

D&T Contextual Challenge Student Workbook

EXPLORE

Investigation

Design thinking

Communication

Prototype

Analysis

EXPLORE

CREATE

EVALUATE

Exploring the design context

- Use the start of this concept map to explore possible areas for your project. As a group discuss and decide which area your team will focus on.
- INEOS TEAM UK believe their influence should extend far beyond the race course, and have put sustainability at the heart of operations.
- **All projects that you design must be sustainable.**



KEY TERMS
• Concept map

Your design brief

Using your team's chosen area from the concept map, work together to create a unique design brief.



DESIGN FIXATION and the language you use

If you focus on a product idea, rather than the problem you are trying to solve, your brief may not be suitable. E.g. 'Design a new boat steering wheel' locks you into a fixed idea, whereas 'Design a method to control the movement of the boat' opens up more possibilities.

Write your initial brief here:

Questions to consider

Who will your primary user be?

What are their main requirements?

Who are your other stakeholders?

What are their main requirements?



KEY TERMS

- Stakeholders
- Primary user
- Design fixation

Your design brief

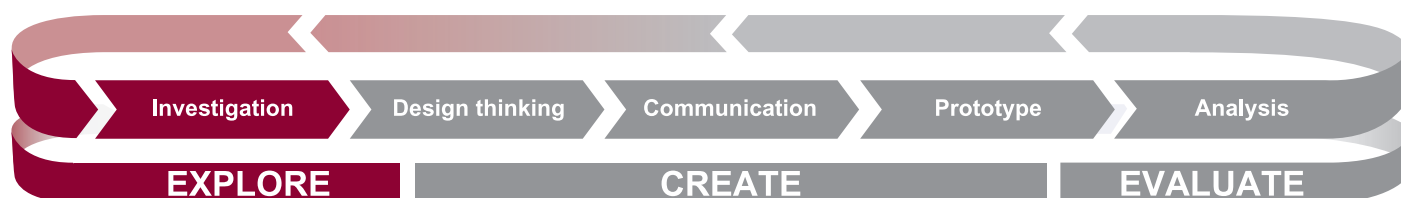
Using your team's chosen area from the concept map, work together to create a unique design brief.

Write the final version of your design brief here:

Review

Before you finish, can you answer 'yes' to all of these questions?

- Is your brief challenging?
- Is it relevant to the context?
- Does it identify the primary user?
- Does it consider any other stakeholders?



KEY TERMS

- Stakeholders
- Primary user
- Design fixation

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Collaborative ideas

Using the space below, each member of your team should produce as many ideas as they can that satisfies your brief. You could use post-its or just write straight into the boxes. Don't worry about presentation – the focus is on generating ideas.

Best ideas



Developing ideas

Use the SCAMPER technique to develop and focus your best ideas.

SCAMPER: Substitute

SCAMPER: Combine

SCAMPER: Adapt

SCAMPER: Modify

SCAMPER: Put To Other Purposes

SCAMPER: Eliminate

SCAMPER: Rearrange



KEY TERMS

- SCAMPER technique

Developing ideas

Research

As your team continues to develop your best idea, always consider the primary user and stakeholder's requirements. If you don't know something then you may need to do some research.

Ask your teacher if you would like more information on specifications used by INEOS TEAM UK , including:

- Race clothing specification
- Steering controls specification
- Plans and photos of hospitality areas
- Branding guidelines
- Trophies
- Sustainability ethos (this should be at the heart of your design)

You can use the space below to add any other areas you might want to research.



Developing ideas

Sketch modelling/prototyping

- Use the next few pages to develop your design.
- Sketch, model and prototype if it is helpful to the team to do so.
- You could also choose to design in CAD.



KEY TERMS

- Sketch modelling
- Prototypes

Developing ideas

Sketching/sketch modelling/prototyping



Developing ideas

Sketching/sketch modelling/prototyping



Developing ideas

Sketching/sketch modelling/prototyping



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EVALUATE



Presenting your design

Plan out your presentation here.



CHECK LIST

Are you ready to present?

- Any models and prototypes
- Presentation drawing
- Technical information
- A plan for your 2 minutes

Design presentation drawing

It can be useful to show several views of your project to help the INEOS TEAM UK designers understand the idea.

