

NEA 2020-21

Here are some examples of work you could produce from Mr Day, Mrs Dix
and Miss Bullock.

Remember you can email them with any questions you may have.

sday@tkasa.org.uk

jdix@tkasa.org.uk

cbullock@tkasa.org.uk

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Design and Technology Component 2

You do not need any other materials.

Instructions

- You must undertake a project in response to one of the contextual challenges, taking into account the needs and wants of the user.
- You should use creativity and imagination when applying iterative design processes to develop and modify designs, and to design and make a prototype.
- You have been provided with three themes, each with two contextual challenges listed. Through your ideas and your final prototype, you will be required to show how you have addressed the contextual challenge.
- You must produce a portfolio and a prototype.
- The portfolio must contain photographic evidence of the manufacture of the prototype.
- Your portfolio must be approximately 20–30 pages (or electronic equivalent).

Contextual challenges

All design and technology happens within a context. It is important for designers to understand the context they are designing within, as this will impact on the wants and needs of users as well as the requirements for the design.

Designers often need to find innovative solutions to design challenges and they look for inspiration from many places to come up with ideas. Often, these design challenges relate to ways in which improvements can be made to the lives or environments in which people live.

Below are three themes, each with two contextual challenges. You must choose **one** contextual challenge to explore and respond to through your assessment project.

Theme 1 Climate Emergency

Contextual challenges

- (a) How can products be used to increase our awareness of the climate emergency?
- (b) How can products be used to promote a more sustainable lifestyle?

Theme 2 Cinemas

Contextual challenges

- (a) How can products be used to encourage people to visit the cinema?
- (b) How can products be used to improve the experience of people at the cinema?

Theme 3 The Coast

Contextual challenges

- (a) How can products be used to preserve wildlife in coastal areas?
- (b) How can products be used to stay safe at the coast?

Context analysis

The first thing you need to do is break down your chosen context using a mindmap or another layout.

<https://www.youtube.com/watch?v=SrHx-bmefSY> - This video has some helpful tips for producing your mindmap.

If you are struggling to get your head around the contexts you may find this video useful.

<https://www.youtube.com/watch?v=iJa9JSVqMEM&t=14s>

Take your time to think about which task you want to complete, it is not possible to swap once you have started.

REMEMBER YOU ARE CHOOSING ONE THEME, THEN ONE CONTEXT ONLY.

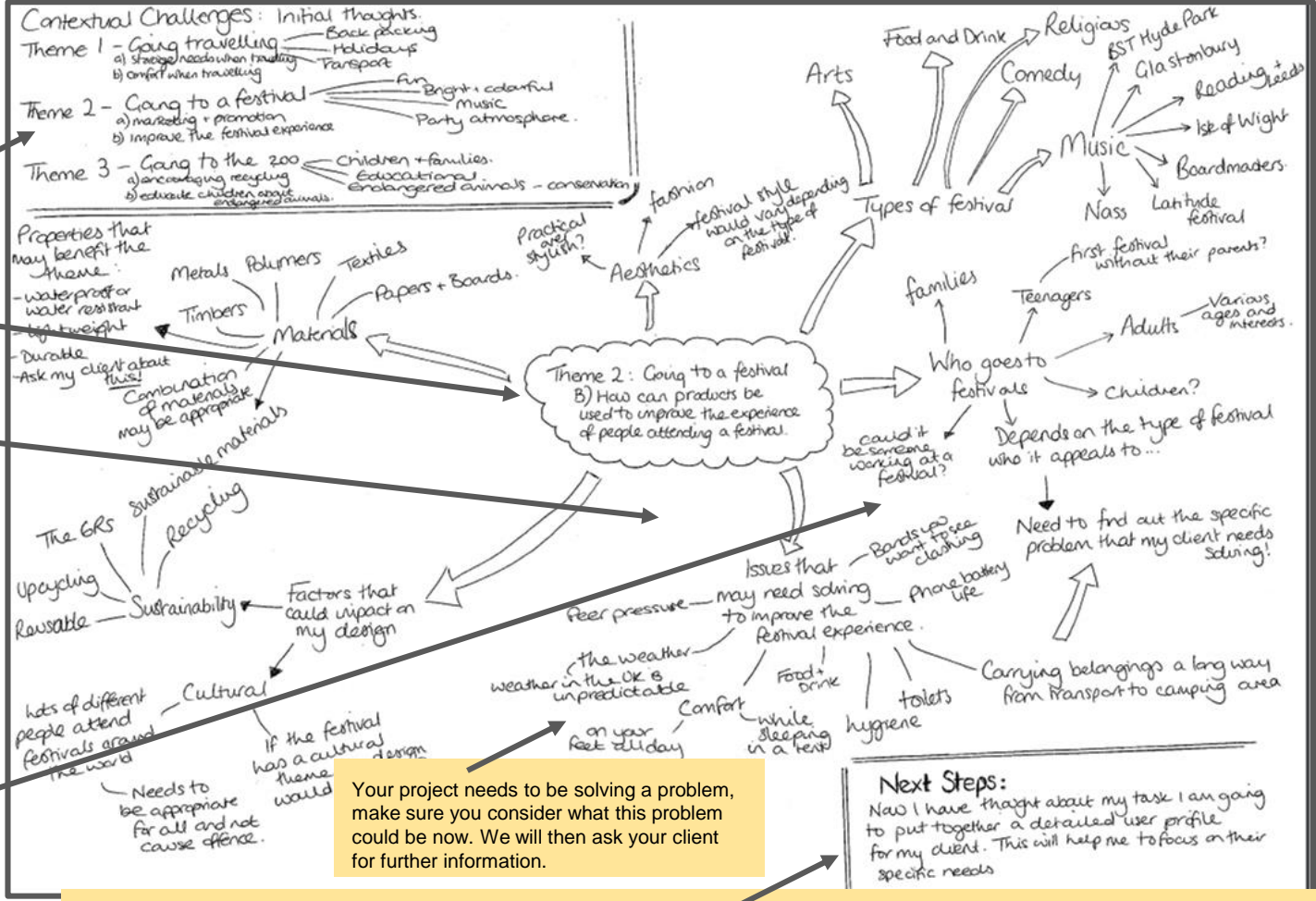
SO FOR EXAMPLE, CINEMA THEME 2, THEN EITHER A OR B.

You may wish to do a quick analysis of all of the contextual challenge before deciding on your chosen one. Please note these are the themes from 2017. You need to use the themes for 2020.

Once you have picked your contextual challenge make this clear on your page

Use a mindmap or a layout of your choice to break up the context. Try to think 'outside the box' and not be too restricted by the wording of the theme. For example in this case it refers to a festival, this doesn't necessarily have to be a music festival, it could be a food and drink festival or festival aimed at children...

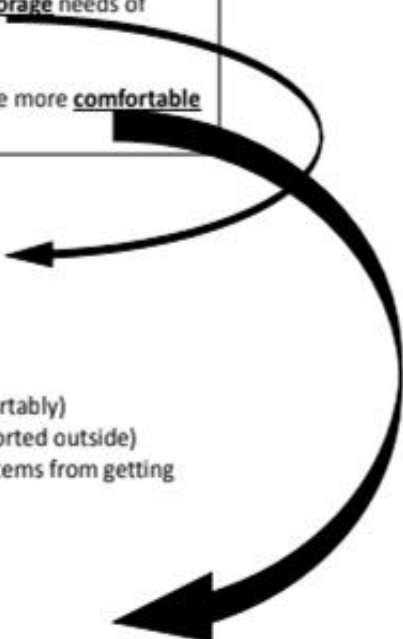
Make sure you are already starting to think about your client. This will be the specific person you are designing for. They will be a focus throughout the whole design process so it is important to get this right and to be happy with your decision.



Your project needs to be solving a problem, make sure you consider what this problem could be now. We will then ask your client for further information.

Next Steps: Explaining what your next step is will show the examiner that you have thought through this process. The next step for everyone will be to research you client. Remember your client needs to be a real person who you have access to for interviews and gathering their opinions either in person or over facetime etc.

Theme 1 -Travelling

- (a) How can products be used to meet the storage needs of people that are travelling
- (b) How can products be used to make people more comfortable when travelling
- 

Travelling storage:

- Light
- Mobile
- Durable
- Large (but small enough to lift comfortably)
- Waterproof (luggage is often transported outside)
- Cushioning on the inside to protect items from getting damaged on the journey

Comfortability

- Handles modelled to your hand or body for comfortable lifting and carrying
- Soft materials on the inside to lessen the impact of your items crashing into the sides

How to travel:

- Bike – Storage needs to clip onto bike or be on your back
- Train
- Walking – Needs to be easy to lift
- Plane
- Car
- Bus

Types of storage:

- Suitcase – Business trip – Black (so no attention is brought to it) – water resistant – secure (Often contains valuables)
- Handbag – Attractive – Small - lightweight
- Wheel-luggage – Needs to be large – Often used on long journeys (Holidays) – Doesn't need to be lightweight (Wheels take the pressure off) – Often colourful plastics (Durable and attractive)
- Rucksack – Water resistant – Comfortable to wear – Many compartments – Very light weight

A different way to present your work.

Next I will analyse theme 2 so that I can access what scenario is my best idea

Possible Problems

- Storage made from plastics have been known to crack in cold weather - Plastics may not be the best material to use for my product when I make it
- Storage made from plastics can crack when under pressure from heavy bags being placed on it – I would need to make my product out of a stronger material when I make it
- Light colours on storage nearly always become discoloured – Create my storage with darker colours would solve this problem
- Handles often break off when travelling a lot with them – The handle would need to be secured on very well
- When travelling by plane flight airport baggage handlers can be very rough with your luggage – The luggage will need to be made out of a strong material
- The box could get damaged from continued use when travelling with the box in the car

A different way to present your work.

My chosen theme is theme 1-going travelling

The contextual challenges are storage needs for travelling and products to make travelling more comfortable.

For storage larger storage compartments should have more sections for different storage uses. Most likely for a longer journey. Or I could do a smaller storage compartment with few sections of storage uses, this would be made for a smaller journey. Is for a day trip, weekend out or a week abroad.

There are several problems that I need to solve which are. Having a balance of not making a storage container too big for a small journey. Or it being too small for a longer journey and not having enough space to put items inside. All necessary items would need to be able to be transported for the right length of journey.

Also not having enough storage space for a long journey and not having too much for a smaller journey.

Questions that could solve problems by user.

What type of transport for travelling?-car, plane, boat, bike, walk or bus.

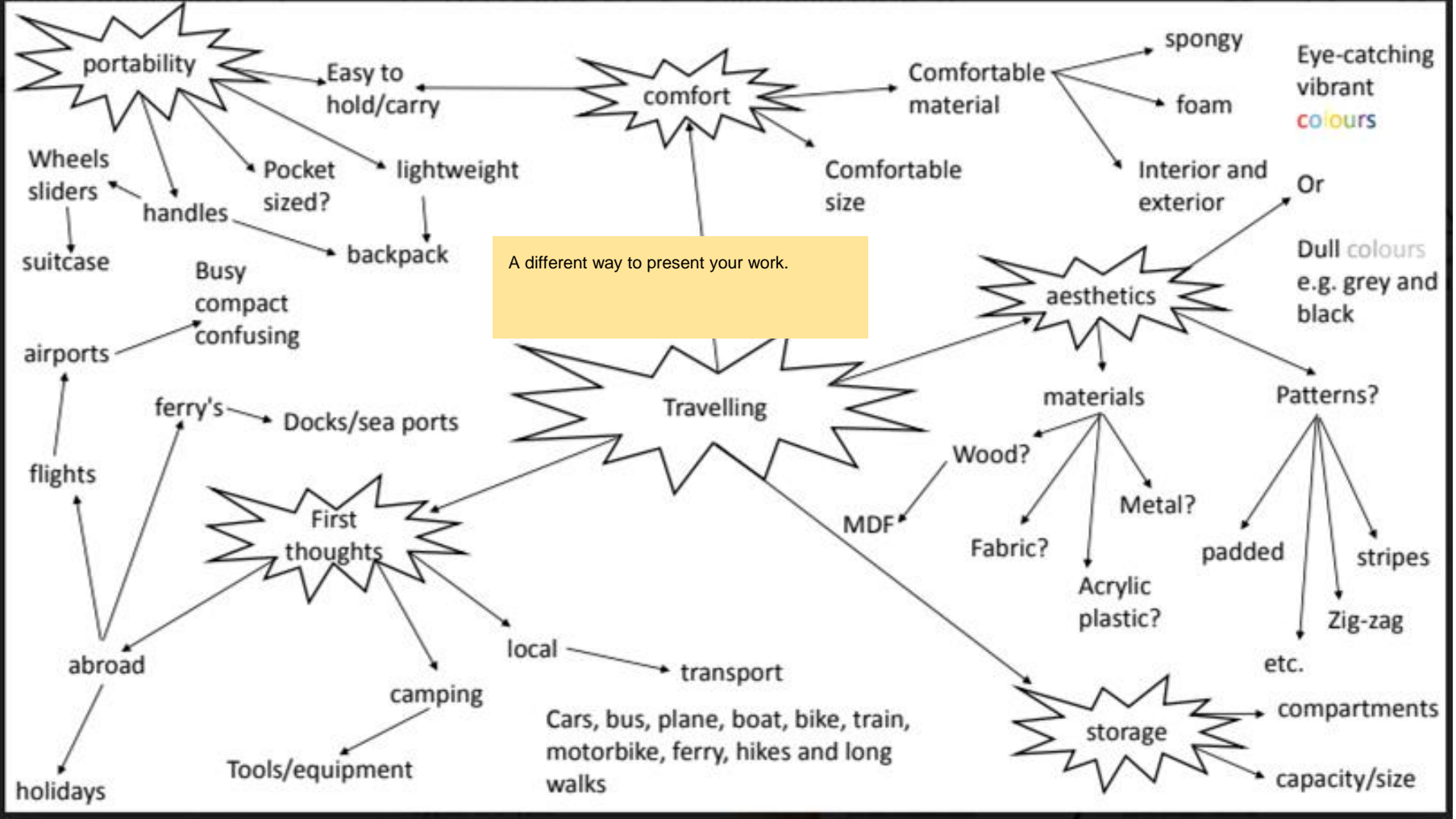
Does it need to stand?

What type of journey is it?-How long is the journey.

Do you want it for a long journey or short journey?

How will it be made to be safe for the user?

A different way to present your work.



Theme 1



I have chosen to do
Theme 1b

a) How can products be used to meet the storage needs of people that are travelling?

- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none"> Country side Hotel Tent Caravan Campervan Car House Airplane Walking Train Bike Motorbike Boat cruise Large Medium Small Sturdy Lightweight Collapsible Cheap Portable | <ul style="list-style-type: none"> Storage box Container Bag Food Drinks Clothes Other items Camping Supplies Pets Work places City Home Furniture Shop Unplanned Planned Long stay Short stay | <ul style="list-style-type: none"> Destination specific Work place School College University Overnight Long time Short time weather resistant Damage resistant Easily repairable In a caravan Small Space aver Durable Boot Floor Seat front | <ul style="list-style-type: none"> Environmental consideration Recycling Weight Size Height length Hobbies Reading Music Games Sport Art Makeup At destination On the way |
|---|---|---|--|

A different way to present your work.

b) How can products be used to make people more comfortable when travelling?

- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none"> Item storage Journey there Items improve Others Space saving Organisation Binders Folders Lunch Containers Leisure Safe storage Aiding gadgets Food Tables Body Fabric Wood Acrylic padding | <ul style="list-style-type: none"> Unplanned Planned Long stay Short stay Hobbies Reading Music Games Sport Art Makeup At destination On the way Styles Colour Material Safety Cost Aesthetics | <ul style="list-style-type: none"> Luxury holiday Camping Outdoors Hotel Country Long time Work place Day out Emergency Sporting events Important events Environmental consideration Recycling Airplane rules Maximum capacity Weight Size Height length | <ul style="list-style-type: none"> Children Adults Elderly Babies Toddlers Teens Pets Journey there At destination Games Sitting down Physical activities Car Airplane Train Boat/cruise Bike Motorbike Van Lorry Horseback Walking Caravan Tent |
|---|---|---|--|

Design possibilities and problems



Next time consider a loose target age

Children, (aged 9-13), when travelling, they'll need something to be occupied with, especially if it long distance to their destination. For example, a child going on holiday in a car, for a two hour trip. The product could be used outside of a vehicle, during the outing/holiday. It would need to be portable, perhaps multi-usable and small. Children of a young age get bored easily, so the product would have to have multiple things to do, or transformed into. The product would have to be easily cleaned, no sharp edges or splintering wood. As it is mainly a children's product, although could be used by any age, bright colours would be best as they are aesthetically pleasing to the user. It could fold down to save space but also function for different purposes.

A different way to present your work.

I think something like a multi-purpose tray table, with a storage box too. It could double as a storage box too. The top could fold up so it could hold paper for drawing, or to stand an iPad on, but also folds down to be used as a table and save space. Some kind of cushioning at the bottom would made it more comfortable but also balance it in a moving car or whatever transport desired.

It shouldn't be too heavy as children are small, and it must be comfortable to use. Parents can concentrate or relax when travelling if their child/children are occupied, when in a car, caravan, campervan, etc. Any other modes of transport such as airplanes, trains and boats, the child will have something to do- therefore being more comfortable during a journey.

Working adults could use it too, such as a laptop stand or iPad or table for business. However, some people feel travel sick if they concentrate on paper for an abundant amount of time.

The over all problem would be for my product to help aid children when they get restless or bored when travelling.

Client research

You need to decide on a specific client that you are going to design your product for and this should have been stated on your mindmap. Produce a profile on your client/s, this will later be followed by an interview, questionnaire or survey relating to the chosen problem identified in Task 1.

Example client profile

User Profile:

Name: Sophie Frost

Age: 16

Interests: music, spends a lot of time on social media, fashion and make up

Sophie is finishing Year 11 and her parents have said that she can go to Reading Music festival with her friends in August before starting college in September. Sophie has been to a number of concerts before but has not been to a festival. She is really excited to be allowed to go without her parents and will be camping with a group of 8 friends. They are travelling to the festival on the train.

Sophie's parents are quite worried about her going to a festival with her friends, they want her to check in daily and let them know she is ok.



Try to include as much information in this as possible.

Extension task:

If you complete this the next thing we will be moving on to will be a questionnaire or interview with your client. Start preparing your questions for this.

Remember you need to find out as much information from your client about their specific needs as possible.