

YEAR 7 Human Technologies: Unit 1 - Technologies for Thinking

Achievement Standard:

In Year 7, students are introduced to the notion of human technologies as all aspects of their lives. **Students become aware of technologies as material, physical, social, cognitive tools used to develop self – identity and foster personal growth in independent and collaborative endeavours. The concept of a growth mindset is the vehicle for helping students develop personal goals and to see thinking as a learnt technology that helps them to thrive.** Students are explicitly taught collaborative behaviours linked to 21st Century Skills. They learn the processes and skills required to approach challenges with others in effective and productive ways by maximising personal and group strengths. They are tasked to think critically by generating and defending claims when exploring community and global issues. During the first year of the course, students are challenged to view themselves as collaborative and self-aware Global Citizens who are well equipped to force positive change.

Unit Specific Information *[various forms e.g. assessment focus, context, etc]*

We are learning to build and expand our intelligence by learning how the brain works. We will be able to demonstrate the attitudes, skills and habits of effective learners.

In this unit students will cultivate a growth mindset by expanding their understanding of human intelligence and strengthening their capability to use technologies for thinking. Students will learn how the brain changes with learning and how they can use brain based study strategies to accelerate their own progress. They will focus on how intelligence is accelerated through human technologies by exploring human development through time. Students will focus on human technologies as a set of cognitive, social, material and spiritual tools that are acquired through communication and learning.

Students will engage in Carol Dweck's Brainology Program which is aimed to build students' confidence, fulfilment, and achievement through understanding expandable intelligence.

Guiding Questions:

- How does the brain work?
- How can we strengthen the brain and build intelligence?
- What are human technologies?
- How have human technologies enabled and accelerated human development?
- Why do mindsets matter?
- How can I cultivate a growth mindset?
- What are the conventions of an Online News Article?

Assessment Details:

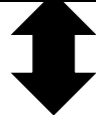
Online News Article which explains a key technology in the rapid evolution of human civilisation. Students will demonstrate an understanding of the generic and presentation features of an Online News Article

Conditions:

- 4 weeks' notice of task
- Planning to be submitted
- 6 lessons in class
- Teacher input on planning and drafting
- Length: 250 – 350 words

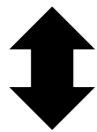
READING / VIEWING/ LISTENING:
Core Text 1: You and your Brain Reading
Core text 2: You can grow your intelligence

COMPREHENSION SKILL FOCUS:
Determining Importance
Concept Map/Power Note



THINKING:

Explain
Create
Interpret



WRITTEN TEXT with images
Online News Article

HIGHLY VALUED LANGUAGE FEATURE FOCUS:
Elaborating clauses.

Priority Standards

| | Knowledge | Communication |
|---|--|---|
| 3 | I can select and develop subject matter to explain human development of a human technology in an Online News Article. | I can communicate meaning effectively and influence audiences. I can construct an Online News Article. |
| 2 | <p>Recognise or recall key vocabulary and concepts</p> <ul style="list-style-type: none"> • Brain Structures and Functions [neuron, dendrites, axon, synaptic buttons etc.] • Evolution • Human Technologies • Accelerated • Mindset • Intelligence • Strategy • Thinking • Online Article • Network • Digital Project <p>Perform basic processes such as:</p> <ul style="list-style-type: none"> • Identifying historical, current and future technologies. • Defining historical, current and future technologies. • Describing historical, current and future technologies. • Identifying the development of human intelligence. • Defining the development of human intelligence. • Describing the development of human intelligence. | <p>Recognise or recall key vocabulary and concepts</p> <p>Passive voice, one sentence per paragraph, third person, headline, byline, content update, image with caption, key points, secondary information, breakout box.</p> <p>Perform basic processes such as:</p> <ul style="list-style-type: none"> • applying appropriate: verbal and written communication to communicate meaning • apply spelling, grammar and sentence structure that conveys the intended meaning • Construct an online news article that has: <ul style="list-style-type: none"> - Passive voice - One sentence per paragraph - Third person - Headline - Byline - Content update - Image with caption - Key points - Secondary information - Breakout box |

| Learning Goals: | | | |
|--|--|---|---|
| Segment and Key Questions | Strand and Sub-Strands | Kirwan High Goals – Students will know and/or be able to: | |
| How does the brain work? - Structure and functions of the brain | <ul style="list-style-type: none"> Knowledge: The development of human intelligence Thinking Routines: Comprehension | <ul style="list-style-type: none"> The regions of the brain and their functions | <ul style="list-style-type: none"> Use thinking routines to develop an understanding of key learning throughout the unit. <ul style="list-style-type: none"> - Students can identify the thinking routine used. - Students can invent and employ strategies appropriate to context and purpose. |
| How do we strengthen the brain and build intelligence? | <ul style="list-style-type: none"> Knowledge: The development of human intelligence Thinking Routines: Cognitive Strategies | <ul style="list-style-type: none"> Understand that neuronal pathways are developed through learning and experience The brain changes and that you can actively change the brain Collaboration is a key part of successful learning | |
| What are human technologies? | <ul style="list-style-type: none"> Knowledge: Historical, current and future technologies Knowledge: The development of human intelligence Thinking Routines: Comprehension and Critical Thinking | <ul style="list-style-type: none"> Define human technologies [cognitive, social and material tools] A range of examples of human technologies Patterns of human technologies across the world [river civilisations] We exist as products of our context, culture and belief system The role of human technologies of a 21st Century teen | |
| How have human technologies enabled and accelerated human development? | <ul style="list-style-type: none"> Knowledge: Historical, current and future technologies Knowledge: The development of human intelligence Thinking Routines: Comprehension and Critical Thinking | <ul style="list-style-type: none"> The theory of evolution Evolution of tool and the evolution of the human brain [Based on the premise that - Humans find ways to be more effective and innovative in order to survive, progress and improve] | |
| Why do mindsets matter? How can I cultivate a growth mindset? | <ul style="list-style-type: none"> Knowledge: The development of human intelligence Thinking Routines: Cognitive Strategies [Metacognition] Collaboration: Understanding and Controlling Oneself | <ul style="list-style-type: none"> The zone of proximal development Dispositions of Growth Mindset and Fixed Mindset | |

| | | | | |
|--|---|--|---|---|
| <p>What key moments in history have contributed to the rapid evolution of human civilisation?</p> | <ul style="list-style-type: none"> • Knowledge: Historical, current and future technologies • Knowledge: The development of human intelligence • Thinking Routines: Creative Thinking • Collaboration: Perspective Taking | <ul style="list-style-type: none"> • Agricultural Revolution • Communication and storage of knowledge and [humans evolve through socialisation and collaboration] • How medical advances have enabled the continued survival of the human population [link to knowledge about the brain and how this has improved our ability to think] • How data is transmitted and secured in networks. | <ul style="list-style-type: none"> • Compare, contrast and evaluate the impacts of key moments in human development • Predict the future technologies and their influence on human development • Distinguish between different types of networks. | |
| <p>The Conventions of an Online News Article</p> | <ul style="list-style-type: none"> • Communication | <ul style="list-style-type: none"> • Generic Structure of an Online News Article • Presentation elements of an Online News Article | <ul style="list-style-type: none"> • Plan a Digital Project • Plan and manage projects that create and communicate ideas and information collaboratively online, taking safety and social contexts into account. • Create an Online News Article which explains a key technology • Use appropriate language conventions (third person, passive voice, one sentence per paragraph) | |
| <p>Possible Habit of Mind: <i>Persisting</i></p> | | | | |
| <p>Exploring Meaning of the HOM By the end of this unit students will be able to:</p> <ul style="list-style-type: none"> • | <p>Expanding Capacity for using the HOM By the end of this unit students will be able to:</p> <ul style="list-style-type: none"> ✓ <i>Use strategies to help them achieve mastery [memory processes, growth mindset, study skills and strategies to cope with stress]</i> | <p>Increasing Alertness for the HOM By the end of this unit students will be able to:</p> | <p>Extending Values of the HOM By the end of this unit students will be able to:</p> | <p>Building Commitment towards the HOM By the end of this unit students will be able to:</p> |

| | | | | |
|--|--|--|---|---|
| General Capabilities: This unit provides opportunities for students to engage in following capabilities: | | | | |
| Literacy ✓ Comprehending texts through listening, reading and viewing ✓ Composing texts through speaking, writing and creating ✓ Text knowledge <input type="checkbox"/> Grammar knowledge ✓ Word knowledge ✓ Visual knowledge Numeracy <input type="checkbox"/> Estimating and calculating with whole numbers <input type="checkbox"/> Recognising and using patterns and relationships <input type="checkbox"/> Using fractions, decimals, percentages, ratios and rates <input type="checkbox"/> Using spatial reasoning <input type="checkbox"/> Interpreting statistical information Using measurement | | ICT <input type="checkbox"/> Applying social and ethical protocols and practices when using ICT <input type="checkbox"/> Investigating with ICT <input type="checkbox"/> Creating with ICT <input type="checkbox"/> Communicating with ICT <input type="checkbox"/> Managing and operating ICT Critical and creative thinking ✓ Inquiring - identifying, exploring and organising information and ideas ✓ Generating ideas, possibilities and actions ✓ Reflecting on thinking and processes ✓ Analysing, synthesising and evaluating reasoning and procedures | | Personal and social capability ✓ Self-awareness ✓ Self-management <input type="checkbox"/> Social awareness <input type="checkbox"/> Social management Ethical understanding <input type="checkbox"/> Understanding ethical concepts and issues <input type="checkbox"/> Reasoning in decision making and actions ✓ Exploring values, rights and responsibilities Intercultural understanding <input type="checkbox"/> Recognising culture and developing respect Reflecting on intercultural experiences and taking responsibility |
| Cross Curriculum Priorities: | | | | |
| <input type="checkbox"/> Aboriginal and Torres Strait Islander histories and cultures | | <input type="checkbox"/> Asia and Australia's engagement with Asia | | <input type="checkbox"/> Sustainability |
| Resources: | | | | |
| ○ ○ ○ | | | | |
| Differentiation [for small groups or individuals]: | | | | |
| Possible Habit of Mind: | | | | |
| Exploring Meaning of the HOM By the end of this unit students will be able to: | Expanding Capacity for using the HOM By the end of this unit students will be able to: | Increasing Alertness for the HOM By the end of this unit students will be able to: | Extending Values of the HOM By the end of this unit students will be able to: | Building Commitment towards the HOM By the end of this unit students will be able to: |
| General Capabilities: This unit provides opportunities for students to engage in following capabilities: | | | | |
| Literacy <input type="checkbox"/> Comprehending texts through listening, reading and viewing | | ICT <input type="checkbox"/> Applying social and ethical protocols and practices when using ICT | | Personal and social capability <input type="checkbox"/> Self-awareness <input type="checkbox"/> Self-management |

| | | |
|---|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Composing texts through speaking, writing and creating <input type="checkbox"/> Text knowledge <input type="checkbox"/> Grammar knowledge <input type="checkbox"/> Word knowledge <input type="checkbox"/> Visual knowledge <p>Numeracy</p> <ul style="list-style-type: none"> <input type="checkbox"/> Estimating and calculating with whole numbers <input type="checkbox"/> Recognising and using patterns and relationships <input type="checkbox"/> Using fractions, decimals, percentages, ratios and rates <input type="checkbox"/> Using spatial reasoning <input type="checkbox"/> Interpreting statistical information <input type="checkbox"/> Using measurement | <ul style="list-style-type: none"> <input type="checkbox"/> Investigating with ICT <input type="checkbox"/> Creating with ICT <input type="checkbox"/> Communicating with ICT <input type="checkbox"/> Managing and operating ICT <p>Critical and creative thinking</p> <ul style="list-style-type: none"> <input type="checkbox"/> Inquiring - identifying, exploring and organising information and ideas <input type="checkbox"/> Generating ideas, possibilities and actions <input type="checkbox"/> Reflecting on thinking and processes <input type="checkbox"/> Analysing, synthesising and evaluating reasoning and procedures | <ul style="list-style-type: none"> <input type="checkbox"/> Social awareness <input type="checkbox"/> Social management <p>Ethical understanding</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understanding ethical concepts and issues <input type="checkbox"/> Reasoning in decision making and actions <input type="checkbox"/> Exploring values, rights and responsibilities <p>Intercultural understanding</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recognising culture and developing respect <input type="checkbox"/> Interacting and empathising with others <input type="checkbox"/> Reflecting on intercultural experiences and taking responsibility |
|---|--|---|

Cross Curriculum Priorities:

| | | |
|---|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Aboriginal and Torres Strait Islander histories and cultures | <ul style="list-style-type: none"> <input type="checkbox"/> Asia and Australia's engagement with Asia | <ul style="list-style-type: none"> <input type="checkbox"/> Sustainability |
|---|--|---|

Differentiation [for small groups or individuals]: