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# Teacher's Introduction

## Overview

This resource has been produced to support teaching and learning of the **GCSE AQA Design and Technology** specification **3.3 Core Design Principles**. The learning content is covered by the following sets of keywords with matching descriptions, which cover all of the topics in **3.3 Core Design Principles**:

- *Investigation, Primary and Secondary Data*
- *Environmental, Social and Economic Challenge*
- *Design Strategies*
- *Communication of Design Ideas*
- *Prototype Development*

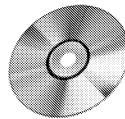
For each set, there are a number of different keyword activities on CD designed to give you a range of different options for classroom, homework and revision. This variety enables you to take a different approach to different topics – such as using the Crosswords as homework for one topic, and the Match Up as a starter for another.

Alternatively, differentiate the activity for a given topic; for example, you might want to give your stronger students the **Crosswords** early on while you start weaker learners on the **Match Up** (where terms and definitions are both available). **Domino** and **Bingo** activities add an element of fun and reinforcement, as well as potential for pair and group work. Finally, the **Flash Cards** come into their own for revision and the **Table Fill** and **Write Your Own Glossary** allow students to test their understanding by correctly filling in keywords or definitions.

For more information about the different activities included, see overleaf →

## Digital Format!

All of the activities are provided electronically on the accompanying CD. To use on a school network, the entire contents of the CD needs to be copied and pasted into an accessible location.



Providing easy access to the activities are two HTML menus:

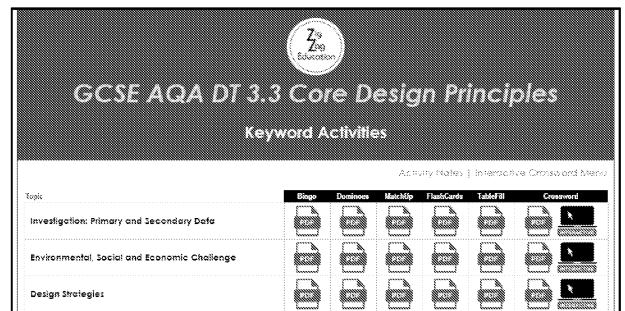
### 1. Access All Menu



Location: [index.html](#)

This menu, designed primarily for teacher use, includes links to everything on provided on the CD – allowing you to easily select what you need when preparing your lessons.

If you intend to give learners access to this menu, then be aware that it does include links to the solutions.



### 2. Interactive Crossword Menu



Location: [interactive-crosswords/index.html](#)

This menu, which can be accessed via the *Access All Menu* is included to allow learner access to just the interactive crosswords (without the answers).

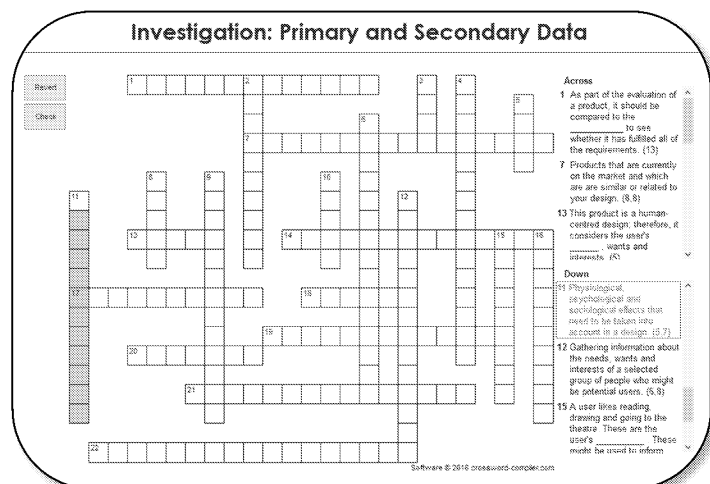


## Free Updates!

Register your email address to receive any future free updates\* made to this resource or other DT resources your school has purchased, and details of any promotions for your subject.

\* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

[Go to zzed.uk/freeupdates](http://zzed.uk/freeupdates)



## Activity Types

All activities are provided as PDF files, allowing for easy printing and sharing on your school's internal network or VLE. In addition, each of the single-page activities (*crosswords*, *match up* and *table fill*), as well as the solutions, are provided on paper too.

The activities included in this resource are as follows:

### Bingo

Each student is given a different bingo card containing a selection of words from the set. The teacher reads the definitions using the Keyword Answers and the student must match the definition to the words on their card to complete rows, columns, and the full bingo card. The bingo activity is available for sets with 12 or more words.

✓ PDF

### Crosswords

These traditional keyword activities are equally effective as lesson or homework activities – and are also an excellent way to ease students into their revision programme.

✓ PDF ✓ PAPER



In addition to the photocopiable worksheets and pdf, the crosswords are provided in interactive format on the accompanying CD-ROM. These are web-based (HTML5) and will run straight from your Internet browser.

### Dominoes / Loop Cards

This is essentially another match-up activity, but this one is designed to be used in a more active way to engage students. It is recommended that students work in pairs or small groups.

✓ PDF

Half of each card contains a keyword, and the other contains a description. To complete the activity, students must align all the cards in the correct order. There is a 'Start' and a 'Finish', meaning that if any cards are left outside of the chain, then students have gone wrong somewhere.

### Match Up

Students match descriptions to their keyword by drawing lines between them. Because there are similar descriptions and keywords, students are likely to make the odd mistake while completing the activity, so it is recommended that they use a pencil to start with! By eliminating the keywords that they are familiar with, students can then think about and learn the ones that they are less confident with.

✓ PDF ✓ PAPER

### Flash Cards

These are a helpful revision tool. To make the cards, fold the page in half, then cut each card and stick together so the keyword is on one side and the definition the other. In addition, students could use these to play a game of pairs. Cut each card in two and place face down on the table. Students will then take it in turns to turn over two cards with the aim of matching up a keyword to its definition. Matched up cards are removed and the game is finished when all the cards have been matched.

✓ PDF

### Glossary Builders

#### Table Fill

Nothing fancy – students simply write the keyword which is being described, without any other help. Because this activity tests the students' own knowledge, it is best used as a homework activity at the end of each topic or during revision. This then acts as a check that they have grasped the key terminology for each topic. Alternatively, they could be given to students at the beginning of the topic, to see what they already know.

✓ PDF ✓ PAPER

#### Write Your Own Glossary

Like the Table Fill, this activity can be used to test pupils before learning a topic, or as a revision tool after learning a topic. Students are given a list of the keywords and need to produce their own definitions. Using Table Fill and Write Your Own Glossary, lessons can be differentiated for all levels of learner.

✓ PDF

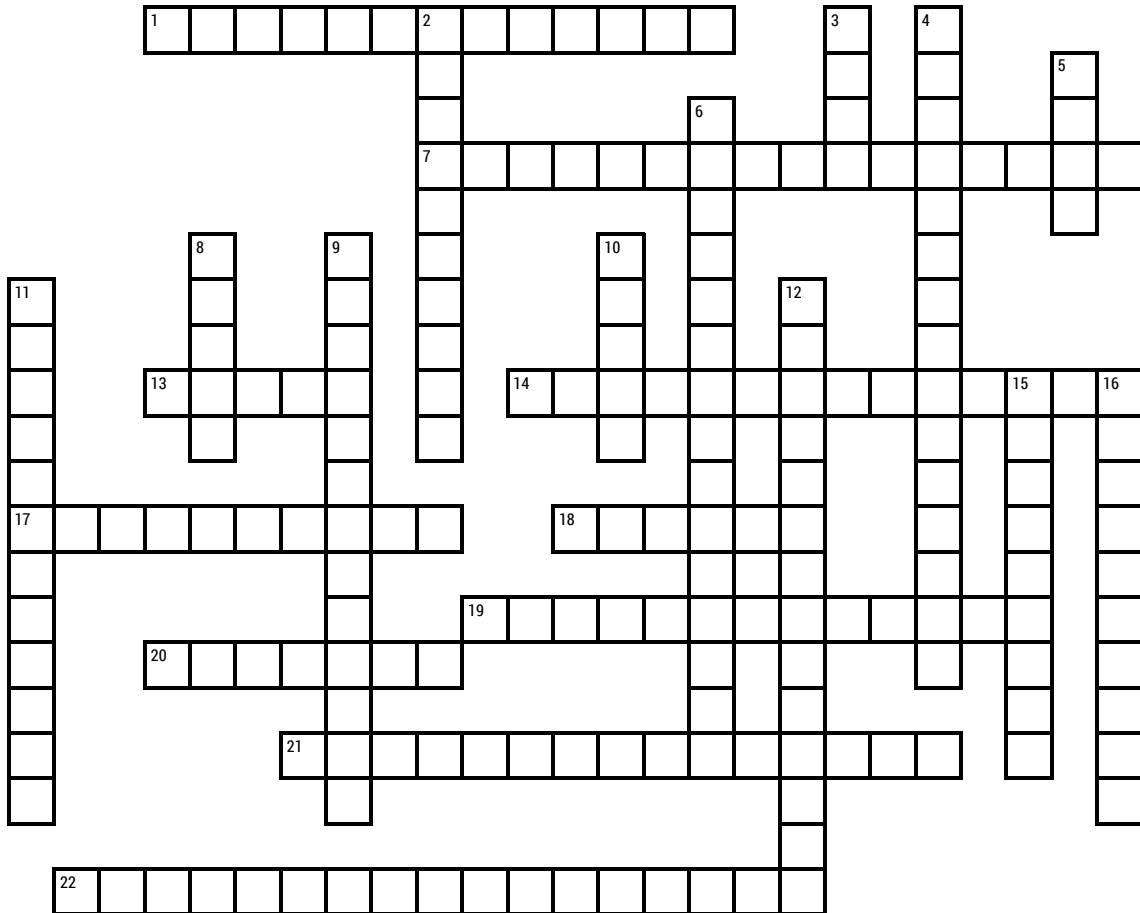
## **Selected Activities and Completed Glossary Page**

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This sample shows one example of several activities.  
The whole resource contains approximately 40 activities –  
6 or 7 activities for each of the 5 topics.

The resource covers 88 key terms.

## Investigation: Primary and Secondary Data



### Across

- 1 As part of the evaluation of a product, it should be compared to the \_\_\_\_\_ to see whether it has fulfilled all of the requirements. (13)
- 7 Products that are currently on the market and which are similar or related to your design. (8,8)
- 13 This product is a human-centred design; therefore, it considers the user's \_\_\_\_\_, wants and interests. (5)
- 14 The most extreme (highest) examples of human measurements. The tallest, widest, heaviest, etc. (4,10)
- 17 More than one individual testing a design or product and providing honest feedback that will help to improve the product before it goes to market. (5,5)
- 18 The person/company who sets the brief. (6)
- 19 The most extreme (lowest) examples of human measurements. The shortest, thinnest, lightest, etc. (3,10)
- 20 The human measurements that apply to most people. (7)
- 21 Questionnaires and interviews are examples of this. (7,8)
- 22 Newspaper articles, research papers and material specifications are examples of this. (9,8)

### Down

- 2 A way of gathering information that involves talking to people / a person about their beliefs and experiences. (10)
- 3 The person who experiences the final product. (4)
- 4 Researching existing products, identifying their strengths and weaknesses and using the information to inform design decisions. (7,8)
- 5 Numerical or written facts. (4)
- 6 The study of the measurements of humans. (15)
- 8 A short, concise statement about the function, aesthetic and target market of a product. (5)
- 9 When writing a \_\_\_\_\_ you will want to use a mixture of open questions and closed questions to get the best insight for your research. (13)
- 10 The non-essentials required by the user that might encourage them to buy/use a product. (5)
- 11 Physiological, psychological and sociological effects that need to be taken into account in a design. (5,7)
- 12 Gathering information about the needs, wants and interests of a selected group of people who might be potential users. (6,8)
- 15 A user likes reading, drawing and going to the theatre. These are the user's \_\_\_\_\_. These might be used to inform design decisions to make the product appeal to the user. (9)
- 16 A study of the physical human factors that should be considered when designing a product. (10)

## Investigation: Primary and Secondary Data (Table Fill)

Information obtained by yourself such as questionnaires, interviews and product analysis.	
Information gathered from existing sources written or obtained by other people or companies.	
Numerical or written facts.	
The person who experiences the final product.	
The person/company who sets the brief.	
Gathering information about the needs, wants and interests of a selected group of people who might be potential users.	
A way of gathering information that involves talking to people / a person about their beliefs and experiences.	
Physiological, psychological and sociological effects that need to be taken into account in a design.	
A study of the physical human factors that should be considered when designing a product.	
More than one individual testing a design or product and providing honest feedback that will help to improve the product before it goes to market.	
Researching existing products, identifying their strengths and weaknesses and using the information to inform design decisions.	
The study of the measurements of humans.	
The most extreme (highest) examples of human measurements. The tallest, widest, heaviest, etc.	
The human measurements that apply to most people.	
The most extreme (lowest) examples of human measurements. The shortest, thinnest, lightest, etc.	
A written set of open questions and closed questions that is given to a user to answer. The data from this is used to inform design decisions.	
The essential functions/features/aesthetics of a product required to make a design appropriate for the user.	
The non-essentials required by the user that might encourage them to buy/use a product.	
Activities, objects, styles, etc. that appeal or excite the user.	
The requirements that a product must meet or exceed, written in a document.	
A short, concise statement about the function, aesthetic and target market of a product.	
Products that are currently on the market and which are similar or related to your design.	

## Investigation: Primary and Secondary Data (Match Up)

1	A short, concise statement about the function, aesthetic and target market of a product.
2	A study of the physical human factors that should be considered when designing a product.
3	A way of gathering information that involves talking to people / a person about their beliefs and experiences.
4	A written set of open questions and closed questions that is given to a user to answer. The data from this is used to inform design decisions.
5	Activities, objects, styles, etc. that appeal or excite the user.
6	Gathering information about the needs, wants and interests of a selected group of people who might be potential users.
7	Information gathered from existing sources written or obtained by other people or companies.
8	Information obtained by yourself such as questionnaires, interviews and product analysis.
9	More than one individual testing a design or product and providing honest feedback that will help to improve the product before it goes to market.
10	Numerical or written facts.
11	Physiological, psychological and sociological effects that need to be taken into account in a design.
12	Products that are currently on the market and which are similar or related to your design.
13	Researching existing products, identifying their strengths and weaknesses and using the information to inform design decisions.
14	The essential functions/features/aesthetics of a product required to make a design appropriate for the user.
15	The human measurements that apply to most people.
16	The most extreme (highest) examples of human measurements. The tallest, widest, heaviest, etc.
17	The most extreme (lowest) examples of human measurements. The shortest, thinnest, lightest, etc.
18	The non-essentials required by the user that might encourage them to buy/use a product.
19	The person who experiences the final product.
20	The person/company who sets the brief.
21	The requirements that a product must meet or exceed, written in a document.
22	The study of the measurements of humans.

<b>Primary research</b>	
<b>Secondary research</b>	
<b>Data</b>	
<b>User</b>	
<b>Client</b>	
<b>Market research</b>	
<b>Interviews</b>	
<b>Human factors</b>	
<b>Ergonomics</b>	
<b>Focus group</b>	
<b>Product analysis</b>	
<b>Anthropometrics</b>	
<b>95th percentile</b>	
<b>Average</b>	
<b>5th percentile</b>	
<b>Questionnaire</b>	
<b>Needs</b>	
<b>Wants</b>	
<b>Interests</b>	
<b>Specification</b>	
<b>Brief</b>	
<b>Existing products</b>	



# Investigation: Primary and Secondary Data

1 S P E C I F I C A T I O N										3 U		4 P			
										S		R		5 D	
										E		O		A	
										6 A					
7 E X I S T I N G P R O D U C T S															
										T		U		A	
										R		C			
										V		H			
										I		R		12 M	
										E		O		A	
										W					
										A					
										N					
13 N E E D S										14 5 T H P E R C E N T		15 I L		16 E	
										S		O		R	
										K		A		N	
										M		E		L	
										E		L		T	
17 F O C U S G R O U P										18 C L I E N T		Y		E	
										T		S		R	
										R		S		O	
										N		S		M	
										I		S		I	
20 A V E R A G E										19 5 T H P E R C E N T I L E		S		S	
										I		S		T	
										C		E		S	
21 P R I M A R Y R E S E A R C H										R					
										E					
										C					
22 S E C O N D A R Y R E S E A R C H															