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# **Table of Topics**

	Topic	Keyword Titles	Spec Point
1		Microorganisms, enzymes and food spoilage	3.4.1.1–3.4.1.2
2		Microorganisms in food production	3.4.1.3
3	Food Safety	Bacterial contamination	3.4.1.4
4		Buying and storing food	3.4.2.1
5		Preparing, cooking and serving food	3.4.2.2

## **Teacher's Introduction**

### **Overview**

This resource has been produced to support teaching and learning of the **AQA GCSE Food Preparation and Nutrition** specification. The learning content is covered by the following sets of keywords with matching descriptions, which cover all of the Learning Aims for the following topics:

- Microorganisms, enzymes and food spoilage
- Microorganisms in food production
- Bacterial contamination
- Buying and storing food
- Preparing, cooking and serving food

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:

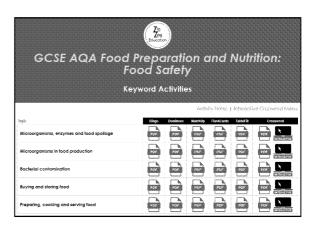
### 1. Access All Menu

 $\rightarrow$ 

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

 $\rightarrow$ 

Location: interactive-crosswords/index.html

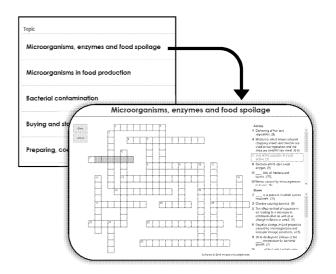
This menu, which can be accessed via the *Access All* Menu is included to allow learner access to just the interactive crosswords (without the answers).

## Free Updates!

Register your email address to receive any future free updates\* made to this resource or other Food Preparation and Nutrition 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



## **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.



#### 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.





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**

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.



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.

#### 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.

#### **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.

### **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**

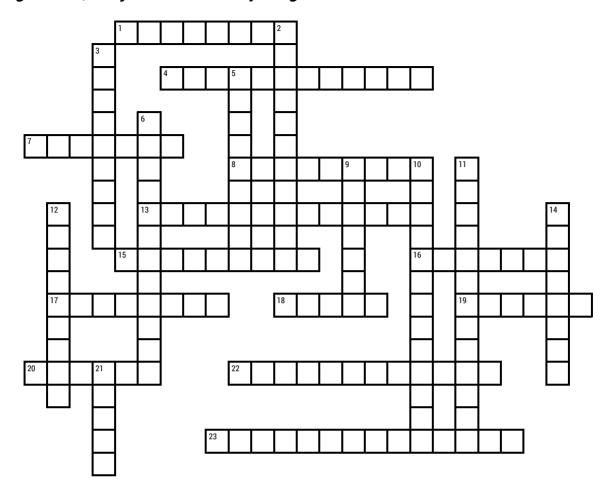
This sample shows <u>one</u> example of several activities.

The whole resource contains approximately 40 activities –

6 or 7 activities for each of the 5 topics.

The resource covers 85 key terms.

## Microorganisms, enzymes and food spoilage



#### **Across**

- 1 Darkening of fruit and vegetables. (8)
- 4 Method in which brown-coloured chopping boards and utensils are used to cut vegetables and red ones are used for raw meat. (6,6)
- **7** One of the products of yeast action. (7)
- 8 Bacteria which don't need oxygen. (9)
- 13 \_\_\_\_ kills all bacteria and spores. (13)
- 15 Illness caused by microorganisms or toxins. (9)
- **16** Bacteria which need oxygen. (7)
- 17 Chemical reaction booster. (8)
- 18 Furry growth on bread or fruit. (5)
- 19 Form of bacteria or fungi resistant to high or low temperatures which can multiply and reproduce in more friendly conditions. (6)
- **20** Biologically active, protein-based molecule which speeds up chemical reactions. (6)
- 22 A process which turns milk into yoghurt. (12)
- 23 Microscopic organisms found everywhere in the environment, on the human body and in food, which can cause food spoilage. (14)

#### Down

- **2** \_\_\_\_ is a process in which spores reactivate. (11)
- 3 Disease-causing bacteria. (9)
- **5** The effect on food of exposure to air, leading to a decrease in nutritional value as well as a change in flavour or smell. (9)
- 6 Negative change in food properties caused by microorganisms and improper storage conditions. (4,8)
- **9** 20 to 40 degrees Celsius is the \_\_\_\_ temperature for bacterial growth. (7)
- 10 \_\_\_\_\_ of food with bacteria may lead to a poisoning. (13)
- 11 Food products which offer the best conditions for microorganism growth and increase the risk of food poisoning, which include raw, moist, protein-rich and ready-to-eat products. (4-4,5)
- **12** Cooking method which stops darkening of fruit and vegetables. (9)
- 14 Microscopic organisms of various shapes used in food production, which can also cause diseases and food poisoning. (8)
- **21** Single-celled fungus used in beer production. (5)

# Microorganisms, enzymes and food spoilage (Table Fill)

Negative change in food properties caused by microorganisms and improper storage conditions.	
Transfer of microorganisms or food particles to another food, which may cause food poisoning or anaphylactic shock.	
Tiny fungi used in blue cheese production and which create a furry growth on bread and fruit, causing the food to spoil.	
Microscopic organisms of various shapes used in food production, which can also cause diseases and food poisoning.	
Microscopic, single-celled fungus used in bread, wine and beer production.	
Biologically active, protein-based compounds necessary for conducting many life processes, which act as catalysts in chemical reactions.	
Microscopic organisms found everywhere in the environment, on the human body and in food, which can cause food spoilage.	
Process conducted by bacteria or yeast in which sugar is turned into carbon dioxide and other substances, such as alcohol and lactic acid.	
Product of yeast fermentation used in wine and beer production.	
Type of bacteria which need oxygen to live.	
Type of bacteria which do not need oxygen to live.	
All agents capable of causing diseases, such as bacteria, viruses or parasites.	
Food products which offer the best conditions for microorganism growth and increase the risk of food poisoning, which include raw, moist, protein-rich and ready-to-eat products.	
Substance or agent which speeds up the rate of a chemical reaction.	
Reaction of the body to harmful microorganisms or toxins present in food.	
Range of temperature which creates ideal conditions for bacterial growth and increases enzyme activity.	
Effect of enzymatic action which leads to change in colour of a food.	
Heat treatment applied to vegetables and fruit to prevent browning.	
The effect on food of exposure to air, leading to a decrease in nutritional value as well as a change in flavour or smell.	
When bacteria spores become active again, leading to bacterial growth and food spoilage.	
High-temperature treatment of food or kitchen utensils in which all microorganisms and spores are killed.	
Form of bacteria or fungi resistant to high or low temperatures which can multiply and reproduce in more friendly conditions.	
Method in which brown-coloured chopping boards and utensils are used to cut vegetables and red ones are used for raw meat.	

# Microorganisms, enzymes and food spoilage (Match Up)

1	All agents capable of causing diseases, such as bacteria, viruses or parasites.
2	Biologically active, protein-based compounds necessary for conducting many life processes, which act as catalysts in chemical reactions.
3	Effect of enzymatic action which leads to change in colour of a food.
4	Food products which offer the best conditions for microorganism growth and increase the risk of food poisoning, which include raw, moist, protein-rich and ready-to-eat products.
5	Form of bacteria or fungi resistant to high or low temperatures which can multiply and reproduce in more friendly conditions.
6	Heat treatment applied to vegetables and fruit to prevent browning.
7	High-temperature treatment of food or kitchen utensils in which all microorganisms and spores are killed.
8	Method in which brown-coloured chopping boards and utensils are used to cut vegetables and red ones are used for raw meat.
9	Microscopic organisms found everywhere in the environment, on the human body and in food, which can cause food spoilage.
10	Microscopic organisms of various shapes used in food production, which can also cause diseases and food poisoning.
11	Microscopic, single-celled fungus used in bread, wine and beer production.
12	Negative change in food properties caused by microorganisms and improper storage conditions.
13	Process conducted by bacteria or yeast in which sugar is turned into carbon dioxide and other substances, such as alcohol and lactic acid.
14	Product of yeast fermentation used in wine and beer production.
15	Range of temperature which creates ideal conditions for bacterial growth and increases enzyme activity.
16	Reaction of the body to harmful microorganisms or toxins present in food.
17	Substance or agent which speeds up the rate of a chemical reaction.
18	The effect on food of exposure to air, leading to a decrease in nutritional value as well as a change in flavour or smell.
19	Tiny fungi used in blue cheese production and which create a furry growth on bread and fruit, causing the food to spoil.
20	Transfer of microorganisms or food particles to another food, which may cause food poisoning or anaphylactic shock.
21	Type of bacteria which do not need oxygen to live.
22	Type of bacteria which need oxygen to live.
23	When bacteria spores become active again, leading to bacterial growth and food spoilage.

food spoilage	
cross-contamination	
mould	
bacteria	
yeast	
enzymes	
microorganisms	
fermentation	
alcohol	
aerobic	
anaerobic	
pathogens	
high-risk foods	
catalyst	
food poisoning	
optimal temperature	
enzymatic browning	
blanching	
oxidation	
germinate	
sterilisation	
spores	
colour coding	

# Microorganisms, enzymes and food spoilage

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