

Topics: (linked to Science Understanding areas)

Biological Sciences – Cells; The Body; Genetics

Additional: Careers; Technology

Concepts: (linked to Science Understanding - South Australia's Leading Learning Resource)

Biological Sciences – Form & Function

- Yr R	- Yr 1	- Yr 2	- Yr 3	- Yr 4	- Yr 5	- Yr 6	- Yr 7	- Yr 8	- Yr 9	√ Yr 10
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Word Count: 531

Content:

<https://australiascience.tv/new-form-of-dna-found-in-human-cells/>

Ground breaking discovery of a new form of DNA has been found in living human cells for the first time. This resource can be used to delivery Year 10 Biological Sciences curriculum, ([ACSSU184](#)) looking at how DNA passes along genetic traits and how this new form perhaps works to switch various traits 'on & off'.

How this could be used in a classroom setting (Linked to Science Inquiry Skills):

(Number denotes intended year level linked to SHE. No number denotes potentially any year level)

- ✓ **Questioning and predicting:**
 - What do you think the future impact of this knowledge might be?
 - Can you think of any new career opportunities that might be developed in future with this new discovery in mind?
- ✓ **Evaluating:**
 - Do you think this is worthwhile research to be looking into? Justify your arguments.
- ✓ **Communicating:**
 - Explain what the new discovery about DNA is in your own words.
 - How does this impact our understanding of transmission of heritable characteristics?
 - What are the technological advances that have made this discovery possible?
 - In what way does this discovery meet the values & needs of contemporary society?
 - Why would this research be undertaken – whose or what needs is it meeting to enable it to be funded?

How this meets the Science National Curriculum on the strand: 'Science as a Human Endeavour'



Year 6	
Year 7	
Year 8	
Year 9	
Year 10	<p>Nature and development of science</p> <ul style="list-style-type: none"> Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community (ACSHE191) - <i>investigating the development of the Watson and Crick double helix model for the structure of DNA; investigating the history and impact of developments in genetic knowledge</i> Advances in scientific understanding often rely on technological advances and are often linked to scientific discoveries (ACSHE192) - <i>recognising that the development of fast computers has made possible the analysis of DNA sequencing, radio astronomy signals and other data</i> <p>Use and influence of science</p> <ul style="list-style-type: none"> People use scientific knowledge to evaluate whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities (ACSHE194) - <i>investigating the applications of gene technologies such as gene therapy and genetic engineering</i> Values and needs of contemporary society can influence the focus of scientific research (ACSHE230) - <i>considering the use of genetic testing for decisions such as genetic counselling, embryo selection, identification of carriers of genetic mutations and the use of this information for personal use or by organisation such as insurance companies or medical facilities</i>