Design and Technologies Level 5 and 6	Digital Technologies Level 5 and 6
 Investigating Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (VCDSCD038) exploring the steps involved in the process to satisfy a design brief, need or opportunity investigating designed solutions from around the world to make suitable, quality decisions that meet the design brief, challenge or scenario identifying the importance of complementary parts of working, everyday systems by deconstructing the components, structure and purpose of products, services or environments testing a range of materials, components, tools and equipment to determine the appropriate technologies needed to make designed solutions, for example, a moving vehicle investigating how to minimise material use and manage waste by critiquing the environmental and social impacts of materials, components, tools and equipment Planning and Managing Develop project plans that include consideration of resources when making designed solutions VCDSCD042) setting milestones for production processes and allocating roles to team members identifying when materials, tools and equipment are required for making the solution outlining the planning and production steps needed to produce a product, service or environment using digital technologies Generatig generating a range of design ideas for products, services or environments using prior knowledge, skills and research developing atternative design ideas and considering implications for the future to broaden the appeal and acceptance of design ideas to enhance and improve the sustainability of a product, service, environment or system representing and communicating design ideas using modelling and drawin	 Data and Information Collect, access and present different types of data using simple software to create information and solve problems (VCDTDI021) selecting appropriate formats or layout styles to present data as information depending on the type of data and the audience, for example graphs suit data that shows trends or comparisons; lists suit text data that needs to be presented in alphabetical order; animations suit images that show actions and relationships using different techniques to present data as information improving the appearance and usability of data, for example using colour, headings and labelling of images to organise and accurately identify data using software to sort and calculate data when solving problems, for example softing numerical data in ascending or descending order and automating simple arithmetic calculations using nearby cells and summing cell ranges in spreadsheet or database software e exploring different online sources to access data, for example using online query interfaces to select and retrieve data from an online database such as a library catalogue or weather records recognising that all types of data are stored in digital systems and may be represented in different ways such as files and folders with names and icons Individually and with others, plan, create and communicate ideas and information safely, applying agreed ethical and social protocis (VCDTDI02) using a range of online tools to share information and being aware that information may be received at different times, for example adding entries to a class blog, participating in a web conference or online chat with an author, or participating in a forum on a specific topic organising and creating different types of information for sharing and collaborating online, for example nusing all capital letters when expressing a strong viewpoint about a contentious matter and ensuring that the audience is aware of your identity <

•	independently and collaboratively using criteria for success to evaluate processes and planning
	in regard to sustainability considerations
•	evaluating the suitability of materials, tools and equipment for specific purposes
•	reflecting on how well their designed solutions ensure safety and wellbeing of users and
	consumers and meet the needs of communities and different cultures
•	considering the criteria for success in relation to the benefits and costs of production
	processes, the environmental impact, future use and application, and social values and ethics
	of client
•	evaluating designed solutions from a range of technologies contexts with consideration of
	ethics and sustainability

Week/Curriculum	Lesson
3 Design Brief and Groups	Tuning in: The Design Process for New York Public Library Logo 5 mins total
Investigating Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (VCDSCD038) • exploring the steps involved in the process to satisfy a design brief, need or opportunity	 "We are going to watch a short video that shows the design process. Design is another word for creating. Process means the steps. So the Design Process means steps to create something. This is a design process by a graphic designer who created a logo or drawing. Watch Video: https://voutu.be/6 GXiuV-mlo 1m 20s (included in tuning in time) How did the graphic designer know what the New York Public Library wanted? What do you think was one of the things the library wanted in their design? What do you think was one of the things the library wanted in their design? What part of the process shows you this? How did the Library tell the designer what they wanted? We are going to write a Design Brief together, which is exactly how the New York Library would have communicated their requirements for the logo. LI: To write a design brief SC: I can collaborate with my group Whole Class: Design Brief 7mins Mr Bartley has asked Grade 5/6FA to become graphic designers to create new school rules posters. To begin our Design Process we are going to have to write a Design Brief, so we know what to Design. Read out each part of the brief and describe what it needs to include. Ask students to suggest some ideas and write them on the board for reference. Example, Describe the Client: Who wants the design? Who are they? What do they do? Where are they located? Describe the Target Audience: Who will see the design? Where are these people? Communication Need: What design does the client want?

- Purpose: Why is the design needed?
- Context: How will the design be used?
- Constrictions and expectation: page size, colour scheme, inspiration, rules, school logo
- Presentation Format: How will the final design be displayed?

Activity: Jigsaw 20mins

Students are broken up into 5 groups of mixed gender and grade levels. Students discuss and write their part of the design brief on a shared google slide.

Sharing/ Discussion 4mins

Review the Design Brief and on criteria suggested. Make any amendments.

Peer Contribution Assessment 4mins

Students use the final 2 minutes to assess the levels of contribution for each group member. https://drive.google.com/open?id=1-_ImiUnhs1sMESe0Izu6xg8x0usfo1KSbsLo4ehRfhQ

*Design Brief Reference https://helveticamediuma.com/learn/brief/

 4 Research and Brainstorming Investigating Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (VCDSCD038) investigating designed solutions from around the world to make suitable, quality decisions that meet the design brief, challenge or scenario Planning and Managing Develop project plans that include consideration of resources when making designed solutions (VCDSCD042) setting milestones for production processes Data and Information Collect, access and present different types of data using simple software to create information and solve problems (VCDTDI021) Individually and with others, plan, create and communicate ideas and information safely, applying agreed ethical and social protocols (VCDTDI022) 	LI: To research poster design and images that relate to the school rules SC: I can use the 'Yes and' strategy to come up with ideas I can search the web to find simple icons/line drawings and images that relate to my school rule Timeline for Design Solution (9 Parts) Week 4 Research and Brainstorming Week 5 Generation of ideas Week 6 Developing and Refining Week 7 Mock up Week 8 Final Product Submission Week 9 Evaluation against Design Brief Review Design Rules https://docs.google.com/document/d/1IH87ReIJ4W9_bbtGjHYvZdJ46i0kRsQ3r-vgiENOfJc/edit Tuning in: Design Rules https://youtu.be/LK4SqhTZyaU *Model "Yes and" paperclip generating ideas technique Google classroom Task: In your groups decide what you like and dislike about the posters. Collaborate to come up with: • 3 "Nobecause" statements in the Yellow post it note • 3 "Yesand" statements in the Yellow post it note Pink Students to work in pairs to write "Yes and" statements or "No because" statements on the Google Jamboard. https://dive.google.com/open?id=1dqQvYdigZzPtR6nBCdw5VpbhE5Jen9ogRwejupMSHVU&authuser=0 Activity:
	Activity: Students search_to find images related to each of the rules using the search words <u>icon</u> and <u>line drawing</u> . Students can also add photographs of each other acting out the rules. Model to the students how to • Search for images • Copy and paste images • Recolour images to black and white Peer Contribution Assessment 4mins https://docs.google.com/spreadsheets/d/1s_rofcFVj8-HA1szCH62hgfCgkSOL7Ffoii8Ti_4Xz0/edit#gid=0
5 Generation of ideas	LI: To generate as many ideas as possible of picture/icon/text that communicates a school rule

Generating

Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (VCDSCD039)

- generating a range of design ideas for products, services or environments using prior knowledge, skills and research
- representing and communicating design ideas using modelling and drawing standards including the use of digital technologies

Data and Information

Collect, access and present different types of data using simple software to create information and solve problems (**VCDTDI021**)

 recognising that all types of data are stored in digital systems and may be represented in different ways such as files and folders with names and icons

SC: I can look at my research (Jamboard + images)

- I can discuss my ideas with my group using 'yes and' strategy
- I can draw my ideas in thumbhails using a stylus on jamboard
- I can draw my ideas in thumbnails using pencil and paper + photography
- I can number my groups ideas
- I can use jamboard to collage my ideas

Tuning in: "Yes and" strategy for research posters

Play 'Yes and' for how to use a paper clip. Have a student scribe how many ideas the class generates Explain to students how this approach assists in the design process. Even though we did use 'No' comments previous lesson we can still use those to generate ideas.

Show students their ideas from example posters written on a google doc.

Whole class:

Student to work in groups to generate ideas for a school rule. Discuss the meaning of the word generate-creating/making. Explain how coming up with ideas is intimidating/link to the scariness of a blank page. Model to students how to use research from previous session + 'yes and' strategy to draw ideas for a specific rule. Explain that when generating ideas we only want rough ideas, nothing needs to be perfected yet. Model the LI and SC.

• Students to follow groups on spreadsheet on the board

Sharing/Discussion:

Teacher to go through each slide to showcase student ideas. Students are encouraged to use 'Yes and' strategy to build on content. One student from each group to scribe ideas on google sheets using the number of the thumbnail.

Peer review:

Student's to use Google Sheet Review to assess the contribution and efficiency of the group.

6 Developing and Refining

Generating

Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (VCDSCD039)

- representing and communicating design ideas using modelling and drawing standards including the use of digital technologies, for example scale; symbols and codes in diagrams; pictorial maps and aerial views using web mapping service applications
- experimenting with materials, tools and equipment to refine design ideas, for example considering the selection of materials and joining techniques to suit the purpose of a product

https://youtu.be/elgcwY_DGCo grafit tutorial

https://vectr.com/tmp/e6gtg7SMHK/apkVKeluF?modal =welcome

https://www.youtube.com/watch?v=t1LpFn1OHa0 Drawing Faces

LI: To develop a vector graphic for a school rule

SC: I can make a free Gravit account

- I can make my page 29.7 x 42.0 cm
- I can use my thumbnail sketches to create a vector graphic.

Tuning in:

Graphic designers generate as many ideas as possible by using thumbnail drawings. Show example thumbnail drawings. Our thumbnails will be all our sketches that we created last week.

https://docs.google.com/presentation/d/1vivxZRPxntt6RWBy-JxDWKgrFZ6HSe4myQ0fno3uUrM/edit

*Discuss Jamboard "Auto Draw" link

Whole Class: Colour scheme and Gravit

Deciding on a colour scheme- Discuss colours that we think of for Trinity and why <u>https://piktochart.com/blog/inspirational-brand-colors/</u>rgraphic



	 Vote for people style Introduce Gravit graphic design software and it's interface Watch <u>https://www.youtube.com/watch?v=ExMWJ8LTnrw</u> Gravit how to make faces Read LI and SC. Explain that a vector graphic is "Unlike JPEGs, GIFs, and BMP images, vector graphics are not made up of a grid of pixels. Instead, vector graphics are comprised of paths, which are defined by a start and end point, along with other points, curves, and angles along the way. A path can be a line, a square, a triangle, or a curvy shape. These paths can be used to create simple drawings or complex diagrams." <u>https://techterms.com/definition/vecto</u> <u>https://techterms.com/definition/vecto</u> <u>Students work in their grounds to create vector graphics for their school rule. Next session all these graphics will be put together on one poster page.</u>
 7 Mock-up Generating Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (VCDSCD039) analysing and modifying design ideas to enhance and improve the sustainability of a product, service, environment or system 	LI: To develop a vector graphic for a school rule SC: I can allocate something for each person to build with Gravit I can use shapes + cut/paste to build my vector I can follow the Graphic people 'rules' I can keep to the colour palette I can use the font decided. Tuning in: Colour schemes and Colours on the computer https://www.youtube.com/watch?v=-Fs2t6P5AjY Vector Graphics https://www.youtube.com/watch?v=-Fs2t6P5AjY Vector Graphics https://www.youtube.com/watch?v=-AvgCkHrcj90 Watch first 2 minutes LI: To create a mock up (draft) of the final rules poster and explain my group's choices
	SC: I can use a colour scheme I can include each groups graphic rule I can use 1 or 2 fonts I can use a background and adjust transparency I can include the school logo and title I can explain the choices for my mock up "We used a brick background because Trinity has a lot of brick buildings". " I used a check background because the Trinity uniform has check".

8 Final Product Submission	LI:
Pitch and Feedback	SC:
9 Evaluation against Design Brief	LI: SC: