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## MICRO ORGANISMS

Learning Objective: To understand what micro organism, bacteria and germs are, where they are found and the importance of preventing their spread to help infection control

#### Links to the National Curriculum:

KS1	KS2
Scientific Enquiry: 2a, 2b, 2c, 2e, 2f, 2g Life Processes: 1b, 2d	Scientific Enquiry: 2c, 2e, 2h, 2i, 2m, 5f

#### Lesson Sequence:

One

Content	Resources required
Discussion with the class to gather baseline assessment of their understanding on micro organisms.	Board Board Pen
'Micro organism' to be written in centre and a mind map to be created.	Worksheet A
What is a micro organism? A tiny life form often called bacteria, germ or virus. They can be helpful e.g aids digestion and food production or harmful e.g cause disease.	
<b>4 conditions needed for micro</b> <b>organisms to multiply:</b> Time (to multiply), Nutrition, Moisture and Warmth	
Cross-curricular links: Science: Yeast experiment - pupils to observe yeast growth and monitor the production of CO2 during the experiment as follows:	5 small water bottles 5 balloons
5 water bottles, 5 balloons, half teaspoon sugar x2 and half teaspoon vinegar x2	Teaspoons Fresh baker's yeast Sugar, vinegar, cold/
Equal amounts of fresh baker's yeast divided between the 5 bottles and sealed with balloon	warm water
Combine half teaspoon sugar + yeast + cold water Combine half teaspoon sugar + yeast + warm water Combine half teaspoon vinegar + yeast + warm water Combine half teaspoon vinegar + yeast + warm water The remaining bottle to contain only yeast	
Q: which bottle creates the best environment for yeast growth and why?	
Design and Technology: Design a micro organism, bacteria (helpful or harmful) or virus. Explain what it does to the body	





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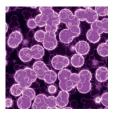
## MICRO ORGANISMS

	Content	Resources required
	Importance of personal hygiene: Hand-washing	Worksheet B Worksheet C
	Hair up Removing jewellery and nail varnish Covering cuts and grazes www.foodafactoflife.org.uk/sheet.aspx?siteId=14&sectionId=6 2&contentId=138	Interactive resources: foodafactoflife.org.uk
	www.sensoryworld.org/kitchen_entry.html	
Lesson Two	<b>Importance of food hygiene:</b> Different coloured chopping boards Temperature (danger zone for food) Importance of cooking over 72 degrees	
	Personal hygiene and food hygiene are so important because they prevent the spread of bacteria or their ability to multiply.	
	<b>Key phrases:</b> Use-by date (seen on foods or drinks that 'go off' quickly- not to be eaten or drunk after this date)	
	Sell-by date (seen on a wider variety of foods, foods eaten after this day may not be harmful but texture or taste may be impaired)	
	Food storage can be addressed as follows: Fridge: correct use of shelves, correct temperature and wrapping of food	Worksheet D foodafactoflife.org.uk
<b>Three</b>	Freezer: correct temperature and wrapping of food Cupboard: warm, dry place www.foodafactoflife.org.uk/sheet.aspx?siteId=14&sectionId=6 2&contentId=138	
Lesson Thr	<b>Extension task for older pupils:</b> Research the importance of stock rotation and storage life with all foods including frozen.	
	<b>For practical assessment:</b> Children to prepare a hygienic work station ready to cook a healthy dish (for example: fruit salad or healthy sandwich) with a Food Safety certified member of staff	

Worksheet A

## MICRO ORGANISMS

Learning Objective



A micro organism is

The conditions needed for bacteria to multiply are:

1.	3.
3.	4.

#### Fill in the blanks using the words in the boxes below.

#### Harmless Bacteria (good):

Some bacteria is good for keeping c	DUľ	healthy.
Other bacteria help to make some of	the	_we eat.
These include	_which makes	rise.

yeast digestive system foods bread

#### Harmful Bacteria (bad):

Some bacteria can be harmful. If they are left in the right conditions to multiply, they can make us feel\_\_\_\_\_and in\_\_\_\_\_ These harmful bacteria can be found on\_\_\_\_\_meat or meat that has not been\_\_\_\_\_properly. This is why food hygiene and correct cooking are so important for **food**\_\_\_\_\_

raw sick **safety** foods cooked pain



Name:

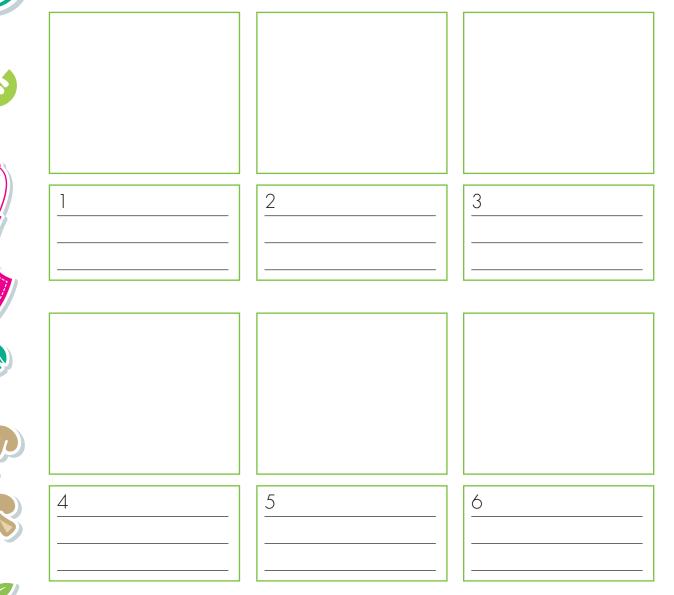
Worksheet B

# **V** F

## PERSONAL HYGIENE

Learning Objective

#### I can make sure I am clean and hygienic in the kitchen by:



#### Key Words

Hygienic means

Contamination means

## FOOD HYGIENE

Learning Objective:



C n F

It is really important to use different coloured chopping boards for different foods because

Detergents and disinfectants are all used in order to



Worksheet C

They should be used safely and stored away from food.

Food needs to be stored and cooked at the right temperature because

Cooking food for the correct time is just as important as cooking at the correct temperature because



Storing food for the correct time is also important. This is why we have \_ \_\_\_\_dates on packets.

Being hygienic with food is so important because



Name:

Date:

## FOOD STORAGE

Learning Objective:

#### In the boxes below, draw or write examples for the different kinds of food.

Frozen	foods:	

Dry foods:

Chilled foods:

Worksheet D

#### Can you match your food to the right storage space?

- To be stored in:
- 🗕 a freezer
- kept below -18 degrees
- food should be well wrapped or in plastic containers
- To be stored in:
- a cool, dry place
- off the floor
- on shelves
- airtight containers
- To be stored in: • a fridge
- to be kept cool (1-5 degrees)
- plastic containers
- food to be kept in a right order (raw meat at the bottom)







## DIET AND HEALTH

Learning Objective: To understand what a nutrient is and the importance of eating a healthy balanced diet in order to provide the body with what it needs to be healthy

#### Lesson Sequence:

	Content	Resources required
	Discussion with the class to gather baseline assessment of their understanding on healthy eating.	Board Board Pen
Lesson Four	'Healthy eating' to be written in centre and a mind map to be created.	Worksheet E
	<b>What is a nutrient?</b> A substance which provides nourishment essential for life and growth	Interactive resources: http://multimedia.food. gov.uk
	Why is a balanced diet important? Supply the body with a range of nutrients which are essential for growth, repair and function. Helps to keep the body healthy	Special educational needs: http://studentswith learningdifficulties.blogspot.
	Worksheet E answers: FRUIT/VEGETABLES supply us with lots of vitamins and minerals that help to keep our hearts and bodies healthy CARBOHYDRATES are a good source of energy and	co.uk www.foodafactoflife.org.uk
	packed with vitamin B <b>PROTEIN</b> is essential for our bodies to be able to grow and repair <b>FATS, SALT and SUGARS</b> should be eaten in smaller	www.nhs.uk/livewell/ goodfood/documents/ eatwellplate.pdf
	amounts to keep us healthy DAIRY gives us and calcium which helps to strengthen our teeth and bones	
	Recap of lesson four and healthy eating.	Worksheet F
	<b>Why should we make healthy choices?</b> To give our body all the nutrients it needs To keep our bodies healthy	Worksheet G www.foodafactoflife.org.uk
Lesson Five	Worksheet F What is a healthy balanced diet? Eating the right amount of food for you (age, gender, activity level) Eating a range of foods in the relevant quantities (as seen in the Eatwell plate)	www.nhs.uk/livewell/ goodfood/documents/ eatwellplate.pdf
<b>_</b>	Worksheet G Task: [paired activity] discuss the various food choices that are available for children and decide on the healthier options. What do you think about the packet of crisps being included in Charlie's menu? Is there a healthier alternative? NB: Teacher to reinforce that crisps are not a suitable snack and the reduction of high fat, salt and sugar items as part of a healthy diet	



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## DIET AND HEALTH

	Content	Resources required
	Why can making the healthy choice sometimes be more of a challenge? Adverts and packaging (persuasive and branding) 'Fake foods' (Fruit Flakes and Fruit Shoots are not fruit)	Worksheet H
Lesson Six	What healthy choices can we make? See worksheet H which encourages the children to think of the healthier choices they can make	
Lesso	Cross-curricular links:	
_	Design and Technology & Literacy: Create a promotional poster or advert for a fruit or vegetable using persuasive language and a slogan	
	Literacy: What do you think of children's menus in restaurant? Do you think they are healthy? Why?	

## HEALTHY EATING

Learning Objective:

#### What is a nutrient?

It is really important to eat a large range of different foods so that

#### Can you link the food with the label and explanation?

...should be eaten in smaller amounts to keep us healthy

...are a good source of energy and packed with vitamin B

...gives us calcium which helps to strengthen our teeth and bones

FATS, SALTS & SUGAR...

FRUIT/VEGETABLES...

**CARBOHYDRATES...** 

**PROTEIN...** 

DAIRY...

...supply us with lots of vitamins and minerals that help to keep our hearts and bodies healthy

...is essential for our bodies to be able to grow and repair





Worksheet E











Name:

Worksheet F

## BALANCED DIET

Learning Objective:

A healthy balanced diet is

#### Can you draw an example of a balanced meal?

My meal is suitable for a healthy balanced diet because

#### Worksheet G

Look at the table below.

Can you discuss who may be the healthiest and why?

	Joe	Lisa	Charlie
Breakfast	2 slices of toast with strawberry jam Glass of water	Chocolate croissant Glass of milk	Cornflakes with milk and a banana No drink
Mid- morning	Carrot sticks Cola	Apple Water	Bag of crisps Water
Lunch	Ham sandwich Apple Yoghurt Fruit squash drink	Cheese & tomato pasta Banana Water	Jacket potato with tuna & sweetcorn Side salad Apple juice
Afternoon	Chocolate bar	Fruit Flakes	Yoghurt pot
Dinner	Chicken and mushroom pie Peas Mashed potato Orange squash	Omelette filled with cheese, mushrooms and onion Chips Water	Beef casserole Mashed potato Cauliflower Water
Activity	45 minutes football training	10 minutes skipping	30 minutes walking to school

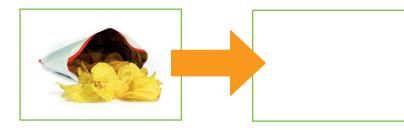




### HEALTHY CHOICES FOR A BALANCED DIET Worksheet H

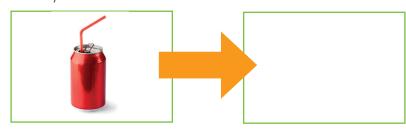
Learning Objective:





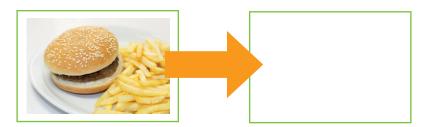
This is a healthier option because

When I am thirsty:



This is a healthier option because

For my dinner:



This is a healthier option because

## FOOD HYGIENE AND SAFETY

Μ		С	R	0	0	R	G	А	Ν		S	Μ	Н
А		V	E	Μ	Т	U	S	F	Р	F	J	0	Н
F	Ν	С	R	R	0	E	V	А	Ν	R	S	G	А
S	Q	Н	R	0	$\mathbb{W}$	U	Н	Н	Т		0	Х	Ν
G	С	0	V	L	E	Μ	L	А	E	D	L	Ν	D
E	А	Р	0	Н	L	0	0	D	Μ	$\mathbb{W}$	Р		$\mathbb{W}$
R	E	Р	Ν	R	Μ	К	Р	U	Р	А	E	J	А
Μ	Μ		L	F	R		D	G	E	F	F	Н	S
S		Ν	К	Р	В	Т	U	$\mathbb{W}$	R	В		К	Н
А	Н	G	E	Т	С	С	Y	А	А	L	Ν	U	
D	G	В	S	F	Р	Н	L	Y	Т	S	К	А	Ν
Н	С	0		U	R	E	J	Т	U	Т	G	D	G
Q	0	А	Ν	S	U	Ν	К	Н	R	0	0	В	Y
E	0	R	А	L	А	Р	E	F	E	R	С	R	Т
F	К	D	E	U	Р	А	0	S	U	А	Р	0	А
А	С	S	L	К	Y	U	Μ	Р	Ν	G	Y	Р	U
S		E	С	D	Μ	В	А	С	Т	E	R		А

#### See if you can find...

MICRO ORGANISM	SOAP
BACTERIA	FRIDGE
HANDWASHING	COOK
GERMS	KITCHEN
MOULD	KNIFE
STORAGE	SINK

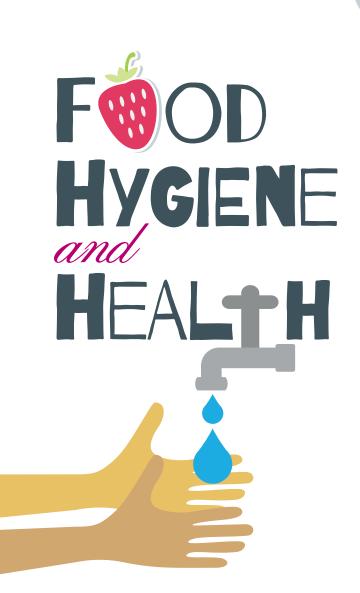
CLEAN APRON CHOPPING BOARD SAFE TEMPERATURE TOWEL



Worksheet I

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#### **Pupil Assessment**

Name:

Class:

Date:



## FOOD HYGIENE AND HEALTH

#### 1. Label the five parts of the Eatwell Plate:



#### 2. The Eatwell plate is important because



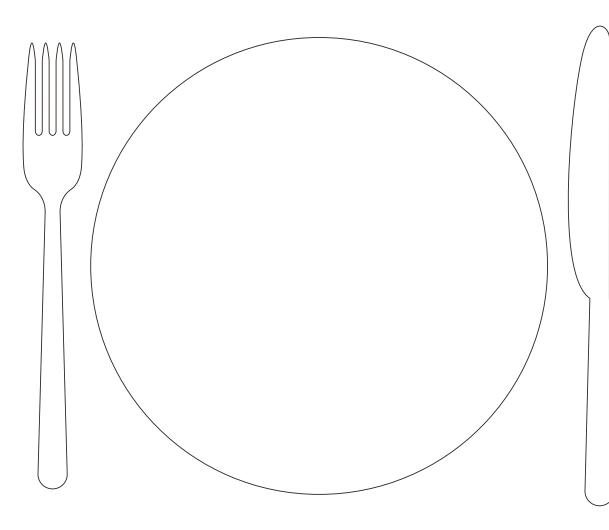
Name:	Date:	

#### 3. Draw a healthy, balanced menu for one day:

		Food	Drink
)	Breakfast		
	Lunch		
)	Dinner		
	Snacks		

#### 4. It is important to be healthy because

5. Draw an example of a healthy meal:

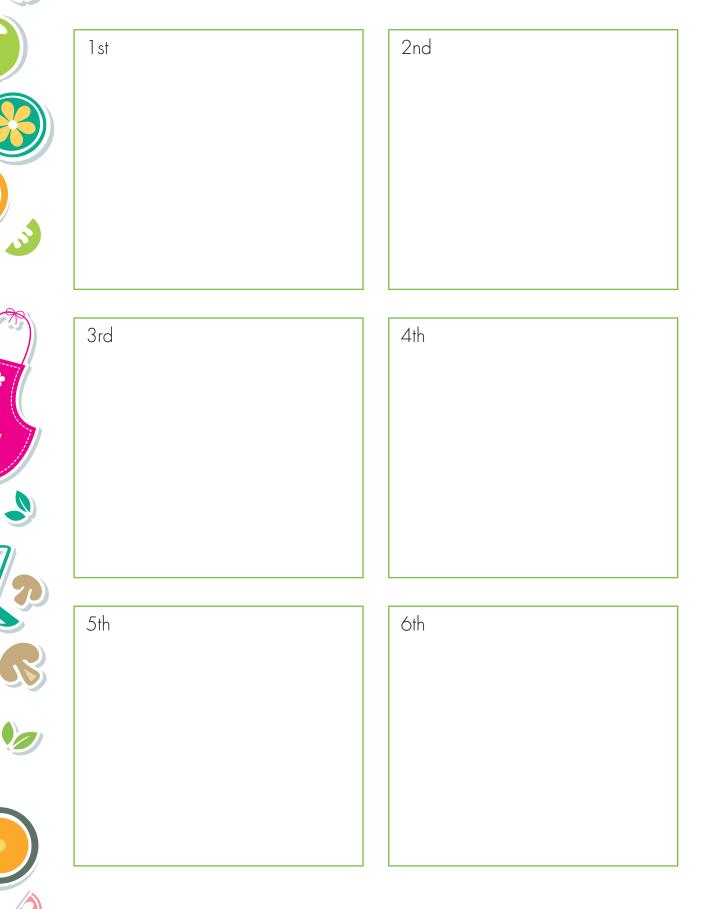




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Date:

6. Get ready to cook:



# 7. Being clean and tidy is important when I am cooking because 8. Can you draw examples of foods to match the correct method of storage? Fridge Kitchen cupboard Freezer



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