eugenics the theory and practice of improving the human species by means of selective breeding
eukaryotic cells cells that possess membrane-bound organelles such as a nucleus and mitochondria (e.g. animals, plants, fungi and protoctistans)
extinction complete loss of a species when the last organism of the species dies. The Tasmanian tiger believed to be extinct but there are still occasional reports of sightings.
falsification suggests that no theory is ever proven beyond all doubt
fault a break in a rock structure causing a sliding movement of the rocks along the break
fertilisation penetration of the ovum by a sperm


sonic motion detectors devices that send out pulses of ultrasound at a frequency of about 40 kHz and then detect the reflected pulses from the moving object
special relativity Einstein's special relativity theory examined the nature of space and time. It was called 'special' because it didn't include the effects of gravity.
speciation formation of new species
species diversity the number of different species within an ecosystem
spectrum light from a source separated out into the sequence of colours, showing the different frequencies
sperm male reproductive cell. It consists of a head, a middle section and a tail (flagellum) used to swim towards the ovum (egg).
spontaneous mutation a mutation of DNA that cannot be explained or identified
steady state theory a theory which states that there was no beginning to the universe and that the universe does not change in appearance
stratosphere the second layer of the atmosphere up to about 55 km above the Earth's surface, between the troposphere and the mesosphere

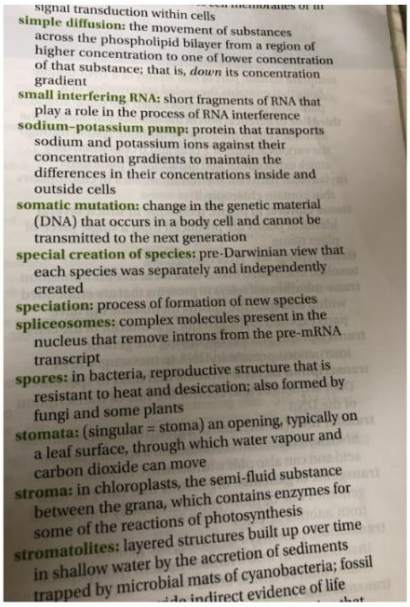
[20] Biology Study design; page 11





enzyme-substrate (E-S) complex: transient compound produced by the bonding of an enzyme with its specific substrate, at the active site of the enzyme
epithelial tissues: include the external layers of the skin, and the internal linings or mucous membranes of the cavities of the airways, the gut and the urogenital tract
eukaryote: cell or organism with a membrane-bound nucleus
eukaryotic: describing cells that have a membrane-bound nucleus
exergonic: refers to a chemical reaction that is energy releasing
exocytosis: movement of material out of cells via vesicles in the cytoplasm
exoenzymes: enzymes that function outside the cells that produce them; that is, enzymes in an extracellular setting
exon: part of the coding region of a gene that is both transcribed and translated
exon juggling: production of different combinations of the exons in a gene transcript leading to different gene products from the same gene
exotoxin: toxin secreted into the surrounding medium by a micro-organism as it grows
extinction: permanent loss of a species, ranging from local to global
extracellular: refers to locations within the body that are outside cells, such as blood plasma and extracellular fluid

Glossary 771



signal transduction within cells
simple diffusion: the movement of substances across the phospholipid bilayer from a region of higher concentration to one of lower concentration of that substance; that is, *down* its concentration gradient
small interfering RNA: short fragments of RNA that play a role in the process of RNA interference
sodium–potassium pump: protein that transports sodium and potassium ions against their concentration gradients to maintain the differences in their concentrations inside and outside cells
somatic mutation: change in the genetic material (DNA) that occurs in a body cell and cannot be transmitted to the next generation
special creation of species: pre-Darwinian view that each species was separately and independently created
speciation: process of formation of new species
spliceosomes: complex molecules present in the nucleus that remove introns from the pre-mRNA transcript
spores: in bacteria, reproductive structure that is resistant to heat and desiccation; also formed by fungi and some plants
stomata: (singular = stoma) an opening, typically on a leaf surface, through which water vapour and carbon dioxide can move
stroma: in chloroplasts, the semi-fluid substance between the grana, which contains enzymes for some of the reactions of photosynthesis
stromatolites: layered structures built up over time in shallow water by the accretion of sediments trapped by microbial mats of cyanobacteria; fossil

10.1. The clarified meanings of '<u>evolution</u>':

The meanings associated with the word '**evolution'** can be condensed to the following:

10.1.1. Change over time

- This is the common understanding of the word, sometimes wrongfully applied to biological evolution.
- Everything changes over time; cars, buildings, mobile phones – but these changes are caused by intelligent beings (people) not random natural forces. Some books even imply that the 'evolution' of languages, planes, cars etc. somehow supports biological evolution. This is clearly nonsensical equivocation.

10.1.2. <u>Micro</u>evolution (adaptation)

- Individuals in a population of organisms have traits which better suit them to differing environmental conditions. Over time, the number of individuals with the favourable traits will increase as less adapted individuals die off.
  This is what Darwin called 'natural selection'.
  Examples include:
  - Animals that live in cold climates tend to have lots of fur
  - Lizards that blend well into their environment increase in number, while the ones that stand out are the first to be attacked by predators.
- This is real, observable, and <u>uncontested</u>.
- The genetic information of organisms includes a level of variety which assists the survival of some over others. However, it should be noted that:
  - Natural selection **only selects** the organisms (from the pre-existing gene pool) best suited to the environment.
  - Natural selection has **not** been observed to create **new** and **novel** information.

- It is often claimed that macroevolution is nothing more than lots of accumulated micro evolution. To the undiscerning reader, this seems credible and very appealing. However, deeper investigation yields the conclusion that the mechanisms involved in **micro**evolution are **qualitatively** different to what is needed for **macro**evolution.
  - **Micro**evolution uses the pre-existing information contained in the genome and simply selects for different variations.
  - **Macro**evolution requires the addition of new (non-existing) genetic information.

  Therefore, the evolutionist ploy of providing countless examples of micro evolution and then **implying** that they prove macroevolution is gross scientific overreach. It is invalid extrapolation and very poor science.

10.1.3. Macroevolution

- Macroevolution can be stated as an equation:

  Simple beginning (e.g. simple cell, or bacterium)

  + lots of time

  + lots of natural selection

  + many mutations

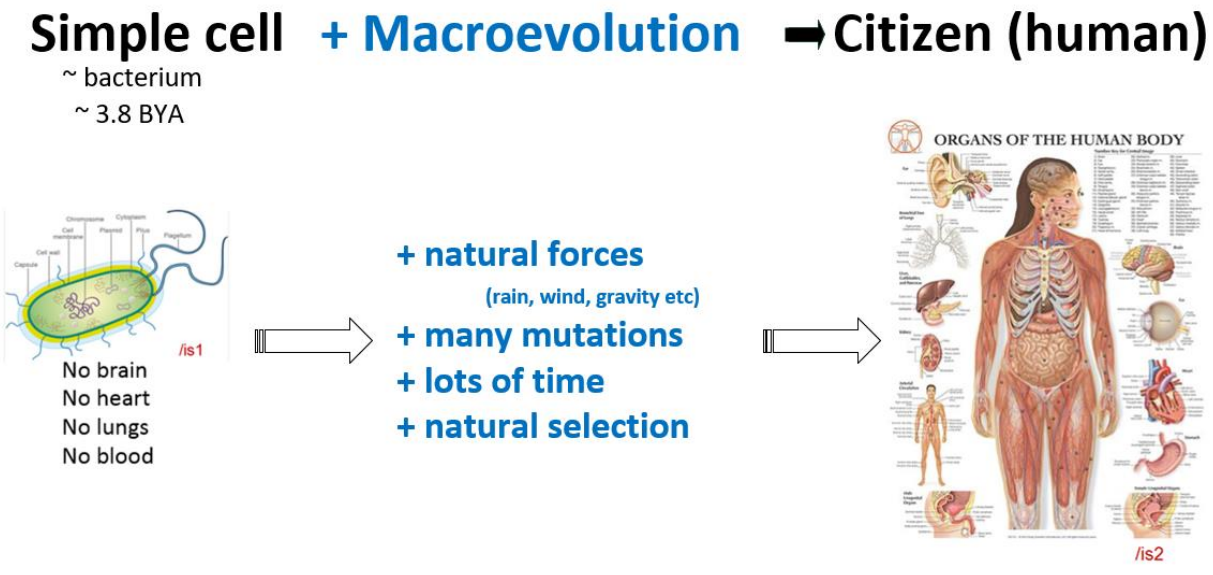
  + natural forces (rain, wind, radiation gravity, etc.)

  ==========

  Equals an extremely complex organism

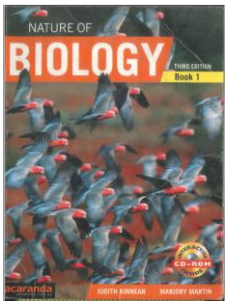
  (i.e. human with a brain and blood circulatory system etc.)

- It can be represented diagrammatically as:



- This is taught as an implied scientific fact and what needs to be proven beyond reasonable doubt.

10.2. What exactly is a '<u>species</u>'?



- The word 'species' is another grossly abused word.
  The Year 11 Biology textbook states on page 229:

  "The **species** is the basic unit of the living world ….
  To date, around 1.7 million different **species** have been identified …."

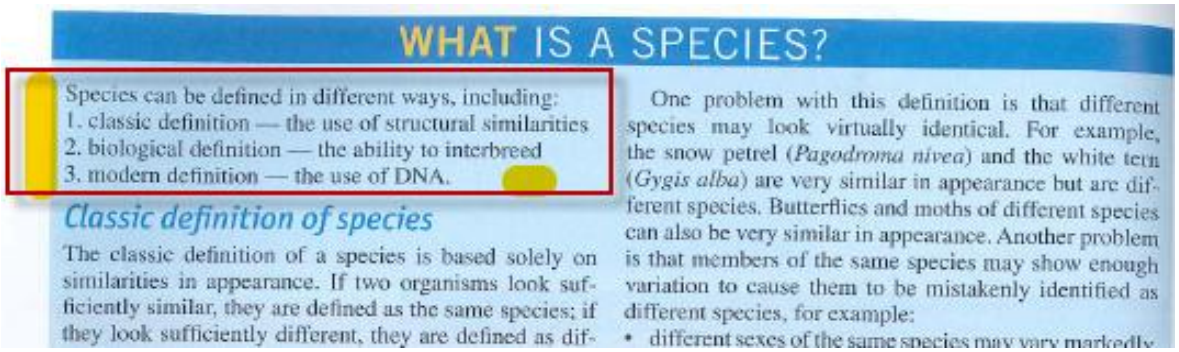
- The Biology Study Design uses '**species'** over 22 times.
  Consider some examples:
  - "Area of Study 1: How are **species** related?"
  - "Students examine how evolutionary biology and the relatedness of **species** is based upon the accumulation of evidence."
  - "…explain how relatedness between **species** is determined"
  - "…the use of phylogenetic trees to show relatedness between **species**"

10.2.1. So, what is the problem?

- The problem is that they are using a word which has no commonly agreed definition.

- On the very next page (page 230) the textbook states:

  "Species can be defined in **different ways**, **<u>including</u>**:
  1. Classic definition – the use of structural similarities
  2. Biological definition – the ability to interbreed
  3. Modern definition – the use of DNA."[21]



WHAT IS A SPECIES?

Species can be defined in different ways, including:
1. classic definition — the use of structural similarities
2. biological definition — the ability to interbreed
3. modern definition — the use of DNA.

Classic definition of species

The classic definition of a species is based solely on similarities in appearance. If two organisms look sufficiently similar, they are defined as the same species; if they look sufficiently different, they are defined as dif-

One problem with this definition is that different species may look virtually identical. For example, the snow petrel (*Pagodroma nivea*) and the white tern (*Gygis alba*) are very similar in appearance but are different species. Butterflies and moths of different species can also be very similar in appearance. Another problem is that members of the same species may show enough variation to cause them to be mistakenly identified as different species, for example:

- different sexes of the same species may vary markedly

- Note that:
  - The 3 definitions are distinctly different.
    - i.e. structural similarities does NOT mean they can interbreed e.g. Mule and horse
  - The 3 listed are NOT the complete list. There are over eight different definitions in use.[22]
  - Even the given descriptions above are still vague.
    - What does "use of structural similarities" mean exactly?
      What structures and how similar do they need to be?
    - What does "the use of DNA" mean?
      How many differences in the nucleotides are needed before one organism will be

[21] NATURE OF BIOLOGY 1 - VCE TEXT BOOK (YEAR 11) page 230

[22] http://www.talkorigins.org/faqs/faq-speciation.html

declared a different species?
(There is no such quantitative criterion agreed to by biologists)

- How can they declare that humans are in the '*Homo sapiens*' genus and species, without also declaring which definition of species they are using?
  What specific criteria are they using to make this determination?
  The textbook does <u>not</u> hint that scientists themselves are struggling with these fundamental questions.

- Apart from this being really poor science, there is a bigger issue.
  A core assertion of macroevolution is that organisms are continually changing and increasing in function and complexity and becoming new 'species.
  Evolutionists assert that "speciation has been observed", meaning that one species has been observed to change into another.
  This deception is only possible because 'species' is never defined.

- For example, it has been asserted that:

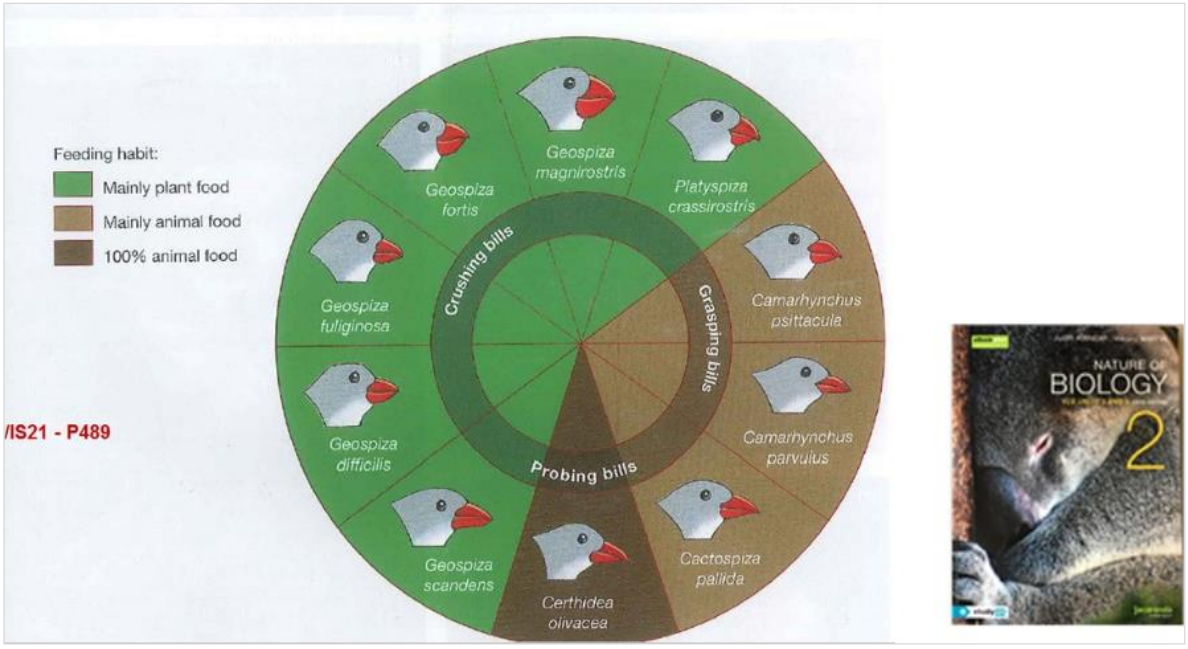
  > "There are now at least 13 species of finches on the Galapagos Islands, each filling a different niche on different islands."[23]

  However, the differences between the finches are only minor variations in the shape and size of the beak or the color of the feathers. They are **variants** of the same gene pool of finches that survived given the different habitats of vegetation and insects oh these islands. To assert that these minor differences constitute different species is invalid and deceptive. This is completely inconsistent with the categorizing of dogs as described in the *Scientific American* article "Why are different breeds of dogs all considered the same species?"[24]

- Consider the fanciful diagram contained in the Year 12 Biology textbook:

[23] https://www.pbs.org/wgbh/evolution/library/01/6/l_016_02.html

[24] https://www.scientificamerican.com/article/different-dog-breeds-same-species/



[25]

- Who made the determination that there are 13 different species?
- On what basis was this determination made?
- Does this mean that they cannot interbreed? Answer: No.
  A BBC article states the following:
  "The most extensive genetic study ever conducted of Darwin's finches, from the Galapagos Islands, has revealed a messy family tree **with a surprising level of interbreeding between species**. It also suggests that changes in one particular gene triggered the wide variation seen in their beak shapes."[26]

10.3. Conclusion

The level of ambiguity and equivocation evident in the presentation of evolution is disturbing and would not be tolerated in other fields of factual science. This is reflected in an article from *New Scientist* magazine:

> "Much of the vast neo-Darwinian literature is **distressingly uncritical.**
> The possibility that anything is seriously amiss with Darwin's account of evolution **is hardly considered.**
> Such dissent as there is, often relies on theistic premises which Darwinists rightly say have no place in the evaluation of scientific theories. So, onlookers are left with the impression that there is little or nothing about Darwin's theory to which a scientific naturalist could reasonably object. **The methodological skepticism that characterizes most areas of scientific discourse seems strikingly absent when Darwinism is the topic."**[27]

[25] NATURE OF BIOLOGY 2 - VCE TEXT BOOK

[26] BBC article on Galapagos Finches

[27] "Survival of the fittest theory: Darwinism's limits" 03 February 2010

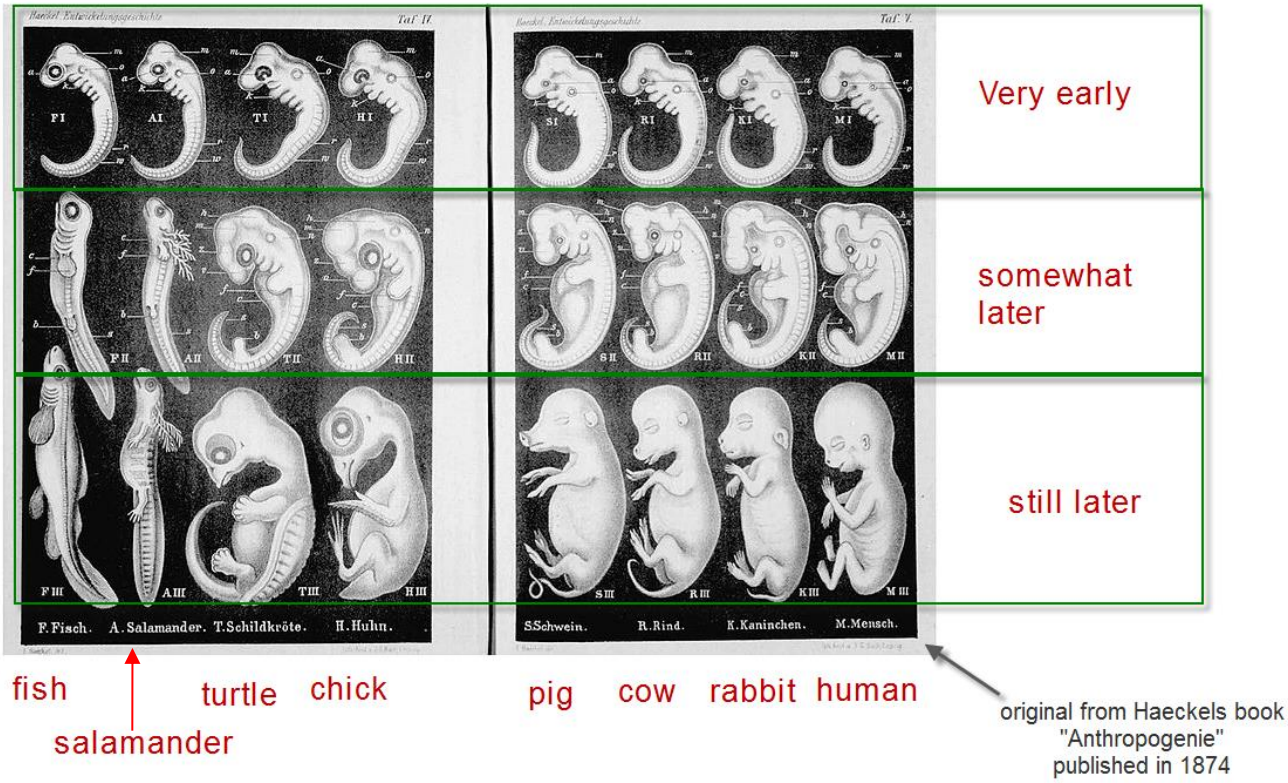
11. EXHIBIT 2: Haeckel's hanky panky (Comparative embryology)

11.1. Brief history

Ernst Haeckel:
Christmas of 1860 (age 26)
Source: Wikipedia

- When Darwin published "On the Origin of Species" in 1859, he had negligible evidence for evolution.
  His idea of 'natural selection' was just that - an idea.
  So, when German professor Ernst Haeckel embraced evolution and started preaching that embryos demonstrated that evolution was true, Darwin was delighted.
- Haeckel was born at Potsdam, Prussia (now Germany) on February 16, 1834. He studied medicine and science at Würzburg and the University of Berlin and was a professor of zoology at Jena from 1865 until his retirement in 1909.
- Ian Taylor, author of *In the Minds of Men,* writes:
  - 'He became Darwin's chief European apostle proclaiming the gospel of evolution with evangelistic fervour, not only to the university intelligentsia but to the common man by popular books and to the working classes by lectures in rented halls.'[28]
- Haeckel's academic credentials and enthusiasm for evolution enabled him to represent his musing and imagination as scientific fact. He propagated many falsehoods, but the most relevant (because it persists to this day) is his proclamation that **similarities in the embryos** of different creatures proves that evolution was true and real.
- He produced a diagram showing the embryos of different creatures which appeared to have striking similarities. He then **interpreted** the similarities as an indication that **they had a common ancestor**. This idea is given several different titles including:
  - 'the law of recapitulation'
  - 'the biogenetic law'
  - 'ontogeny recapitulates phylogeny'
- Haeckel became very influential in Germany and was instrumental in getting evolution taught in German schools. Haeckel and Darwin inspired Adolf Hitler to attempt to create a master race by applying the principles of natural selection. This involved killing off the infirm and others who were 'unfit for life'.
- The fraudulent diagram is shown here (original in black and white, colour by author) was published in his book *Anthropogenie*.

[28] Ian Taylor, *In the Minds of Men,* TFE Publishing, Toronto, 1984, p. 185, who cites Peter Klemm, *Der Ketzer von Jena,* Urania Press, Leipzig, 1968



- The audiences were so impressed with the similarities in the early stages that they readily accepted Haeckel's speculation/guess/interpretation that it 'proved' **a common ancestor**.
- This deception has 2 components:
  1) The drawings were fraudulent.
  2) Misrepresenting conjecture as a scientific fact.
- This fraud is widely conceded even by evolutionists. Consider just a few examples:

New York Times article:

> "**Several years ago**, **though**, **biologists discovered that many of the drawings <u>were fraudulent</u>** and that the true resemblances were not nearly so striking. Nevertheless, some textbooks still contain them."[29]

Staunch evolutionist P Z Myers states:

[29] Biology Text Illustrations More Fiction Than Fact; By JAMES GLANZ APRIL 8, 2001

> "Haeckel was wrong. His theory was invalid, some of his drawings were faked, and he willfully over-interpreted the data to prop up a false thesis.
> Furthermore, he was influential, both in the sciences and the popular press;
> his theory still gets echoed in the latter today.
> Wells is also correct in criticizing textbook authors for perpetuating Haeckel's infamous diagram without commenting on its inaccuracies or the way it was misused to support a falsified theory."[30]

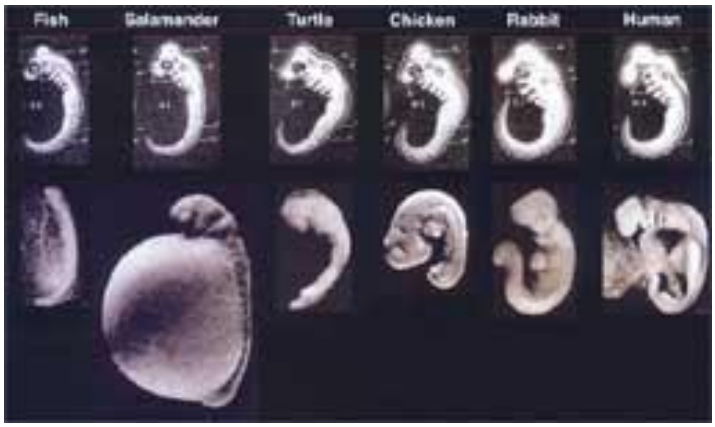
Noted evolutionist Stephen Gould wrote the following regarding Ernst Haeckel's work in a March 2000 issue of *Natural History*:

> "Haeckel had exaggerated the similarities by idealizations and omissions.
> He also, in some cases — in a procedure that can only be called fraudulent — simply copied the same figure repeatedly.…
>
> **Haeckel's drawings never fooled expert embryologists**, who recognized his findings right from the start. Haeckel's drawings, despite their noted inaccuracies, entered the most impenetrable and permanent of all quasi-scientific literatures: standard student textbooks of biology...
> Once ensconced in textbooks, misinformation becomes cocooned and effectively permanent, because…textbooks copy from previous texts....
> [W]e do, I think, have the right to be both astonished and ashamed by the century of mindless recycling that has led to the persistence of these drawings in a large number, if not a majority, of modern textbooks!"[31]

[30] http://www.talkorigins.org/faqs/wells/haeckel.html

[31] http://www.creationism.org/caesar/haeckel.htm

- A picture is worth a thousand words.
  Consider photos of embryos compared with Haeckel's drawings.



←Haeckel's drawings –

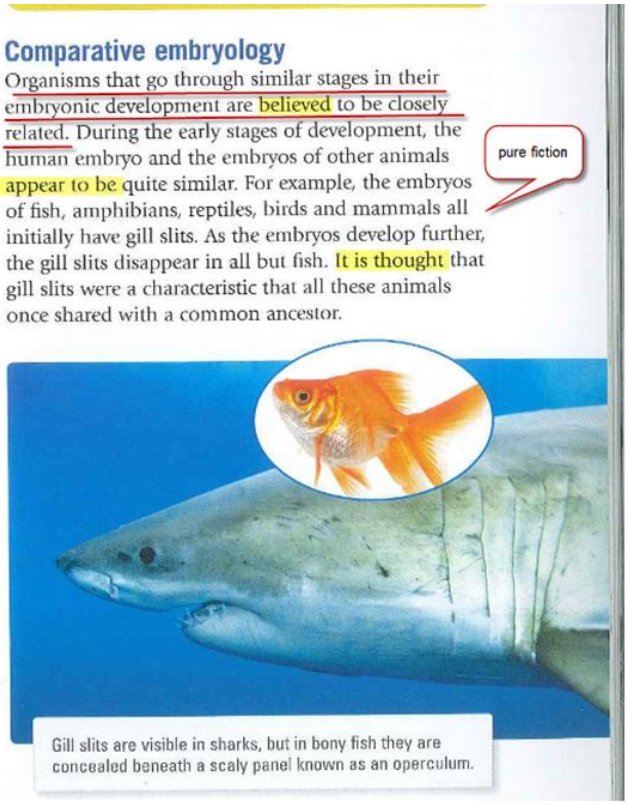
← Photographs by Dr Michel Richardson et al. show how embryos really look at the same stage. [32]

11.2. THIS FRAUD IS IN OUR TEXTBOOKS TODAY

- Education departments are slow to implement corrections; however, this deception has been exposed for many decades. One could be rightfully indignant that this deception is still being peddled to trusting students **today**.
- It has been re-packaged with vague and confusing scientific sounding jargon to 'sell' it to trusting students. Consider some typical deceptions:

[32] Michael Richardson *et al.*, *Anatomy and Embryology* **196**(2):91–106, 1997

11.2.1. Example 1: Year 10 text book (Science Quest 10 – Jacaranda Press)



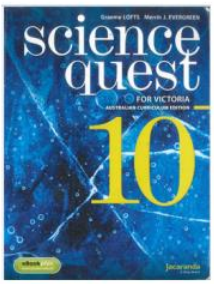
Comparative embryology

Organisms that go through similar stages in their embryonic development are believed to be closely related. During the early stages of development, the human embryo and the embryos of other animals appear to be quite similar. For example, the embryos of fish, amphibians, reptiles, birds and mammals all initially have gill slits. As the embryos develop further, the gill slits disappear in all but fish. It is thought that gill slits were a characteristic that all these animals once shared with a common ancestor.

pure fiction

Gill slits are visible in sharks, but in bony fish they are concealed beneath a scaly panel known as an operculum.

/sq10: pg111

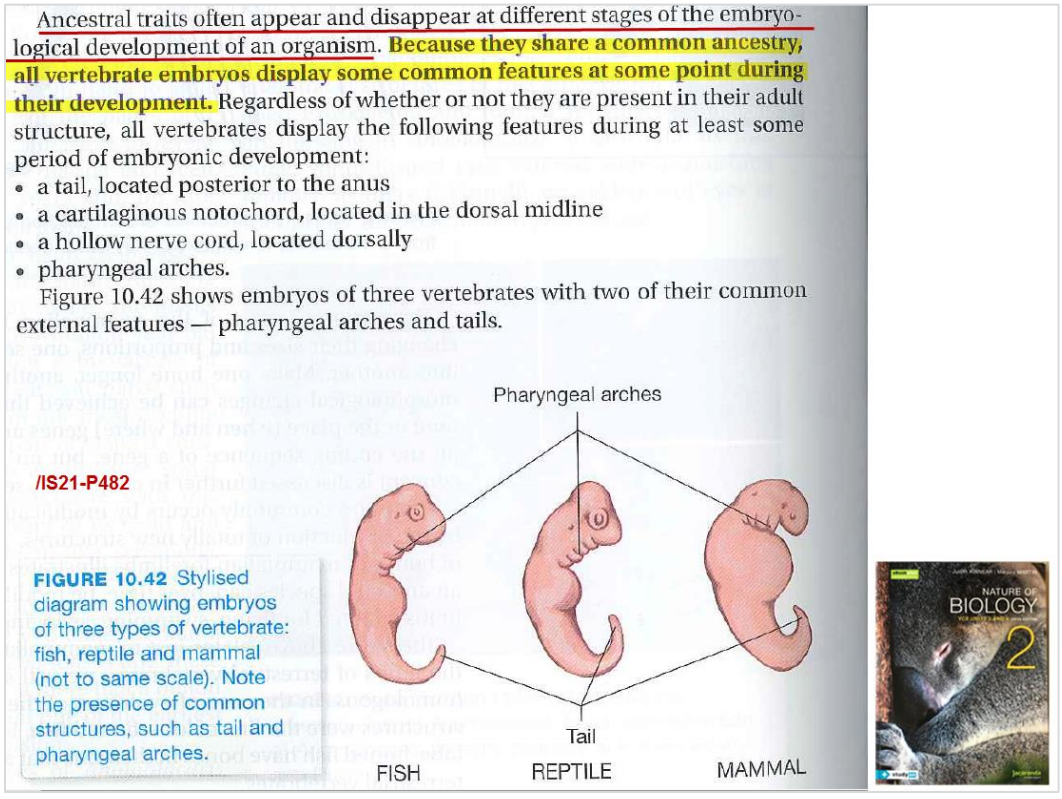


Consider a critical analysis of this extract.

Book extract	Comments
"Organisms that go through similar stages in the embryonic development are **believed** to be closely related."	• The statement is worded to give students the impression that embryos somehow indicate common descent. • The term "similar stages" is so vague as to make it meaningless. What does it actually mean? • "Believed" by whom and on what grounds?
"During the early stages of development, the human embryo and the embryos of other animals **appear to be** quite similar."	• This contradicts the photographic evidence above. • Seconds after conception most embryos 'appear' to be similar as they begin the development process. • How is this evidence that a bacterium became a baby human over a long period of time? • This is complete speculation without evidence.

"For example, the embryos of fish, amphibians, reptiles, birds and mammals **all have gill slits**. As the embryos develop further, the gill slits disappear in all but the fish."	• The statement "all have gill slits" is contained in numerous evolutionary documents; however, there is no evidence given to support this wild assertion. • They are merely **interpreting** the folds in the skin to be gill slits. The Year 12 textbook calls them Pharyngeal arches. What is **observed** is folds in the outer surface – the textbooks linkage to evolutionary common descent is gross speculation, and scientific overreach. • This is another example of equivocation where students will emerge with a **false** impression that the embryos provide credible scientific evidence for macroevolution. In short, students are being deceived.
"It is **thought** that the gill slits were a characteristic that all these animals once shared with a common ancestor."	• This statement continues to falsely link the embryo skin folds with macroevolution. • These claims have no credible scientific evidence supporting them.

11.2.2. Example 2: Year 12 textbook (Nature of Biology 2 – Jacaranda Press)



Ancestral traits often appear and disappear at different stages of the embryological development of an organism. **Because they share a common ancestry, all vertebrate embryos display some common features at some point during their development.** Regardless of whether or not they are present in their adult structure, all vertebrates display the following features during at least some period of embryonic development:

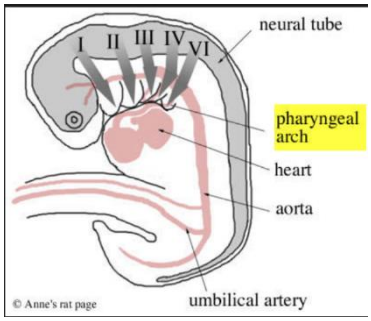
- a tail, located posterior to the anus
- a cartilaginous notochord, located in the dorsal midline
- a hollow nerve cord, located dorsally
- pharyngeal arches.

Figure 10.42 shows embryos of three vertebrates with two of their common external features — pharyngeal arches and tails.

/IS21-P482

FIGURE 10.42 Stylised diagram showing embryos of three types of vertebrate: fish, reptile and mammal (not to same scale). Note the presence of common structures, such as tail and pharyngeal arches.

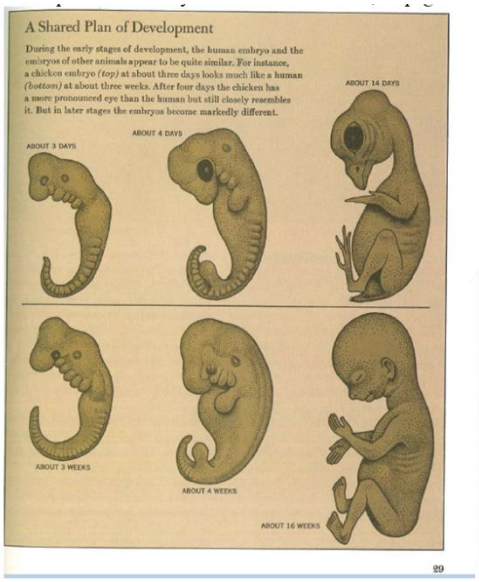
Consider a critical analysis of the statements above.

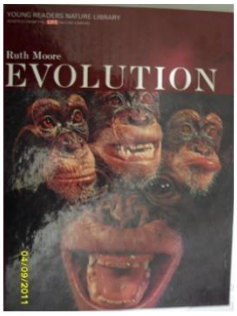
Book extract	Comments
"Ancestral traits often appear and disappear at different stages of embryological development of an organism."	• This ambiguous statement is **belief** masquerading as science. There is **<u>no</u>** evidence presented to support this wild assertion. • This is gross scientific exaggeration and overreach.
"Because they share a common ancestry all vertebrate embryos **display some common features** at some point during their development."	• The **assumption** that organisms "share a common ancestry" is **mis**represented as a fact whereas it is complete speculation with no credible scientific evidence.
"Regardless of whether or not they are present in their adult structure, **<u>all</u>** vertebrates display the following features during at least some period of embryonic development..."	• This dogmatic statement is 'softening up' the student into accepting blindly what follows.
• **a tail,** located posterior to the anus	• Look at the actual picture of the human embryo. Can you can see a 'tail'? This is clearly a case of mis representing an interpretation, guess or wishful thinking as scientific fact. It is gross scientific overreach.
• a cartilaginous notochord, located in the dorsal midline	• They seem to be asserting that what ends up as our spinal column starts off as something different (cartilaginous notochord) and this somehow indicates common ancestry. • This is another example of pure speculation masquerading as science. What evidence are they putting forward to substantiate this wild assertion?
• Pharyngeal arches	 • Yet another example of equivocation and overreach.

	• The pharyngeal arches are observable, but the textbook then transitions from fact to fiction in requiring students to **believe** that they indicate common ancestry. • What evidence is put forward to support this assertion? None.

11.2.3. Example 3: *Evolution* by Ruth Moore

- This comparative embryology myth is contained in most evolutionary books, despite it being debunked many decades ago. The authors are often very creative in the words they use to **imply** things which are not supported by the evidence. In short, their equivocation leads the reader into accepting a false conclusion.
- Consider another example:





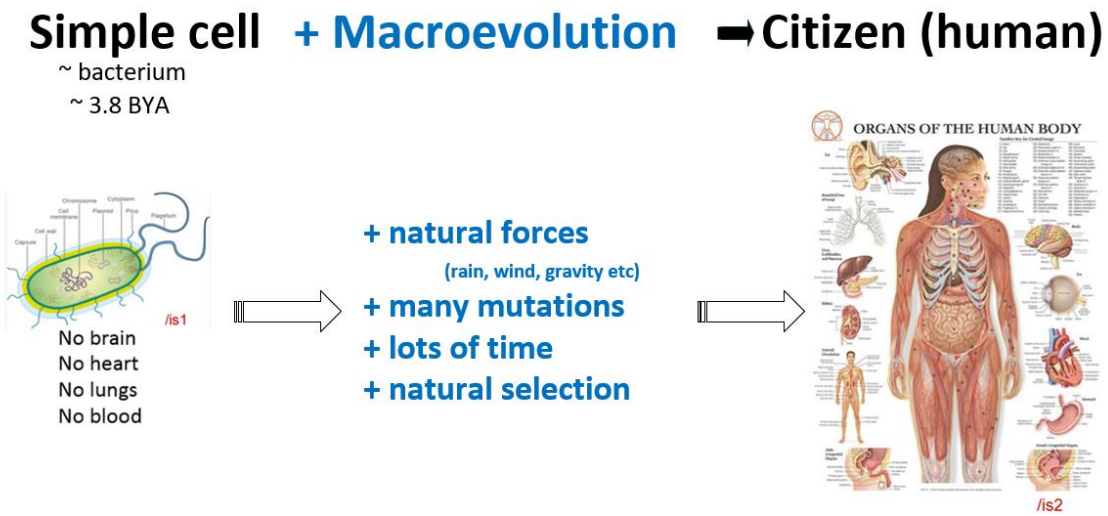
11.3. Conclusions

- It is highly disturbing that this debunked evidence continues to linger in our science textbooks. It looks like there is such a scarcity of credible scientific evidence supporting macroevolution that the writer's resort to outright frauds.
- The net effect is to cause students to accept as true and real what is false and fictitious. This is a deliberate deception.
- Why has this been allowed to go on for so long?
- Classroom teachers of today were the students who were duped a generation ago.

12. EXHIBIT 3: Assuming what needs to be proven

The VCAA curriculum documentation **assumes** that evolution is a proven scientific fact. How and why this assumption is made is neither explained nor justified (see Section 2).
Considering the unusual and extraordinary nature of the claim,
the evidence should be equally extraordinary in its strength.

What is required is credible scientific evidence to prove the following:



Regrettably, the evidence is **conspicuous by its absence**.

The textbooks just **assume** macroevolution to be true and real, hoping that the students and teachers will not notice or challenge this **assumption**.
This is really poor science and violates the curriculum requirement that:

> "Students **evaluate** the validity and reliability of claims made in secondary sources with reference to currently held scientific views, the quality of the methodology **and the evidence cited**.
> They construct **evidence-based arguments** and use appropriate scientific language, representations and balanced chemical equations when communicating their findings and ideas for specific purposes." [33]

The textbook format, content and overall presentation seems to be designed to coerce the reader into blind acceptance of macroevolution rather than encouraging critical review. There is no hint that there are serious flaws in macroevolution – or that there is significant dissent in the scientific community as evidenced by the over 1000 scientists who have publicly expressed their Dissent From Darwinism.

[33] Victorian Curriculum, Foundation-10; Science: Level 7 – Level 10, page 2

A Scientific Dissent From Darwinism

"We are skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life. Careful examination of the evidence for Darwinian theory should be encouraged."

This was last publicly updated November, 2016. Scientists listed by doctoral degree *or* current position.

Philip Skell*	Emeritus, Evan Pugh Prof. of Chemistry, Pennsylvania State University	Member of the National Academy of Sciences
Lyle H. Jensen*	Professor Emeritus, Dept. of Biological Structure & Dept. of Biochemistry	University of Washington, Fellow AAAS
Maciej Giertych	Full Professor, Institute of Dendrology	Polish Academy of Sciences
Lev Beloussov	Prof. of Embryology, Honorary Prof., Moscow State University	Member, Russian Academy of Natural Sciences
Eugene Buff	Ph.D. Genetics	Institute of Developmental Biology, Russian Academy of Sciences
Emil Palecek	Prof. of Molecular Biology, Masaryk University; Leading Scientist	Inst. of Biophysics, Academy of Sci., Czech Republic
K. Mosto Onuoha	Shell Professor of Geology & Deputy Vice-Chancellor, Univ. of Nigeria	Fellow, Nigerian Academy of Science
Ferenc Jeszenszky	Former Head of the Center of Research Groups	Hungarian Academy of Sciences
M.M. Ninan	Former President	Hindustan Academy of Science, Bangalore University (India)
Denis Fesenko	Junior Research Fellow, Engelhardt Institute of Molecular Biology	Russian Academy of Sciences (Russia)
Sergey I. Vdovenko	Senior Research Assistant, Department of Fine Organic Synthesis	Institute of Bioorganic Chemistry and Petrochemistry Ukrainian National Academy of Sciences (Ukraine)
Henry Schaefer	Director, Center for Computational Quantum Chemistry	University of Georgia
Paul Ashby	Ph.D. Chemistry	Harvard University
Israel Hanukoglu	Professor of Biochemistry and Molecular Biology Chairman	The College of Judea and Samaria (Israel)
Alan Linton	Emeritus Professor of Bacteriology	University of Bristol (UK)
Dean Kenyon	Emeritus Professor of Biology	San Francisco State University
David W. Forslund	Ph.D. Astrophysics, Princeton University	Fellow of American Physical Society
Robert W. Bass	Ph.D. Mathematics (also: Rhodes Scholar; Post-Doc at Princeton)	Johns Hopkins University
John Hey	Associate Clinical Prof. (also: Fellow, American Geriatrics Society)	Dept. of Family Medicine, Univ. of Mississippi
Daniel W. Heinze	Ph.D. Geophysics (also: Post-Doc Fellow, Carnegie Inst. of Washington)	Texas A&M University
Richard Anderson	Assistant Professor of Environmental Science and Policy	Duke University
David Chapman*	Senior Scientist	Woods Hole Oceanographic Institution

Source: https://dissentfromdarwin.org/

12.1. Conclusions

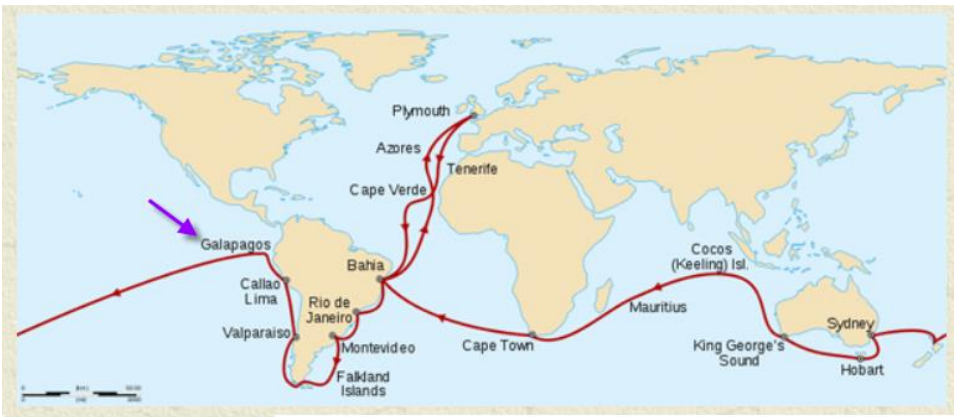
- Controversy and serious scientific problems have surrounded evolution from Darwin's time to today.
- **Assuming** evolution to be true and real as opposed to providing credible and convincing supporting evidence – is more than scientific overreach – it is a deception that should NOT be allowed in schools.

13. EXHIBIT 4: - Biogeography

- The textbooks need to present credible scientific evidence that a bacterium-like organism became a baby human over a long period of time; biogeography is ostensibly one such evidence. However, when it is examined carefully, it is just another example of **equivocation**; students are deceived by vague claims and even vaguer supporting evidences.
- **Biogeography** has various names including:
  - Allopatric speciation
  - Geographic speciation
  - Vicariant speciation
  - Or its earlier name, the dumbbell model[34]

13.1. The claims

- Darwin took a famous journey to the Galapagos Islands in 1831.



Voyage of the Beagle /isl4

- Darwin noticed different attributes in finches of different islands which he **believed** were the offspring of a common ancestor.
  He then imagined/concluded that:
  - If finches on different islands have varying attributes, these attributes must have been produced by differing conditions on the various islands.
  - He then imagined this process on a longer time scale. The differences could become much bigger, thereby producing a totally different creature.
  - Thus, he concluded that the different creatures were the result of evolution (or "descent with modification" as Darwin called it).
- In Darwin's book, "*On the Origin of Species*", Chapter 12 (Geographical Distribution) is devoted to this topic.
  He states:

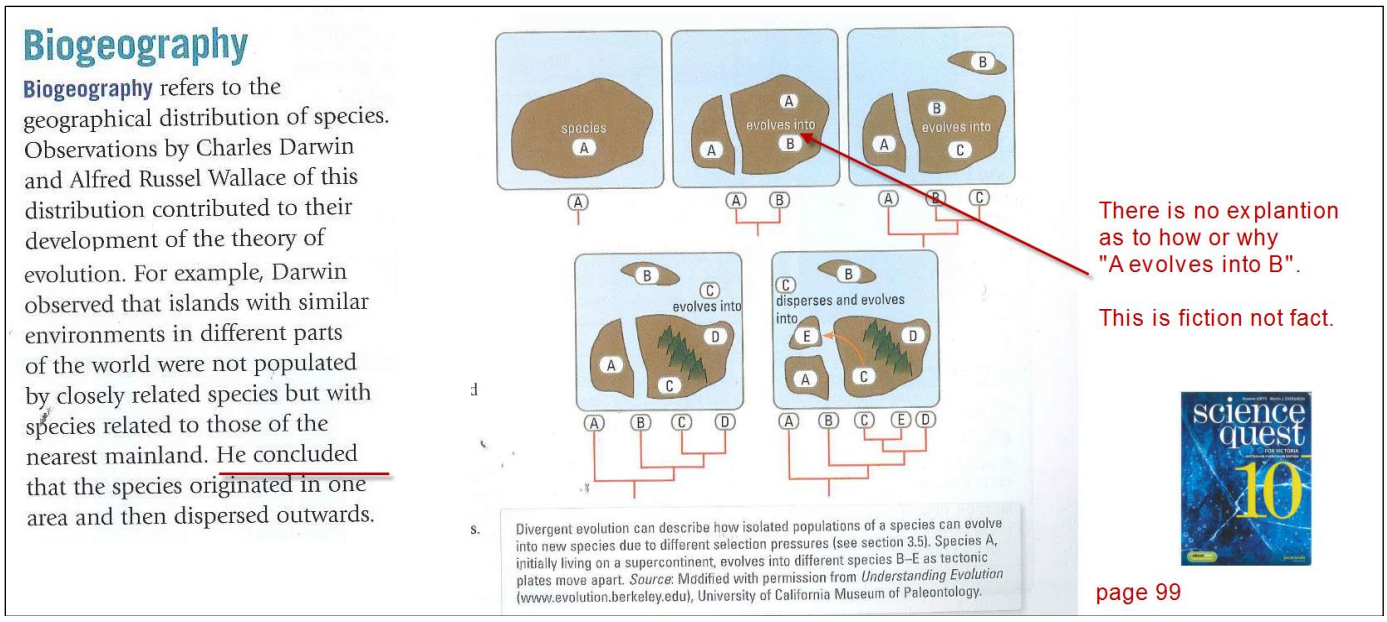
  "In considering the distribution of organic beings over the face of the globe, the first great fact which strikes us is, that neither the similarity nor the

[34] Wikipedia

dissimilarity of the inhabitants of various regions can be wholly accounted for by climatal and other physical conditions."

- The claim is that:
  - Sometimes populations of organisms get separated by natural barriers such as earthquakes or floods etc.
  - After the break, the separated organisms change and "evolve" into different creatures.
- There is no explanation or evidence presented to explain how the separated creatures develop new and novel body parts. It is just **assumed** that this happens.
- Why would they "evolve" after the break and not before?
  Surely natural selection is working before and after the isolation.

13.2. Textbook Example 1: Science Quest 10

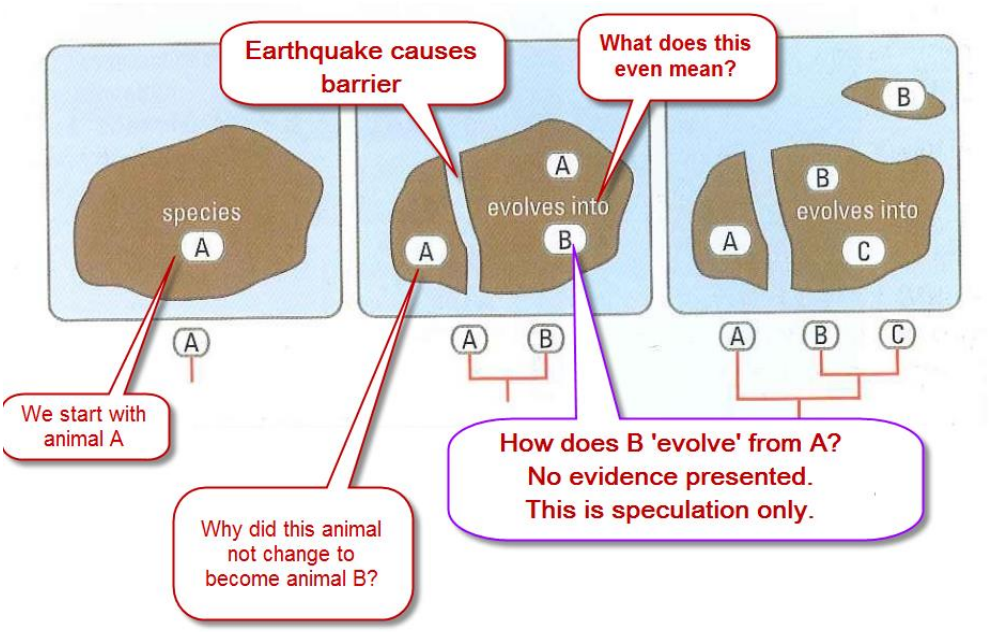


Let's scrutinize the above text as the curriculum requires.

Book extract	Comments
"Biogeography refers to the geographical distribution of species. Observations by Charles Darwin and Alfred Russel Wallace of this distribution contributed to their development of the theory of evolution."	• It is telling that 'Biogeography' is not clealry defined but rather described in an ambiguous manner. What exactly does "geographical distribution of species" mean? • There is an **implication** that this mysterious phenomenon somehow contributed to the theory of evolution.

	• The reader is being 'softened up' by starting off with some facts – the fiction is then blended in later.
"For example, Darwin **observed** that islands with similar environments in different parts of the world were **not** populated by closely related species **but with species <u>related</u> to those of the nearest mainland.**"	• What Darwin 'observed' were the animals (fact). • The statement about their ancesteral lineage is pure speculation. How could Darwin determine where the parents and grandparents of the animals lived?
"He **concluded** that the species originated in one area and then dispersed outwards."	• Note that Darwin '**concluded'**, not '**guessed'** or '**speculated'**. It seems to be designed to give the student the impression that Darwin's conclusion was correct and true – even though there is no supporting evidence.

- The diagram below (extracted from diagram above) further reinforces the deception of speculation masquerading as fact.
  - How does animal A magically become animal B?
  - Why do we need the barrier separation for animal A to become animal B?



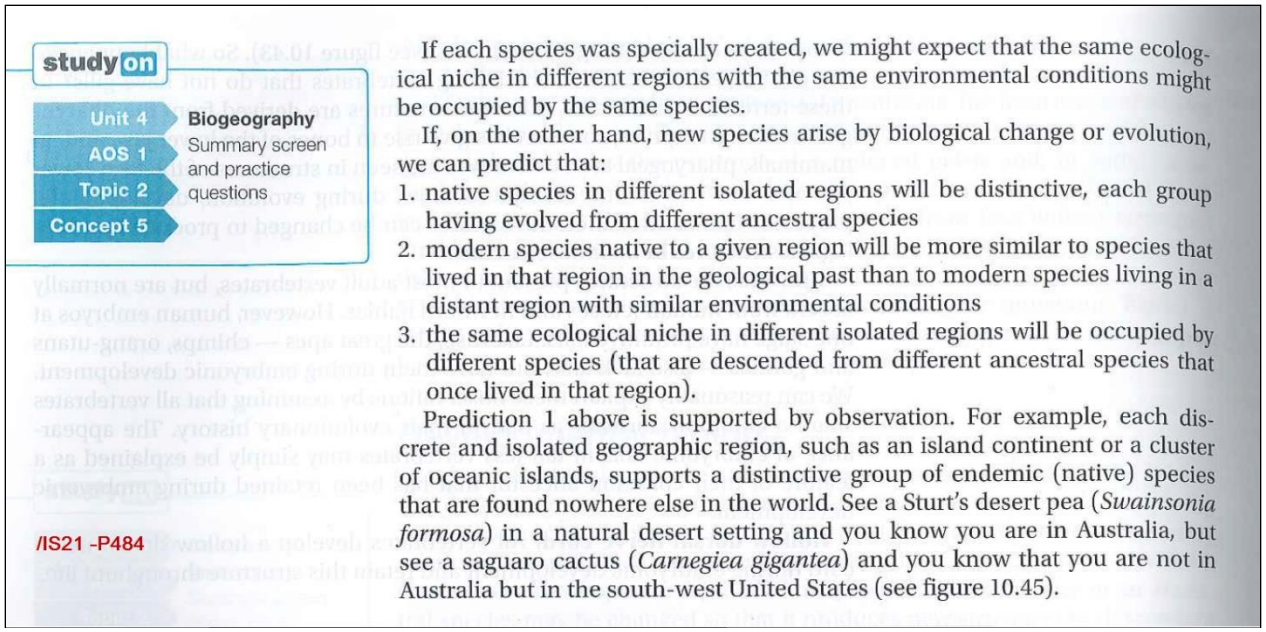
13.3. Textbook Example 2: Year 12 Biology textbook

13.3.1. Overview

- It could be argued above that the Year 10 textbook can only contain an overview of biogeography; however, evolution is a whole semester unit in the Year 12 textbook. Hence, it is reasonable to expect substantive and compelling evidence to support macroevolution. This is not the case.

- Reading through the Biogeography section is tedious and frustrating. It is seemingly designed to lead the students into blindly accepting it, despite the lack of credible evidence. The claims are vague, ambiguous and hard to understand. The evidence supporting it is even more so.
- The textbook's argument can be stated as follows:
  - If organisms were **intelligently designed**, we expect to observe that:
    - the same animal varieties would occupy all the geographical locations with similar environments.
  - If organisms **evolved,** then we would expect to observe that:
    - Animals in different isolated regions will "be distinctive" because they "evolved" from different ancestors.
    - Animals which are unique to a particular region will be more similar to their ancestors than to animals living in another similar but isolated region.
    - That the animals in a region will be the descendants of the animals which occupied that region in the past.
- The structure seems reasonable and in accordance with the scientific method. However, the deception is in the 'predictions' and subsequent observations. The suggested predictions do **not** provide credible evidence that macroevolution is true. They are either irrelevant or assume the thing they are trying to prove.
- Evolutionary literature frequently points to point to any phenomenon and declare, "This is exactly what evolution would predict". This is the tactic used here. The deception is unmasked only by carefully scrutinizing the predictions and observations.

13.3.2. Textbook extract



If each species was specially created, we might expect that the same ecological niche in different regions with the same environmental conditions might be occupied by the same species.

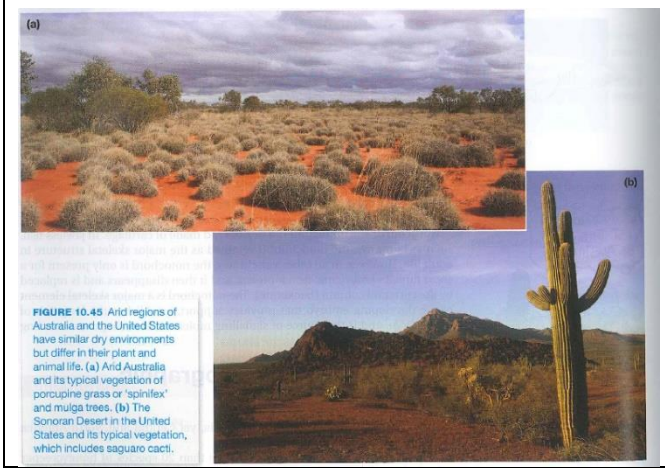
If, on the other hand, new species arise by biological change or evolution, we can predict that:

1. native species in different isolated regions will be distinctive, each group having evolved from different ancestral species
2. modern species native to a given region will be more similar to species that lived in that region in the geological past than to modern species living in a distant region with similar environmental conditions
3. the same ecological niche in different isolated regions will be occupied by different species (that are descended from different ancestral species that once lived in that region).

Prediction 1 above is supported by observation. For example, each discrete and isolated geographic region, such as an island continent or a cluster of oceanic islands, supports a distinctive group of endemic (native) species that are found nowhere else in the world. See a Sturt's desert pea (*Swainsonia formosa*) in a natural desert setting and you know you are in Australia, but see a saguaro cactus (*Carnegiea gigantea*) and you know that you are not in Australia but in the south-west United States (see figure 10.45).

Let's scrutinize this text – as the curriculum requires.

Book extract	Comments
"**If** each species was specially created, we **might expect** that the same ecological niche in different regions with the same environmental conditions **might** be occupied by the same species."	• What is this statement actually saying? • It could be restated as: **'If** an intelligent designer created the animals, then we could expect the same animal varieties would occupy all the geographical locations with similar environments.' • It is creating a straw man to be knocked down in subsequent text.
"**If**, on the other hand, new species arise by biological change or evolution, **we can predict that…**"	• Here we are exploring a second hypothesis: that the animal varieties were not the product of intelligent design but of evolution**.** • The predictions of this hypothesis is where further deception takes place.
"**1.** native species in different isolated regions will be distinctive, each group **having evolved** from different ancestral species."	• It starts with the observation that animals in different isolated regions will "be distinctive" (whatever that means). Then it transitions to speculation/interpretation that the reason for the distinctiveness is because they "evolved" from a different ancestor. • This is circular reasoning. It assumes what it is trying to prove. • This is a false prediction in that observing this prediction does nothing to support macroevolution.
"**2.** modern species native to a given region will be more similar to species that lived in that region in the geological past than to modern species living in a distant region with similar environmental conditions."	• The lack of clear wording will confuse and frustrate students greatly. • English translation: animals which are unique to a particular region will be more similar to their ancestors than to animals living in another similar but isolated region. • How does this relate to supporting macroevolution?
"**3.** the same ecological niche in different isolated regions will be occupied by different species **(that are descended from <u>different</u> ancestral species that once lived in that region).**"	• It seems to be saying (in a very confusing manner) that the animals in a region will be the descendants of the animals which occupied that region in the past. • It transitions into evolution by asserting that the descendants were from a **<u>different</u>**

	ancestral species (i.e. that the current organisms evolved from different organisms). • Again, this is circular reasoning – it assumes what it is trying to prove.
"Prediction 1 above is supported by observation. For example, each discrete and isolated geographic region, such as an island continent or a cluster of oceanic islands, supports a distinctive group of endemic (native) species that are found nowhere else in the world. See a Sturt's desert pea (Swainsonia formosa) in a natural desert setting and you know you are in Australia, but see a saguaro cactus (Carnegia gigantea) and you know that you are not in Australia but in the south-west United States (see figure 10.45)."  **FIGURE 10.45** Arid regions of Australia and the United States have similar dry environments but differ in their plant and animal life. **(a)** Arid Australia and its typical vegetation of porcupine grass or 'spinifex' and mulga trees. **(b)** The Sonoran Desert in the United States and its typical vegetation, which includes saguaro cacti.	• What is observed is that the plants in Australian deserts are different from plants in the deserts of North America. But what does this prove? • The textbook predicts an arbitrary observation, then describes it in unnecessary detail in order to lead the student into accepting it as 'proof'. This is scientific overreach and **not** credible evidence for macroevolution. • How does this explain where the design information to build the different organisms came from?

"Prediction 2 (above) is supported by observation. For example, modern marsupial mammals of Australia are similar in structure to fossil marsupial species that are found in Australia; for example, at Riversleigh, fossils of a diversity of Australian species (reptiles, birds and mammals) have been found. There, different strata contain fossils from 25 million to just 40,000 years ago. Fig 10.46 shows a reconstruction, based on fossil evidence, of the Riversleigh ecosystem from 20 million years ago, when the area was a rainforest.	• Marsupial mammals are nothing more than mammals with a pouch (e.g. kangaroo, koala). • There is much irrelevant detail (which is very confusing) - but no credible scientific evidence supporting macroevolution. • The assertion that marsupial mammals of today are similar to those of the past contradicts evolution – this indicates stasis (non-change) not evolution. • This definitive statement about the dates and the creation of a complete ecosystem is a case of exaggeration and overreach.

Birds lived here including the earliest known parrots, and Emuarius, which is **thought to be** ancestral to both modern emus and cassowaries. Reptiles included crocodiles, turtles, lizards and snakes. The dominant animals were marsupials. Many kinds lived in the Riversleigh rainforests of 20 million years ago, including some that were ancestral to modern marsupials, such as kangaroos, possums, wombats, koalas and dasyurids. Other marsupials found in the ecosystem have no modern representatives; these extinct marsupial lines included so-called marsupial 'lions' and strange marsupials of extinct genus Yalkaparido. Monotreme mammals, including several ancient platypus species, lived in this ecosystem."	• Monotremes are egg-laying mammals comprising the platypuses and echidnas. • On what basis can it be stated that they were different species considering that all they have is fossil impressions? • Which definition of species are they using?
"Prediction 3 (above) is supported by observation. For example, the ant-eating niche on different continents is occupied by different species. In Australia, it is the echidna (Tachyogossus aculeatus); in South-East Asia, the pangolin (Manis temminckii); in South America, the giant anteater (Myrmecophaga tridacyla); and, in Africa, the aardvark (Orycearopus Afer) (see figure 10.47)."	• The prediction was confusing, convoluted and ambiguous – the observation is the same. • The observation provided is irrelevant for supporting macroevolution.

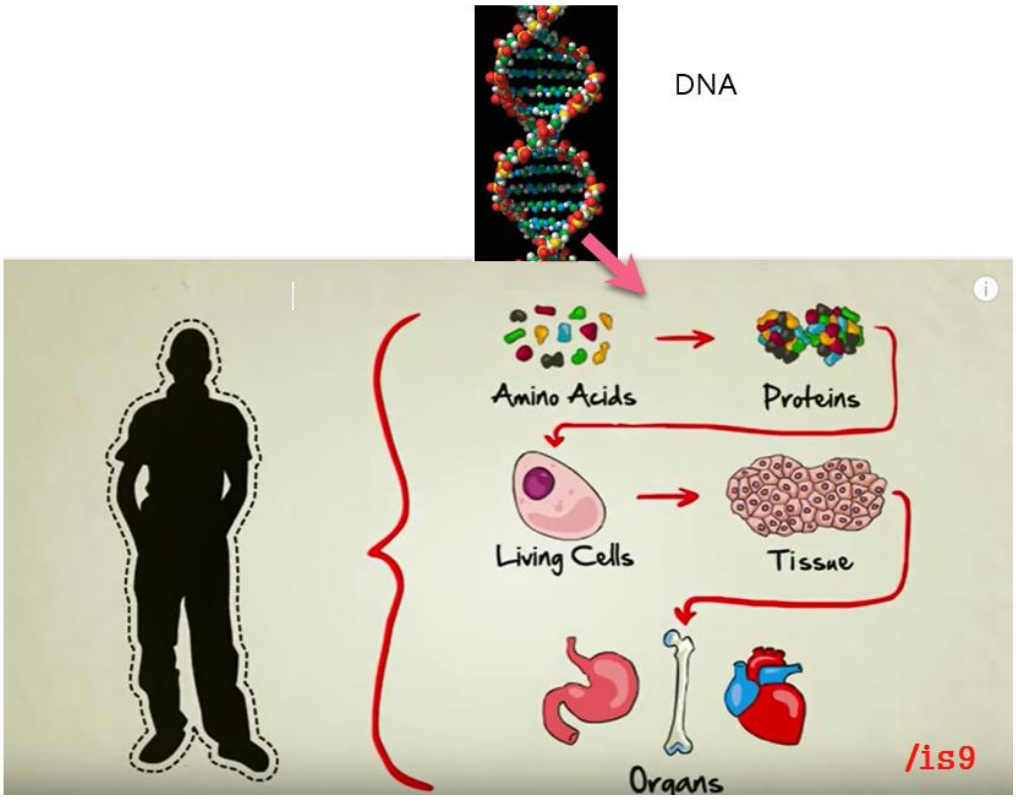
13.4. Conclusions

- ♦ It is disturbing and deceptive to present biogeography as evidence for macroevolution, because the observable data presented does nothing to support the idea that a bacterium became a human over a long period of time.
- ♦ Why are students being deceived with this confusing nonsense?

14. EXHIBIT 5: Genetics and DNA

14.1. Overview

- DNA (Deoxyribonucleic Acid) is a huge molecule present in nearly all living organisms.
  - It contains the information needed to build those organisms.
  - All the cells in a person's body contain the same DNA.
  - Its information is stored in the order of four chemicals (nucleotides):
    - Adenine (A)
    - Guanine (G)
    - Cytosine (C)
    - Thymine (T)
- The make-up of living organisms can be described as follows:
  - 20 different amino acids are used to produce molecular chains called proteins. The order of the amino acids in the chain determines the role or characteristics of each protein
  - Proteins are used to produce cells.
  - Many cells of similar type are combined produce tissue.
  - Tissues arranged in a particular manner produce organs.
  - Organs working together enable creatures like humans to live and grow.
- It can be represented diagrammatically as:

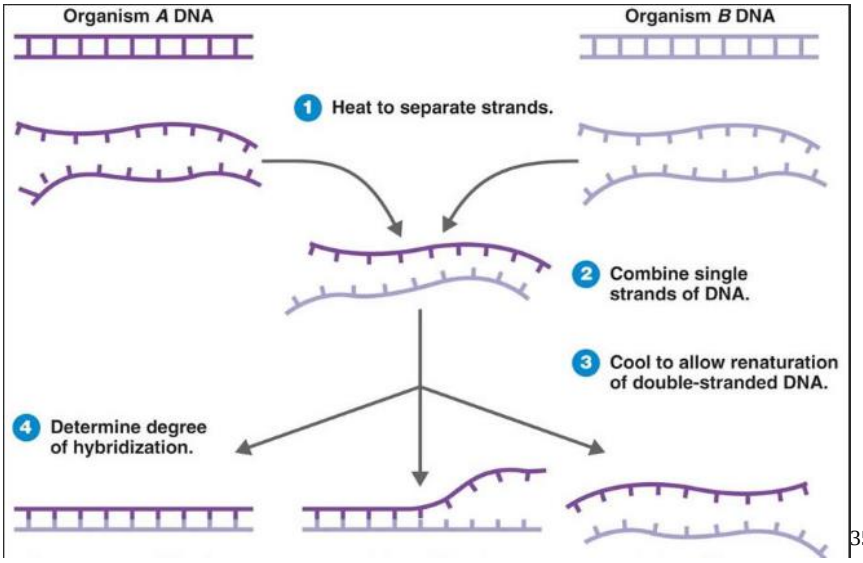


- The four nucleotides are like letters on a page; their order communicates information and determines the characteristics of the animals. Some people liken DNA to the code in a computer program; Bill Gates has tweeted:

- It is worth noting that Darwin knew nothing about DNA or genetics, as DNA began to be understood in the early 1950s.
- It is surprising to see DNA used as evidence for evolution since relatively recent discoveries show that DNA is a major problem for evolution in three regards:
  - **First**: Where did the coded information contained in the DNA come from?
    - There is nothing about the information that is self-ordering any more than the letters on this page can self-order.
  - **Second**: The information in the DNA is multi-dimensional, meaning that the same sequence can be read in different ways to generate different proteins.
    - This means that a random change (mutation) is not going to generate new functionality without wrecking some existing functionality (imagine writing a sentence that can be read backwards with a different meaning).
  - **Third**: How can the slow and gradual process (macroevolution) explain the development of brand-new body parts, since new body parts will require **complementary** and **simultaneous** changes in large numbers of nucleotides?
    - The probability of mutations accounting for these multiple changes is essentially zero.
- Since the DNA evidence against evolution is so strong, the textbook writers go into creative overdrive to somehow make it seem as if it supports evolution. They do this by heavy duty equivocation (introducing unnecessary complexity and confusion to cause the reader to draw a false conclusion).
- The bold assertion in the textbooks is that **DNA-DNA hybridization** supports or even proves macroevolution. But what is it, and what does it really show?

14.1.1. What is DNA hybridization?

- It is nothing more than a process which enables the comparing of DNA of different organisms. YouTube videos which describe this process are contained here and here.



[35]

- There is nothing contentious about the process, the contention relates to the **interpretation of the results**.
  - Evolutionists **interpret** the similarities to indicate that the two organisms share a common ancestor.
    - This is essentially the same argument as homologous structures, which asserts that similar forelimb structures between different animals indicate a common ancestor.
  - Intelligent design advocates **interpret** the similarities to indicate a common designer.
    - They argue that the evolutionary conclusion is equivalent to presuming that a Ford Mustang evolved from a GM Trans-Am because they have many similarities, or that MS PowerPoint evolved from MS Word because many of the programming structures are similar.

- In **1991**, Dr Jon Ahlquist and Dr Charles Sibley (1917–1998), formerly of Yale University, published *Phylogeny and Classification of Birds*, which suggested a new phylogeny [ancestral tree] for birds. Known as the Sibley–Ahlquist taxonomy, it was based on DNA-DNA hybridization techniques. Since then John Ahlquist has realised that the evolutionary claim based on it is <u>incorrect</u>. He has stated:

> "Molecular evidence of any sort proves nothing about evolution, in fact. All we are doing is measuring 'God's numbers'—or as Charles [Sibley, his long-term collaborator] used to call them, 'nature's numbers' of genetic similarity or difference.
> **The techniques used by phylogenetic to make their 'trees' <u>are laden with evolutionary assumptions</u>.**
> They simply assume that evolution is a fact and then stuff their data into their algorithms, which therefore will always produce an

[35] https://isntsciencewonderful.files.wordpress.com/2016/03/slide15.jpg

evolutionary result. Regardless, we all have the same data, the difference is how we interpret it."[36]

14.2. DNA the evolution killer

- DNA presents a major (even fatal) flaw for macroevolution.
  Dr Ben Carson, former Director of Paediatric Neurosurgery at one of the world's greatest hospitals (John Hopkins), ground-breaking surgeon, best-selling author and recipient of the Presidential Medal of Freedom, and many other high-level awards said:

  > "I think one of the most damning pieces of evidence against evolution is the human genome. You can see that you have very complex, sophisticated coding mechanisms for different amino acids, and various sequences that give you millions of different genetic instructions -- very much like computer programming, which uses a series of zeros and ones in different sequences, but gives you very specific information about what that computer is to do."

- Dr John Sanford (geneticist and inventor of the Gene-gun) said:

  > "The bottom line is **that the primary axiom [of Darwinian/Macroevolution] is categorically false**; you can't create information with misspellings, not even if you use natural selection."[37]
  > [The "primay axiom' is that mutations and natural selection explain the diversity of life on earth.]

- The biggest problem for macroevolution is that it does not provide a credible way to explain the source of the design information needed to build complex biological systems. Evolutionists **speculate** about how it **might** have happened and typically evoke 'natural selection' as the magic genie that can produce design information from thin air – but there is no observable data to support such ambit claims.
  - See below Macroevolution flaw 1: Where did the information come from? for a detailed analysis.

14.3. Textbook deceptions

So how do the textbooks overcome the problems to macroevolution that DNA presents? They drown the reader in mostly irrelevant details and **assume** that similarities in the DNA 'prove' ancestral evolutionary descent. The students are so overwhelmed by the details, that they accept the assumption without question. This is equivocation, bad science and deceptive.

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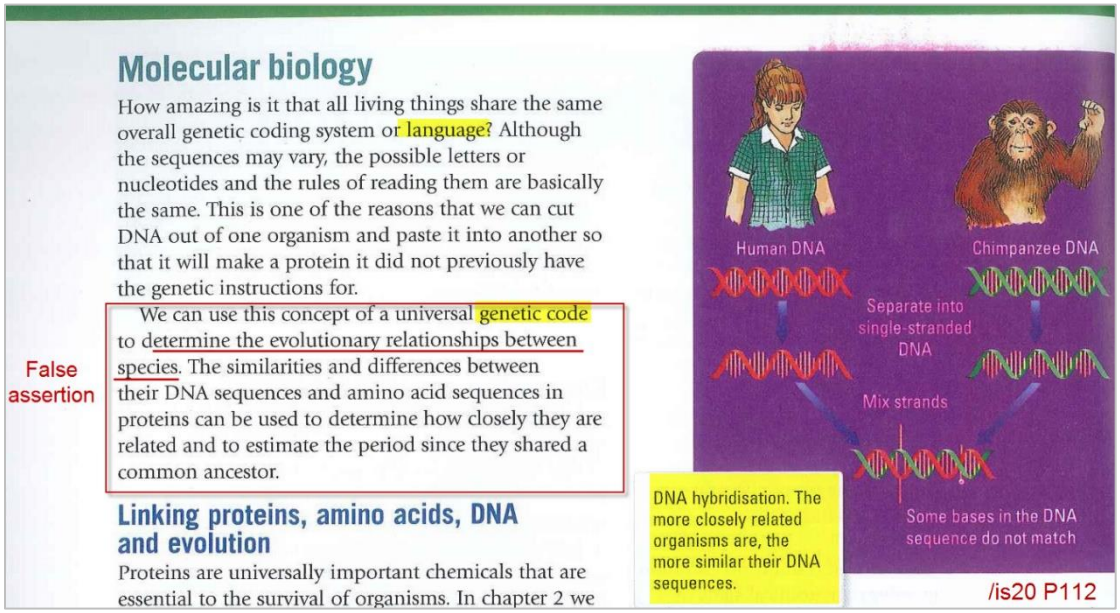
[36] Convert to Creation

[37] Kansas evolution Hearings, 2005

Consider some typical examples:

14.3.1. Example 1: Year 10 textbook (Science Quest 10)



Molecular biology

How amazing is it that all living things share the same overall genetic coding system or language? Although the sequences may vary, the possible letters or nucleotides and the rules of reading them are basically the same. This is one of the reasons that we can cut DNA out of one organism and paste it into another so that it will make a protein it did not previously have the genetic instructions for.

We can use this concept of a universal genetic code to determine the evolutionary relationships between species. The similarities and differences between their DNA sequences and amino acid sequences in proteins can be used to determine how closely they are related and to estimate the period since they shared a common ancestor.

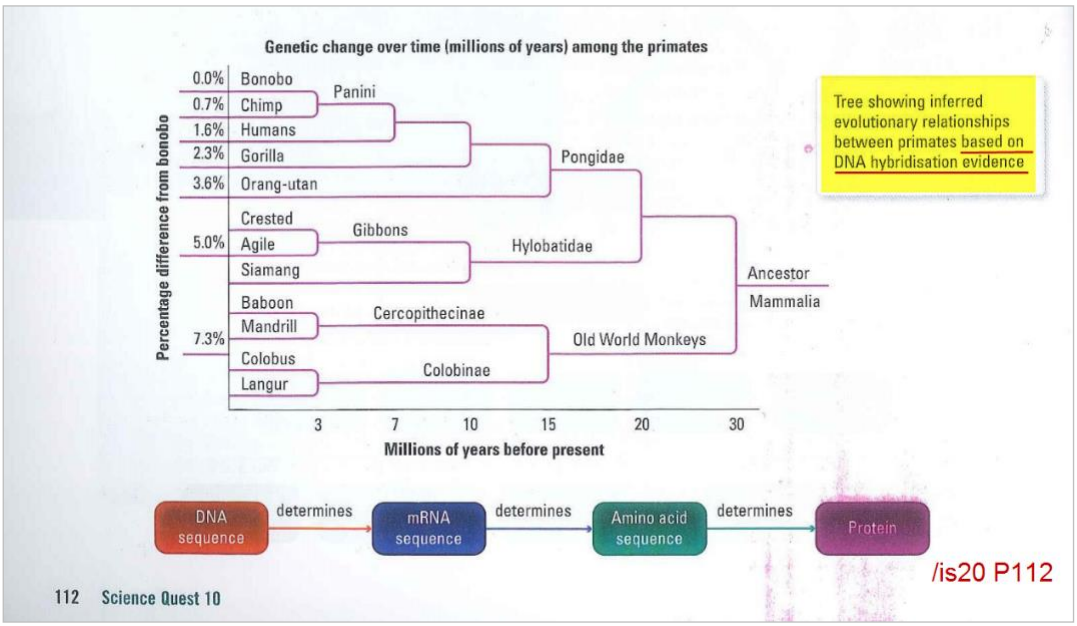
False assertion

Linking proteins, amino acids, DNA and evolution

Proteins are universally important chemicals that are essential to the survival of organisms. In chapter 2 we

DNA hybridisation. The more closely related organisms are, the more similar their DNA sequences.

/is20 P112



Tree showing inferred evolutionary relationships between primates based on DNA hybridisation evidence

/is20 P112

Book extract	Comments
"We can use this concept of universal genetic code to determine the evolutionary relationship between species."	• The **interpretation/belief** that similarities in DNA nucleotides in different animals indicate common descent is just that - an interpretation or guess. Stating it as a **fact** is gross scientific overreach.

"The similarities and differences in their DNA **<u>can</u>** be used to determine how closely they are related and to estimate the period since they shared a common ancestor."[38]	• The average student would conclude that this is a factual statement – but that impression is **false.** It is definitely **<u>NOT</u>** a fact. At best it is conjecture and speculation. • Representing it as a fact is deceptive.

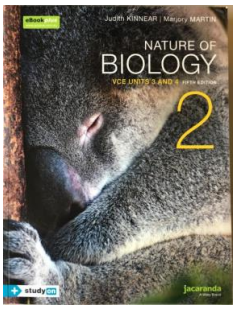
It is often claimed that similarities in the DNA between chimpanzees and humans is strong 'proof' of common ancestry and evolutionary descent. This is persuasive for the uneducated, however, Dr. Barney Maddox, a leading genome researcher, said the following about the genetic differences:

> "Now the genetic difference between the human and his nearest relative, the chimpanzee, is at least 1.6%. That doesn't sound like much, but calculated out, **that is a gap of at least 48,000,000 nucleotides**, and a change of only 3 nucleotides is fatal to an animal; there is no possibility of change."[39]

[38] ScienceQuest 10; page 112

[39] Human Genome project, Quantitaive A Disproval of Evolution,CEM facts sheet. Cited in Doubts about Evolution

14.3.2. Example 2: Year 12 Biology textbook



Chapter 11(How are species related?) is 36 pages long and goes into extraordinary and confusing details about DNA which frustrate students greatly because it confuses 2 separate issues:

1 – What are the observable attributes and characteristics of DNA?

2 – What do similarities in the DNA indicate?

Comparing DNA

/IS21-P510

studyon
Unit 4 AOS 1 Topic 3 Concept 1 — Molecular studies–DNA Summary screen and practice questions

DNA sequences have been described as 'documents of evolutionary history'. Comparisons of DNA from different species may be made in several ways:

1. direct comparison of DNA base sequences
2. comparing whole genomes
3. DNA hybridisation
4. comparing karyotypes.

Comparing DNA base sequences

studyon
Unit 4 AOS 1 Topic 3 Concept 4 — Molecular studies–amino acid sequences Summary screen and practice questions

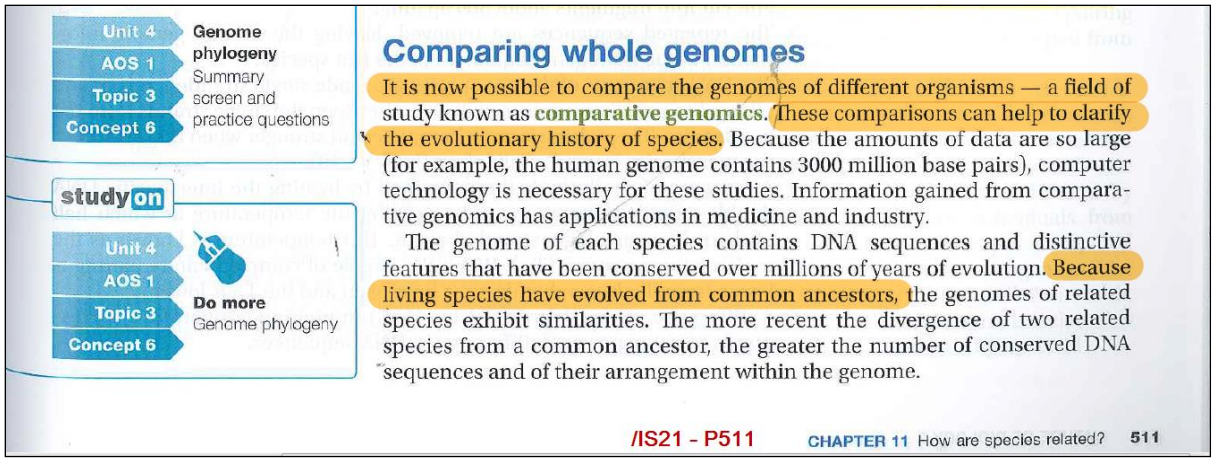
DNA molecules consist of a series of base pairs (bp) that form a base sequence (refer back to chapter 2, page 41).

If evolution has occurred, we can predict that species that are closely related by evolutionary descent will show more similarities in the base sequences of their common genes. Hence, direct comparisons of the DNA sequence of genes in different species can also be used to infer evolutionary relationships. For example, haemoglobin genes are present in all mammals. Sequences have been identified for the approximately 17 000 bases in this segment of DNA in human beings and other animals. The results show that these sequences are most similar between humans and chimpanzees.

Table 11.4 shows the DNA sequences from part of a haemoglobin gene.

TABLE 11.4 DNA sequences from a segment of a haemoglobin gene from four mammalian species. Differences between the human DNA sequence and those of other species are shown by coloured letters. The dash (-) is used to keep the sequences aligned. Note that there are two differences between the human and the sequences of some other primates (orang-utan and monkey) but that there are more between the human and the rabbit DNA sequences. Why?

Species	DNA sequence of part of a haemoglobin gene
human	TGACAAGAACA - GTTAGAG - TGTCCGAGGACCAACAGATGGGTACCTGGGTCCCAAGAAACTG
orang-utan	TCACGAGAACA - GTTAGAG - TGTCCGAGGACCAACAGATGGGTACCTGGGTCTCCAAGAAACTG
Rhesus monkey	TGACGAGAACA A GTTAGAG - TGTCCGAGGACCAACAGATGGGTACCTGGGTCTCCAAGAAACTG
rabbit	TGGTGATAACA AGACAGAG A TATCCGAGGACCAGCAGATAGGAACCTGGGTCTCTAAGAAGCTA



Book extract	Comments
"**If** evolution has occurred, we can predict that species that are closely related by evolutionary descent **will show** more similarities in the base sequences of their common genes."	• This statement assumes what it is trying to prove. Inserting the "if" at the start just make it look legitimate. • We **know** that there some similarities in the DNA, the question is what does this indicate?
"Hence, direct comparison of the DNA sequence of genes in different species **can** also be used to infer evolutionary relationships."[40]	• The "if" in the first sentence gives way to the dogmatic statement that it "**can**" be used to infer evolutionary relationships. • This is a speculation masquerading as a scientific fact which deceives the students into a false conclusion.
"It is now possible to compare the genomes of different organisms – a field of study known as comparative genomics. These comparisons can **help to clarify** the **evolutionary history of species."**[41]	• Speculation being represented as fact. • Evolution is **assumed** and genetics is used to "help clarify" their ancestry. • Students will be focussed on the ancestral history and not realise that the underlying assumption has **not** been established.
"Because living species **have evolved from common ancestors,** the genomes of related species exhibit similarities. The more recent the divergence of two related species from a common ancestor, the	• This assumes what it is trying to prove (circular reasoning). • The belief/speculation/assumption that this indicates evolutionary descent is gross

[40] Nature of Biology 2, Jacaranda press, page 510

[41] Nature of Biology 2, Jacaranda press, page 511

greater the number of **conserved** DNA sequences and their arrangement within the genome." [42]	scientific overreach. To present it as a fact is deceptive.

14.4. Conclusions

- Overwhelming the students with the observable details of DNA and then slipping in the **assumption** that similarities indicate common ancestral descent is bad science and bad education.
- DNA is described as a digital code which has never been observed to be the product of natural forces. To boldly assert that similarities in the DNA support macroevolution is pure fiction and scientific overreach – in short, a deception.
- Ignored by science texts is the fact that essential and intricate proteins are required to produce DNA, but specific DNA sequences would have had to have been there in the first place to specify the amino acid sequences of the intricate proteins. Moreover, none of this can happen without a sophisticated and integrated energy production system that only living cells possess.

See also:

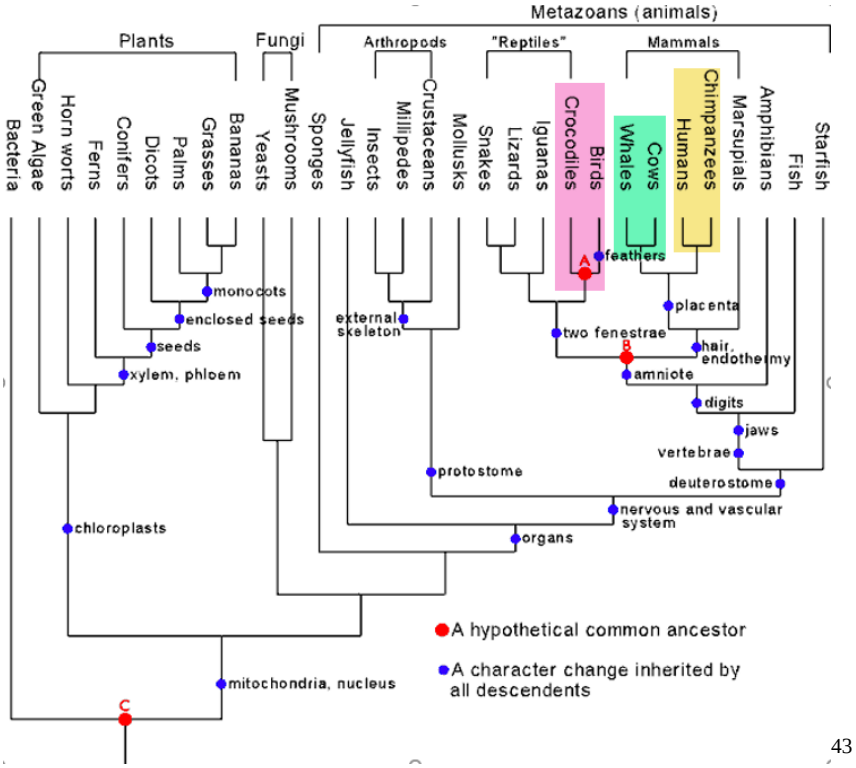
- Richard Dawkins proves intelligent design
- Is Richard Dawkins really stumped?

[42] Nature of Biology 2, Jacaranda press, page 511

15. EXHIBIT 6: Phylogenetic trees (Cladograms)

15.1. Overview

- Taxonomy; the science of grouping biological organisms on the basis of shared characteristics is a valid scientific field. However, phylogenetic trees (also called cladograms) are literally a textbook example of "bait and switch" advertising in the way they are used in evolutionary literature.
  - The "**bait**" is the self-evident truth that we can group organisms based on similar characteristics.
  - The "**switch**" is made when they transition from **observation** to **speculation** about organisms' ancestors (which are not observed).
    - The textbooks start off grouping organisms on the basis shared observable characteristics then imperceptibly transition to grouping them on the basis of imaginary evolutionary ancestors.
- Phylogenetic trees are presented in such a confusing way that they hide the underlying and unproven **assumption** that organisms share common ancestors.
- Consider an example from 29+ Evidences for Macroevolution, The Scientific Case for Common Descent (Version 2.89 Copyright © 1999-2012 by Douglas Theobald, Ph.D.)



[43]

- This chart shows that cows and whales had a common ancestor, also birds and crocodiles had a common ancestor because they have some

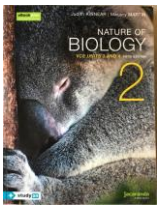
[43] 29 Evidences for evolution- http://www.talkorigins.org/faqs/comdesc/

common sequences in their DNA. But this is gross scientific overreach and wild speculation. In principle, this is akin to claiming that the science of aerodynamics and aeroplanes evolved from buses because they have similar recliner seats for passengers, buses being simpler than aeroplanes and both have wheels and brakes.

- The evolutionary literature is written in such a manner that the reader incorrectly concludes:
  - Wow – this is really complex
  - It seems pretty tall that a cow and whale had a common ancestor, but the smart biologist have sound reasons for coming to this strange conclusion.
  - I don't understand it because I am not start enough or educated enough to understand it, so I will just trust them.

The following specific textbook examples illustrate this point.

15.2. Case study: YEAR 12 TEXTBOOK: NATURE OF BIOLOGY 2



15.2.1. What is relatedness? (page 506)

Denisovans.

What is relatedness?

The millions of different species of plants, animals and microorganisms that live on Earth today are related by descent from common ancestors. What does it mean to be related? How do we decide which species are the most closely related? How do we decide which species branched off from which?

In a biological sense, relatedness refers to how recently species split from a common ancestor. So, we may ask the question: *Is species A more closely related*

to species B or C or D? The answer cannot come by comparing the similarity of habitat or the way or life (niche) or even similarity in appearance. (As we saw in chapter 10 (see page 492), convergent evolution can produce similarities in remotely related species.) The answer comes from re-phrasing the question: *Does species A share a more recent common ancestor with species B or with C or with D?* Whichever species, B, C or D, shares the more recent common ancestor with species A is the species that is most closely related to A.

Figure 11.5 shows a possible answer.

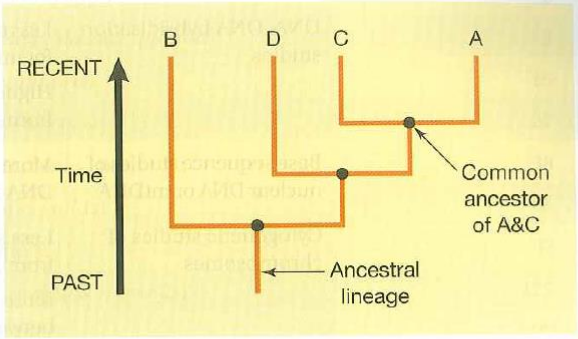


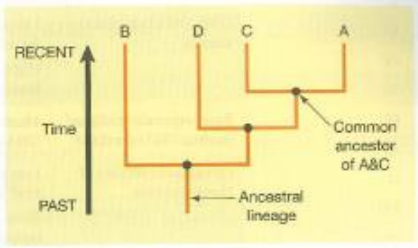
FIGURE 11.5 Phylogenetic tree showing the evolutionary relationship (relatedness) between four species A, B, C and D. Common ancestors are shown as black dots. Can you identify the common ancestor of species A, C and D? Which pair of species shares the *most recent* common ancestor? They are the most closely related pair of species (and they are A and C).

P506&7

- Let's examine the above extracts carefully.

Textbook extract	Comment
"The millions of different species of plants, animals and microorganisms that live on Earth today **<u>are</u>** related by descent from common ancestors."	• This statement dogmatically declares macro evolution as fact. But there is no credible scientific evidence to support this 'fact' – this is deception.
"What does it mean to be related? How do we decide which species are the most closely related? How do we decide which species branched off from which?"	• These are loaded questions based on false assumptions. It is asking how closely animals are related – which assumes that they are related. It assumes that a banana is related to an ostrich – but this only an overarching **belief,** not science.
"In a biological sense, relatedness refers to how recently species split from a common ancestor. So we may ask the question: Is species A more closely related to species B or C?"	• Again, a loaded statement which presumes macroevolution is true and real – something which has **not** been established.
"The answer cannot come by comparing the similarity of habitat or the way of life (niche) or even **similarity in appearance."**	• Just above it states that relatedness refers to ancestral lineage, why is it now referring to "habitat" and "similarity in appearance"? This is confusing the issue.
"(As we saw in chapter 10 (see page 492) convergent evolution can produce similarities in remotely related species)."	• 'Convergent evolution' is introduced just to confuse matters. It is the appearance of similar structures in organisms believed to be of **different** lines of descent.[44] source • The reference to page 492 is totally fallacious. It does **not** show what it claims to show. • Page 492 states the belief that: "Over geological time, natural selection **<u>may</u>** act on distantly related species to produce superficial similarities that are not due to shared ancestry but reflect the fact that species adapted to a similar way of life."
"The answer comes from re-phrasing the question: Does species A share a more recent common ancestor with species B or with Species C or D? Whichever species, B, C, or D, shares the more recent common ancestor with species A is the species that is more closely related to A"	• This is stating the obvious but it is based on the false assumption that A,B,C, and D indeed share a common ancestor. • Example of equivocation and circular reasoning.

[44] http://www.dictionary.com/browse/convergent-evolution

Figure 11.5 shows a possible answer.  **FIGURE 11.5** Phylogenetic tree showing the evolutionary relationship (relatedness) between four species A, B, C and D. Common ancestors are shown as black dots. Can you identify the common ancestor of species A, C and D? Which pair of species shares the *most recent* common ancestor? They are the most closely related pair of species (and they are A and C).	• This is a theoretical/imaginary diagram only, not one based on observation yet the wording beneath its states "phylogenetic tree **showing** the evolutionary relationship…". This is a statement of fact, not speculation. • The book transitions from the imaginary to the real world in a manner that will lead students to false conclusions, ie deceive them.

- The deception continues, page 510

Comparing DNA /IS21 P510

DNA sequences have been described as 'documents of evolutionary history'. Comparisons of DNA from different species may be made in several ways:

1. direct comparison of DNA base sequences
2. comparing whole genomes
3. DNA hybridisation
4. comparing karyotypes.

Comparing DNA base sequences

DNA molecules consist of a series of base pairs (bp) that form a base sequence (refer back to chapter 2, page 41).

If evolution has occurred, we can predict that species that are closely related by evolutionary descent will show more similarities in the base sequences of their common genes. Hence, direct comparisons of the DNA sequence of genes in different species can also be used to infer evolutionary relationships. For example, haemoglobin genes are present in all mammals. Sequences have been identified for the approximately 17 000 bases in this segment of DNA in human beings and other animals. The results show that these sequences are most similar between humans and chimpanzees.

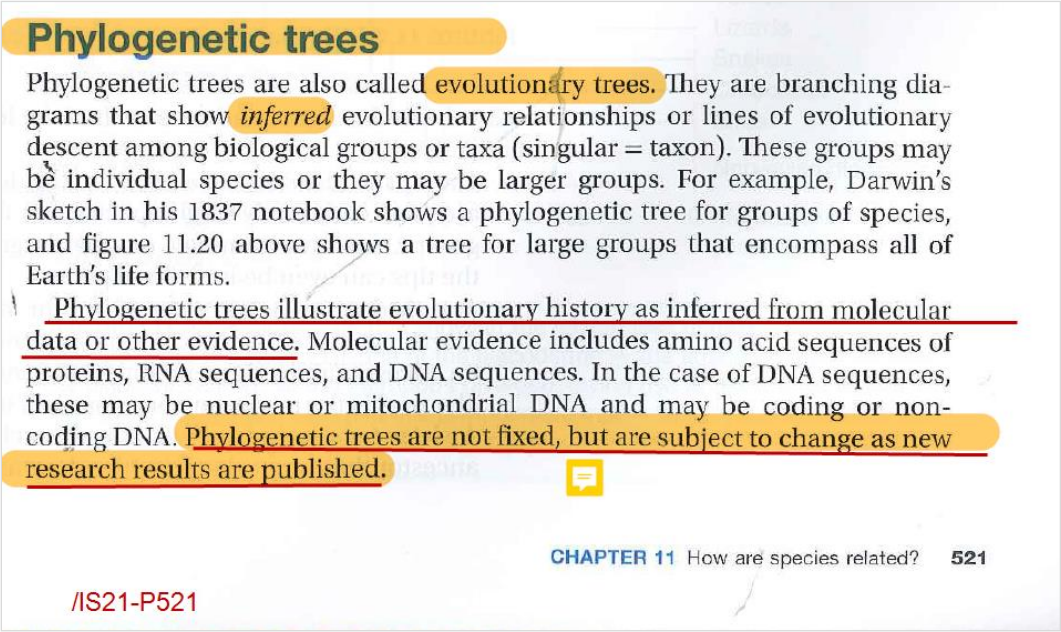
- Let's scrutinize this carefully.

Extract from textbook	Comment
"**If** evolution has occurred, we can predict that species that are closely related by evolutionary descent will show more similarities in the base sequences of their common genes."	• The prediction can be restated: Different species that evolved from a common ancestor will have greater similarities in their DNA than other species. • But this is circular reasoning because we do NOT know which species evolved from

	a common ancestor. Therefore, this can be restated: We will interpret similarities in the DNA to mean that they had a common ancestor. • They are making a prediction based **on the assumption** that similarities in the DNA indicate evolutionary descent. This is the same assumption made in homologous structures. There is no mention of the competing hypothesis that the similarities could indicate a common designer.
"Hence, direct comparisons of the DNA sequence of genes in different species **can also be used** to **infer** evolutionary relationships."	• The evolutionary assumption is further re-enforced by applying circular reasoning.
"For example, haemoglobin genes are present in all mammals. Sequences have been identified for the approximately 17 000 bases in this segment of DNA in humans and animals. The results show that these sequences **are <u>most</u> similar between humans and chimpanzees."**	• Having established the false assumption in the prediction (that similarities in DNA indicate evolutionary descent); now the focus is on showing similarities in the DNA. • The beta-haemoglobin gene in humans is about 1,600 base pairs. [45] Alpha-haemoglobin would be similar, the 17,000 number needs review/explanation.

[45] https://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=DetailsSearch&Term=3043

- The equivocation continues on page 521



Phylogenetic trees

Phylogenetic trees are also called evolutionary trees. They are branching diagrams that show *inferred* evolutionary relationships or lines of evolutionary descent among biological groups or taxa (singular = taxon). These groups may be individual species or they may be larger groups. For example, Darwin's sketch in his 1837 notebook shows a phylogenetic tree for groups of species, and figure 11.20 above shows a tree for large groups that encompass all of Earth's life forms.

Phylogenetic trees illustrate evolutionary history as inferred from molecular data or other evidence. Molecular evidence includes amino acid sequences of proteins, RNA sequences, and DNA sequences. In the case of DNA sequences, these may be nuclear or mitochondrial DNA and may be coding or non-coding DNA. Phylogenetic trees are not fixed, but are subject to change as new research results are published.

CHAPTER 11 How are species related? 521

/IS21-P521

- Scrutiny of the above extract.

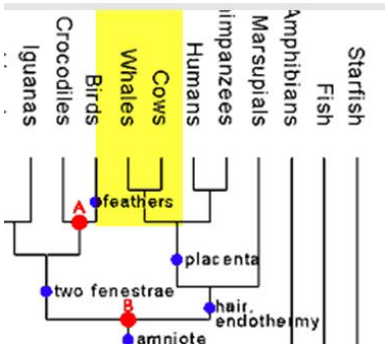
Extract from textbook	Comment
"Phylogenetic trees **illustrate** evolutionary history as **inferred** from molecular data or other evidence…..	• First, they state that the diagrams **illustrate** – ie show, ie they are a fact. Then they divulge (in a veiled manner) that they are "inferred". • This is clear equivocation
Phylogenetic trees are **not fixed**, but are subject to change as new research results are published.	• This is another, yet veiled, admission that they are little more than lines on paper. That they are imaginary and based on prior **beliefs** rather than credible evidence. • The fact that are "**not fixed**" means that the reasoning for them in the first place was dubious guesswork. Therefore, they are subject to change when some-one challenges them.

15.3. Conclusions

- ♦ Phylogenetic trees (Cladograms) deceive the students by implying that they have solid evidence supporting them, this is **not** the case. They mostly indicate the

imaginations and speculations of evolutionists and are little more than lines on paper with little relation to the real world.

- For example, this tree shows cows and whales sharing a common ancestor;



- If you Google:
  "What is the evidence showing that a whale and cow had a common ancestor".
  One gets a sea of confusing gibberish with no credible evidence.

The textbooks should stop deceiving the students by exaggerating the scientific significance of phylogenetic trees. The diagrams can be effective communication tools if they are based on solid data. However, **if** they are based on false assumptions (macroevolution) they become tools of deception.

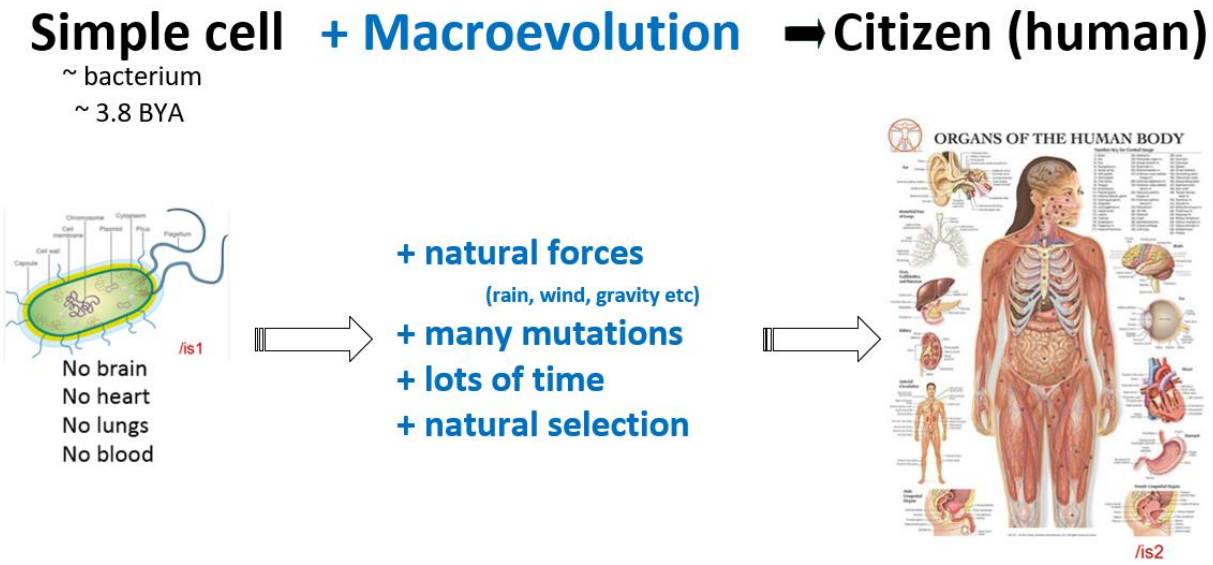
16. EXHIBIT 7: Deception by omission

In science, before a conclusion can be reached it is important to consider **all** the available evidence and consider multiple explanations for that evidence. This is what the curriculum and textbooks fail to do in the teaching of evolution. This is more than poor science – it is a deception. There is little indication that there are serious scientific problems with macroevolution. Scientific objections are belittled and ignored on the basis that they are made by religious people and for religious reasons. Consider an article in the *New Scientist*:

> "Much of the vast neo-Darwinian literature is **distressingly uncritical.**
> The possibility that anything is seriously amiss with Darwin's account of evolution **is hardly considered.**
> Such dissent as there is, often relies on theistic premises which Darwinists rightly say have no place in the evaluation of scientific theories. So onlookers are left with the impression that there is little or nothing about Darwin's theory to which a scientific naturalist could reasonably object.
> **The methodological skepticism that characterizes most areas of scientific discourse seems strikingly absent when Darwinism is the topic."**[46]

16.1. Understanding what evolutionists need to demonstrate.

- Since macroevolution is taught as a scientific fact to trusting students, it is reasonable to expect the course to provide credible and convincing supporting evidence. The onus of proof is on evolutionists **to provide evidence** to prove (beyond reasonable doubt) the macroevolution equation which can be stated as follows:



[46] "Survival of the fittest theory: Darwinism's limits" 03 February 2010

- Note that evolutionists have no explanation as to how the first living cell came into existence. Earlier evolutionist literature asserted that the first cell sprang to life due to natural causes – this is pure unsupported speculation with no experimental support whatsoever. Thankfully, this fiction is not contained in the textbooks examined, rather they imply that the starting point for macroevolution is a 'simple' cell probably a bacterium. However, even we they are granted this significant concession, macro evolution still does not make credible scientific sense.

- The equation is counter-intuitive because it indicates that things get better, more ordered and complex over time due to natural forces.
  What we observe every day is the opposite:
  - If we don't attend to our gardens, the gardens degrade over time
  - If we don't maintain our bodies, our bodies degrade over time.
  - Cars and other systems degrade over time; they don't get better
  - The second law of thermodynamics states:

    "….that when energy changes from one form to another form, or matter moves freely, entropy (**disorder**) in a closed system **increases**."[47]

- Having clarified what needs to be proven, the following major flaws in macroevolution are conspicuous by their absence in the textbooks.

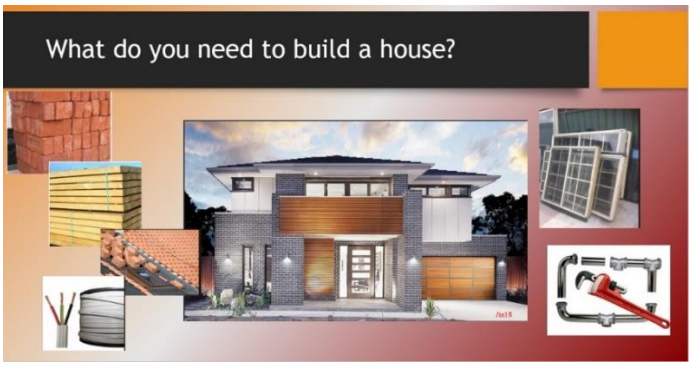
16.2. Macroevolution flaw 1: Where did the information come from?

- A major problem for macroevolution is that it does not provide a credible way to explain the source of the design information needed to build the complex organisms we observe.

- Evolutionists **speculate** or image how it **might** have happened.
  However, speculation and imagination does NOT constitute scientific evidence.
  To appreciate the magnitude of this problem, consider the question….

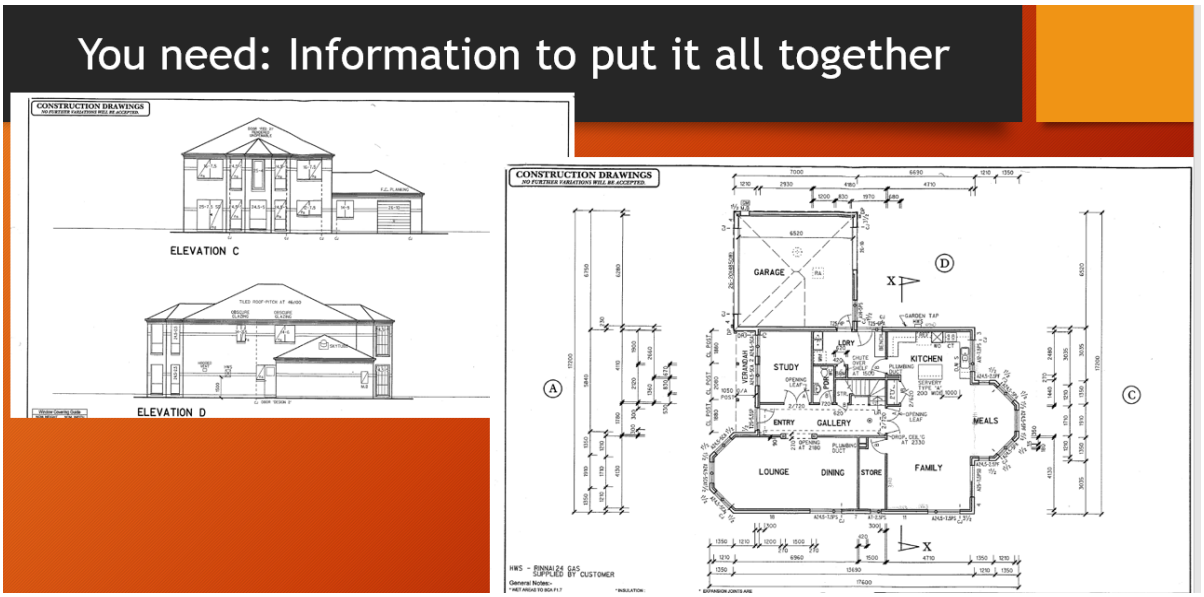
16.2.1. What do you need to build a house?

- You need: bricks, windows, pipes, cables, tiles, timber, etc.

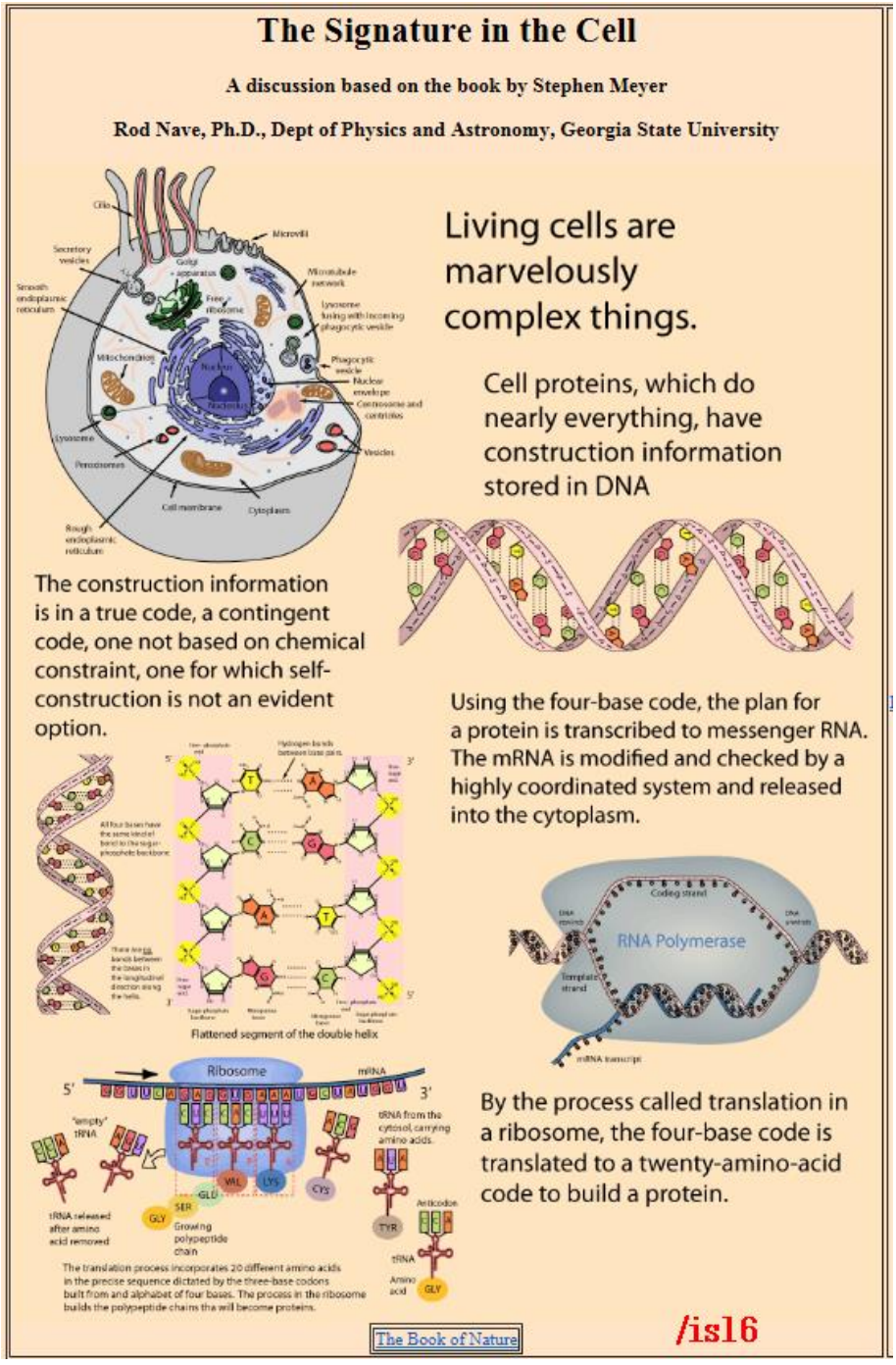


[47] Wikipedia https://simple.m.wikipedia.org/wiki/Second_law_of_thermodynamics

- But materials are **not enough**.
  Can you imagine what you would get if you simply threw all the components together in a random manner?
- If you put all the necessary components on the building site and left them for millions of years, would you expect a house to emerge? – no way.
  A key component is missing; what is it?
  Answer: **Information**, a design drawing showing how to put them together in a complementary and coherent manner.



- Where does the design drawing come from?
  Can natural forces produce something equivalent to a design drawing?
  Have natural forces been observed to produce specified information like the drawings above or like a story in a book or a computer program? Definitely not.
- Even simple organisms are very much more complex than a house.
  If we consider the human body, with the skeletal system and how muscles connect it together and how the nervous system and brain cause it to move – it is a marvel of engineering.
  So where did the design information to build it come from?
- Even a single cell is astonishingly complex with micro machines doing a variety of tasks. So where did information come from?



- Evolutionists have tried desperately to show how natural forces can produce the design information needed to build organisms – but they have failed.
- The DNA code is like a computer program; it is like the letters on this page. The order of the letters conveys the information but their arrangement cannot be explained by chemistry, there is no chemical or physical reason why a "t" must be next to a "h" etc. DNA is similar, but instead of having a 26 letter alphabet it

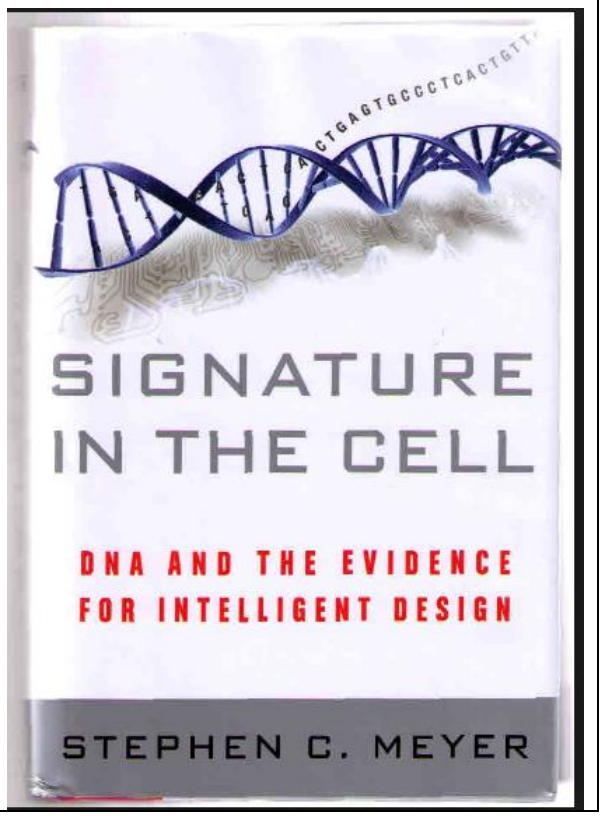
has only 4 chemical bases abbreviated to: A,C,G and T. When you put them in a specific order they convey design information to build parts of organisms.

- There is no credible evidence to show that natural forces can produce codes like this. In all observed cases, this type of design information is the product of an intelligent designer. This fundamental problem for macroevolution is described in detail by Stephen C Meyer in his book *Signature in the Cell*.

Stephen C. Meyer received his Ph.D. in the philosophy of science from the University of Cambridge.

A former geophysicist and college professor, he now directs Discovery Institute's Center for Science and Culture in Seattle.

He has authored the New York Times best seller Darwin's Doubt: The Explosive Origin of Animal Life and the Case for Intelligent Design (HarperOne, 2013) as well as Signature in the Cell: DNA and the Evidence for Intelligent Design (HarperOne, 2009), which was named a Book of the Year by the Times (of London) Literary Supplement in 2009.



16.3. Macroevolution flaw 2: How did genders "evolve" from asexual organisms?

- Darwin said:

> "If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, **my theory would absolutely break down.** But I can find out no such case"[48]

- There are many complex organs which cause Darwin's theory to break down, the human reproductive system is one of them.
  - It contains a large number of essential components:
    - In males: Penis, testes, sperm production
    - In females: Vagina, fertile eggs, womb

[48] Charles Darwin, On the Origin of Species. P158

        - An amazing hormonal control system
    - If one essential component is missing or not working correctly, the result is not 80% efficiency but ZERO offspring.
    - How can a slow and gradual process produce all the essential components **simultaneously**?
    - How can a working penis and vagina "evolve"?
        - What good is a penis for reproductive purposes without a matching vagina?
        - How could they "evolve" at exactly the **same place and time?**

- Bacterium as the original starting point of evolution (as evolutionists claim) reproduces asexually and at a very fast rate.
    - It does not need to find a mate.
    - It does not have sex organs.
    - All the food is available for the reproducing entity; it does not have to be shared with a (largely useless) 'mate'. Thus, asexuality confers the maximum evolutionary fitness.

  How and why would the genders "evolve"?
    - Why would natural selection allow such a thing?
    - Any signs of genitals in an organism would render them less fit for purpose and therefore cause their extinction.

- The sexual reproductive system we observe in animals today is a major problem for macro evolution. To appreciate fully the challenge, consider this video http://youtu.be/Ab1VWQEnnwM.

16.4. Macroevolution flaw 3: Where are all the myriad of transition fossils that Darwin predicted?

- The macroevolution model of slow and gradual change means that there should be millions of fossils of creatures in transition from one kind of organism to another. This concerned Darwin, but he comforted himself with the thought that our fossil record is incomplete – eventually they would be found.
  After 150 years of actively looking, they still have not been found. There should be thousands upon thousands of them, but all they have found is a handful of doubtful examples. They were missing then, and they are still missing now.

- Stephen Jay Gould, Former Professor of Geology and Paleontology at Harvard University said:

> "The absence of fossil evidence
> for intermediary stages between major transitions of organic
> design, indeed our inability, even in our imagination, to construct
> functional intermediates in many cases,
> **has been a persistent and nagging problem for**
> **gradualistic accounts of evolution."**[49]

[49] S.J Gould, in Evolution Now: A century After Darwin, ed. John Maynard Smith, (New York: Macmillan Publishing 1982) p140

also

> "The fossil record had caused Darwin more grief than joy. **Nothing distressed him more than the Cambrian explosion.** The coincident appearance of almost all complex organic designs..."[50]

- Even evolutionist David M Raup recognizes the problem of fossils for evolution. He said:

> "A large number of well trained scientists outside evolutionary biology and paleontology have **unfortunately gotten the idea that the fossil record is far more Darwinian than it is**. This probably comes from the oversimplification inevitable in secondary sources: low level textbooks, semi popular articles, and so on.
> Also there is probably some wishful thinking involved. In the years after Darwin, his advocates hoped to find predictable progressions. In general, **these have NOT been found** yet the optimism died hard, **and some pure fantasy has crept into textbooks**"[51]

- The Cambrian explosion indicates a large number of complex organisms appearing abruptly without any evidence of the simpler ancestral organisms that should have existed if macroevolution was true. This fundamental problem for macroevolution is documented by many people including:
  - Ian Juby - Fossil Record Busted
  - Stephen C Meyer in his book: Darwin Doubt
- So why is there no mention of these matters in the textbooks?

16.5. Macroevolution flaw 4 : Where are all the animals currently in transition?

- The textbooks and other evolutionary literature often cite random observations and state: “this is exactly what evolution predicts”.[52] The problem is that the predictions are usually bogus and unrelated to the issue.
- Let’s apply this idea in a more genuine way. The core claim of macroevolution is that organisms are in a continual state of change from one species to a different and better suited one.
  Evolutionists claim that:
  - A cow and whale had a common ancestor (let’s call it a “CowWhale”). This means that the CowWhale species changed over a long period of time and became 2 different species a cow and a whale.

---

[50] Gould, Stephen Jay, The Panda's Thumb, pp 238-239, 1980

[51] Evolution and the Fossil Record, Science, Vol 213, No 4505, 17 July 1981, p 289

[52] Richard Dawkins does this in his book *Evolution – the Greatest show on earth*, countless times.

        - During the transition period the species would have had new attributes (either a cow or whale) as it changed and also remnants of the old species.
        - Let's consider the whale transition in more detail.
          As the CowWhale species was becoming a whale, a tail and fins had to 'evolve' via a "slow and gradual" process. So initially, small tail and fins would emerge in large numbers of the CowWhale species, getting more developed and bigger over time.
    - If we were living at that time we would have seen some CowWhale animals in the transitory state with small fins and tails – and be wondering what on earth is happening to the CowWhale species.

- Applying the same principles to today. If macroevolution is true and real we would expect to see **thousands** of animals **in a state of transition**.
    - We should see some humans (out of the 7.53 billion) which are developing new and better body parts while on the macroevolution path.
        - Like an eye at the back of the head. This would be very useful in detecting predators.
        - Like immunity from diseases like malaria, polio and other ailments.
        - Like better joints which don't degrade with time.
    - We should see hundreds of other animals also in a state of transition.
        - Some losing some attributes and others gaining new and different body parts.
        - We should see animals with rudimentary wings on their way to developing the flight capability.

- So, what do we actually observe?
  We see animals well designed for their current state showing no signs of transition. Whales are well designed for what they do. Dolphins are well designed for what they do etc.

- Where are the thousands of transitional animals today?
  This problem, like the others, is conspicuous by its absence in the textbooks.

17. ---------- Section 4 ----------
Substantiation: The current way of teaching evolution is deleterious to student psychological and emotional well-being.

17.1. Overview

Sections 2 and 3 of established that:

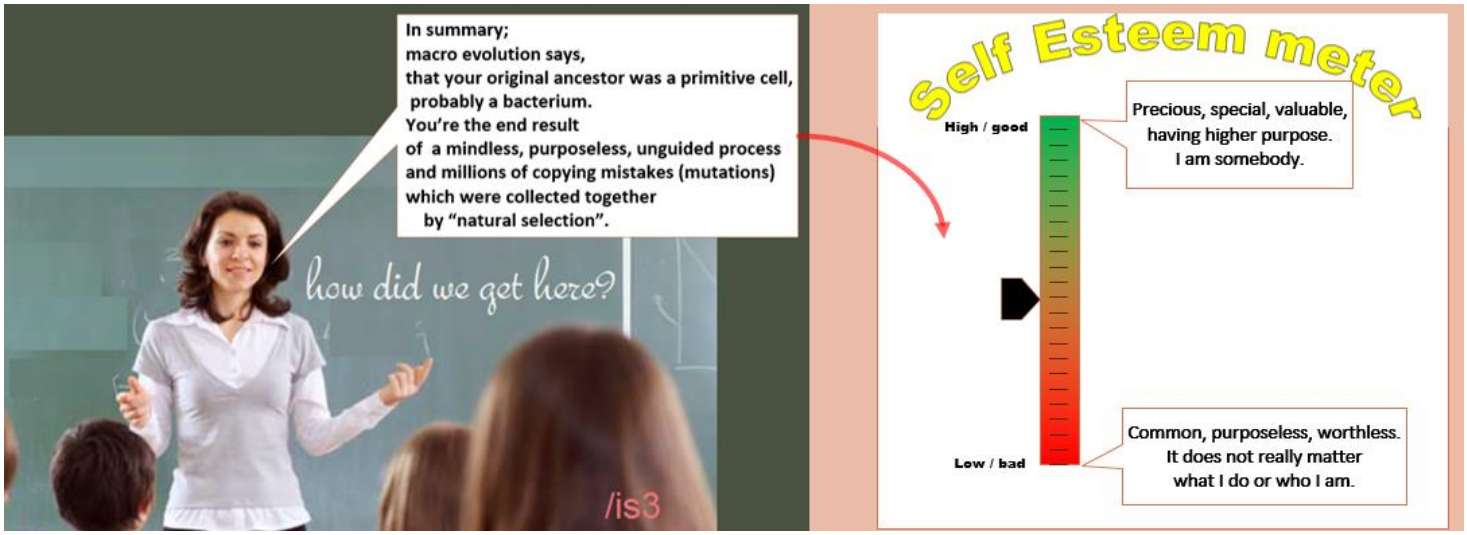
- Macroevolution is taught as an implied scientific fact.
- The students are being deceived because the scientific evidence undermines rather than supports macroevolution.

This should be enough to cause significant concern and trigger corrective action. Regrettably this is not the case. The response of many is:

- "So what? Who cares, we have been doing it for decades."
- "There are bucket loads of nonsense in the curriculum. Why should we care about this?"

We should care because this deception is **not** harmless. It has negative consequences on the emotional and psychological well-being of students which contributes to mental anguish and destructive lifestyles.

Consider a teacher summarizing the evolution unit by saying:



If you were a student in her class, what feelings would be aroused in you?

- Would you be inspired to strive sacrificially for some noble cause and the common good? or
- Would it lead you onto the "selfish pleasure" road?

When researchers in the late 1940s asserted that smoking had deleterious consequences to health, they were mostly dismissed because of doctors who endorsed smoking and by examples of

smokers who lived into their 90s. The destructive consequences of smoking were not easy to detect or quantify. Similarly, the negative consequences of teaching macroevolution are not easily detectable and do not affect every child in the same way.
However, the increasing rate of mental illness and suicide in young people should be enough to prompt serious investigation and concerted action.

The Prime Minister recently identified teen suicide as one of his major priorities.
Why are teens killing themselves at this elevated rate?
Could it be that they view themselves as worthless?
Could it be that the education system be implanting the idea that they are worthless?

Proving a cause and effect relationship for issues associated with human psychology is not easy because humans are mind-blowingly complex and diverse. Hence, testing if the current way of teaching evolution is deleterious to the emotional and psychological well-being of students is not easy. However, we need to recall that our industrial laws do not require proof that something is unsafe for it to be removed from use – all that is required is '**reasonable suspicion'**.
We err on the side of caution and remove anything that may cause harm. This principle was applied to lollies. The School Confectionery Guidelines were developed, which state:
"From 2009, no confectionary should be supplied through school food services".[53]
Not all children who eat lollies will become obese and unhealthy, but the likelihood is that **some** will – hence lollies were removed. The evidence that teaching macroevolution to students is deleterious to their psychological well-being is similar.

It is acknowledged that the evidence presented here does not constitute 'proof'.
Additional data is being collected and universities are being approached to take this on as a research topic of the psychology department. However, there is sufficient evidence to warrant serious investigation and corrective action.

There are 4 lines of evidence:

- Case Study
- Deductive reasoning
- Expert testimony
- Survey results

Individually, they may be discarded as 'circumstantial' however collectively they provide sufficient evidence to justify corrective action.

18. Case study

This case study is the personal experience of Fred (alias). Fred indicated his desire to remain anonymous but wanted to share his experience because he believes that it may be indicative of the experience of other students also.

Fred is over 40 years of age, married and working in a professional capacity. Fred was raised in a Christian household but had only a nominal understanding and commitment to Christianity or the church he attended sporadically. He did not read the Bible, but he did have a sense that a higher power (God) must exist and was ultimately responsible for the creation he saw around him. His world view was broadly Christian.

[53] https://mail.google.com/mail/u/0/?shva=1#inbox?projector=1

He was taught evolution in Year 8 at a northern suburbs public high school, and accepted it enthusiastically. He said:

> "Evolution seemed a bit confusing, but the fancy diagrams and scientific jargon convinced me that the problem was with my understanding as opposed to the science behind it. The thought that they were telling me a 'porky' never entered my mind."

Upon accepting evolution, Fred felt intellectually superior, enlightened and above the religious 'myths' that he heard from his religious father. His worldview was fundamentally changed from nominal Christian to staunch atheist. However, the smugness diminished over time - especially when he was in Year 11 and 12. His belief in evolution was challenged on two fronts; one scientific and one emotional.

Emotional challenge

The question of what subjects he would select for Year 11 and 12 led him to ask the broader questions of "What career should I pursue? What am I going to do with my life? Does it matter what I do with my life?"

These questions disturbed him and pushed him to the fundamental starting question of "**Who am I?**"

His nominal Christian upbringing led him to believe that he was the offspring of an intentionally created race of people. However, he had abandoned this and embraced evolution which said that he was the product of a mindless, purposeless process and millions of copying mistakes. "This left a hollow, empty feeling in me," he said.

> **"How can a purposeless accident have a 'higher' purpose? The answer is obvious - it doesn't. What's the point of struggling and striving to achieve anything – if evolution is true – it doesn't matter a cracker. The sex, drugs and rock-n-roll outlook of my friends seemed really appealing. But it just felt wrong."**

These confusing, troubling thoughts and problems at home brought him to the edge of depression.

Scientific challenge

While doing Year 11 Biology, Fred became aware of the complexity of animal visual systems. He noticed that they have a large number of components working together to produce the sensation of vision.

"I**t looked designed** and **not** the product of countless copying mistakes," Fred said.

Also, while studying the solar system in Physics, there was evidence of order and **design** in the laws of physics and the movement of the planets.

"Looking through the microscope and the telescope, there was strong evidence of design. This shook my confidence and commitment to evolution," Fred recalled.

Fred's commitment to evolution was being challenged on both emotional and scientific grounds. A world where evolution was true was a dark and lonely place; plus, there was strong evidence

for design. Eventually he abandoned evolution and returned to the Christian worldview in a deeper, more meaningful manner. The feelings of despair and purposelessness disappeared; a sense of striving for a "higher purpose" returned.

Fred is sharing his story because he believes that the emotional and psychological distress that he experienced as a result of being taught evolution is **not** unique to him. Although he did not see it at the time, with the benefit of hindsight and maturity he is completely convinced that being taught evolution was a significant contributing factor to his psychological frustrations and distress. He asks the pointed question:

"If it happened to me – why could it not happen to others?"

Good question.

18.1. Other examples.

18.1.1. ABC radio Australia - participant

- In an ABC (Australia) radio, *Life Matters* with Norman Swan, 4 May 2000 'Black Dog Days—The Experience and Treatment of Depression'
- A person (Gerard) who had contemplated suicide said:
  "I think that some people may have an inability to cope,
  and maybe this might sound a bit extreme, but that might be Darwinian theory, the Darwin theory of survival of the fittest.
  Maybe some of us aren't meant to survive,
  maybe some of us are meant to kill ourselves. . . .
  There's too many people in the world as it is.
  Maybe it is survival of the fittest, maybe some of us are meant to just give up, and **maybe that would help the species."**
- **Source:** https://creation.com/evolution-and-suicide and https://answersingenesis.org/natural-selection/suicide-and-evolution/
  - I was unable to locate this episode on the RN website LINK

19. Deductive reasoning

"Deductive reasoning is the process of **reasoning** from one or more statements (premises) to reach a logically certain conclusion."[54]

Many students will consciously or unconsciously go through the following deductive reasoning:

1 - I am the product of a mindless, purposeless, unguided process and millions of copying mistakes.

[54] https://en.wikipedia.org/wiki/Deductive_reasoning

2 - Copying mistakes and purposeless processes produce purposeless chaotic results. They have no intrinsic purpose

3 - Since I am the product of millions of copying mistakes;
I do not have any intrinsic purpose.

4 - Since I do not have an intrinsic purpose, I have no intrinsic value.
Ultimately, what I do (or do not do) does not make any real difference.

20. Expert testimony

20.1. Principal of Britain's Emmanuel College, Nigel McQuoid, and his predecessor, John Burn, wrote in 1997:

> "To teach children that they are nothing more than developed mutations who evolved from something akin to a monkey and that death is the end of everything is hardly going to engender within them a sense of purpose, self-worth and self-respect."[55]

20.2. Dr. Susan Blackmore, atheist psychologist and Visiting Professor at the University of Plymouth, wrote:

> "If you really think about evolution and why we human beings are here, you have to come to the conclusion **that we are here for absolutely no reason at all.**
> **That can be very scary**, but it can also be comforting."[56]

20.3. Sam Harris, prominent atheist author and scientist, is quoted as saying:

> "We are driverless cars running a program we did not write,
> which we cannot control, and whose existence we are not even wired to sense."[57]

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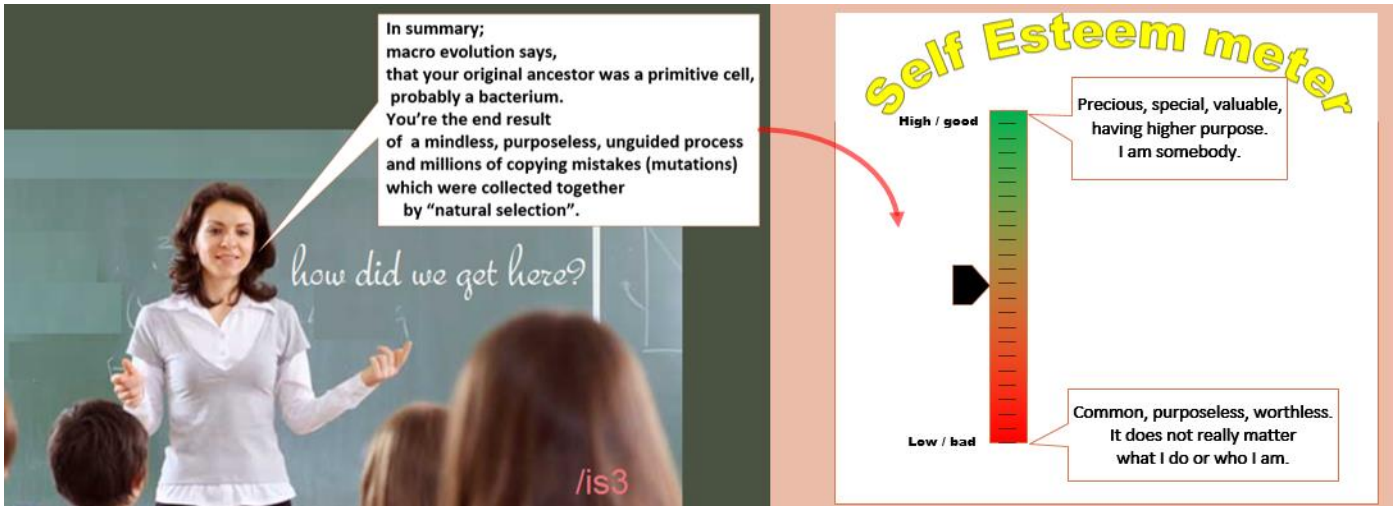
[55] Branigan, T., Top school's creationists preach value of biblical story over evolution: State-funded secondary teachers do not accept findings of Darwin, *The Guardian* (London), 9 March 2002, p. 3

[56] https://www.susanblackmore.uk/journalism/the-world-according-to-dr-susan-blackmore/

[57] https://www.chron.com/sports/outdoors/article/Kenneth-Miller-finds-good-news-in-evolution-12854049.php

20.4. Discussion with registered psychologist

- I paid money to meet with a registered psychologist to explore the impact of teaching macro evolution to trusting students. She has requested that her identify be with-held, so she will be referred to by the alias of Jane.
- The focus of our discussion was the following diagram



- See Appendix 2 for key extracts from our discussions.

20.4.1. Key points/ net conclusions

1. Jane is an atheist and reasonably well informed evolutionist.
   She personally does not find evolution to be negative and has managed to find a way to inject positive associations with it. However, this is regardless of the science and is make believe.
   - She has chosen to **believe** that evolution is something "wonderful" and "amazing" although she was unable to substantiate how or why. These adjectives seem to be based a pre-conceived belief rather than rational scientific thought and does **not** take into consideration what is in the textbooks.
2. She clearly feels that the teacher statement to the class is "**very negative**". Since the statement is very "negative" then the impact on some students will be "negative".
3. She asserts that no teacher would make that statement because it is "so negative." This is the reaction of many people and they are largely correct that teacher would not state it so plainly and bluntly. But this is what the textbooks contain in a fragmented, sugar coated manner. The fact that teachers and textbooks go to great length to sugar coat macro-evolution clearly indicates that if/when it is stated plainly – that it is very negative and it has a negative impact on the emotions and psychology of students.
4. She **believes** that the statement mis-characterizes macro evolution; although she could not say how.

20.5. Psychiatrist

> "I agree that belief in evolution **could lead to nihilism**,
> unless you were able to disassociate this belief from real life
> – in other words, **be in denial or be intellectually dishonest or hypocritical**.
> Many people manage to achieve this state of mind."[58]

- Definition of *nihilism* (Websters Dictionary)
  - **1a :** a viewpoint that traditional values and beliefs are unfounded and that **existence is senseless and useless**
    Nihilism is a condition in which all ultimate values lose their value.— Ronald H. Nash
  - **b :** a doctrine that denies any objective ground of truth and especially of moral truths
  - **2a :** a doctrine or belief that conditions in the social organization are so bad as to make destruction desirable for its own sake independent of any constructive program or possibility
  - **b** *capitalized* **:** the program of a 19th century Russian party advocating revolutionary reform and using terrorism and assassination

[58] The psychiatrist (MBBS FRANZCP) wishes to remain anonymous.

21. Survey results

21.1. Year 10 student feedback in 2018

The Year 10 class of 2018 at [redacted] College were asked to comment on the questionnaire contained in Appendix 1. Feedback was requested in hard copy after receiving the opening address of the evolution unit.

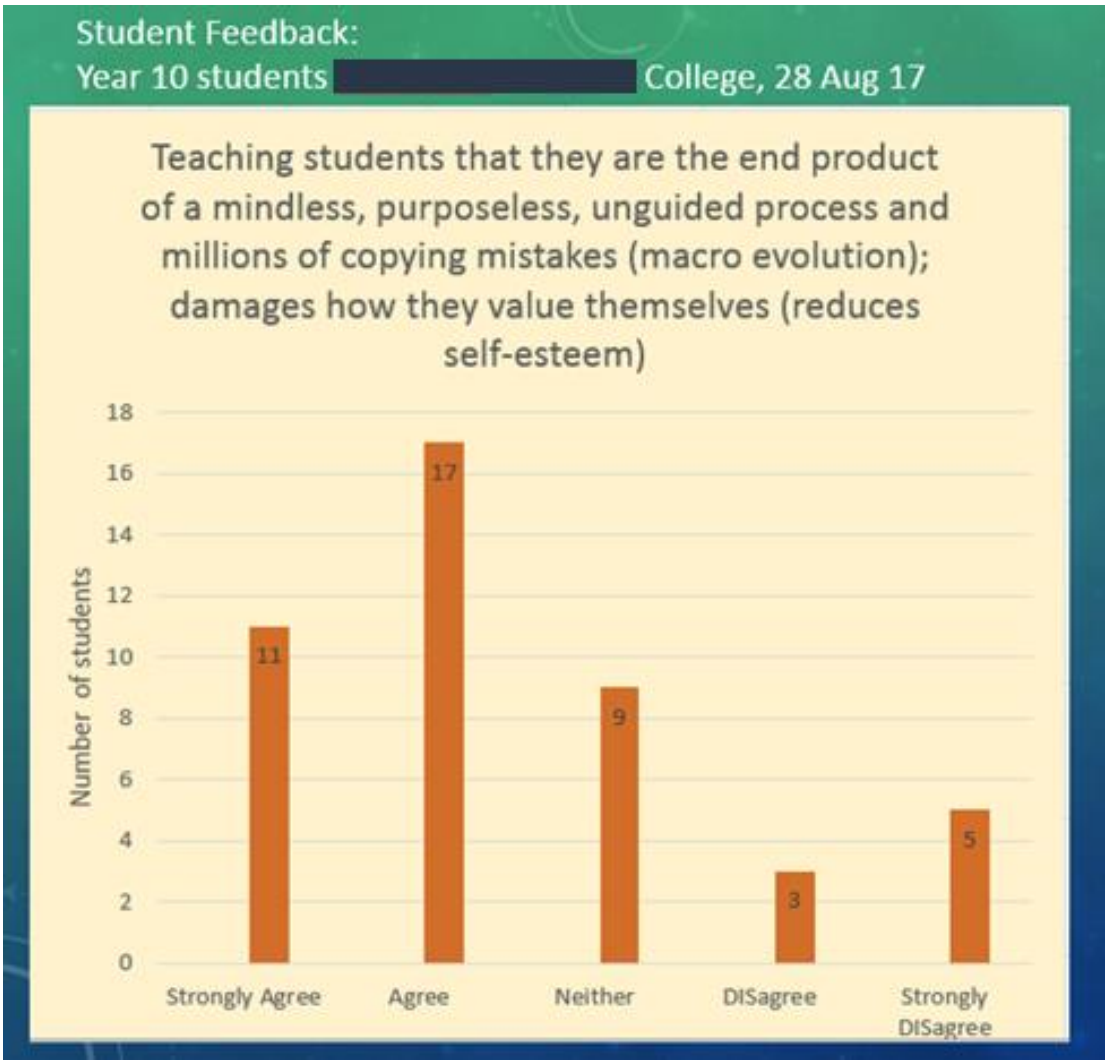
Regrettably students came to the theater without their pens, so they were asked to fill in the sheets and return them next science period. This resulted in a small number of forms being returned.

Although the population size is small it is still useful for indicative purposes.

Comment	Strongly Agree	Agree	Neither	**DIS**agree	Strongly **DIS**agree
The average year 10 student will ignore the statement; hence it will have negligible impact.	2	6	5	6	2
It leads to feelings of irrelevance and meaninglessness.	2	11	4	2	2
It degrades the students' emotional well-being.	1	10	7	2	1
It **degrades** the students' self-esteem	1	9	8	1	1
It **improves** the students' self-esteem	0	2	8	9	2
Students will feel a reduced sense of higher purpose and meaning	3	7	8	3	0

21.2. Year 10 student feedback in 2017

In 2017, the Year 10 students were asked to indicate how they felt about the impact of teaching evolution. The results were:



21.3. ANECDOTAL EVIDENCE

A small number of parents were approached with the questionnaire in Appendix 1.
A number of them made the statement "A teacher would never make that statement" in a concerned tone of voice. They are probably right that few (if any teachers) would state macro evolution with the clarity and bluntness that the questionnaire contains. However, the point is that they find the statement concerning, disturbing, and repugnant.
The statement **is** contained in the textbooks in a peace-meal and somewhat concealed manner.

This anecdotal evidence indicates many parents would object to their children being at the receiving end of an accurate and blunt description of macro evolution. Their instinctive response reveals their feeling that it is not good for their children.

22. APPENDIX 1 – Feedback questionnaire

This questionnaire was used to obtain the view of students and others.

Questionnaire – What do you think?
Macro-evolution's impact on self-esteem/emotional well-being

SETTING THE SCENE

A year 9-10 school teacher could summarize the evolution unit by saying something like:

Please indicate how you feel **about the teacher's statement?**

Comment	**Strongly Agree**	**Agree**	Neither	**DIS**agree	Strongly **DIS**agree
The average year 10 student will ignore the statement; hence it will have negligible impact.					
It leads to feelings of irrelevance and meaninglessness.					
It degrades the students' emotional well-being.					
It **degrades** the students' self-esteem					
It **improves** the students' self-esteem					
Students will feel a reduced sense of higher purpose and meaning					

Other comments:

Your profession: _____ Date: _____

VER.8: 25/8/18

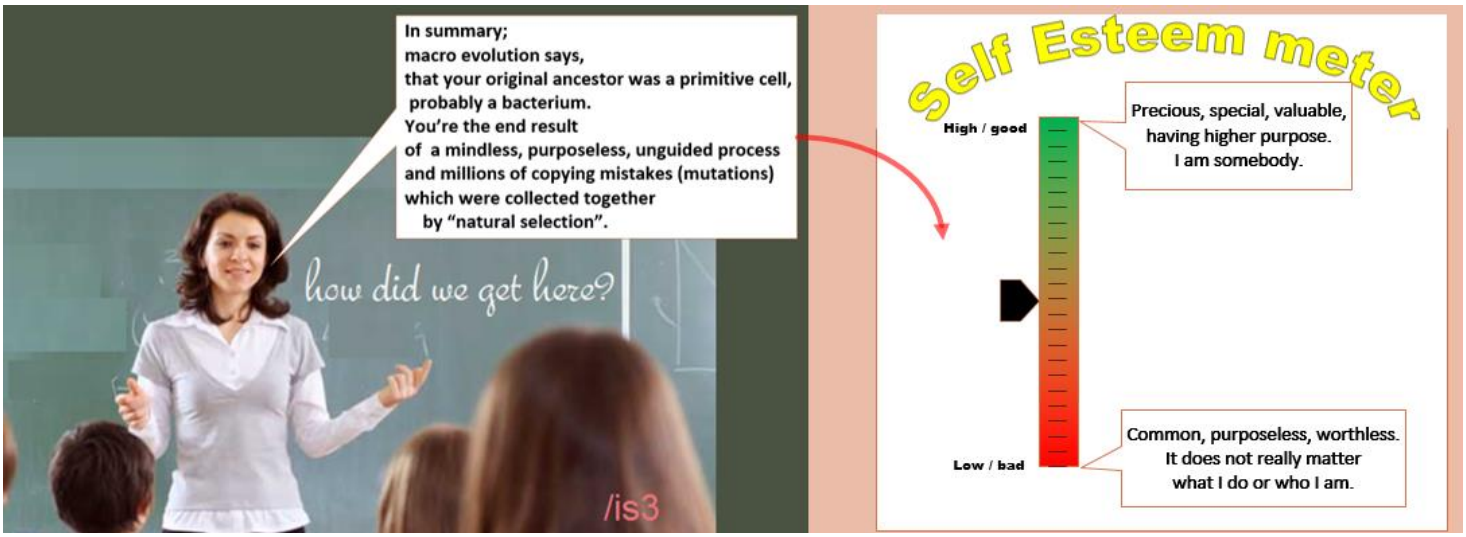
23. APPENDIX 2: Discussion with psychologist

23.1. Introduction

- Seven psychologists were approached to get their opinion on impact on students of being taught macroevolution. Four flatly refused the payment offer, 3 did not respond. An eight psychologist was approached and surprisingly she agreed to participate.
- She was advised over the phone about the nature of the discussion and of the request to record the interaction. She agreed to participate and to me recording the interaction. She also advised that she had an atheistic viewpoint
- The cost of the session was $170 and took place on mid-June 2019.
  The friendly discussion lasted for over 1 hour 15 minutes.
- She has requested anonymity, so she will be referred by the alias "Jane".
  She is a Registered Psychologist and works with people needing assistance with a wide range of issues including:
  - confidence and **self-esteem problems**
  - post-traumatic stress,
  - depression,
  - anxiety,
  - obsessive-compulsive behaviours,
  - grief and loss issues,
  - relationship difficulties,
  - gender identity issues,
  - and substance dependence issues,
  - panic and phobias,

23.2. Key notes/extracts

- The key part of the discussion revolved around this diagram which is contained in TOS section 4 and shown here:



- Some of her comments included:
    - "When I read that, my reaction to that is: Wow, I too have read things about evolution and this is such a **negative slant** on what I have read on evolution" 12:11 (time on audio recording)
    - "To me this looks like a collection of the most negative slants you can put on a discussion of evolution. I would be very surprised if a teacher got up and said verbatim" 12:32
    - "When I look at the whole of that paragraph in that box.
      To me it has a very negative feel" 14:44
    - "Let's move onto the next bit which says
      'You're the end result of a mindless, purposeless, unguided process'…
      to me that sounds so negative"16:32
    - "I would be surprised if any teacher would make it exactly as that whole block because **to me is sounds so negative**. It's like picking out the most negative stuff… I would say it's an amazing process where the laws of physics have contributed to molecules coming together…" 18:30
    - "I don't feel negative about this stuff.
      So when I read it I think '**Oh my gosh that seems so negative**".20:23
    - "I look at that [diagram above] and I think – oh my goodness,
      that sounds so negative" 23:50
    - "But do I think that paragraph as a whole puts a negative slant on something something that I find as a wonderful fascinating process ….I find it wonderful and exciting. I don't find it negative.
      But that [paragraph above] **feels negative when I read the whole thing**"26:54
    - "To me it [paragraph] **has such a negative feel about it**" 27:37

- Theo: "If a teacher was to stand up and say that to your children..would you be concerned. Do you think it would have a deleterious impact on at least a proportion of the children"
    - "I don't know. That's hypothetical.
      It's quite possible. It's quite possible" 28:42
    - "**This feels so negative to me**. … I feel information has been edited to produce this."37:59
    - "When in all the time though Theo that I was taught evolution in high school, ..I never came across any lecturer or teacher who put it that put it in a way that sounded as negative as that sounds…
      that [statement by teacher above] **sounds really negative to me**." 41:53
    - "I can only give you my impression. …
      and say it [teacher statement] **sounds negative to me**"43:06

23.2.1. Key points/ net conclusions

- Jane is an atheist and reasonably well informed evolutionist.
  She says that she personally does not find evolution to be negative and has managed to find a way to inject positive associations with it.
  However, this is regardless of the science and is make believe.
  - She has chosen to **believe** that evolution is something "wonderful" and "amazing" although she was unable to substantiate how or why.
  - These adjectives seem to be based a pre-conceived belief rather than rational scientific thought and does **not** take into consideration what is in the textbooks.
- She clearly feels that the teacher statement to the class is "**very negative**". She re-iterated this many times. Since the statement is very "negative", then the impact on students will also be "negative".
- She asserts that no teacher would make that statement because it is "so negative." This is the reaction of many people and they are largely correct that most teachers would not state it so plainly and bluntly. But this **is** what the textbooks contain in a fragmented, sugar coated manner. The fact that teachers and textbooks go to great length to sugar coat macro-evolution clearly indicates that if/when it is stated plainly – that it is very negative with deleterious impact on the emotions and psychology of students.
- She **believes** that the statement mis-characterizes macro evolution; although she could not say how. When pressed to identify what part of the teacher statement was incorrect – she could not.