



Digital Technologies - Happiness Project

Learning Objective: To refine by transforming materials to be fit for purpose.

Planning and Curriculum Coverage

Designing and Developing Digital Outcomes PO 3 and PO 4

Progress Outcome 3 for DDDO

In authentic contexts, students follow a defined process to design, develop, store, test and evaluate digital content to address given contexts or issues, taking into account immediate social, ethical and end-user considerations. They identify the key features of selected software and choose the most appropriate software and file types to develop and combine digital content. Students understand the role of operating systems in managing digital devices, security, and application software and are able to apply file management conventions using a range of storage devices. They understand that with storing data comes responsibility for ensuring security and privacy.

Progress Outcome 4 for DDDO

In authentic contexts, students investigate and consider possible solutions for a given context or issue. With support, they use an iterative process to design, develop, store and test digital outcomes, identifying and evaluating relevant social, ethical and end-user considerations. They use information from testing and apply appropriate tools, techniques, procedures and protocols

to improve the quality of the outcomes and to ensure they are fit-for-purpose and meet end-user requirements.

Also:

Technology Achievement Objectives - Technological Products

School Learning Area - Learning Objective: To refine by transforming materials to be fit for purpose

Level Four: Students will: Understand that materials can be formed, manipulated, and/or transformed to enhance the fitness for purpose of a technological product.

Achievement objective

Students will: Understand that materials can be formed, manipulated, and/or transformed to enhance the fitness for purpose of a technological product.

Teacher guidance

To support students to develop understanding of technological products at level 4, teachers could:

- provide students with the opportunity to discuss what is meant by materials being formed, manipulated, and transformed.

Forming refers to bringing two or more materials together to formulate a new material resulting in a different overall composition and structure to that of the original materials. Transforming refers to changing the structure of an existing material to change some of its properties, but in terms of its composition, it remains the same material.

- guide students to understand that for materials to be selected for use in a technological product, their performance properties must align with the desired specifications of the product
- guide students to recognise that during development of a product, specifications are established that will require the manipulation, and in some cases, transformation and formation, of materials
- provide students with a variety of technological products to explore and guide students to identify examples of when materials needed to be manipulated, transformed and/or formed to enable material linked specifications of the product to be met and contribute to the product's fitness for purpose
- provide students with a scenario outlining technical and acceptability specifications for a product and support them to explore and research materials to determine what material would be suitable and how they could be manipulated and/or transformed to meet product specifications
- support students to communicate material related
- details effectively. Material related details include such things as what materials would be feasible and how they would need to be formulated, manipulated and/or transformed. Effective communication uses specialised language and symbols.

Indicators

Students can:

- describe examples to illustrate how the manipulation of materials contributed to a product's fitness for purpose
- describe examples to illustrate how the transformation of materials contributed to a product's fitness for purpose
- describe examples to illustrate how the formulation of new materials contributed to a product's fitness for purpose
- communicate, using specialised language and drawings, material related details that would allow others to create a product that meets both technical and acceptability specifications.

Level Five: Students will: Understand that materials can be formed, manipulated, and/or transformed to enhance the fitness for purpose of a technological product.

Achievement objective

Students will:

Understand how materials are selected, based on desired performance criteria.

Teacher guidance

To support students to develop understanding of technological products at level 5, teachers could:

- guide students to understand that the composition of materials determines what performance properties it exhibits. Composition relates to such things as the type and arrangement of particles that make up the material
- support students to analyse examples of how materials have been selected to gain insight into how this selection relies on understanding the composition of the materials available and using this knowledge to help decide which materials in combination would provide the best "fit" with the product specifications.

Examples should include the material selection practices of technologists.

Indicators

Students can:

- discuss examples to illustrate how the composition of materials determines performance properties
- explain the link between specifications of a product and the selection of suitable materials for its construction
- discuss examples to illustrate how decisions about material selection take into account the composition of the material and the specifications of the product.

Copied and edited from:

<http://technology.tki.org.nz/Technology-in-the-NZC/Technology-indicators/Technological-products-IOPs>

Project:

How Might We make Action for Happiness a part of our school, or classroom practice?

The following resource has existed for a good period of time and provides a good basis for this project.

<http://www.actionforhappiness.org/calendars>



The focus of this project is to develop a database using the calendars as a focus for content, that they can be used to push the content of each day through to the Visual Signage in the hallway at school.

Other ideas,

How could databases/spreadsheets be used to help create individual slides/graphics quickly to be able to deal with this type of data when planning a month or week of activities in the school. Even recreating the document to a weekly focus through design principles and infographics.

Databases

One of the issues that will come up as part of this when dealing with databases, is date formatting.

Dealing with dates... databases and dates, formatting dates, displaying dates and the various formats that cause databases to go askew,

An interesting way to look at this is <https://xkcd.com/1179/>, what other formats have students seen, or dealt with?



Students will need to come up with a way to get the information into the database, as well as possibly think of metatags, filtering that could be used in the future to help other students find activities that could be done to support.

The discussion would help students to explore filtering suggesting as well as how these make databases more easily to function and interpret.

Jan: Happy New Year (general happiness actions)

Feb: Friendly February (key: Relating)

Mar: Mindful March (key: Awareness)

Apr: Active April (key: Exercising)

May: Meaningful May (key: Meaning)

Jun: Joyful June (key: Emotions)

Jul: Jump Back July (key: Resilience)

Aug: Altruistic August (key: Giving)

Sep: Self-Care September (key: Acceptance)

Oct: Optimistic October (key: Direction)

Nov: New Things November (key: Trying Out)

Dec: Kindness Calendar (for advent/festive season)

Another part of this would be using the functions within the database about finding words and the number of instances. Using the wildcard tools(% , * , depending on platform) to find the "Appreciate" and "appreciating" word for example.

Poster design and Development



Decision 1: Layout – Less is more

I consider how many key items I'm dealing with. In this case I had 4 key guidelines so considered:

How a page/slide might be divided in four.

What layouts have I not seen recently – you don't want to many things in your classroom or school looking the same.

Is the target of the work more informative or creative. I keep layout simpler if it's main aim in information.

I decided we had not seen a basic cheque board look recently and the aim of this poster was information., so we kept it simple.

Too much information on one page/slide can overload the viewer and fight against the intentions of the creator.

Decision 2: Style – Pick one and stick to it.

If the style remains constant it is easier to digest the info.

Saying that, you can use style to emphasise or unite key elements. E.g. I use yellow to highlight the key word from each of the 4 guidelines on the poster above.

If you import icons for objects:

try to use a icon sets so they're all the same style, match their line and shape style for other objects.

If you start with a photo, use it's colours for other objects

For colours,



use 3 max (unless doing an actual rainbow effect) + Black and white.

Use either a vertical or horizontal line on the colour pallet – match tone or single colour theme
OR use paletton.com for a 3 colour designer pallet. (see Pic)

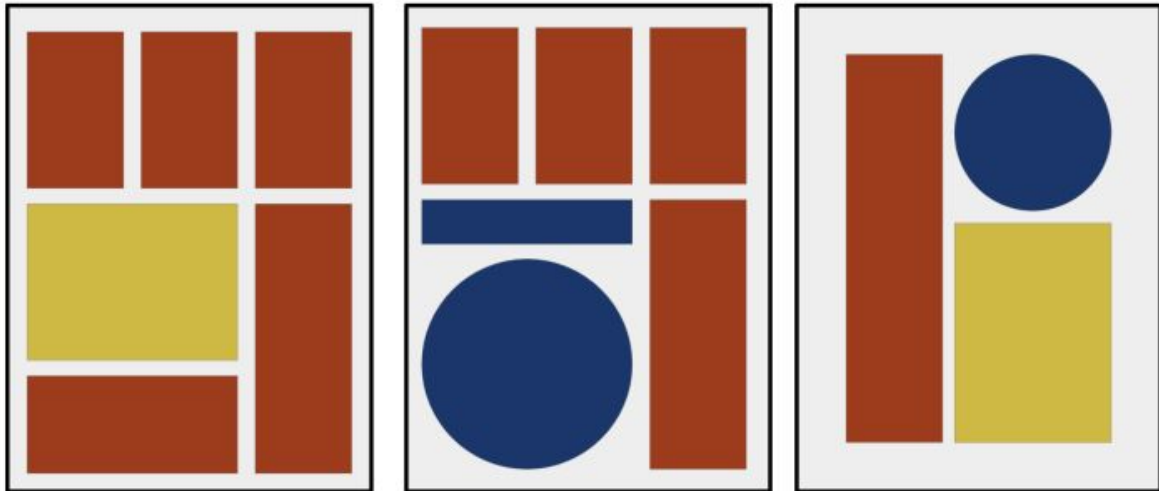
Stick to one line style and width

Don't go crazy with fonts – try to stick to one and make sure it's easy on the eye

For slides, keep to the same colour theme and style. A change of colour or style can accidentally visually imply a change of topic.

Decision 3: Balance objects size and spacing

No matter what's on the page, make sure all the objects, when grouped, create an equal border width around the edge.



Don't use bullets if colour and shapes can divide the info.

Consider how many key statements/elements there are and find an interesting way to divide the area up in a balanced way.

Remember people read left-to-right and top-to-bottom. Think about the order you want people to see things in.

Decision 4 – Quality and thematic images



It's the holidays, so I thought this might be a nice image to go with this resource at the time, maybe not in winter.

Using high-quality images is key to making work look professional.

When people can quickly recognise their work looks like a quality product, teachers and students both enjoy the task much more. Speakers can be taken more seriously if they look visually professional.

Use a good royalty-free image site. Not Google.

I use pixabay.com (There are many more)

Have a creative thought about connecting the meaning of images with your theme. This cocktail on a beach might mean relax or holiday but it also might mean “escape” or “lonely”. Try to match the colours of your graphic to the images you chose. This will help maintain the 3+B&W colour rule.

There you go.

My final rule is “Be inspired by others.” Google “posters” and “infographics” before you start any project and try to copy the ideas of pros.

You'll rarely achieve the same result leaving you with wonderfully unique “ideas of you own.”

Some content copied and reused from

<https://eduwells.com/2018/09/12/4-guidelines-for-making-posters-slides-infographics/> as per CC

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Higher levels

To build on this would be ways for students to input what they have done to show how they have met the different posts each day.

How would they make their own type of system for ongoing daily activities, ie training calendar for sports?

How could a student develop an iCal or iCalendar (not the same thing) program to automatically add these into the days, groups, calendar. - Possibly a CT Progress focus as well?

References:

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<http://technology.tki.org.nz/Technology-in-the-NZC/DDDO-Progress-outcomes-exemplars-and-snapshots> - DDDO Progress Outcomes

<http://technology.tki.org.nz/Technology-in-the-NZC/Technological-knowledge/Technological-products> - teacher Education - Technological Products

<https://xkcd.com/1179/> - XKCD Databases

<http://www.actionforhappiness.org/calendars> - Action for Happiness Calendars 2018