2017 specification
first exams in 2019
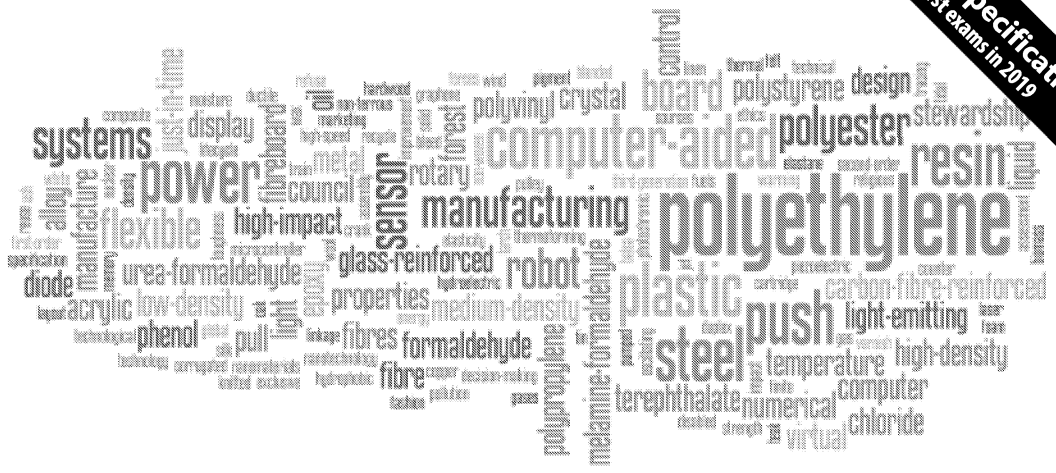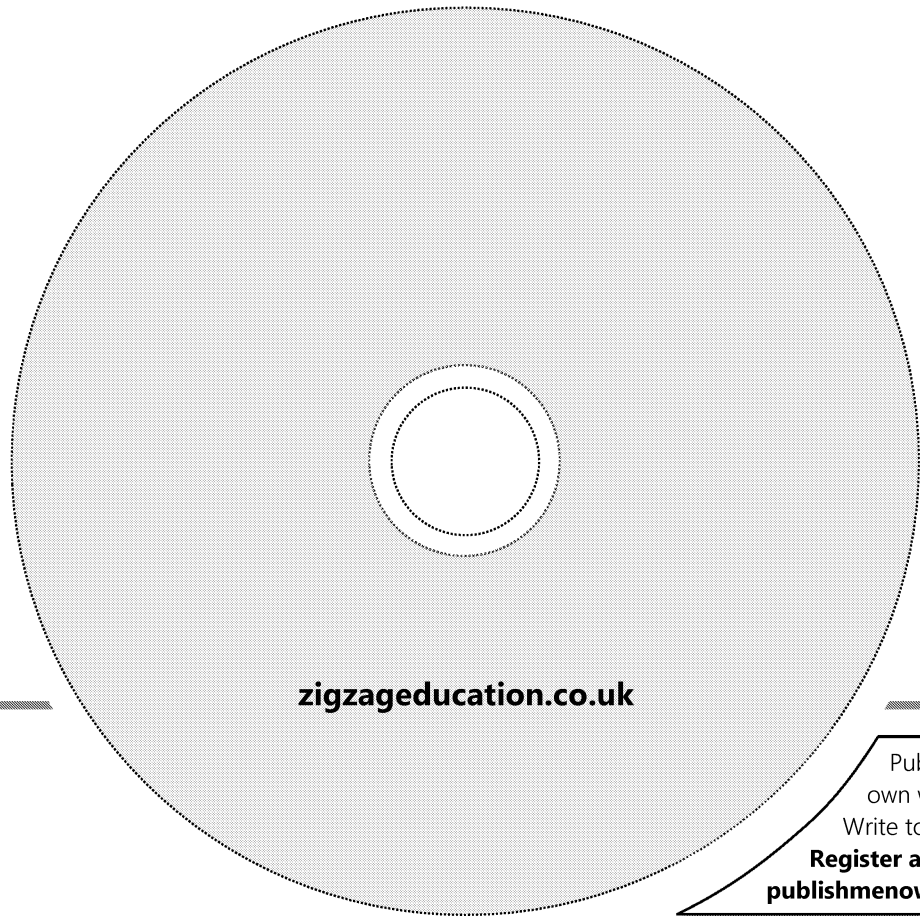
GCSE AQA DT Keyword Activities

3.1 Core Technical Principles

CJ7/ 8512

POD 8512

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Contents

Teacher's Introduction

Overview

This resource has been produced to support teaching and learning of the **GCSE AQA Design and Technology** specification **3.1 Core Technical Principles**. The learning content is covered by the following sets of keywords with matching descriptions, which cover all of the topics in **3.1 Core Technical Principles:**

- *New & Emerging Technologies: Industry, Enterprise & People*
- *New & Emerging Technologies: Sustainability & Environment*
- *New & Emerging Technologies: Production Techniques & Systems*
- *Energy Generation & Storage*
- *Modern Materials, Composite Materials & Technical Textiles*
- *Smart Materials*

- *Systems Approach to Designing*
- *Mechanical Devices*
- *Material Categories: Paper & Boards*
- *Material Categories: Natural & Manufactured Timbers*
- *Material Categories: Metals & Alloys*
- *Material Categories: Polymers*
- *Material Categories: Textiles*
- *Material Properties*
- *Acronyms*

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.
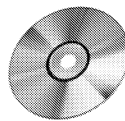
Providing easy access to the activities are two HTML menus:

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.
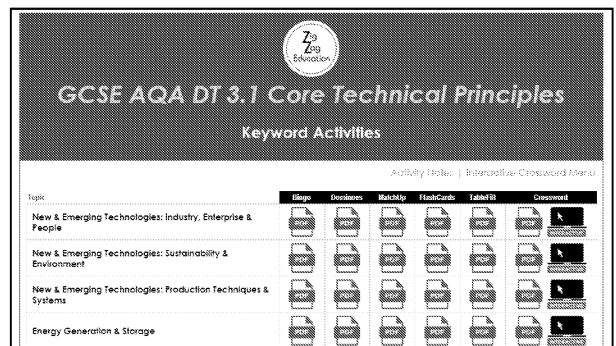
2. ***Interactive Crossword* Menu** ➔

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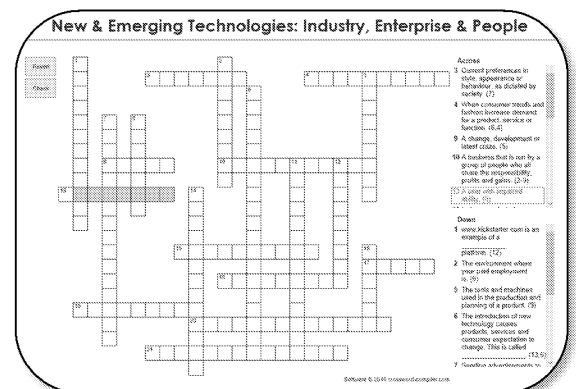
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* resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers

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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.
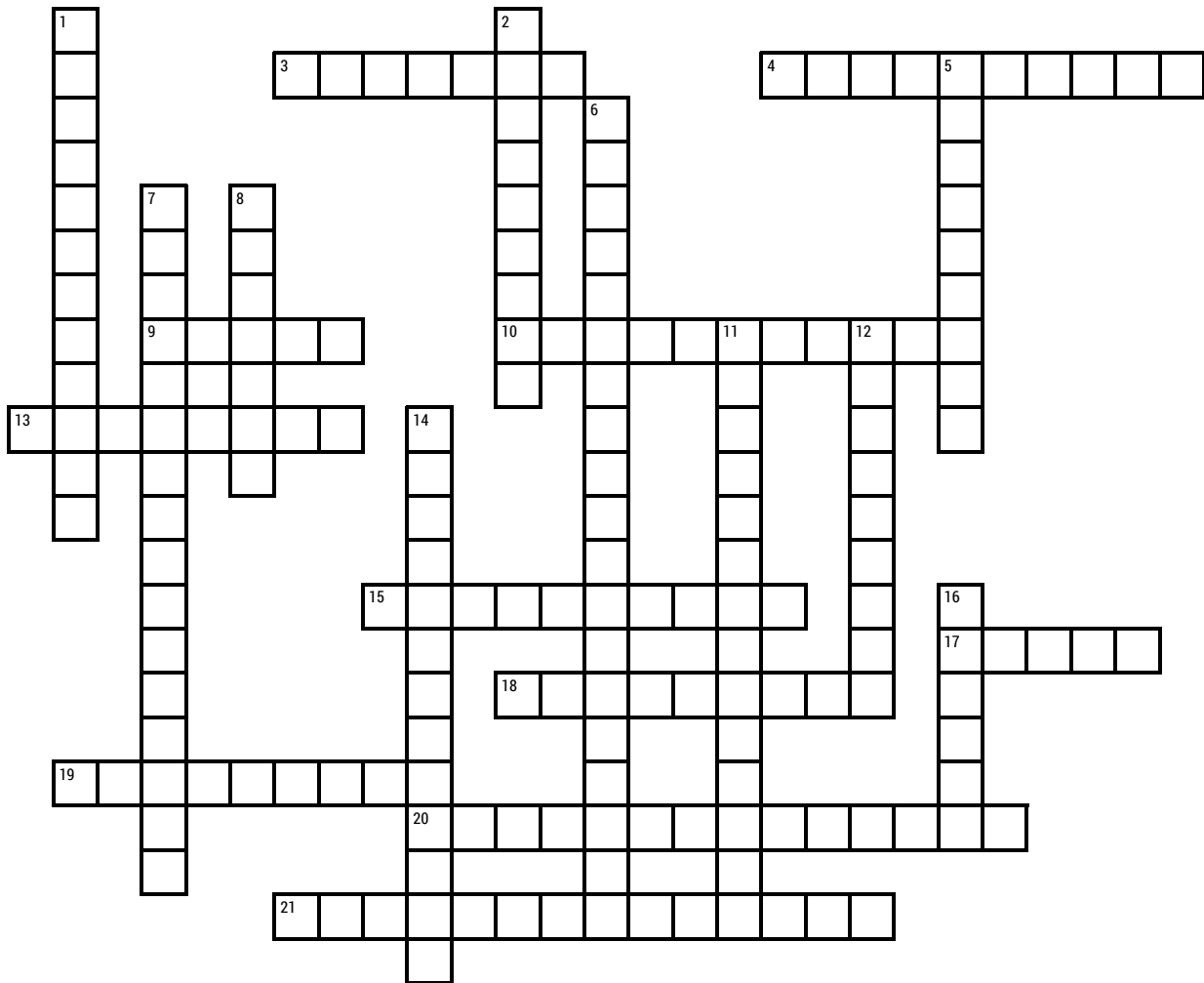
✓ PDF

Selected Activities and Completed Glossary Page

This sample shows <u>one</u> example of several activities.
The whole resource contains approximately 110 activities –
6 or 7 activities for each of the 15 topics.

The resource covers 238 key terms.

New & Emerging Technologies: Industry, Enterprise & People

Across

3 Current preferences in style, appearance or behaviour, as dictated by society. (7)

4 When consumer trends and fashion increase demand for a product, service or function. (6,4)

9 A change, development or latest craze. (5)

10 A business that is run by a group of people who all share the responsibility, profits and gains. (2-9)

13 A user with impaired ability. (8)

15 In the manufacturing industry a lot of jobs have been replaced by _____ because it is a more accurate and faster. (10)

17 These are used to cut, shape, smooth and manipulate a material during the manufacturing process to make it into a product. (5)

18 Design that is aimed at a specific target market, and that is difficult, unappealing or unobtainable for other users. (9)

19 A product or service that the retailer has paid a higher price for to ensure an acceptable standard of living for the producer. Normally indicated by a logo. (4,5)

20 When technology develops and new products get produced for the market. (10,4)

21 Affecting something or someone in a beneficial way. (8,6)

Down

1 www.kickstarter.com is an example of a _____ platform. (12)

2 The environment where your paid employment is. (9)

5 The tools and machines used in the production and planning of a product. (9)

6 The introduction of new technology causes products, services and consumer expectation to change. This is called _____. (13,6)

7 Sending advertisements to potential customers through social media and emails is called _____. (7,9)

8 An older user. (7)

11 A collection of people who have the same spiritual belief system. (9,5)

12 Design that considers all users. (9)

14 Amazon and eBay are examples of what? (7,6)

16 Moral principles that help a person, group of people or company decide what actions and decisions are right and wrong. (6)

New & Emerging Technologies: Industry, Enterprise & People *(Match Up)*

1	A business that is run by a group of people who all share the responsibility, profits and gains.	
2	A change, development or latest craze.	
3	A collection of people who have the same spiritual belief system.	
4	A user with impaired ability.	
5	Advertisement campaigns that take place online.	
6	Affecting something or someone in a beneficial way.	
7	An agreement between retailer and producer that a price paid to the producer is enough to cover costs and provide a decent standard of living.	
8	An older user.	
9	Buying and selling products and services online.	
10	Current preferences in style, appearance or behaviour, as dictated by society.	
11	Design that considers all users.	
12	Design that is aimed at a specific target market, and that is difficult, unappealing or unobtainable for other users.	
13	Moral principles that help a person, group of people or company decide what actions and decisions are right and wrong.	
14	Processes and functions being performed by robots and machinery instead of people.	
15	The difference in the world created by the introduction of new technology.	
16	The environment where your paid employment is.	
17	The tools and machines used in the production and planning of a product.	
18	These are used to cut, shape, smooth and manipulate a material during the manufacturing process to make it into a product.	
19	When a group of people pledge money to pay for an idea, product or service.	
20	When consumer trends and fashion increase demand for a product, service or function.	
21	When technology develops and new products get produced for the market.	

Automation	
Workplace	
Equipment	
Tools	
Crowdfunding	
Virtual marketing	
Virtual retail	
Co-operative	
Fair trade	
Technology push	
Market pull	
Technological change	
Fashion	
Trend	
Inclusive	
Exclusive	
Ethics	
Disabled	
Elderly	
Religious group	
Positive impact	

New & Emerging Technologies: Industry, Enterprise & People (Table Fill)

Processes and functions being performed by robots and machinery instead of people.	
The environment where your paid employment is.	
The tools and machines used in the production and planning of a product.	
These are used to cut, shape, smooth and manipulate a material during the manufacturing process to make it into a product.	
When a group of people pledge money to pay for an idea, product or service.	
Advertisement campaigns that take place online.	
Buying and selling products and services online.	
A business that is run by a group of people who all share the responsibility, profits and gains.	
An agreement between retailer and producer that a price paid to the producer is enough to cover costs and provide a decent standard of living.	
When technology develops and new products get produced for the market.	
When consumer trends and fashion increase demand for a product, service or function.	
The difference in the world created by the introduction of new technology.	
Current preferences in style, appearance or behaviour, as dictated by society.	
A change, development or latest craze.	
Design that considers all users.	
Design that is aimed at a specific target market, and that is difficult, unappealing or unobtainable for other users.	
Moral principles that help a person, group of people or company decide what actions and decisions are right and wrong.	
A user with impaired ability.	
An older user.	
A collection of people who have the same spiritual belief system.	
Affecting something or someone in a beneficial way.	

New & Emerging Technologies: Industry, Enterprise & People

Across

3. FASHION
4. MARKET PULL
9. TREND
10. COOPERATIVE
13. DISABLED
15. AUTOMATION
17. TOOLS
18. EXCLUSIVE
19. FAIRTRADE
20. TECHNOLOGY PUSH
21. POSITIVE IMPACT

Down

1. CROWDFUNDING
2. WORKPLAN
5. EQUIPMENT
6. TECHNICIAN
7. VIRTUE
8. ELDERLY
11. RELIGION
12. INCLUSIVE
14. VIRTUAL REALITY
16. ETHICS