Technology Projects

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TENZ TECHNOLOGY EDUCATION NEW ZEALAND

Ko wai au

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Icebreaker

Pick a lolly and get into a group of 5 and discuss.

- **Purple**= Favourite animal or plant.
- **Red**= Favourite movie/tv show/book.
- **Yellow**= Favourite cuisine.
- **Orange**= Favourite location in the world/ Favourite location in Aotearoa
- **Green**= Favourite project you have worked on (school or home).

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Developing a project/unit

- Identify the focus
- Selection of a context
- Developing Learning outcomes and differentiated assessment criteria
- Developing learning experiences.

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Key points to planning

- Consider the next steps in learning for your students. Base this on the ‘Indicators of Learning in the support document.
- Recognise an authentic issue, need or opportunity.
- Ask! Is it relevant to your students? Remember innovation is an important part of developing student’s technological literacy.
- What Technological area or areas might your unit cover?
- Most technological developments cover more that one area - is one going to be a focus?
- What context are you going to work in?
- Contexts provide information for unit planning and for students' technological practice.

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- Develop an initial brief.
- Plan and structure the learning that you want to take place. Have some predetermined outcomes. Learning outcomes describe what you want the students to know or be able to do. Make them measurable - then students can be assessed or reported on them.
- Link the achievement objectives to learning outcomes.
- Remember to include components from each of the strands. This will ensure that your students will undertake technological practice and enhance their technological literacy.
- As you write your objectives consider the activities and assessment they will generate.
- Establish assessment criteria and strategies. Base your assessment on the indicators of achievement at the bottom of the matrix pages in the technology support document.
- What will you assess? What are you looking for? What are the criteria for success / achievement? What strategies / tools will you use

Resourcing

- What equipment will you need, do you need outside expertise and do you need to source materials etc.
- Will you be able to teach the Unit? Plan this as if you will. Plan the structure to fit the group of students you have in mind.
- Do they have further learning needs before they get to the desired level of achievement? Consider further learning outcomes for the unexpected learning outcomes.
- Make judgements for students technological practice related to your assessment criteria

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Timelines and Standard pairing

- Term 4 is always busy, try not to include this in your year plan.
- 15-week durations work well if doing x 2 projects.
- If doing one project use clear markers to ākonga when things are due/should be at.
- Try using standards that complement each other e.g:

- L3 Conceptual standard with a prototyping standard AS91610, AS91611 and AS91623 Applied design.

- L3 Material testing with prototyping standard AS91620, AS91611 and CNC AS91622.

- L2 Advanced concepts AS91347, AS91357 prototype and AS91363 Sustainability.

- L2 Special feature AS91344 and some of the above.

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WEEK	CONTENT	Assessments due	DATES
1	Project 1 - Storage Design	Achievement Standard 91047 (1.4) - 6 Credits (Internal)	3 Feb - 7 Feb
2	Investigation	Undertake development to make a prototype to	10 Feb - 14 Feb
3	Investigation	address a brief. Hand in - 29th May	17 Feb - 21 Feb
4	Investigation, Issue, Brief, Specs, Ideation		24 Feb - 28 Feb
5	Ideation		2 Mar - 6 Mar
6	Initial Ideas		9 Mar - 13 Mar
7	Development		16 Mar - 20 Mar
8	Development		23 Mar - 27 Mar
9	Development		30 Mar - 3 Apr
10	Presentation, Working Drawing, Cutting List, Make		6 Apr - 10 Apr
	HOLIDAYS (10th Apr - 26th Apr)		
1	Make	Achievement Standard 91059 (1.22) - 4 Credits (Internal)	27 April - 1 May
2	Make	Demonstrate understanding of basic concepts used to	4 May - 8 May
3	Make	make products from resistant materials.	11 May - 15 May
4	Make	Hand in - 29th May	18 May - 22 May
5	Make, Trialling, Evaluation		25 May - 29 May
6	External Report Week		1 June - 5 June
7	Project 2 - Speaker Design		8 June - 12 June
8	Investigation		15 June - 19 June
9	Issue, Brief, Specs, Ideation		22 June - 26 June
10	Ideation, Initial Ideas		29 June - 3 July
	HOLIDAYS (4th Jul - 19th Jul)		
1	Initial Ideas, Development	Achievement Standard 91057 (1.20) - 6 Credits (Internal)	20 July - 24 July
2	Development	Implement basic procedures using resistant materials	27 July - 31 July
3	Development	to make a specified product.	3 Aug - 7 Aug
4	Development, Make	Hand in -25th September	10 Aug - 14 Aug
5	Make		17 Aug - 21 Aug
6	Make		24 Aug - 28 Aug
7	Make		31 Aug - 4 Sept
8	Make		7 Sept - 11 Sept
9	Make		14 Sept - 18 Sept
10	Make, Trialling, Evaluation		21 Sept - 25 Sept
	HOLIDAYS (26th Sep - 11th Oct)		
1		Achievement Standard 91048 (1.5) - 4 Credits (External)	12 Oct - 16 Oct
2		Demonstrate understanding of how technological	19 Oct - 23 Oct
3	Final week	modelling supports decision making.	26 Oct - 30 Oct
4		Hand in - 16th October	2 Nov - 6 Nov
5			9 Nov - 13 Nov
6			16 Nov - 20 Nov
7			23 Nov - 27 Nov
8			30 Nov - 4 Dec
9			7 Dec - 11 Dec
	HOLIDAYS (10th December - Jan /February 20212)		

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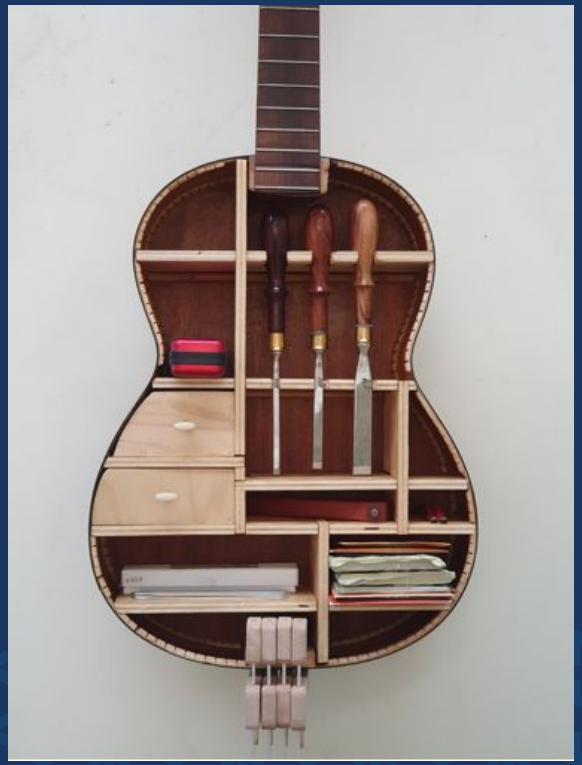
Sustainability Projects



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Going loopy

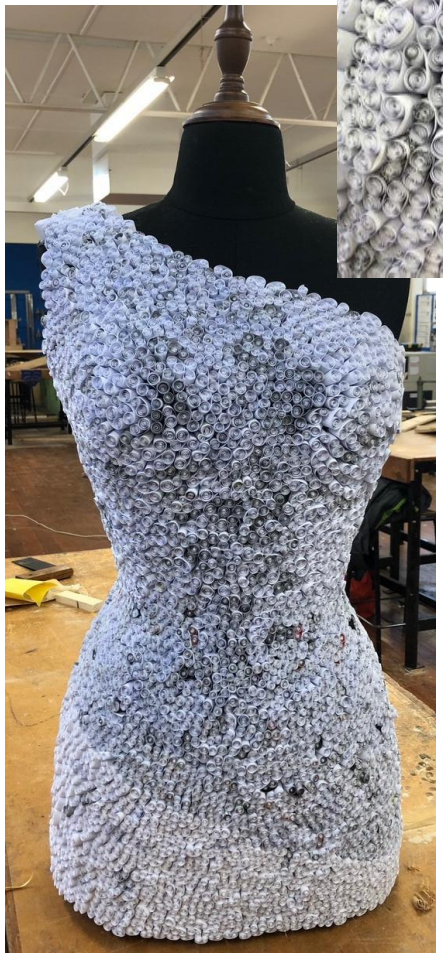
This design is purely conceptual. It has no basis in reality. It was a result of me playing with coils and loops, proportion, fluid, continuous lines and the idea of movement.

The shapes that I have chosen are irregular and asymmetrical –I think this is partly what makes it visually appealing to me. The shape is bizarre, but pleasingly balanced. From all angles it presents different forms, and the eye is drawn to different parts of the costume.

I also like the continuity of the forms- the loops repeat and vary, but also seem to flow into each other. There is no obvious end to the coils. They loop back in on themselves, and then emerge in a different direction. This, I think, adds a visual element to the costume.

Movement is an inherent part of this suit. As the person walks, sections of the suit change shape and the loops bunch together and then stretch out. Notably, the loops on the back of the leg change shape as the knee is bent and then straightened, and the loops underneath the opposite arm change shape as the arm is raised and lowered.

The entire suit is made from rubber, and the coils made from bicycle inner tubes. The inner tubes, when inflated, will hold their shape, while still allowing for movement. Inner tubes also curve readily, and it is easy to achieve complex curves with them. By comparison, working a hard material like wood into these shapes would difficult and time consuming, and would not allow movement.



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FINISHED PROTOTYPE

-FLAT PACKED- -CONSTRUCTED- -IN SITU-



GORILLA
PRO

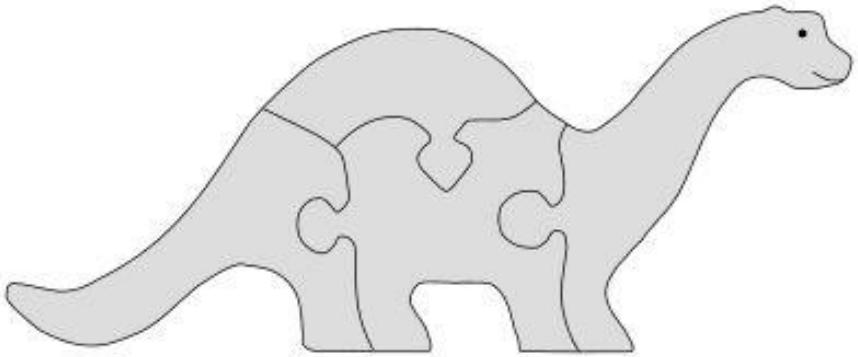


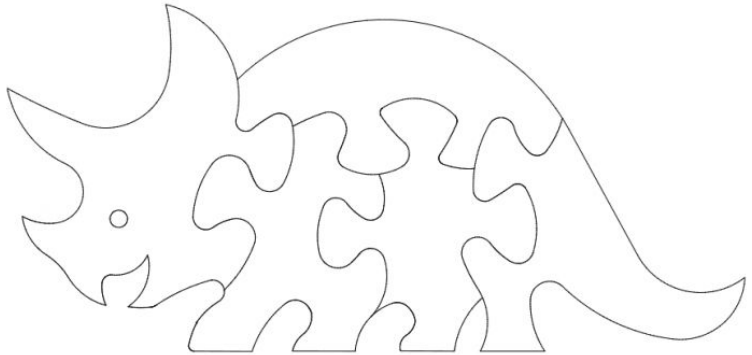






Material Activity- wood veneers





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Questions?

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Ngā mihi
Thank You

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