FUTURE ANYTHING

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ACTIVATE 2023
UNIT OVERVIEW
TECHNOLOGY X

FUTURE ANYTHING: ACTIVATE 2023 | TECHNOLOGY X UNIT OVERVIEW

L	Title	Learning Goals	Success Criteria	Exit Ticket Portfolio Assessment items *	Future Capabilities	Key Activities	Teacher Tips and Advice
1	The Beginning	We are learning to understand the shape of the Future Anything Activate program through the exploration of the Driving Question. We are learning to understand the Future Capabilities that underpin the Activate program.	Use what you know to complete a mini, tech-based challenge. Use what you know to outline the Future Capabilities and identify when they are being used.	▲ Annotated Sketch of 'Tech-ified' School Area ▲ Mini Challenge Rating Card	Communication Critical Thinking Problem Solving Creativity and Innovation Project Management	▲ Mini Challenge: 'Tech-ified' School Area ▲ Future Capabilities PPT ▲ **Future Anything Pre-Program Survey** ▲ Mini Challenge Reflection	This lesson is centred around a mini, tech-based challenge that requires students to pick an area of the school to 'tech-ify'. We recommend starting this lesson by having students physically walk around the school to determine the area that they want to focus on. Then, they will work in small groups to generate a way to use technology to make that area of the school better. This mini challenge is a great way to launch the Activate program, introduce students to the Driving Question, as well as have them experiment with using the Future Capabilities. NOTE: Teachers will need to determine the winning team of the mini, tech-based challenge in this lesson. Ensure all students complete the Pre-Program survey - this will help us feed back to you on their learning! You should also complete the **Teacher Pre-Program Survey** at this point.
2	Tech in the Past	We are learning to understand how technology has evolved throughout the last 100 years.	Use what you know to gather insights about the evolution of technology in transportation, manufacturing, health and communication since 1923.	▲ Technology Over Time Activity	Critical Thinking Communication	▲ Technology Inventory Template ▲ Technology Over Time Activity ▲ Optional: Create a GIF showing the change in one technology over time.	This lesson is focused on broadening students' understanding of what constitutes technology and how it is more than just electronics. Students will be guided to explore how technology has evolved over the past 100 years by focusing on what technology has been used for transportation, manufacturing, health and communication since 1923. You may choose to break this activity into parts and have small groups investigate each topic, then report back to the class. The optional activity asks students to create an animated GIF that shows the change in a single technology over time. You may need to check if these websites are available in your context. For more GIF makers (and heaps more amazing tech tools check out **The Teacher's Guide to Tech**)

3-4	Tech in the Present	We are learning to understand the current trends in technology. We are learning to dive deep into a current tech trend that interests us.	Use what you know to share insights about different trends in technology. Use what you know to create a mini game that teaches others about a current tech trend.	^ Trend(ing) Matrix ^ Tech Trend Deep-Dive	Creativity and Innovation Project Management	^ Tech in the Present PowerPoint ^ Trend(ing) Matrix ^ Tech Trend Deep-Dive ^ Tech Trend Mini-Game	This lesson block is focused on having students explore current trends in technology related to drones, robotics, AI, VR, AR, wearables, Web3, blockchain and cryptocurrency (or another verified by the teacher). Students will be introduced to each of these trends and then, they will be required to investigate one of these trends in small groups and create a mini game to teach their peers about the trend that they have been assigned. If you have access to any innovative tech facilities within the school or outside the school (i.e. a local business that uses innovative tech), it would be really valuable to organise a site visit/tour during this lesson block.
5-6	Tech in the Future	We are learning to understand how technology will evolve in the next 100 years We are learning to understand the conditions that make creativity and divergent thinking possible.	Use what you know to envision how a specific type of technology will evolve in the next 100 years. Use what you know to innovate an area of focus using a specific type of technology.	^ Mini Design Brief	Critical Thinking Creativity and Innovation Communication	^ Students will select a card from the Tech Cards Deck and engage in a group ideation around the future of this tech ^ Arrange ideas into a timeline, and add any missing ideas ^ Choose a Focus Area card and create a timeline showing the past and future of this area ^ Mini Design Brief	In this lesson, students will practice ideating using a chosen tech area (e.g robotics, AI, VR etc.). Use the tech cards to ensure a variety of different areas are explored (these could be student choice or lucky dip). They will then dig into the history and possible futures associated with a focus area (such as manufacturing or education). Then, students will be guided to use their chosen Tech Card to specifically innovate their chosen Focus Area in the next 12 months. They will complete a mini design brief to communicate their idea. You may want to simplify this final activity – consider having students create an Elevator Pitch to share their idea in 60 seconds.
7	Tech Gone Wrong	We are learning to understand the challenges associated with technology.	Use what you know to share insights about privacy and security issues related to technology. Use what you know to complete an audit of your data stored on technology platforms and devices.	^ Challenges of Technology Template	Critical Thinking Problem Solving	^ Ideate Tech Challenges ^ Case Study – Optus ^ Debate – ethical technology issue ^ Technology Audit	In this lesson, students will explore the ethical challenges of technology, especially those challenges related to an individual's privacy and security. They'll do this by considering the challenges that they've experienced with technology, as well as the challenge they've witnessed other people experience with technology. Then, they will explore a 'comprised data' case study and consider how they would navigate this. They will also be guided to complete an audit of their own 'data', which is housed on technology platforms and devices. The debate activity requires you to set a debate topic. You might choose to provide several topics so students work in small groups rather than as a whole class. Potential topics include: - Personal privacy is more important than national security - Artificial intelligence causes more harm than good - Remote work has ruined work life balance Find more ideas **here.**

8	Tech For Good	We are learning to understand how technology can be used to solve global problems.	Use what you know to outline what the United Nations' Sustainable Development Goals are. Use what you know to source examples of tech-based start ups and/or solutions that are addressing the Sustainable Development Goals.	• Tech x SDG Bingo Card	Critical Thinking Problem Solving Communication	• Solar Windows case study • Tech x SDG Bingo Activity • Elevator pitch – best tech invention for good	In this lesson block, students will be introduced to the United Nation's 17 Sustainable Development Goals (SDG). A solution to the 'wedding cake' starter activity can be found **here**. They will consider an example of tech for good with the Solar Windows video. Then, they will play Tech x SDG Bingo by finding an example of a tech-based start-ups and/or solution that addresses each of the SDGs. NOTE: There are five different versions of the Tech x SDG Bingo Card so we recommend that teachers print a few copies of each card out so that students are completing different cards and sourcing a variety of examples. The last activity asks students to choose one of the tech solutions they discovered and pitch it back to the class. Provide opportunities for them to do this in small groups.
9	The Entrepreneur's Odyssey	We are learning to appreciate how our past has informed our present; creating personalised areas of expertise and authenticity. We are learning to build a profile to help us understand who we are; our strengths and weaknesses; likes and dislikes.	Use what you know to build a learner profile Use what you know to share insights about yourself with a partner	• Learner profile avatar presentation	Communication Critical Thinking	• Introduction to the Entrepreneur's Odyssey Video • Various Activities - student choice • Avatar creation and sharing via presentation (PowerPoint, Video, Tik Tok, etc)	This lesson is the beginning of the Entrepreneur's Odyssey, where students being an exploration of the Driving Question. This lesson focuses on Step 1, where students gather insights about themselves via quizzes, reflections and other activities. You are welcome to draw from what already happens in your school context (e.g. pastoral care or similar). If an activity is not hyperlinked, then it is a Future Anything resource and will be available in the Learner Profile resource folder. Students are prompted to create an 'Avatar' of themselves, which highlights their strengths, interests and collaboration style. Ensure you plan time to share their insights with others – this is an important part of the process.
10	What matters to me?	We are learning how to connect our lived experiences with global issues.	Use what you know to choose the top three 'wicked problems' that you are passionate about solving. Use what you know to ensure your chosen problem is connected to your lived experience.	• A shortlist of problems that you have tested using the choosing your problem matrix • A (tentative) problem and group	Problem Solving Creativity and Innovation	• Problem Ideation PPT - ideating 50+ problems in the world. • Choosing 3-5 wicked problems. • Using your problem matrix to check alignment with self and select problem. • Connect with other people with similar interest in problems.	The focus of this lesson is for students to generate a range of 'wicked' problems using the SDGs as prompters in the Problem Ideation PPT. Once students have ideated a range of potential problems, they will be guided to choose 3-5 problems that jump out to them and then, they will take each problem through a problem matrix. They will use the problem matrix to determine which problem they want to focus on and then, they will close this lesson by connecting with students who have chosen a similar problem focus.

11	Why does it matter?	We are learning to describe the causes, consequences, scope and impact of a chosen problem. We are learning to understand the other solutions that tackle the chosen problem using technology.	Use what you know to explain the causes, consequences, scope and impact of a problem. Use what you know to complete a one-page summary of your chosen problem. Use what you know to complete an existing solutions inventory.	▲ The Domino Effect Template* ▲ Problem Deep-Dive Workbook* ***NOTE: By the end of this lesson, students will have gathered the necessary content for Part 1 (Project Brief) of their Tech Design Folio.**	Problem Solving Critical Thinking	▲ Domino Effect Activity ▲ Problem One-Pager ▲ Existing Solution Database	This lesson is focused on students developing a strong understanding of their chosen problem (because we cannot solve a problem that we know little about). Each group will begin by completing a Domino Effect Activity to flesh out the causes and consequences of their chosen problem. You might choose to complete this activity in a digital space, such as using Miro or OneNote to collaborate. Each group will select a specific cause or consequence of their problem to focus on. They will then need to divide their focus for the remainder of the lesson - half of the group will need to investigate the chosen cause or consequence of the problem and the other half of the group will need to explore the existing solutions in place to solve this problem. We recommend being particularly tuned into students' engagement with their chosen problem and group during this lesson. If students are not focused (or not able to fill their Domino Effect Template), please support them with pivoting from their original problem and group.
12	What could we do about it?	We are learning to understand the conditions that make creativity and divergent thinking possible.	Use what you know to ideate 50+ possible solutions to your problem. Use what you know to pretotype and pitch two possible solutions.	▲ 2 Pretotypes with Peer Feedback* ***NOTE: It is important for students to gather evidence from this lesson, as it will be necessary for Part 2 (Solution Development) of their Tech Design Folio.**	Creativity and Innovation Communication	▲ Solutions Ideation PPT - ideate 50+ possible solutions to your problem. ▲ 2 x Pretotypes ▲ Speed Dating - share pretotypes with another group, provide feedback and vote on the best solution.	In this lesson block, students will be prompted to generate a range of tech-based solutions for their chosen problem. Then, they will be required to select two of their favourite ideas to pretotype. Students will then pretotype their two ideas by completing an annotated sketch or storyboard template to represent each idea (in its early stages). Ensure you provide sufficient time for groups to 'speed date' another team. During this activity, each group will share their two pretotypes, gather feedback and then, decide on their best solution to continue developing as a group. Feedback is essential, and can help steer students away from existing ideas. You might want to invite your Activator to provide feedback at this point, or wait until the prototyping stage.
13	How are we different?	We are learning to understand the importance of solutions that have a clear point of difference.	Use what you know to pinpoint your solution's points of difference.	▲ Points of Difference Canvas* ***NOTE: By the end of this lesson, students will have gathered the necessary content for Part 2 (Solution Development) of their Tech Design Folio.**	Critical Thinking Creativity and Innovation	▲ Point of Difference PPT ▲ Points of Difference Canvas ▲ Check for similar ideas – Optional Competitor Map	The focus of this lesson is for students to ensure that their tech-based solution has a clear point of difference. Students will be guided to ideate a range of ways that they can differentiate their solution and then, they will select 3-4 to weave into their solution. There is a 'Level Down' prompt that prompts students to complete a Competitor Analysis map. If you want to include business viability in your unit, this is a useful activity.

14	Teamwork Makes the Dream Work	We are learning to understand the expectations and requirements of the assessment task. We are learning to use project management skills to set up 'norms' which create a healthy environment for collaboration.	Use what you know to develop a Project Management Plan.	Project Management Plan* ***NOTE: By the end of this lesson, students will have gathered the necessary content for Part 3 (Project Management) of their Tech Design Folio.**	Communication Project Management	Introduce assessment. Project Management Plan	This lesson is centred around setting up the team for success by having each group complete a project management plan where they will be guided to break down the project into key actions steps, assign a person responsible for each of the key action steps and determine a due date for each key action. Ensure that students consider their Collaborative Archetypes when assigning key action items for the project. The tool provided is a Word document, but it is highly recommended that students use an online tool like Notion, Asana or Trello to assign tasks and manage progress.
15 - 16	How can we test it?	We are learning to understand how to use prototyping tools to test our tech-based solutions.	Use what you know to create an advanced prototype.	Completed Prototype	Creativity and Innovation Adaptive Mindset	Choose Your Own Prototyping Adventure: Students select a prototyping method to create a more advanced prototype of their tech-based solution.	In this lesson block, students will be introduced to a range of prototyping tools, such as computer-aided design, wireframing, 3D printing, etc. Then, students will have the opportunity to adapt their pretotype and build a prototype using one (or more) of these prototyping tools.
17	Feedback as fuel	We are learning how to source feedback in a variety of ways.	Use what you know to gather purposeful feedback from users.	Feedback Integration Cards **NOTE: By the end of this lesson block, students will have gathered the necessary content for Part 4 (Prototype Construction) of their Tech Design Folio.**	Creativity and Innovation Adaptive Mindset	Feedback Finder Matrix Choose Your Own Feedback Adventure: Students select a feedback method to further improve their tech-based solution. Feedback Planning Template Feedback Collection Template Feedback Integration Cards	Students will be introduced to a range of feedback methods and they will select a feedback method to engage in once they have built their prototype. The students will close this lesson block by integrating the feedback that they received to finalise their prototype. It is recommended that students gather evidence of the feedback that they received, as well as keep a record of how they used their feedback to improve their solution as this will be required for their tech design folio.
18 - 19	This lesson block has been intentionally left for students to compile Sections 1-4 of their Tech Design Folio, as well as complete their Prototype Justification (Section 5). This time can also be used to complete the optional booster lessons (see below)						

Booster Module 1: Pitching							
B1	The Perfect Pitch	We are learning to understand the structure and delivery of a persuasive pitch	Use what you know to draft your pitch and slidedeck.	Final draft of pitch and slidedeck.	Communication Project Management	Students analyse one of the Future Anything Grand Final Pitch Videos Students go through The Pitch PPT, uses the Future Anything Pitch Cheat Sheet and complete the PPPPA Pitching Template Students create a slidedeck Students gain feedback	Use this booster to support students to create a persuasive pitch. This unit does not focus strongly on a 'Pitch' as the product, but you may wish to include this lesson (or an abbreviated version of it) if students want to develop a pitch. This is an important part of the Future Anything Finals, so this lesson could also be an optional task for groups who are keen to push their ideas further.
Booster Module 2: Strategic Action Plan							
B2	Strategic Action Plan	We are learning to consider the sustainability and longevity of our tech-based solution by exploring areas, such as finance, marketing, ethics and impact.	Use what you know to Use what you know to create a strategic action plan for the implementation of your tech-based solution beyond the Activate Program.	Roadmap Strategic Action Plan Workbook	Communication Project Management Critical Thinking Problem Solving	Students complete a 'roadmap' that assists them to bring their idea to market. They then work through a Strategic Action Plan to set goals, plan their finances, and make decisions relating to marketing and ethics.	This is an optional booster that can be included in the Tech Design Folio submission (see Section 6: Next steps). The Strategic Action Plan will: outline their future goals, establish their financial and marketing strategies, prepare for potential ethical challenges with the implementation of their tech-based solution, as well as clarify their intended, long-term impact.
20	How Do We Bend The Future?	We are learning to understand the importance of reflection.	Use what you know to explain what went well, what didn't go well and what you would do differently to improve.	• Students complete Denouement Handout* • **Student Post Program Survey**	Adaptive Mindset	• Denouement • **Student Post Program Survey** • **Apply for Future Anything National Finals 2023**	This is a great opportunity to reflect on the program. Make sure you complete the **Teacher Post-Program Survey**, and get students to complete the **Student Post Program Survey** so we can provide you will important information about their experience of the program. This is also a great time for you to gather internal feedback from students, teachers, parents and other stakeholders about the project. What worked? What would they love to see next year? Collect these ideas so next year's teachers can continue to grow the program in your school. All Activate students can apply for the Future Anything National Finals **here** to be in with the chance of winning a share of $20K in funding and support to launch their ideas into the real world. Application close on 15 September 2023

AUSTRALIAN CURRICULUM LINKS

Design and Technologies (Year 9 and 10)

- **AC9TDE10K02**: analyse the impact of innovation, enterprise and emerging technologies on designed solutions for global preferred futures
- **AC9TDE10K04**: analyse and make judgements on the ethical, secure and sustainable production and marketing of food and fibre enterprises
- **AC9TDE10K06**: analyse and make judgements on how characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions
- **AC9TDE10P01**: analyse needs or opportunities for designing; develop design briefs; and investigate, analyse and select materials, systems, components, tools and equipment to create designed solutions
- **AC9TDE10P02**: apply innovation and enterprise skills to generate, test, iterate and communicate design ideas, processes and solutions, including using digital tools
- **AC9TDE10P05**: develop project plans for intended purposes and audiences to individually and collaboratively manage projects, taking into consideration time, cost, risk, processes and production of designed solutions

Sustainability (Cross Curriculum Priority)

- **SS2:** Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments.
- **SS3:** Social, economic and political systems influence the sustainability of Earth's systems
- **SW1:** World views that recognise the interdependence of Earth's systems, and value diversity, equity and social justice, are essential for achieving sustainability.
- **SW2:** World views are formed by experiences at personal, local, national and global levels, and are linked to individual, community, business and political actions for sustainability.
- **SD1:** Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems
- **SD2:** Creative and innovative design is integral to the identification of new ways of sustainable living.

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