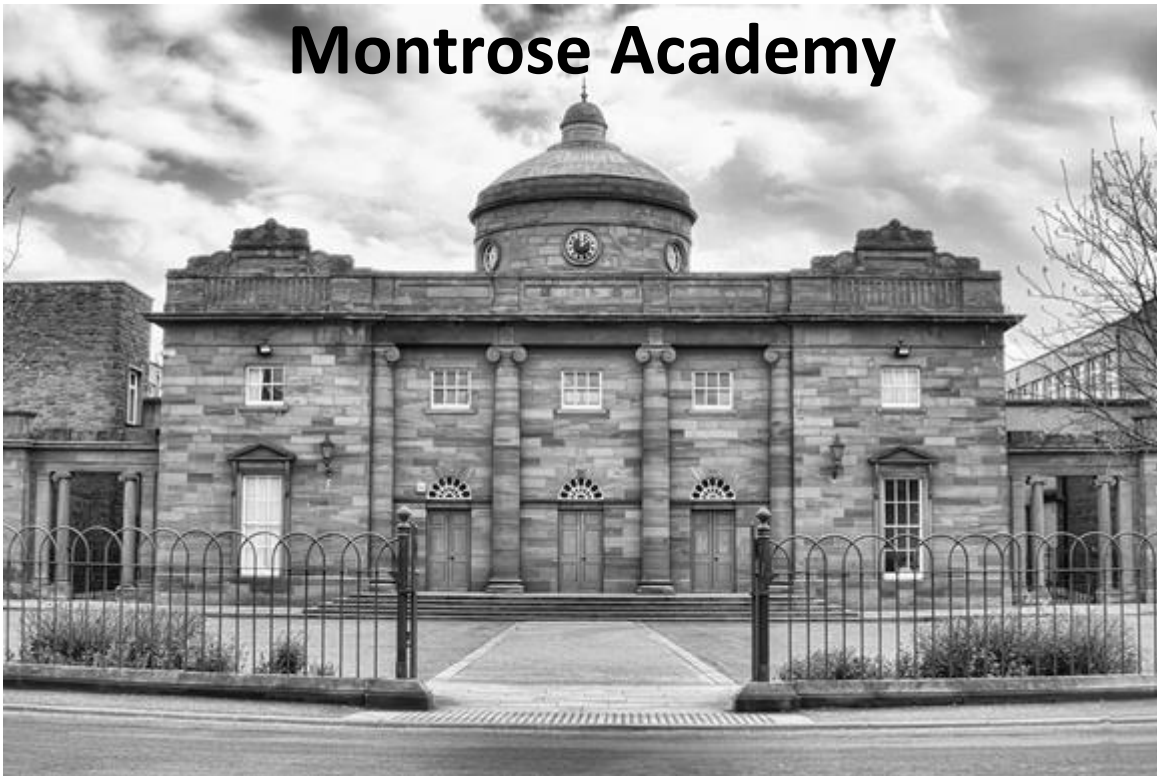


N5 Design & Manufacture

Designing Questions

Montrose Academy



The Design Team

Who are the members of a design team?

1. _____

6. _____

2. _____

7. _____

3. _____

8. _____

4. _____

9. _____

5. _____

10. _____

Explain what each one does.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

The Design Process

Draw a diagram of the design process in the space below.



Although the design process is not always linear, there are steps which you would expect to see followed throughout a design folio. Write the stages in the correct order below.

1. _____

6. _____

2. _____

7. _____

3. _____

8. _____

4. _____

9. _____

5. _____

10. _____

Name 3 methods for identifying a problem or need.

- 1. _____
- 2. _____
- 3. _____

Explain what each of these mean.

- 1. _____

- 2. _____

- 3. _____

Describe what you would expect to see in a design brief.

Name one disadvantage of:

(a) an open brief

(b) a closed brief

What is the analysis used for?

Show a mind map for a water bottle in the space below.

Show a table with morphological analysis for a mirror in the space below.

Why is research an important part of the design process?

What sort of things should be researched before a product can be designed?

What sort of things can be used to carry out research for a product?

What is a specification?

What 2 separate things will a specification contain?

What is a product design specification?

What is a materials specification?

What is meant by idea generation?

Choose 4 methods of generating ideas and describe the process of each of them.

1. _____

2. _____

3. _____

4. _____

Why is developing initial ideas important?

What sort of things will happen when developing ideas?

What is meant by Synthesis?

Why is the justification and recording of decisions important?

Name 5 things that may be required to show for the detail of a product.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

Name some presentation techniques that can be used to enhance the look of your design folios.

_____	_____
_____	_____

Name 7 types of models that can be used in the design process.

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | |

Take 3 of these models and explain what they are.

What would you expect to see in the planning for manufacture stage of the design process?

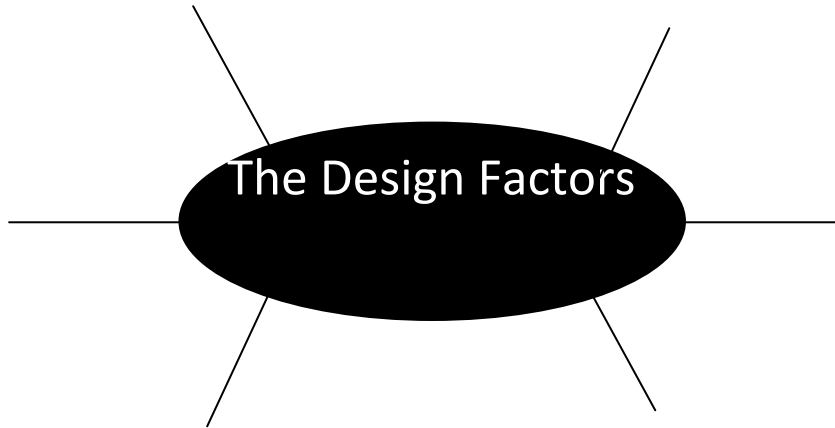
Explain what each of these things are.

At what 2 stages of the design process would you expect to be evaluating your product?

In the space below, show graphically, some of the methods of evaluating ideas that can be used.

Design Factors

Name the design factors.



Each of these factors are important parts of the design process. They are also made up of smaller parts to make them easier to understand. Over the following pages you must explain what the smaller parts of these design factors are.

Function

Performance

Ergonomics

➤ Anthropometrics

Safety

Aesthetics

➤ Colour

➤ Contrast/Harmony

➤ Shape/Form

➤ Size/Proportion

➤ Balance

➤ Texture/Materials

➤ Fashion/Style

Market

➤ Market Segments

➤ Target Market

➤ Niche Marketing

➤ Consumer Demands

➤ Social/Consumer Expectations

➤ Introducing New Products

➤ The Marketing Mix

➤ Technology Push

➤ Technology Pull

Product Evaluation

What are surveys used for?

Questionnaires can be used to find out peoples' views on a product. What are some of the things that make a good questionnaire?

Other than questionnaires how can a designer find out information about their product?

What things will have to happen for your survey to generate good results?

Why are user trials useful?

Why is it good to carry out product comparisons?

Design Impact

Describe what consumerism is.

Describe how the rise of consumerism has effected product designers?

What are some of the things that have caused consumerism to rise?

Why are some of the reasons for products becoming more affordable and accessible for consumers? Explain how these reasons have had an impact on consumers.

What are some of the benefits of sustainable design?

What are the choices for a designer to do to reduce the environmental impact of a product?

1.

2.

3.

4.

5.

6.

7.

What is meant by each of the following?

- (a) Design for recycled content

(b) Bio plastics

(c) Design for transport efficiency

(d) Design for longevity

(e) Design for energy efficiency

Explain what the 3 areas of sustainable design are?

1. _____

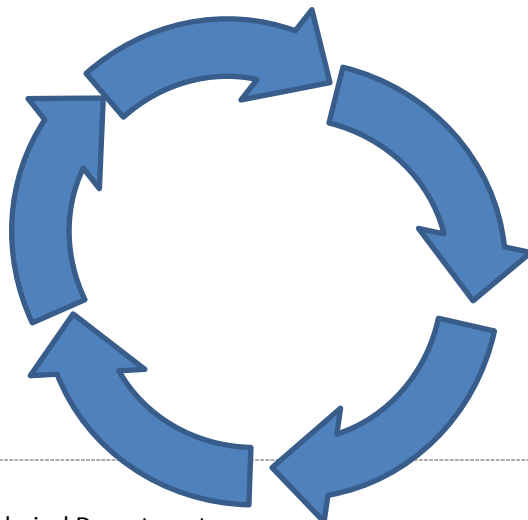
2. _____

3. _____

Explain what is meant by the design term “**Cradle to Grave**”?

What is eco design?

Complete the life cycle of a cradle to grave product.



Literacy Skills

Write a description of what you have to do to answer the following types of exam questions properly.

State

Justify

Describe

Explain

Compare

What are standard components?

Name advantages of using standard components in products.

1.

2.

3.

4.

5.

6.

7.

What needs to be produced before a rapid prototyping model is created?

Name the advantages of using rapid prototyping to make models.

1.

2.

3.

4.

5.

6.

7.
