Zig Zag Education

Food and Nutrition GCSE (9-1) | WJEC | 3560

2016 specification
first exams in 2018

Ingredient Cards

For GCSE WJEC Food Preparation and Nutrition: Vegetables

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Teacher's Introduction

This resource is designed to help you teach and discover the fascinating world of food we eat every day. Ingredient Cards are written with in mind the students who have chosen the challenge of studying the new subject – WJEC (Wales) GCSE Food Preparation and Nutrition.

What it covers

The Ingredient Cards introduce carefully chosen food ingredients – some to represent British cuisine and some to introduce world foods. The resource comprises 28 Vegetables sheets and 12 Task sheets.

1	Onion	Onion, leek, garlic and asparagus – Task sheet
2	Leek	
3	Asparagus	
4	Garlic	
5	Mushrooms	Mushrooms – Task sheet
6	Tomato*	Tomato – Task sheet
7	Courgette (zucchini)*	Courgette, pumpkin and cucumber – Task sheet
8	Pumpkin*	
9	Cucumber*	
10	Carrot	Root vegetables (carrot, parsnip, celeriac and swede) – Task sheet
11	Parsnip	
12	Celeriac	
13	Swede	
14	Bell pepper*	Bell pepper / sweet pepper – Task sheet
15	Potato	Potato and sweet potato – Task sheet
16	Sweet potato	
17	Cabbage	Cruciferous vegetables (cabbage, cauliflower and broccoli) – Task sheet
18	Cauliflower	
19	Broccoli	
20	Beetroot	Beetroot – Task sheet
21	Green peas	Green peas, sweetcorn and green beans – Task sheet
22	Sweetcorn	
23	Green beans	
24	Spinach	Leafy greens (spinach, lettuce and celery) – Task sheet
25	Lettuce	
26	Celery	
27	Olives*	Olives and avocado – Task sheet
28	Avocado*	

*Ingredients marked with a * are botanically classified as fruits as they develop from plants' flowers.*

How to use this resource

This resource covers all aspects of the new WJEC (Wales) GCSE specification for Food Preparation and Nutrition and is designed to increase the knowledge, improve the skills, arouse the curiosity and trigger the creativity of those using it.

Each Ingredient Card is dedicated to one ingredient. You can print and laminate these so that they can be safely used in the kitchen, without the risk of staining or damaging them.

- **What is It?** Briefly describes what part of a plant a given vegetable is and provides some trivia to make it more interesting for the student.
- **Common Cuisines**. This part indicates where a given ingredient comes from and where it is usually used in the world.
- **Nutritional Information**. Contains data about macro- and micronutrients present in a given food ingredient, both in 100 g and in a portion or piece, to help evaluate the nutritional value of the dishes made using it. It is presented in the form of a table, containing information about macro- and micronutrients as required by the WJEC (Wales) GCSE specification. If there is a '-' it means that there is no data available about the given nutrient. If there is a '0' it means that the ingredient does not contain the given nutrient.

> **IMPORTANT**: *All nutritional data is provided for raw vegetables without skin.*
>
> *Please note that vegetables do not contain any cholesterol, and, therefore, it is not indicated separately on the Ingredient Cards.*
>
> *Please bear in mind that nutritional data is estimated, and may differ depending on the variety, growth conditions, storage conditions and any processing applied to the food (e.g. freezing, pickling, drying, canning or juicing).*

- **Health Benefits**. Indicates the health benefits of consuming the given food ingredient, with special attention to vitamins, minerals, unsaturated fats, protein, phytosterols, naturally occurring antioxidants and essential oils (where applicable).
- **Allergy and Health Risks**. Points out the main health hazards relating to the consumption of a given food ingredient, including the risk of an allergic reaction.
- **Alternatives**. Contains a list of other food products which can be used instead of the described ingredient in case of shortage, health conditions or other reasons why the original ingredient cannot be used.
- **Cooking Uses**. A catalogue of culinary uses of a given food ingredient. Indicates whether it can be eaten raw or cooked, and whether there are any special requirements for cooking or preparation (where applicable). It also lists the kinds of dish in which the ingredient can be used, in order to fully appreciate its features and value.
- **Storage**. Conditions in which to store the given product in order to preserve its nutritional value, colour, texture and flavour.

The vegetables are combined into small groups, and each group is followed by a **Task sheet** focused on the given ingredients. The purpose of each Task sheet is to check students' knowledge and encourage them to research more information, as well as experiment with the ingredient and discover its potential in cooking. Each task has been assigned a reference number to help cover the whole spectrum of the WJEC (Wales) GCSE Food Preparation and Nutrition specification. Simply copy one Task sheet per student for them to work on either during the lesson or at home. There are also exemplary answers to help you assess students' progress and determine more challenging exercises which require more effort.

> *The nutritional data is, in most cases, based on the United States Department of Agriculture database and McCance and Widdowson Composition of Foods database for Great Britain.*
>
> *Where appropriate, other sources of information have been used, such as FODMAPer application issued by Monash University and label information for products most popular in Great Britain.*

Note about the nutritional data provided and spec coverage:
The Ingredient Cards contain a wide range of information, including data about vitamins and minerals. Please note that the nutritional values supplied do not always reflect the requirements of the WJEC (Wales) GCSE specification for Food Preparation and Nutrition, as they provide additional data on sodium, phosphorus and Vitamins E and K.

We believe that the additional information provided will broaden the students' knowledge and improve their understanding of how nutrients work together in the human body. However, there is no need for students to focus on the vitamins or minerals not covered by the specification. The following table indicates which vitamins and minerals the WJEC (Wales) GCSE specification covers.

Vitamins		
Calcium		✓
Iron		✓
Sodium		
Fluoride		✓
Iodine		✓
Phosphorus		
Potassium		✓
Magnesium		✓
Minerals		
Fat soluble	Vitamin A	✓
	Vitamin D	✓
	Vitamin E	
	Vitamin K	
Water soluble	Vitamin B1 (Thiamine)	✓
	Vitamin B2 (Riboflavin)	✓
	Vitamin B3 (Niacin)	✓
	Vitamin B9 (Folic acid)	✓
	Vitamin B12 (Cobalamin)	✓
	Vitamin C (Ascorbic acid)	✓

September 2017

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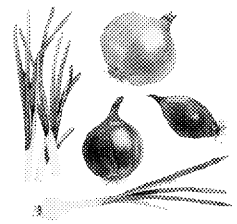
** resulting from minor specification changes, suggestions from teachers and peer reviews, or occasional errors reported by customers*

Go to **zzed.uk/freeupdates**

1. Onion



What is It?

Onion is a vegetable bulb of the plant *Allium cepa L.* It is b
covered with a couple of layers of inedible husk (paper-like
be used as a natural brown pigment; for example, for dyei
There are many varieties of onion, one of the most popula

Common Cuisines:

Onion is a common ingredient in cuisines all around the world due to its pungent
easily changeable flavour. Onion is used in North African cuisine due to the sweet
can give to dishes. In Asian cuisine it is used as a bulking agent in curries. You will
use for onion in most cuisines you come across.

Nutritional Information:

These values may vary. Data is given for brown onion.

Nutritional value: typical value	Per 100 g	Per 1 large (150 g)
Energy	40 kcal	60 kcal
Macronutrients		
Fat	0.1 g	0.15 g
Saturated fats	0.04 g	0.063 g
Monounsaturated fats	0.01 g	0.019 g
Polyunsaturated fats	0.02 g	0.026 g
Carbohydrates	9.4 g	14 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	4.25 g	6.36 g
Fibre	1.7 g	2.5 g
Protein	1.1 g	1.65 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0.02 mg	0.03 mg
Vitamin K	0.4 mcg	0.6 mcg
Vitamin B1 (Thiamine)	0.05 mg	0.069 mg
Vitamin B2 (Riboflavin)	0.03 mg	0.041 mg
Vitamin B3 (Niacin)	0.12 mg	0.174 mg
Folate	19 mcg	28 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	7.4 mg	11.1 mg
Calcium	23 mg	34 mg
Iron	0.20 mg	0.32 mg
Sodium (Salt)	4 mg	6 mg
Fluoride	1.1 mcg	1.65 mcg
Iodine	2 mcg	3 mcg
Phosphorus	29 mg	44 mg
Potassium	146 mg	219 mg
Magnesium	10 mg	15 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Onion is rich in potassium whi
necessary for maintaining prop
quercetin, which is an importa
antioxidant) effective in the tre
inflammation. It also contains
support the treatment of colds
makes it appropriate for peop
Onion also provides vitamin C
The high calcium content help
individuals, making it suitable

Allergy and Health Risks:

Although the quercetin in onio
stopping the production of his
people with allergies to grass p
onion. It is also worth limiting
relatively high sugar content. E
(especially raw onion) may res

Alte

For caramelising in dishes, us
For savoury, pungent flavou
For flavour and aroma, use fe
For the harsh peppery taste,

Cooking Uses:

- **Caramelise** to use in s
- **Keep raw** for use in sa
- **Sauté** for use as a gar
- **Pickle** for use in salad
- **Dehydrate** to use as a
  meats, marinades, pas
- **Fry** for use in burgers,

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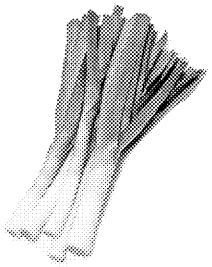
2. LEEK



What is It?

Plant closely related to onion built of many long leaves tigh
of a cylinder. The white part is very delicate and sweet in fla
part is more nutritious.

Common Cuisines:

Leek was probably first grown in ancient Egypt, from where it was brought to Rome and other European countries. Nowadays it is a common ingredient worldwide; for example, in Turkish, French or Welsh cuisines.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 leek (140 g)
Energy	61 kcal	85.4 kcal
Macronutrients		
Fat	0.3 g	0.42 g
Saturated fats	0.04 g	0.056 g
Monounsaturated fats	0.004 g	0.0056 g
Polyunsaturated fats	0.16 g	0.224 g
Carbohydrates	14.15 g	19.81 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	3.9 g	5.46 g
Fibre	1.8 g	2.52 g
Protein	1.5 g	2.1 g
Micronutrients		
Vitamin A	83 mcg	116.2 mcg
Vitamin D	0	0
Vitamin E	0.92 mg	1.288 mg
Vitamin K	47 mcg	65.8 mcg
Vitamin B1 (Thiamine)	0.06 mg	0.084 mg
Vitamin B2 (Riboflavin)	0.03 mg	0.042 mg
Vitamin B3 (Niacin)	0.4 mg	0.56 mg
Folate	64 mcg	89.6 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	12 mg	16.8 mg
Calcium	59 mg	82.6 mg
Iron	2 mg	2.8 mg
Sodium (Salt)	20 mg	28 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	35 mg	49 mg
Potassium	180 mg	252 mg
Magnesium	28 mg	39 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional An

Health Benefits:

Leek is a source of beta caro
proper eyesight, and cholin
maintaining good memory.
treatment due to its high iro
(polyphenols and antioxidan
'bad' cholesterol levels in bl
also be used in the treatme
its diuretic activity. Leek also
necessary for maintaining h
piece of leek provides almo
which is necessary to build

Allergy and Health Risks:

Leeks generally don't have
side effects, although exces
laxative effect. Raw leeks ca

Alter

For stronger, more punge
onion or garlic.
For similarly mild flavour

Cooking Uses:

- **Keep raw** for use in sa
- **Fry** for sauces, soups a
- **Stew, steam or roast**
- **Fry, stew or steam** to
  or dumplings
- **Mash** to add to mash

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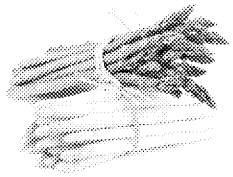
3. Asparagus



What is It?

Spring vegetable with a crunchy texture and delicate edible characteristic shape and delicate flavour. Available in green varieties. White asparagus is grown by earthing it up to pre and creation of the green pigments. Only young asparagus spears turn woody and are hard to chew.

Common Cuisines:

Although asparagus is mostly grown in China, it is more characteristic of north-western European countries, such as Germany, France, Spain and the Netherlands.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 medium spear (16 g)
Energy	20 kcal	3 kcal
Macronutrients		
Fat	0.12 g	0.02 g
Saturated fats	0.04 g	0.006 g
Monounsaturated fats	0	0
Polyunsaturated fats	0.05 g	0.008 g
Carbohydrates	3.88 g	0.62 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	1.88 g	0.3 g
Fibre	2.1 g	0.3 g
Protein	2.2 g	0.35 g
Micronutrients		
Vitamin A	38 mcg	6 mcg
Vitamin D	0	0
Vitamin E	1.13 mg	0.18 mg
Vitamin K	41.6 mcg	6.7 mcg
Vitamin B1 (Thiamine)	0.143 mg	0.023 mg
Vitamin B2 (Riboflavin)	0.141 mg	0.023 mg
Vitamin B3 (Niacin)	0.98 mg	0.16 mg
Folate	52 mcg	8 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	5.6 mg	0.9 mg
Calcium	24 mg	4 mg
Iron	2.14 mg	0.34 mg
Sodium (Salt)	2 mg	0 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	52 mg	8 mg
Potassium	202 mg	32 mg
Magnesium	14 mg	2 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Asparagus is very low in calo great element of low-calorie people with hypertension or necessary to prevent bleedi well as folates, which help to a source of calcium which su muscle contractions and blo (24 mg in 100 g), which imp provides quercetin (an impo prebiotic – substance which in the gut).

Allergy and Health Risks

Asparagus contains purines bladder and kidney stones. especially in people with dig sulfur compounds, which m cause allergic reactions, esp onion allergy. The symptom inflammation, tightness of t anaphylactic shock.

Alte

For the colour, texture broccoli.
For crunchiness, use bro

Cooking Uses:

- **Steam** to serve as a
- **Bake** under a sauce
- **Pickle** to use in sala
- **Fry or sauté** to use
- **Boil or steam** and s boiled eggs, sprinkle

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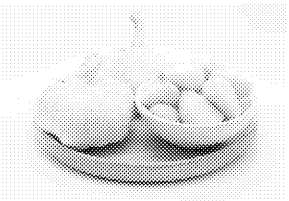
4. Garlic



What is It?

Aromatic vegetable built of small cloves tightly packe
bulb and covered with a couple of layers of thin husk
oils and pungent in flavour, garlic is available in many

Common Cuisines:

Garlic is widely used in cookery around the world, including Vietnamese, Chinese, Thai, Korean and North African cuisines, and in southern European cuisines such as those from Italy or Bulgaria. Garlic consumption is forbidden in several religions and beliefs, such as Hinduism, Buddhism and Sikhism, as they believe it overstimulates the senses.

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 clove (3 g)
Energy	149 kcal	4 kcal
Macronutrients		
Fat	0.5 g	0.01 g
Saturated fats	0.089 g	0.003 g
Monounsaturated fats	0.011 g	0
Polyunsaturated fats	0.248 g	0.007 g
Carbohydrates	33.06 g	0.99 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	1 g	0.03 g
Fibre	2.1 g	0.1 g
Protein	6.36 g	0.19 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0.08 mg	0
Vitamin K	1.7 mcg	0.1 mcg
Vitamin B1 (Thiamine)	0.2 mg	0.006 mg
Vitamin B2 (Riboflavin)	0.11 mg	0.003 mg
Vitamin B3 (Niacin)	0.7 mg	0.021 mg
Folate	3 mcg	0 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	31.2 mg	0.9 mg
Calcium	181 mg	5 mg
Iron	1.7 mg	0.05 mg
Sodium (Salt)	17 mg	1 mg
Fluoride	0	0
Iodine	3 mcg	0
Phosphorus	153 mg	1 mg
Potassium	401 mg	12 mg
Magnesium	25 mg	1 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Garlic is high in calcium, nec
development of bones and
potassium, which lowers blo
flavonols (a group of polypl
antioxidants and fight off in
as a natural antibiotic, often
the treatment of colds and f

Allergy and Health Risks:

Garlic should be avoided in
(recommended for people w
rare. Overconsumption may

Alte

For the pungent aroma, use a
For the sweet flavour, substitu
For spiciness in sauces and cur
**For the use in pesto and othe
For caramelising, use onion.

Cooking Uses:

- **Mince** or crush to use
- **Caramelise** to use in g
- **Caramelise** to make b
  cuisine)
- **Dehydrate** to use as a
  curries, sauces and dre
- **Pickle** whole cloves –
  cucumbers or peppers
- **Infuse** to prepare aro
  spirits

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ONION, LEEK, GARLIC AND ASPARAGUS –

1. Name one religion or belief in which garlic or onion consumption is fo
reason behind this dietary restriction. [Area 6]

.....

.....

.....

2. Try to explain why you cry when chopping an onion, and indicate how

.....

.....

.....

3. Leek is the national emblem of a country. What is the name of that co
containing leek is made there? [Area 5]

.....

4. Research some information about green asparagus, and indicate diffe
asparagus and white asparagus. [Area 1, Area 3]

.....

.....

.....

.....

5. Identify one major diet-related risk and describe how either onion, lee
to reduce or alleviate its symptoms or onset. [Area 3]

.....

.....

.....

6. At what temperature and conditions should onion, garlic, leeks and asp

.....

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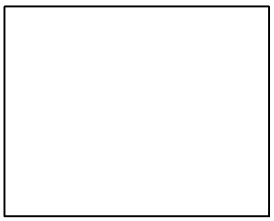
7. Identify and draw five different types of onions. Describe the differenc
between them, and suggest one ideal culinary use for each. [Area 1, Area 6,



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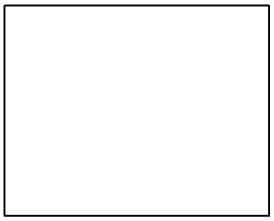

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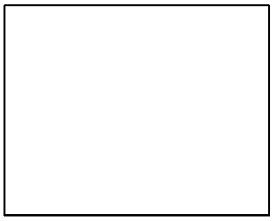

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Extension [Area 1, Area 4, Area 6, skill2, skills 10–12]

Choose one of the ingredients (onion, leek, asparagus or garlic) a
would be characteristic of two different cuisines, but would conta
Design a recipe card for each of your dishes to show any key diffe
that ingredient in them.

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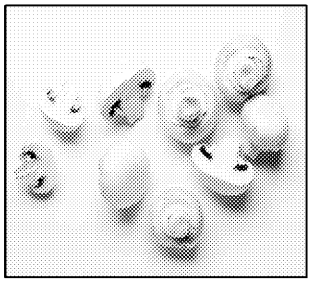
5. White Mushroom / Portobell



What is It?

One of the many types of edible mushroom. White m
wild, but it is usually grown in polytunnels. It has soft
flesh with a dark brown underside. Other mushrooms
mushrooms (also commercially cultivated) and a wid
such as chanterelle, boletus, blewit, morels, truffles a

Common Cuisines:

Widely used in North American and European cuisines, such as Italian, French or Polish. Each of the cuisines uses different varieties of mushroom, so the dishes are specific to the region they come from.

Nutritional Information:

These values may vary. The data shown is for white mushroom.

Nutritional value: typical value	Per 100 g	Per 1 mushroom (20 g)
Energy	22 kcal	4.4 kcal
Macronutrients		
Fat	0.34 g	0.068 g
Saturated fats	0.05 g	0.01 g
Monounsaturated fats	0	0
Polyunsaturated fats	0.16 g	0.03 g
Carbohydrates	3.25 g	0.65 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	1.98 g	0.4 g
Fibre	1 g	0.2 g
Protein	3.09 g	0.62 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0.2 mcg	0.04 mcg
Vitamin E	0	0
Vitamin K	0	0
Vitamin B1 (Thiamine)	0.08 mg	0.016 mg
Vitamin B2 (Riboflavin)	0.4 mg	0.08 mg
Vitamin B3 (Niacin)	3.6 mg	0.72 mg
Folate	17 mcg	3.4 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	2 mg	0.4 mg
Calcium	3 mg	0.6 mg
Iron	0.5 mg	0.1 mg
Sodium (Salt)	5 mg	1 mg
Fluoride	0	0
Iodine	2 mcg	0.4 mg
Phosphorus	86 mg	17.2 mg
Potassium	318 mg	64 mg
Magnesium	9 mg	2 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Mushrooms are very low in c
suitable for people on a low
essential amino acids, which
protein. They also contain ch
from excess fat. Their high p
sodium level makes mushro
hypertension. They are a sou
rare in fruit and vegetables.

Allergy and Health Risks:

Mushrooms should be avoid
three years old), the elderly a
diseases, because the high c
walls makes them difficult to

Alter

For the umami flavour, try usin
beef broth.
To bulk up the dish, use chopp
meat or Quorn™.
For texture, try using cauliflowe

Cooking Uses:

- **Keep raw** to eat as a sna
be eaten this way!)
- **Stew or fry** to use in so
- **Pickle** to use in salads o
- **Dry and pulverise or c**
- **Fry** to use in risotto or p
- **Fry** to use in scrambled
- **Dry** to use for umami fl

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Mushrooms – Task Sheet

1. Explain why mushrooms may be considered a seasonal food. [Area 6]

2. Explain what 'umami' means, and list other foods which provide the sa

3. Design three dishes which contain mushrooms and are suitable for pe diseases. [Area 3]

Extension [Area 5]

Create a leaflet in which you indicate the growth conditions required fo varieties of fungus available in your area.

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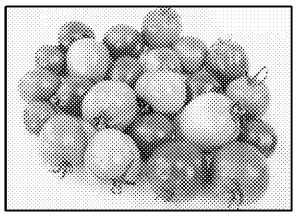
6. Tomato



What is It?

Round or oval, soft fruit with many small seeds, usuall
a thin layer of skin which peels off easily after blanchi
varieties of tomato, which differ in colour, flavour, sha

Common Cuisines:

Although tomatoes originate from South America, today they are a common ingredient in cuisines all around the world, such as Italian, Mexican, Spanish and Bulgarian. Tomatoes owe their popularity to their distinctive umami flavour, sweetness and ability to grow in various climatic conditions.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 medium tomato (170 g)
Energy	18 kcal	30.6 kcal
Macronutrients		
Fat	0.2 g	0.34 g
Saturated fats	0.028 g	0.04 g
Monounsaturated fats	0.031 g	0.05 g
Polyunsaturated fats	0.083 g	0.14 g
Carbohydrates	3.9 g	6.63 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	2.65 g	4.5 g
Fibre	1.2 g	2.04 g
Protein	0.88 g	1.49 g
Micronutrients		
Vitamin A	42 mcg	71.4 mcg
Vitamin D	0	0
Vitamin E	0.54 mg	0.92 mg
Vitamin K	7.9 mcg	13.43 mcg
Vitamin B1 (Thiamine)	0.04 mg	0.07 mg
Vitamin B2 (Riboflavin)	0.02 mg	0.034 mg
Vitamin B3 (Niacin)	0.6 mg	1.02 mg
Folate	15 mcg	25.5 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	14 mg	23.8 mg
Calcium	10 mg	17 mg
Iron	0.27 mg	0.46 mg
Sodium (Salt)	5 mg	8.5 mg
Fluoride	2.3 mcg	3.91 mcg
Iodine	2 mcg	3.4 mcg
Phosphorus	24 mg	40.8 mg
Potassium	237 mg	403 mg
Magnesium	11 mg	19 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Tomatoes are very low in ca
virtually any amount, especi
content of beta carotene m
eyesight. Their natural red p
powerful antioxidant, which
cancer. Tomatoes are a grea
necessary for maintaining p
vitamin K, which supports p
are a source of vitamin, E w
helps to prevent ageing.

Allergy and Health Risks:

Green tomatoes contain a g
which may affect the centra
convulsions or vomiting, so
green tomatoes. The skin m
especially for children and t
allergies, but this is not very

Alte

For texture, sweetness and a

- persimmon
- butternut squash
- bell pepper
- kumquat or kiwi fruit
- roasted turnips

Cooking Uses:

- **Keep fresh** to use in sala
- **Squeeze** for a juice (and
  for home-made ketchup
- **Chop and simmer** for sa
- **Dry** to use in pasta, sanc
- **Dry and mince** to make
- **Deseed and bake** with s

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Tomato – Task sheet

1. Indicate whether or not tomatoes are seasonal foods. Justify your answ

.....

.....

.....

.....

2. Indicate how different methods of processing will affect the nutritiona

Drying: .....

.....

Blanching: .....

.....

Making a tomato juice: .....

.....

Making a tomato soup: .....

.....

3. Suggest what kind of knife and which gripping technique you should u
Identify the advantages and disadvantages of your choice. [skill 1]

.....

.....

.....

.....

.....

4. What kind of date mark would you find on the packaging of: [Area 4]

a) fresh cherry tomatoes?

.....

b) canned tomatoes?

.....

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5. Describe the signs of food spoilage which you would expect to see on

.....

.....

.....

.....

.....

Extension [Area 6]

Choose five different varieties of tomato and set up a tasting panel to c
different tests to evaluate their texture, sweetness, acidity, colour, size c

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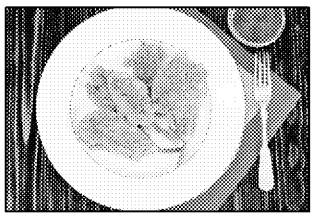
7. Courgette (Zucchi

What is It?

Long summer squash, usually green in colour on t
greenish on the inside. Courgette flowers are also
to America or Europe, you may find that courgett

Common Cuisines:

As with other varieties of squash, courgettes originally came from South or Central America. From there they were brought to Europe, and now they are widely used in Mediterranean countries, such as France, Egypt, Greece and Turkey.



S
St
wr
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the
age

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 medium zucchini (300 g)
Energy	17 kcal	51 kcal
Macronutrients		
Fat	0.32 g	0.96
Saturated fats	0.084 g	0.252
Monounsaturated fats	0.011 g	0.033
Polyunsaturated fats	0.091 g	0.273
Carbohydrates	3.11 g	9.33
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	2.5 g	7.5
Fibre	1.0 g	3
Protein	1.21 g	3.63
Micronutrients		
Vitamin A	10 mcg	30
Vitamin D	0	0
Vitamin E	0.12 mg	0.36
Vitamin K	4.3 mcg	12.9
Vitamin B1 (Thiamine)	0.05 mg	0.15
Vitamin B2 (Riboflavin)	0.09 mg	0.27
Vitamin B3 (Niacin)	0.45 mg	1.35
Folate	24 mcg	72
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	18 mg	54
Calcium	16 mg	48
Iron	0.37 mg	1.11
Sodium (Salt)	8 mg	24
Fluoride	0	0
Iodine	0	0
Phosphorus	38 mg	114
Potassium	261 mg	783 mg
Magnesium	18 mg	54 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Courgette, like many other v
calories. It contains high lev
lutein and zeaxanthin, which
support proper eyesight. Co
which makes it a great fooc
to maintain proper hydratio
people with digestive probl
also rich in potassium – one
over 20% of RNI for this mi

Allergy and Health Risks:

Very rare cases of allergy to
Courgette contains some ar
crystallise in the human bod
bladder stones, but these si

Alte

For similar texture and ta
squash.
To improve nutritional va
which is higher in beta carc

Cooking Uses:

- **Stew** to use in ratatou
- **Steam and blend** to
- **Grate** to add to panca
- **Pickle** to use in salads
- **Bake** with a stuffing a
- **Grill** to use as a side d
- **Raw and thinly sliced**

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8. Pumpkin

What is It?

Large, orange round squash, most popular around Hallov
and seeds are edible; seeds are also used to produce oils

Common Cuisines:

Pumpkin is a staple food in the USA around Halloween, where it is used to prepare pumpkin pie (and lanterns), and in Mexico (calabaza en tacha – candied pumpkin).

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per cup of 2.5cm cubes (116 g)
Energy	26 kcal	30 kcal
Macronutrients		
Fat	0.1 g	0.12 g
Saturated fats	0.052 g	0.06 g
Monounsaturated fats	0.013 g	0.015 g
Polyunsaturated fats	0.005 g	0.006 g
Carbohydrates	6.5 g	7.55 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	2.76 g	3.2 g
Fibre	0.5 g	0.6 g
Protein	1 g	1.16 g
Micronutrients		
Vitamin A	426 mcg	494 mcg
Vitamin D	0	0
Vitamin E	1.06 mg	1.23 mg
Vitamin K	1.1 mcg	1.3 mcg
Vitamin B1 (Thiamine)	0.05 mg	0.058 mg
Vitamin B2 (Riboflavin)	0.11 mg	0.13 mg
Vitamin B3 (Niacin)	0.6 mg	0.7 mg
Folate	16 mcg	19 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	9 mg	10.4 mg
Calcium	21 mg	24 mg
Iron	0.8 mg	0.93 mg
Sodium (Salt)	1 mg	1 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	44 mg	51 mg
Potassium	340 mg	394 mg
Magnesium	12 mg	14 mg
g – grams, **mg** – milligrams, **mcg** – micrograms		

Nutritiona

Health Benefits:

Pumpkin is a great source o
antioxidants such as lutein a
necessary for proper eyesig
membranes. It is very low in
in potassium, so may be co
sodium or low-calorie diet.
calcium and group B vitami
gentle on the digestive syst
treatment of kidney and bla
used for treating parasite in
zinc, which improves immu

Allergy and Health Risks:

It is very rare to develop an a
usually safe to feed it to bab
eating the seeds may result i

Alte

For the delicate flavour a
For the colour and textur
For the texture and colou
parsnips or celeriac.

Cooking Uses:

- **Simmer and blend** to
- **Mash** to make gnocch
- **Roast or bake** to use
- **Grate and bake** in pie
  cheesecake
- **Pickle** to use in salads
- **Pickle or roast** to use
  feta cheese or other in
- **Purée** to use in a latte

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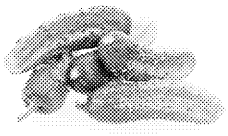
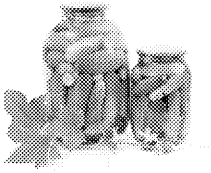
9. Cucumber



What is It?

Long, firm vegetable with dark green skin and light green delicate f
Usually eaten raw (with or without skin), but may also be pickled. J
cucumber is botanically a fruit. Cucumbers differ in shape and leng
have a smooth skin, while others can have little spikes.

Common Cuisines:



Cucumbers are known and used worldwide, but it's worth paying special attention to Bulgarian cuisine, where cucumbers are used to prepare Shopska salad, and to Eastern European (e.g. Polish) cuisine, where cucumbers are pickled and used to prepare hot cucumber soups (winter) and cold buttermilk soups (summer).

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 long cucumber (280 g)
Energy	12 kcal	34 kcal
Macronutrients		
Fat	0.16 g	0.45 g
Saturated fats	0.013 g	0.036 g
Monounsaturated fats	0.002 g	0.006 g
Polyunsaturated fats	0.003 g	0.008 g
Carbohydrates	2.16 g	6.05 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	1.38 g	3.86 g
Fibre	0.7 g	2 g
Protein	0.59 g	1.65 g
Micronutrients		
Vitamin A	4 mcg	11 mcg
Vitamin D	0	0
Vitamin E	0.03 mg	0.08 mg
Vitamin K	0	0
Vitamin B1 (Thiamine)	0.031 mg	0.087 mg
Vitamin B2 (Riboflavin)	0.025 mg	0.07 mg
Vitamin B3 (Niacin)	0.049 mg	0.1 mg
Folate	14 mcg	39 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	3.2 mg	9 mg
Calcium	14 mg	39 mg
Iron	0.22 mg	0.62 mg
Sodium (Salt)	2 mg	6 mg
Fluoride	1.3 mcg	3.6 mcg
Iodine	3 mcg	8.4 mcg
Phosphorus	21 mg	59 mg
Potassium	136 mg	381 mg
Magnesium	12 mg	34 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Health Benefits:

Almost 97% of cucumb
makes it a great source
satisfying thirst. Cucun
strong teeth, and iodin
Cucumber has a low g
diabetics, and low sod
for people with hypert
source of probiotic ba
and bowel movements

Allergy and Health

Allergy to cucumbers i
does occur, this is mos
production. Raw cucu
enzyme which breaks d
serve them with other
cucumbers are safe to
vegetables, such as to

Al

For the fresh, delicate
For the crunchiness, u
For flavour and colou

Cooking Uses:

- **Keep raw and slic**
  tortillas
- **Grate or slice** to us
- **Blend** to add to co
- **Pickle** to use in sal
  stews
- **Fresh or pickled** t
- **Grate or slice** to s
  with vinegar, salt a

**remember that the enzyme in cucumber can damage vitamin C from other vegetables; it is O*
are not sliced too finely and mixed directly before serving

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COURGETTE, PUMPKIN AND CUCUMBER –

1. Courgette, pumpkin and cucumber are considered seasonal vegetables which they are harvested. [Area 6]

.....

.....

.....

.....

2. Research information about the vegetables above and describe whether local foods. [Area 5]

.....

3. Which of the three vegetables (courgette, pumpkin or cucumber) is the

.....

.....

.....

.....

.....

4. Evaluate the advantages and disadvantages of developing genetically specified vegetables. [Area 5]

.....

.....

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.....

.....

.....

.....

Extension [Area 4, Area 6]

Research information on how to make pickled cucumbers, and then list used in the process. List each step in the pickling process, and give pick ingredients available. After two weeks, assess whether or not you have s tasting panel for your product.

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10. CARROT

What is It?

Hard root vegetable, usually orange in colour, but different
light yellow to dark purple. In some countries, the greens a
immature carrots are available in shops as 'baby carrots' –
different variety.

Common Cuisines:

Carrots are used in cuisines all around the world. Around the fifteenth century they were brought to the UK, where they became a staple food. Carrots are popular in both savoury and sweet dishes due to their universal, slightly sweet taste and indistinct aroma.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 carrot (45 g)
Energy	41 kcal	18.45 kcal
Macronutrients		
Fat	0.24 g	0.11 g
Saturated fats	0.037 g	0.02 g
Monounsaturated fats	0.014 g	0.01 g
Polyunsaturated fats	0.117 g	0.05 g
Carbohydrates	9.58 g	4.3 g
Starch (polysaccharides)	1.43 g	0.64 g
Sugars (mono– and disaccharides)	4.74 g	2.13 g
Fibre	2.8 g	1.26 g
Protein	0.93 g	0.42 g
Micronutrients		
Vitamin A	835 mcg	376 mcg
Vitamin D	0	0
Vitamin E	0.66 mg	0.3 mg
Vitamin K	13.2 mcg	5.94 mcg
Vitamin B1 (Thiamine)	0.066 mg	0.03 mg
Vitamin B2 (Riboflavin)	0.058 mg	0.026 mg
Vitamin B3 (Niacin)	0.99 mg	0.45 mg
Folate	19 mcg	8.55 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	6 mg	2.7 mg
Calcium	33 mg	15 mg
Iron	0.3 mg	0.14 mg
Sodium (Salt)	69 mg	31 mg
Fluoride	3.2 mcg	1.44 mcg
Iodine	0	0
Phosphorus	35 mg	16 mg
Potassium	320 mg	144 mg
Magnesium	12 mg	5 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Carrot is known for its beta
supports proper eyesight, a
epithelium, hair and nails. R
index, so can be eaten by di
necessary for proper blood
carrot support proper bowe
helps to cure diarrhoea, whi
constipation.

Allergy and Health Risks:

Large amounts of vitamin A
people suffering from liver d
a doctor before consuming
carrot has a relatively high g
that it should be avoided by
common allergen.

Alte

For similar texture and fla
root, daikon or celeriac.
For the colour and sweetn
butternut squash.

Cooking Uses:

- **Keep raw** to use in sa
- **Cook whole or chopp**
  dishes
- **Blend** raw to use in ju
- **Cook and blend** to m
- **Grate** to use in muffin
- **Pickle** (alone or with
  flavour
- **Steam or roast** as a s

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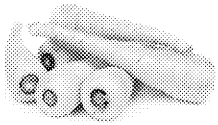
11. Parsnip



What is It?

White root vegetable native to Europe and Asia, often mista
because of its appearance. Despite being neglected and unc
countries, it is one of the most popular winter vegetables in
be a staple food in Eastern Europe before potatoes were im

Common Cuisines:

The use of parsnips is characteristic of British cuisine, but they are also used in Germany, France and the Netherlands. Parsnip very often grows in the wild (gaining it popularity during the World War II).

Stor
Store
shed o
in mois
weeks.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 small parsnip (80 g)
Energy	75 kcal	60 kcal
Macronutrients		
Fat	0.30 g	0.24 g
Saturated fats	0.05 g	0.04 g
Monounsaturated fats	0.112 g	0.09 g
Polyunsaturated fats	0.047 g	0.04 g
Carbohydrates	18 g	14.4 g
Starch (polysaccharides)	6.2 g	4.96 g
Sugars (mono- and disaccharides)	4.8 g	3.84 g
Fibre	4.9 g	3.92 g
Protein	1.2 g	0.96 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	1.5 mg	1.2 mg
Vitamin K	22.5 mcg	18 mcg
Vitamin B1 (Thiamine)	0.09 mg	0.07 mg
Vitamin B2 (Riboflavin)	0.05 mg	0.04 mg
Vitamin B3 (Niacin)	0.7 mg	0.56 mg
Folate	67 mcg	53.6 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	17 mg	13.6 mg
Calcium	36 mg	28.8 mg
Iron	0.6 mg	0.48 mg
Sodium (Salt)	10 mg	8 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	71 mg	56.8 mg
Potassium	375 mg	300 mg
Magnesium	29 mg	23 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Parsnip is high in fibre, whi
high-fibre diet. It provides
blood clotting. Parsnip also
stimulates diuresis. It is an
which helps to lower blood
electrolyte – one small pars
for this mineral.

Allergy and Health Risks:

Parsnip contains furanocou
allergic reactions and skin
calories, which may make i
wish to lose weight. It cont
does calcium, which may in
balance if not mixed with c
high in sugar, which makes

Alte

For texture and aroma, bu
parsley root.
For the colour and textur
slightly nutty flavour, use c

Cooking Uses:

- **Steam, fry or roast** to
- **Bake or fry** in the for
- **Grate or dice** to add t
- **Steam or boil** and **bl**
- **Mash** to use in a puré
- **Caramelise** to use as
- **Shred and blanch** to

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12. CELERIAC

What is It?

Round creamy root with edible leaves –not to be mistaken fo
celeriac is quite tough and nutty in flavour.

Common Cuisines:

Celeriac originated in the Mediterranean and then spread to the rest of Europe, where it is now considered a staple food. It is worth noting that celeriac can be used interchangeably with celery as the base for the famous Waldorf salad.

Stora
Celeriac
dark pla
its stems

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 cup of 2.5cm cubes (156 g)
Energy	42 kcal	66 kcal
Macronutrients		
Fat	0.3 g	0.47 g
Saturated fats	0.079 g	0.123 g
Monounsaturated fats	0.058 g	0.09 g
Polyunsaturated fats	0.148 g	0.231 g
Carbohydrates	9.2 g	14.35 g
Starch (polysaccharides)	0.5 g	0.75 g
Sugars (mono- and disaccharides)	1.6 g	2.5 g
Fibre	1.8 g	2.8 g
Protein	1.5 g	2.34 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0.36 mg	0.56 mg
Vitamin K	41 mcg	64 mcg
Vitamin B1 (Thiamine)	0.05 mg	0.078 mg
Vitamin B2 (Riboflavin)	0.06 mg	0.094 mg
Vitamin B3 (Niacin)	0.7 mg	1.1 mg
Folate	8 mcg	12 mcg
Vitamin B12		
Vitamin C (Ascorbic acid)	8 mg	12.5 mg
Calcium	43 mg	67 mg
Iron	0.7 mg	1.09 mg
Sodium (Salt)	100 mg	156 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	115 mg	179 mg
Potassium	300 mg	468 mg
Magnesium	20 mg	31 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritional

Health Benefits:

Celeriac is low in calories an
the body to help blood clot
which helps to prevent certa
of niacin, necessary for relea
the regulation of the nervou
of antioxidants which may p
down ageing.

Allergy and Health Risks:

Celeriac is a strong allergen
separately from other produ
contamination. It is also hig
it in low-sodium diets.

Alte

For colour, flavour and sr
parsnips or parsley root.
For texture in mash, use p

Cooking Uses:

- **Raw, grated and blar**
- **Steam or simmer** to u
- **Roast or grill** to serve
- **Coat in breadcrumbs**
  vegetarian-friendly dis

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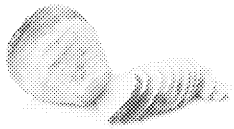
13. Swede



What is It?

Also known as rutabaga, swede evolved as a cross between
This vegetable comes from industrial crops only (i.e. it does
Larger bulbs may be woody inside, so it's best to choose sm

Common Cuisines: Swedish, Finnish, Scottish

In Finland swede is used to make a traditional Christmas casserole. In Sweden it is cooked and mashed with potatoes and butter into *rotmos*. In Scotland it forms part of neeps and tatties, traditionally served with haggis.

Stora
Brush of
then sto
May be v
Blanched

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 small swede (600 g)
Energy	24 kcal	144 kcal
Macronutrients		
Fat	0.3 g	1.8 g
Saturated fats	-	-
Monounsaturated fats	0.1 g	0.6 g
Polyunsaturated fats	0.2 g	1.2 g
Carbohydrates	5 g	30 g
Starch (polysaccharides)	0.1 g	0.6 g
Sugars (mono- and disaccharides)	4.9 g	29.4 g
Fibre	1.9 g	11.4 g
Protein	0.7 g	4.2 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0	0
Vitamin K	2 mcg	12 mcg
Vitamin B1 (Thiamine)	0.15 mg	0.9 mg
Vitamin B2 (Riboflavin)	0	0
Vitamin B3 (Niacin)	1.2 mg	7.2 mg
Folate	31 mcg	186 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	31 mg	186 mg
Calcium	53 mg	318 mg
Iron	0.1 mg	0.6 mg
Sodium (Salt)	15 mg	90 mg
Fluoride	0	0
Iodine	0	0
Phosphorus	40 mg	240 mg
Potassium	170 mg	1020 mg
Magnesium	9 mg	54 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Swede is rich in sulfur comp
may help to prevent cancer
as well as some group B vita
which boosts the immune s
may be enjoyed by most pe
potatoes for diabetics, beca
starch or sugar, which woul
levels. It provides insoluble
bowel movements.

Allergy and Health Risks:

Excessive consumption may
cause allergic reactions in th
spinach.

Alte

For the texture and colou
For colour, texture and fla
root or turnip.
For crunchiness, substitute
even water chestnuts).

Cooking Uses:

- **Cook and mash** to se
- **Dice or grate** to add
- **Roast or steam** to ser
- **Raw and grated** can b

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Root vegetables (carrot, parsnip, celeri
Task sheet

1. List five dishes which are based on carrots. [Area 1]

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.....

.....

2. Check the Reference Nutrient Intake (RNI) for teenagers and calculate
a %) is provided by 100 g of **one** of the vegetables: carrot, parsnip or

Nutritional value: typical value	Reference Nutrient Intake for teenage boys	Reference Nutrient Intake for teenage girls	100 g of .....
Energy			
		Macronutrients	
Fat			
Carbohydrates			
Starch (polysaccharides)			
Sugars (mono- and disaccharides)			
Fibre			
Protein			
		Micronutrients	
Vitamin A			
Vitamin D			
Vitamin B1 (Thiamine)			
Vitamin B2 (Riboflavin)			
Vitamin B3 (Niacin)			
Folate			
Vitamin B12			
Vitamin C (Ascorbic acid)			
Calcium			
Iron			
Sodium (Salt)			
Iodine			
Phosphorus			
Potassium			
Magnesium			

Extension [Area 6, skills 1–3, skills 5–9, skill 20]
Design a soup using one of the root vegetables listed. Then design a sk
equipment used (and techniques or skills required), the cooking metho
preparation of the vegetables.

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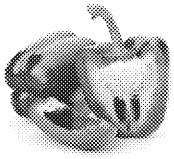
14. Bell Pepper / Sweet



What is It?

Firm, red, yellow or green vegetable in the shape of a bell, e
multiple seeds. Red bell peppers are used to make paprika (
used to make chilli because of their high level of capsaicin –
makes them spicy and hot).

Common Cuisines:

Peppers are native to Mexico and South America, but were transferred to Europe in the fifteenth century and have gained popularity since.

Nutritional Information:

These values may differ between similar products. The information below is for red pepper.

Nutritional value: typical value	Per 100 g	Per 1 medium pepper (120 g)
Energy	31 kcal	37.2 kcal
Macronutrients		
Fat	0.3 g	0.36 g
Saturated fats	0.027 g	0.032 g
Monounsaturated fats	0.003 g	0.004 g
Polyunsaturated fats	0.04 g	0.05 g
Carbohydrates	6 g	7.2 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	4.2 g	5.04 g
Fibre	2.1 g	2.52 g
Protein	1 g	1.2 g
Micronutrients		
Vitamin A	157 mcg	188 mcg
Vitamin D	0	0
Vitamin E	1.58 mg	1.89 mg
Vitamin K	4.9 mcg	5.9 mcg
Vitamin B1 (Thiamine)	0.054 mg	0.06 mg
Vitamin B2 (Riboflavin)	0.085 mg	0.1 mg
Vitamin B3 (Niacin)	1 mg	1.2 mg
Folate	46 mcg	55 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	128 mg	153.6 mg
Calcium	7 mg	8.4 mg
Iron	0.43 mg	0.52 mg
Sodium (Salt)	4 mg	4.8 mg
Fluoride	0	0
Iodine	3 mcg	3.6 mcg
Phosphorus	26 mg	31.2 mg
Potassium	211 mg	253 mg
Magnesium	12 mg	14 mg
g – grams, **mg** – milligrams, **mcg** – micrograms		

Storage:

Peppers should be
temperature of aro
kitchen towel and s
unwashed peppers
and refrigerate for u
refrigeration can cau

Nutrition

Health Benefits:

Red pepper is a great sourc
important for boosting the
ingestion of iron and skin re
contains beta carotene, nec
healthy skin. It contains litt
appropriate for people with
quite high levels of vitamin
clotting of blood.

Allergy and Health Risks:

Sweet pepper may cause al
people allergic to birch poll

Alte

For colour and crunchines
For the tangy flavour, repl

Cooking Uses:

- **Chop** to add to stews
- **Dice** to use in soups a
  salads and sandwiche
- **Stuff and bake** as a n
- **Grill or roast** to serve
- **Dehydrate** into a pow
- **Grill and blend** into a
  pancakes, as well as o

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BELL PEPPER / SWEET PEPPER – TA

1. Indicate the differences in nutritional value between red pepper and g
McCance and Widdowson's 'Composition of foods' database available

Red sweet pepper	Gree

2. Sweet pepper is very popular in Mexican cuisine – but not only Mexica
which use sweet pepper as a staple food. [Area 5]

.....

.....

.....

Extension [Area 5 Area 6]

Research information about various kinds of pepper and create a poste
from. You can also prepare a tasting panel for various kinds of pepper.

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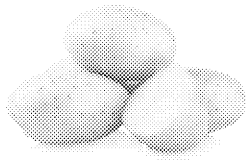
15. Potato



What is It?

Starchy, tuberous vegetable with a brown skin, usual
shape. Potatoes are a very versatile ingredient, since t
variety of dishes which can be prepared from them.

Common Cuisines:

Staple food in many countries, such as Russia (used to make pancakes and vodka), Germany (famous potato salad) and the United Kingdom (jacket potatoes). Although they originated in South America, nowadays almost 70% of the world's consumption of potatoes takes place in Asia.

Sto
Sto
in a
mou

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 small potato (90 g)
Energy	77 kcal	69.3 kcal
Macronutrients		
Fat	0.09 g	0.081 g
Saturated fats	0.025 g	0.0225 g
Monounsaturated fats	0.002 g	0.0018 g
Polyunsaturated fats	0.042 g	0.0378 g
Carbohydrates	17.5 g	15.75 g
Starch (polysaccharides)	15.3 g	13.77 g
Sugars (mono- and disaccharides)	0.82 g	0.738 g
Fibre	2.1 g	1.89 g
Protein	2.05 g	1.845 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0	0
Vitamin K	2 mcg	1.8 mcg
Vitamin B1 (Thiamine)	0.081 mg	0.073 mg
Vitamin B2 (Riboflavin)	0.032 mg	0.029 mg
Vitamin B3 (Niacin)	1.06 mg	0.95 mg
Folate	15 mcg	13.5 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	20 mg	18 mg
Calcium	12 mg	10.8 mg
Iron	0.81 mg	0.73 mg
Sodium (Salt)	6 mg	5.4 mg
Fluoride	0	0
Iodine	1 mcg	0.9 mcg
Phosphorus	57 mg	51.3 mg
Potassium	425 mg	382 mg
Magnesium	23 mg	21 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Potatoes are the main sour
many people around the w
to support healthy bones, f
nervous system and vitami
are very high in potassium,
blood pressure and conduc
potato provides over 10% o
are low in sodium and prot
for people with kidney dise

Allergy and Health Risks:

Raw potatoes are toxic and
Cooked potatoes are high i
contribute to weight gain a
high glycaemic index, which
sugar levels very quickly an
by diabetics.

Alte

For the texture, use sweet
For colour and texture, use
If you are looking for a sta
groats or quinoa.

Cooking Uses:

- **Mash, fry, roast or b**
- **Stuff and bake** to eat
- **Boil or steam** to use i
- **Boil and mash** to use
- **Extract the starch** to
  sweet sauces
- **Roast** whole with skin
  serve as jacket potato
  to eat as a snack
- **Grate** to make potato

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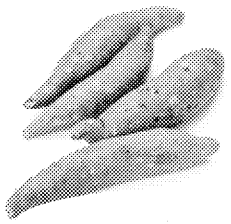
16. Sweet Potato



What is It?

Longitudinal tuberous vegetable with a hard, orange
is sweet in taste. The flesh is usually very hard and cr

Common Cuisines:

Sweet potatoes are a staple food for the poor in the Philippines, as they are easier and cheaper to grow than rice. In the USA, candied sweet potatoes are served for Thanksgiving.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 potato (130 g)
Energy	86 kcal	112 kcal
Macronutrients		
Fat	0.05 g	0.07 g
Saturated fats	0.018 g	0.023 g
Monounsaturated fats	0.001 g	0.001 g
Polyunsaturated fats	0.014 g	0.018 g
Carbohydrates	20.12 g	26.16 g
Starch (polysaccharides)	12.65 g	16.45 g
Sugars (mono- and disaccharides)	4.18 g	5.43 g
Fibre	3.0 g	3.9 g
Protein	1.57 g	2.04 g
Micronutrients		
Vitamin A	709 mcg	922 mcg
Vitamin D	0	0
Vitamin E	0.26 mg	0.34 mg
Vitamin K	1.8 mcg	2.3 mcg
Vitamin B1 (Thiamine)	0.078 mg	0.1 mg
Vitamin B2 (Riboflavin)	0.061 mg	0.079 mg
Vitamin B3 (Niacin)	0.557 mg	0.72 mg
Folate	11g	14 mg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	2.4 mg	3.1 mg
Calcium	30 mg	39 mg
Iron	0.61 mg	0.79 mg
Sodium (Salt)	55 mg	72 mg
Fluoride	-	-
Iodine	2 mcg	2.6 mcg
Phosphorus	47 mg	61 mg
Potassium	337 mg	438 mg
Magnesium	25 mg	32 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Sweet potatoes provide lar
beta carotene, necessary fo
membrane regeneration an
rich in fibre, which supports
They are also rich in vitamin
and supports fertility.

Allergy and Health Risks:

Sweet potatoes are quite h
best not to include them in
who are trying to lose weig
of sodium, which needs to
especially for people with h
Sweet potatoes rarely caus
reaction does occur, it is no

Alte

For texture and volume, u
For colour and sweetness
squash.

Cooking Uses:

- **Mash** (purée) to serve
- **Dice or slice** to add to
- **Roast or fry** to eat as
  chips or crisps)
- **Boil and mash** to pre
- **Boil and mash** to use
  etc.

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Potato and sweet potato – Tas

1. What is the definition of a staple food? [Area 1]

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2. List five staple foods of the United Kingdom. [Area 1]

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3. Research and list countries where sweet potatoes are produced. Expla potatoes to the United Kingdom can affect the environment. [Area 5]

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Extension [Area 3]

Design a poster (using the Ingredients Cards to help you) that highlight eating sweet potatoes over white potatoes.

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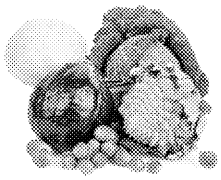
17. Cabbage



What is It?

Leafy, round plant of many varieties, such as savoy, pa
sprouts. Cabbage is closely related to broccoli and cau
they belong to the cruciferous family.

Common Cuisines:

Different varieties of cabbage are popular around the world – bok choi in China, kimchi in Vietnam, Brussel sprouts in the UK... In many European countries (such as Germany, France and Poland) cabbage is soured (pickled) to obtain sauerkraut – a very sour product full of probiotic bacteria.

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 cup of shredded cabbage (70 g)
Energy	25 kcal	18 kcal
Macronutrients		
Fat	0.1 g	0.07 g
Saturated fats	0.034 g	0.024 g
Monounsaturated fats	0.017 g	0.012 g
Polyunsaturated fats	0.017 g	0.012 g
Carbohydrates	5.8 g	4.06 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	3.2 g	2.24 g
Fibre	2.5 g	1.8 g
Protein	1.28 g	0.9 g
Micronutrients		
Vitamin A	5 mcg	4 mcg
Vitamin D	0	0
Vitamin E	0.15 mg	0.10 mg
Vitamin K	76 mcg	53.2 mcg
Vitamin B1 (Thiamine)	0.061 mg	0.043 mg
Vitamin B2 (Riboflavin)	0.04 mg	0.028 mg
Vitamin B3 (Niacin)	0.234 mg	0.164 mg
Folate	43 mcg	30 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	36.6 mg	25.6 mg
Calcium	40 mg	28 mg
Iron	0.47 mg	0.33 mg
Sodium (Salt)	18 mg	13 mg
Fluoride	1.0 mcg	0.7 mcg
Iodine	2 mcg	1.4 mcg
Phosphorus	26 mg	18 mg
Potassium	170 mg	119 mg
Magnesium	12 mg	8 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Cabbage is rich in vitamin K (n
folate and vitamin C (100 g pro
antioxidants and polyphenols,
and ageing. Phytosterols in cab
levels in the blood and preven

Sauerkraut – which is becomin
Britain – is a rich source of vita
health due to high levels of pr
proper functioning of the gut.
Cabbage is low in calories, so
calorie diet.

Allergy and Health Risks:

Cabbage is rich in sulfur comp
and wind. Raw cabbage may a
which may be harmful – espec
diseases. Sauerkraut is high in
avoided by people on a low-s
kidney disease).

Alte

For white colour and similar
For green colour and texture
chard, arugula or collard.

Cooking Uses:

- **Raw, shredded** in salads
- **Shred and simmer or st**
  dishes such as colcannon
- **Divide into leaves and**
  vegetables, and then sim
- **Shred and cook** with he
  dish
- **Pickle** to make sauerkra
  or stuffing
- **Blend into a juice** for us

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18. CAULIFLOWER

What is It?

Cauliflower is part of the cruciferous family. The edible pa
inflorescence – a group of flowers arranged on a stem. It is
colourful varieties (including white, purple and green).

Common Cuisines:

Cauliflower is a popular ingredient in Europe, where it is used to prepare many dishes, such as cauliflower cheese in the UK. It is also used in India where it was introduced during the period of British colonialism. There are many varieties of cauliflower, each originating from a different country.

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 floret (13 g)
Energy	25 kcal	12 kcal
Macronutrients		
Fat	0.28 g	0.04 g
Saturated fats	0.13 g	0.017 g
Monounsaturated fats	0.034 g	0.004 g
Polyunsaturated fats	0.031 g	0.004 g
Carbohydrates	4.97 g	0.65 g
Starch (polysaccharides)	0.2 g	0.026 g
Sugars (mono- and disaccharides)	1.91 g	0.25 g
Fibre	2.0 g	0.3 g
Protein	1.92 g	0.25 g
Micronutrients		
Vitamin A	0	0
Vitamin D	0	0
Vitamin E	0.08 mg	0.01 mg
Vitamin K	15.5 mcg	2 mcg
Vitamin B1 (Thiamine)	0.05 mg	0.007 mg
Vitamin B2 (Riboflavin)	0.06 mg	0.008 mg
Vitamin B3 (Niacin)	0.507 mg	0.066 mg
Folate	57 mcg	7 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	48.2 mg	6.3 mg
Calcium	22 mg	3 mg
Iron	0.42 mg	0.05 mg
Sodium (Salt)	30 mg	4 mg
Fluoride	1 mcg	0.1 mcg
Iodine	0	0
Phosphorus	44 mg	6 mg
Potassium	299 mg	39 mg
Magnesium	15 mg	2 mg

g– grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Cauliflower is a source of fib
and blood sugar and choles
blood clotting) and vitamin C
contains phytosterols – sub
cholesterol levels in the blo
polyphenols (antioxidants) a
risk of developing certain ca

Allergy and Health Risks:

Cauliflower is rich in purines
broken down, can form uric
gall bladder and kidney ston
cruciferous vegetables, it ma
to high levels of sulfur comp

Alte

For similar texture, but mo
The colour and texture of
replaced by potatoes or cele

Cooking Uses:

- **Keep raw** to eat as a s
- **Steam or boil** to serv
- **Bake** in a sauce (e.g. c
  side or main dish
- **Simmer or stew** to ma
- **Fry** in batter or breade
- **Roast** to eat as a main
- **Grind** in a food proce
  base or biscuits
- **Cut into pieces** and a
  gratins

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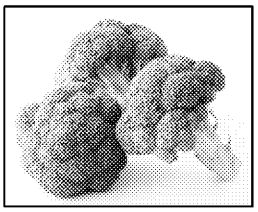
19. BROCCOLI



What is It?

Another member of the cruciferous family, with edible gr
taste of broccoli may be perceived as bitter due to high l

Common Cuisines:

Since broccoli was first grown in Italy, it is most widely used in Europe. In the eighteenth century it was introduced to Great Britain, where it quickly became a staple food.

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 stalk (150 g)
Energy	34 kcal	51 kcal
Macronutrients		
Fat	0.37 g	0.56 g
Saturated fats	0.039 g	0.059 g
Monounsaturated fats	0.011 g	0.017 g
Polyunsaturated fats	0.038 g	0.057 g
Carbohydrates	6.64 g	10.03 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	1.7 g	2.57 g
Fibre	2.6 g	3.9 g
Protein	2.82 g	4.26 g
Micronutrients		
Vitamin A	31 mcg	46 mcg
Vitamin D	0	0
Vitamin E	0.78 mg	1.17 mg
Vitamin K	101.6 mcg	153.4 mcg
Vitamin B1 (Thiamine)	0.071 mg	0.106 mg
Vitamin B2 (Riboflavin)	0.117 mg	0.176 mg
Vitamin B3 (Niacin)	0.639 mg	0.959 mg
Folate	63 mcg	94 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	89 mg	134 mg
Calcium	47 mg	70 mg
Iron	0.73 mg	1.09 mg
Sodium (Salt)	33 mg	50 mg
Fluoride	-	-
Iodine	2 mcg	3 mcg
Phosphorus	66 mg	99 mg
Potassium	316 mg	474 mg
Magnesium	21 mg	32 mg
g – grams, **mg** – milligrams, **mcg** – micrograms		

Nutritional

Health Benefits:

Broccoli is one of the healthi
amounts of micronutrients, s
folate, calcium and iron. It is
almost 10% of RNI for this su
potassium in broccoli help to
Moreover, broccoli provides
beta carotene, lutein, zeaxan
(polyphenols and antioxidan
the prevention of cancer, dia
and many other health-relate

Allergy and Health Risks:

Consuming large quantities
efficacy of certain medicines
increasing the risk of bleedi
increase the risk of developi
stones. The high proportion
increased flatulence. Broccol
people with thyroid dysfunc

Alter

For similar taste and colou
sprouts.
For similar texture, use cau

Cooking Uses:

- **Simmer, steam, brais**
- **Blanch or steam** to u
- **Bake** under a sauce to
- **Shred or divide into**
  dishes
- **Blend raw** to use in c
- **Divide into pieces an**
- **Fry** with bacon or han
  to add to scrambled e

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Cruciferous vegetables (cabbage, cau
broccoli) - Task sheet

1. Indicate what sized portion of cabbage, cauliflower and broccoli will p
for a 16-year-old. [Area 3]

.....

.....

.....

2. What method of heat transfer is used when: [Area 4]

a) steaming broccoli?

.....

b) roasting cauliflower?

.....

c) boiling cabbage?

.....

3. Describe how cooking broccoli will affect its texture, colour and smell.

.....

.....

.....

.....

4. Explain why people with certain medical conditions should not eat cru

.....

.....

.....

.....

.....

Extension [Area 4]

Create an instruction card to indicate five ways of using leftover cabbag
food waste at home. Hang it on the fridge to support your family in redu

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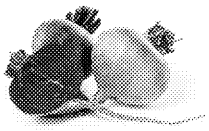
20. Beetroot



What is It?

Beetroot is the edible tap root of a beet plant, but its leaves are e
which gives beetroot its dark purple colour can be extracted for c
dye and for dyeing fabric. Sugar beet is a variety of beetroot cul
animal feed.

Common Cuisines:

Although beetroot is eaten in many countries, including India and Australia, it is a very important part of Eastern European diets, where they are used to prepare a selection of dishes such as soups, salads, condiments or pickles.

Storage
Leaves shoul
towel and kep
Beetroots sho
with the leave

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 beetroot (5 cm diameter) approx. 80 g
Energy	43 kcal	35 kcal
Macronutrients		
Fat	0.17 g	0.14 g
Saturated fats	0.027 g	0.022 g
Monounsaturated fats	0.032 g	0.026 g
Polyunsaturated fats	0.06 g	0.049 g
Carbohydrates	9.56 g	7.84 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	6.76 g	5.54 g
Fibre	2.8 g	2.3 g
Protein	1.61 g	1.32 g
Micronutrients		
Vitamin A	2 mcg	2 mcg
Vitamin D	0	0
Vitamin E	0.04 mg	0.03 mg
Vitamin K	0.2 mcg	0.2 mcg
Vitamin B1 (Thiamine)	0.031 mg	0.025 mg
Vitamin B2 (Riboflavin)	0.04 mg	0.033 mg
Vitamin B3 (Niacin)	0.334 mg	0.274 mg
Folate	109 mcg	89 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	4.9 mg	4 mg
Calcium	16 mg	13 mg
Iron	0.8 mg	0.66 mg
Sodium (Salt)	78 mg	64 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	40 mg	33 mg
Potassium	325 mg	260 mg
Magnesium	23 mg	18 mg
g – grams, **mg** – milligrams, **mcg** – micrograms		

Nutritio

Health Benefits:

Beetroots are a good source o
healthy bowel movements, an
formation. But the main health
from betaine – the purple pigm
antiviral and anticancer agent.
homocysteine in the blood, pr
the risk of heart failure. Beetro
quercetin, which acts as an an

Allergy and Health Risks:

Beetroot is quite high in suga
in diabetics. It may also chang
there were blood in them (thi
dangerous). Beetroot contains
of developing kidney and gall

Alte

For texture and sweetness, use a
For colour, choose red cabbage o
acidity).
To replace the leaves, use spinac

Cooking Uses:

- After cooking, remembe
  – to preserve the deep p
- **Steam whole and unpee**
- **Grate or slice cooked** b
  well as on canapés
- **Keep raw and blend** int
  stand for an hour to avo
- **Grate raw** to use in cake
- **Grate raw or cooked** to
- **Pickle** to use in salads a
- **Bake or steam and grat**
  with meat
- **Grate cooked** beetroot a
  condiment for cold cuts a
- **Chop** the leaves and **sim**

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BEETROOT – TASK SHEET

1. Explain whether or not beetroot may be used in the dietary treatment

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2. Indicate whether beetroot may be perceived as a seasonal vegetable. I harvesting. [Area 6]

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Tas

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3. Cook five small beetroots using five different cooking methods (other than baking used in C
compare them. What features of beetroot can you assess? Which cooking method produce

Sample	Cooking method used	Dislike a lot	Dislike	Neithe
1				
2				
3				
4				
5				

Overall conclusions:

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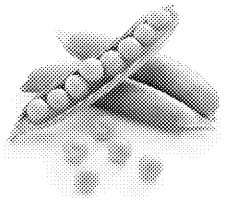
21. Green Peas



What is It?

Green peas are actually seeds encased in a crunchy and s
peas and pod can be eaten. Dried peas are an excellent s
protein alternative for meat.

Common Cuisines:

Dried peas are a staple food in many countries (e.g. throughout Eastern Europe), while sugar snap peas are more popular in Western Europe as a snack. Green peas (*petit pois*) are popular worldwide, and are used as a main ingredient of many meals as well as a side dish.

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also be

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 cup (145 g)
Energy	81 kcal	115 kcal
Macronutrients		
Fat	0.4 g	0.58 g
Saturated fats	0.071 g	0.103 g
Monounsaturated fats	0.035 g	0.051 g
Polyunsaturated fats	0.187 g	0.271 g
Carbohydrates	14.45 g	20.95 g
Starch (polysaccharides)	7.0 g	10.5 g
Sugars (mono- and disaccharides)	5.67 g	8.22 g
Fibre	5.7 g	8.3 g
Protein	5.42 g	7.86 g
Micronutrients		
Vitamin A	38 mcg	55 mcg
Vitamin D	0	0
Vitamin E	0.13 mg	0.19 mg
Vitamin K	24.8 mcg	36 mcg
Vitamin B1 (Thiamine)	0.266 mg	0.386 mg
Vitamin B2 (Riboflavin)	0.132 mg	0.191 mg
Vitamin B3 (Niacin)	2.09 mg	3.03 mg
Folate	65 mcg	94 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	40 mg	58 mg
Calcium	25 mg	36 mg
Iron	1.47 mg	2.13 mg
Sodium (Salt)	5 mg	7 mg
Fluoride	-	-
Iodine	2 mcg	3 mcg
Phosphorus	108 mg	157 mg
Potassium	244 mg	354 mg
Magnesium	33 mg	48 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Green peas provide high amoun
makes them an excellent part of
vegetarian, preventing constipat
movements. Peas are rich in gro
necessary for the healthy functio
increasing immunity. High levels
zeaxanthin in peas help to maint
and work as a potent antioxidan
peas are also a good source of p
cup of peas provides over 10% o

Allergy and Health Risks:

Peas contains purines, which m
kidney and gall bladder stones,
(a disease in which uric acid cry
also quite high in sugars, so sh
diabetics.

Alte

For similar nutritional value, re
For similar texture and sweet
For similar texture and colou

Cooking Uses:

- **Keep raw and fresh** (to
side dish
- **Boil, simmer or stew** (w
aspic (meat jelly), salads,
- **Cook and blend** into a c
- **Dehydrate or dry** to pre
pâtés and stuffing
- **Mash** into a purée
- **Steam** to use in salads, c
dish

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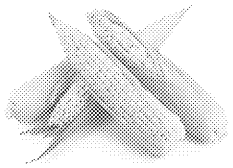
22. Sweetcorn



What is It?

Also known as sugar corn (in America), sweetcorn is a sug
It can be eaten raw, steamed or boiled (bought fresh or c

Common Cuisines:

Sweetcorn is popular in Brazil, where it is eaten with beans for protein complementation. In the USA it is usually eaten steamed or boiled on the cob, and served as a side dish. Popcorn is a popular snack worldwide.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 cup (145 g)
Energy	86 kcal	125 kcal
Macronutrients		
Fat	1.35 g	1.96 g
Saturated fats	0.325 g	0.471 g
Monounsaturated fats	0.432 g	0.626 g
Polyunsaturated fats	0.487 g	0.706 g
Carbohydrates	18.7 g	27.11 g
Starch (polysaccharides)	5.7 g	8.27 g
Sugars (mono- and disaccharides)	6.26 g	9.08 g
Fibre	2.0 g	2.9 g
Protein	3.27 g	4.74 g
Micronutrients		
Vitamin A	9 mcg	13 mcg
Vitamin D	0	0
Vitamin E	0.07 mg	0.1 mg
Vitamin K	0.3 mcg	0.4 mcg
Vitamin B1 (Thiamine)	0.155 mg	0.225 mg
Vitamin B2 (Riboflavin)	0.055 mg	0.08 mg
Vitamin B3 (Niacin)	1.77 mg	2.56 mg
Folate	42 mcg	61 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	6.8 mg	9.9 mg
Calcium	2 mg	3 mg
Iron	0.52 mg	0.75 mg
Sodium (Salt)	15 mg	22 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	89 mg	129 mg
Potassium	270 mg	392 mg
Magnesium	37 mg	54 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutri

Health Benefits:

Sweetcorn is a rich source o
for releasing energy from fo
folate, which is necessary fo
anaemia. The dietary fibre i
movements and avoid cons
source of lutein and zeaxan
eyesight. Sweetcorn is rich i
important electrolyte, and m
muscle contractions and he

Allergy and Health Risks:

Sweetcorn is calorific and c
be avoided by diabetics an
It can also cause digestive is
oversensitivity (as in irritab
second most genetically m
some people may choose n
reasons.

Alte

For texture and sweetnes
For colour and crunchine
For the texture and taste
beans or lentils.

Cooking Uses:

- **Eat raw** as a snack o
  burgers
- **Freeze, can or pickl**
  and curries, stir-fries
- **Boil, roast or steam**
- **Steam or boil** to ad
  tortillas, or sauces (s
- **Toast dry kernels** to
  be used as a garnish

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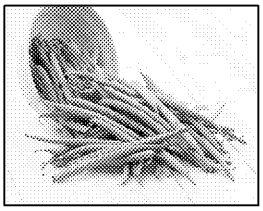
23. Green Beans



What is It?

Also known as snap beans (in America), these are bright g
beans. Green beans may have a fibrous string, which has
cooking (otherwise it will get stuck between your teeth!).

Common Cuisines:

Green beans are eaten worldwide. In the USA they are used to prepare green bean casserole, while in Japan they are made into tempura. They are also very popular in European and Asian cuisines – usually served as a side dish.

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 cup (130 g)
Energy	31 kcal	40.3 kcal
Macronutrients		
Fat	0.22 g	0.29 g
Saturated fats	0.05 g	0.065 g
Monounsaturated fats	0.01 g	0.013 g
Polyunsaturated fats	0.113 g	0.15 g
Carbohydrates	6.97 g	9.06 g
Starch (polysaccharides)	0.88 g	1.14 g
Sugars (mono- and disaccharides)	3.26 g	4.24 g
Fibre	2.7 g	3.5 g
Protein	1.83 g	2.38 g
Micronutrients		
Vitamin A	35 mcg	46 mcg
Vitamin D	0	0
Vitamin E	0.41 mg	0.53 mg
Vitamin K	43 mcg	55.9 mcg
Vitamin B1 (Thiamine)	0.082 mg	0.107 mg
Vitamin B2 (Riboflavin)	0.104 mg	0.135 mg
Vitamin B3 (Niacin)	0.734 mg	0.954 mg
Folate	33 mcg	43 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	12.2 mg	15.9 mg
Calcium	37 mg	48 mg
Iron	1.03 mg	1.34 mg
Sodium (Salt)	6 mg	8 mg
Fluoride	19 mcg	24.7 mcg
Iodine	2 mcg	2.6 mcg
Phosphorus	38 mg	49 mg
Potassium	211 mg	274 mg
Magnesium	25 mg	32 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Green beans are a tasty and
micronutrients such as folat
niacin and calcium. They als
fluoride, necessary for the p
enamel. Green beans contai
polyphenols, which help to
kinds of bean, green beans
any flatulence, and may be
FODMAP diet (a special die
sufferers). A cup of green b
for magnesium, necessary f

Allergy and Health Risks:

Green beans contain a certa
build up into kidney or gall

Alte

For the texture and colour
For colour and texture, cho
snaps.

Cooking Uses:

- If you use fresh green
stems and strings
- **Boil or steam** to use a
variety of additives to
breadcrumbs, butter, P
- **Cook** in soups, stews a
- **Steam or pickle** to us
burgers
- **Wrap** in bacon and st
- **Chop** and add to stew

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GREEN PEAS, SWEETCORN AND GREEN BEAN

1. Compare the nutritional values of green peas, sweetcorn and green be three vegetables is best used in a high fibre diet. [Area 3]

2. Explain why vegetables have to be blanched before freezing. [Area 4, skill 2]

3. Depending on the country or region in which they are used, vegetable in different ways. Indicate how this applies to sweetcorn. [Area 5]

Extension [Area 4]

Cook fresh green beans using three different methods, e.g. boiling, stea then compare how each cooking method affected the appearance, colc of the beans.

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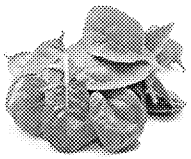
24. Spinach



What is It?

Dark green leaves originating in Asia. Baby spinach has s
while the leaves of mature spinach are thicker and leathe

Common Cuisines:

Spinach is popular in Indian cuisine, where it is used to prepare curries and bhajis. In the USA it is usually served steamed as a side dish. In Italy it is used to make stuffing for pasta (e.g. cannelloni and ravioli)

St
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frid
can

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per handful (30 g)
Energy	23 kcal	7 kcal
Macronutrients		
Fat	0.39 g	0.12 g
Saturated fats	0.063 g	0.019 g
Monounsaturated fats	0.01 g	0.003 g
Polyunsaturated fats	0.165 g	0.05 g
Carbohydrates	3.63 g	1.09 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.42 g	0.13 g
Fibre	2.2 g	0.7 g
Protein	2.86 g	0.86 g
Micronutrients		
Vitamin A	469 mcg	141 mcg
Vitamin D	0	0
Vitamin E	2.03 mg	0.61 mg
Vitamin K	482.9 mcg	144.9 mcg
Vitamin B1 (Thiamine)	0.078 mg	0.023 mg
Vitamin B2 (Riboflavin)	0.189 mg	0.057 mg
Vitamin B3 (Niacin)	0.724 mg	0.217 mg
Folate	194 mcg	58 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	28.1 mg	8.4 mg
Calcium	99 mg	30 mg
Iron	2.71 mg	0.81 mg
Sodium (Salt)	79 mg	24 mg
Fluoride	-	-
Iodine	2 mcg	0.6 mcg
Phosphorus	49 mg	15 mg
Potassium	558 mg	167 mg
Magnesium	79 mg	24 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritio

Health Benefits:

Spinach is a great source o
building healthy red blood
and vitamin C, which increa
provides high doses of vita
blood clotting. Very high a
and zeaxanthin help to ma
as antioxidants, lowering th
Spinach is also an excellen
helps to balance blood pre
for proper muscle contract

Allergy and Health Risks:

Spinach contains a lot of o
risk of kidney stones and w
disease in which uric acid c
causing swelling and pain)
impairing its absorption in

Alte

For the colour and textur
use sorrel.
For similar colour and tex
arugula, beetroot leaves, rc

Cooking Uses:

- Spinach contains oxalic a
body, so it's best to mix
milk, cream or cheese
- **Keep fresh and raw** to a
- **Steam or simmer** with g
- **Steam and blend** to ma
stuffing for dumplings an
- **Add whole or chopped**
- **Blend raw** to make a jui
milk, yogurt or another c

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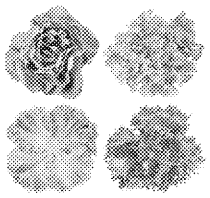
25. LETTUCE



What is It?

Lettuce is a leafy vegetable used especially in salads. The
of lettuce, which differ in colour (usually green, but may a
shape of the leaves. Lettuce is made up of 95% water and
considered a useful source of macronutrients in a diet, bu
water and micronutrients.

Common Cuisines:

Lettuce is usually the base of most popular salads, such as Caesar salad and salade niçoise or simply served sprinkled with vinaigrette sauce.

Stor
Wrap i
sprinkl
and sto
perishal

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per serving (36 g)
Energy	15 kcal	5 kcal
Macronutrients		
Fat	0.15 g	0.05 g
Saturated fats	0.02 g	0.007 g
Monounsaturated fats	0.006 g	0.002 g
Polyunsaturated fats	0.082 g	0.03 g
Carbohydrates	2.87 g	1.03 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	0.78 g	0.28 g
Fibre	1.3 g	0.5 g
Protein	1.36 g	0.49 g
Micronutrients		
Vitamin A	370 mcg	133 mcg
Vitamin D	0	0
Vitamin E	0.22 mg	0.08 mg
Vitamin K	126.3 mcg	45.5 mcg
Vitamin B1 (Thiamine)	0.07 mg	0.025 mg
Vitamin B2 (Riboflavin)	0.08 mg	0.029 mg
Vitamin B3 (Niacin)	0.375 mg	0.135 mg
Folate	38 mcg	14 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	9.2 mg	3.3 mg
Calcium	36 mg	13 mg
Iron	0.86 mg	0.31 mg
Sodium (Salt)	28 mg	10 mg
Fluoride	-	-
Iodine	1 mcg	0.3 mcg
Phosphorus	29 mg	10 mg
Potassium	194 mg	70 mg
Magnesium	13 mg	5 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

The main benefit of eating
water – an underestimated
be impossible to survive. Le
beta carotene, lutein and z
antioxidants. Lettuce also c
which lower LDL cholesterol
rich in quercetin (another a
of developing cancer and c
in calories and may be eate

Allergy and Health Risks:

Allergy to lettuce is very ra
cause side effects or digest
be heavily polluted with pe

Alte

For the green colour and
arugula, spinach, sorrel or l

Cooking Uses:

- **Keep raw and shred**
  sandwiches, burgers, t
- **Wrap** to use instead o
  snacks (finger foods a
- **Wrap and stuff** with
  or anything else and s
- **Blend** into a juice, sm

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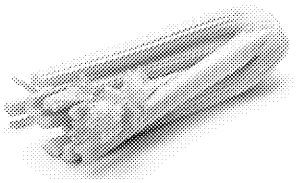
26. CELERY



What is It?

Long, light green, juicy stem with small leaves on top
white part growing under the ground) is called celeri
vegetable. Celery seeds may be eaten whole or grou

Common Cuisines:

In 1893, celery was used to create the famous Waldorf salad in the Waldorf Astoria hotel in New York City, USA. In Europe, celery has gained popularity as a refreshing snack and ingredient of healthy drinks and smoothies.

Storage:
Chopped ce
a week if wra
(shiny side ou
celery sticks s

Nutritional Information:

These values may differ between similar products.

Nutritional value: typical value	Per 100 g	Per 1 stalk (65 g)
Energy	16 kcal	10 kcal
Macronutrients		
Fat	0.17 g	0.11 g
Saturated fats	0.042 g	0.027 g
Monounsaturated fats	0.032 g	0.021 g
Polyunsaturated fats	0.079 g	0.051 g
Carbohydrates	2.97 g	1.93 g
Starch (polysaccharides)	0	0
Sugars (mono- and disaccharides)	1.34 g	0.87 g
Fibre	1.6 g	1 g
Protein	0.69 g	0.45 g
Micronutrients		
Vitamin A	22 mcg	14 mcg
Vitamin D	0	0
Vitamin E	0.27 mg	0.18 mg
Vitamin K	29.3 mcg	19 mcg
Vitamin B1 (Thiamine)	0.021 mg	0.014 mg
Vitamin B2 (Riboflavin)	0.057 mg	0.037 mg
Vitamin B3 (Niacin)	0.32 mg	0.208 mg
Folate	36 mcg	23 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	3.1 mg	2 mg
Calcium	40 mg	26 mg
Iron	0.2 mg	0.13 mg
Sodium (Salt)	80 mg	52 mg
Fluoride	4 mcg	2.6 mcg
Iodine	0	0
Phosphorus	24 mg	16 mg
Potassium	260 mg	166 mg
Magnesium	11 mg	7 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutrition

Health Benefits:

Comprising over 95% water,
especially on hot, sunny day
provides water-soluble vitam
well as calcium and vitamin K
quite rare among vegetables
amounts of beta carotene ar
antioxidants to help prevent
inflammatories. It is also very
in large quantities, even by p

Allergy and Health Risks:

Celery is a strong allergen, a
from other foods to avoid c
also quite rich in sodium, so
by people with hypertensio

Alte

For the crunchy texture, us
For the colour and flavour
Instead of the leaves, use p

Cooking Uses:

- **Chop raw** to use inter
  Waldorf salad or any c
- **Chop and fry** to use i
- **Blend** to make juices a
- **Chop fresh** and serve
  dips or hummus
- **Chop the leaves** and
  make a pesto sauce
- **Sauté in butter** with c
  mirepoix
- **Grind celery seeds** to
  pickles and marinades

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LEAFY GREENS (SPINACH, LETTUCE AND CELE

1. List five dishes which contain spinach. Make sure each of them comes
specific to a different cuisine. [Area 5]

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2. Assess the nutritional value of a salad made with 100 g of lettuce, 50 g
Then indicate how it reflects the nutritional needs of a 16-year-old for v

.....

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3. Some vegetables contain oxalates – substances which can accumulate
or gall bladder stones, as well as rinse calcium out of the body, increas
Give an example of such a vegetable, and explain how to prevent the
consumption. [Area 3]

.....

.....

.....

.....

4. List four leafy greens that are similar to spinach and lettuce. [Area 1]

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Extension [Area 4, skill 20]

Cook fresh lettuce using three different methods, e.g. boiling, roasting
compare how each cooking method affected the appearance, colour, fl
lettuce leaves.

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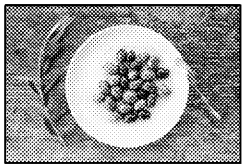
27. OLIVES



What is It?

Olives are the oily fruit of an olive tree, cultivated since ar
are used to make olive oil – one of the most precious and
world. Freshly pickled or harvested olive fruits are very oil

Common Cuisines:

Olives are a staple food in the Mediterranean region, especially in Greece and southern France, where they are eaten whole as snacks as well as in salads and other dishes.

Sto
Oliv
brin
refrig

Nutritional Information:

These values may vary. Information is given for pickled green olives.

Nutritional value: typical value	Per 100 g	Per 1 olive (3 g)
Energy	145 kcal	4 kcal
Macronutrients		
Fat	15.32 g	0.41 g
Saturated fats	2.029 g	0.055 g
Monounsaturated fats	11.314 g	0.305 g
Polyunsaturated fats	1.307 g	0.035 g
Carbohydrates	3.84 g	0.1 g
Starch (polysaccharides)	-	-
Sugars (mono- and disaccharides)	0.54 g	0.01 g
Fibre	3.3 g	0.1 g
Protein	1.03 g	0.03 g
Micronutrients		
Vitamin A	20 mcg	1 mcg
Vitamin D	0	0
Vitamin E	3.81 mg	0.1 mg
Vitamin K	1.4 mcg	0
Vitamin B1 (Thiamine)	0.021 mg	0.001 mg
Vitamin B2 (Riboflavin)	0.007 mg	0
Vitamin B3 (Niacin)	0.237 mg	0.006 mg
Folate	3 mcg	0
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	0	0
Calcium	52 mg	1 mg
Iron	0.49 mg	0.01 mg
Sodium (Salt)	1556 mg	42 mg
Fluoride	-	-
Iodine	0	0
Phosphorus	4 mg	0 mg
Potassium	42 mg	1 mg
Magnesium	11 mg	0 mg
g – grams, **mg** – milligrams, **mcg** – micrograms		

Nutrition

Health Benefits:

Olives are quite unique in t
rich in fats, especially monc
which are necessary for ma
membranes and play impo
functioning of the nervous
also a source of polypheno
developing cardiovascular

Allergy and Health Risks:

Olives are very high in sodi
avoided by people who hav
disease. They are also high
moderation by people on a
content of monounsaturate
risk of inflammation.

Alte

For similar flavour and te
For saltiness, use pickled v
cauliflower.
For similar texture, try roa

Cooking Uses:

- **Pickle** to eat a snack o
stick with a piece of ch
- **Chop** to add to salads
sandwiches, tortillas, e
- **Add whole** to drinks (t
- **Chop** and add to brea
some herbs
- **Blend** into a paste cal
topping for crackers, c
sandwiches
- **Chop** and add to mea
stuffing (e.g. for roaste

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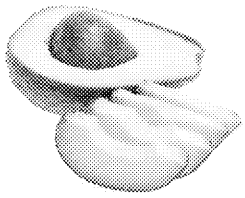
28. AVOCADO



What is It?

Although, botanically, avocado is a fruit, it's mostly used a
known as an alligator pear, an avocado is a large berry of
is soft, oily and resemble cucumbers in smell.

Common Cuisines:

Avocado is widely used in Mexico, where it is used to prepare guacamole – now a popular dip worldwide. It is popular in vegetarian and vegan diets as a meat and butter substitute.

Storage:

Unripe avocados can
to three weeks, best k
ripening, avocado nee
temperature, preferab

Nutritional Information:

These values may vary.

Nutritional value: typical value	Per 100 g	Per 1 avocado (200 g)
Energy	160 kcal	320 kcal
Macronutrients		
Fat	14.66 g	29.32 g
Saturated fats	2.126 g	4.252 g
Monounsaturated fats	9.799 g	19.598 g
Polyunsaturated fats	1.816 g	3.632 g
Carbohydrates	8.53 g	17.06 g
Starch (polysaccharides)	0.11 g	0.22 g
Sugars (mono- and disaccharides)	0.66 g	1.32 g
Fibre	6.7 g	13.4 g
Protein	2.00 g	4 g
Micronutrients		
Vitamin A	7 mcg	14 mcg
Vitamin D	0	0
Vitamin E	2.07 mg	4.14 mg
Vitamin K	21 mcg	42 mcg
Vitamin B1 (Thiamine)	0.067 mg	0.134 mg
Vitamin B2 (Riboflavin)	0.130 mg	0.26 mg
Vitamin B3 (Niacin)	1.738 mg	3.48 mg
Folate	81 mcg	162 mcg
Vitamin B12	0	0
Vitamin C (Ascorbic acid)	10 mg	20 mg
Calcium	12 mg	24 mg
Iron	0.55 mg	1.1 mg
Sodium (Salt)	7 mg	14 mg
Fluoride	7 mcg	14 mcg
Iodine	2 mcg	4 mcg
Phosphorus	52 mg	104 mg
Potassium	485 mg	970 mg
Magnesium	29 mg	58 mg

g – grams, **mg** – milligrams, **mcg** – micrograms

Nutritiona

Health Benefits:

Avocados are a great source o
folate, vitamin E and niacin. Th
for building strong tooth enan
the thyroid gland. They are un
fibre and unsaturated fatty aci
substances which lower choles
cell membrane regeneration, i
testosterone and prevent the f
reason, they may be used in di
diseases and hormonal issues.
potassium – one avocado prov
nutrient!

Allergy and Health Risks:

Avocados are high in fat – so t
if eaten in excess (but this app
cause mild allergic reactions (v
monounsaturated fatty acids m
autoimmune inflammatory dis

Alte

For texture, use melon.
For aroma, use cucumber.
For mashing (guacamole), try
For salads and sandwiches, r
Instead of guacamole, use hu
For texture and creaminess i
desserts, use frozen banana.

Cooking Uses:

- **Mash or blend** into gua
  vegetables, as well as in
- **Slice** to add to salads, sa
- **Blend** to add to smooth
- **Freeze** to use as a base
- **Slice and fry** with scram

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Olives and avocado – Task 3

1. Explain why avocados should or should not be kept next to apples or b

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2. Explain why a chopped avocado turns black, and explain how this proc happening. [Area 4]

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3. List three countries in which olives are grown. Can olives be called a lo

.....

.....

.....

4. Assess what percentage of RNI is provided by 10 g of olives (approxim following nutrients for a 16-year-old, and then indicate whether olives year-old's diet. [Area 3]

	RNI for boys	RNI for girls	10 g olives	
Fats	115 g	94 g		
Carbohydrates	370 g	302 g		
Proteins	111 g	90 g		
Fibre	25 g	25 g		
Vitamin A	700 mcg	600 mcg		
Sodium	1,600 mg	1,600 mg		

Extension [Area 6]

Try to find two different varieties of avocado, and set up a tasting pane any differences in the tasters' opinions?

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ANSWERS

Onion, leek, garlic and asparagus

1. Garlic and onion are forbidden in:
   - Some branches of **Hinduism** – some members of ISKCON (Hare Krishn
     (which garlic assists with) distracts from devotion to Krishna.
   - Additionally, Brahmins cannot eat garlic and onion because they are be
     believed that they negatively affect the ability to concentrate on meditat
   - **Buddhism** – due to the smell, they aren't allowed near the temples.
   - **Sikhism** – to avoid overstimulation. They also don't consume garlic in l
     excites (as an aphrodisiac) and this is not appropriate in a place of wors
   - **Jainism** – they may cause overstimulation, generating excess heat in the

2. Onion is very rich in sulfur compounds. During cutting/chopping, these sub
   and irritate the eyes, causing tears to form. There are many ways of preventi
   example:
   - Refrigerate the onion for some time so that the essential oils don't evapo
     chopping.
   - Cover your eyes with goggles so that the compounds cannot get into yo
   - Put some tissues into your nose and breathe through your mouth durin
   - Use a very sharp knife to reduce the damage to the cells and, therefore,
   - Wet the knife with cold water before cutting the onion.

3. Wales; leek and potato soup (or any other national Welsh dish made with le

4. Because it is grown in a different way from white asparagus, green asparagu
   beta carotene. It also has a more delicate flavour and contains less fibre.

5. Students identify one from:
   - Obesity – all of these vegetables are low in calories, and can be eaten as
     combat obesity, as well as forming part of a healthy, balanced diet to pr
   - Hypertension (high blood pressure) – garlic is rich in potassium, which
   - Cancer – all of them are high in polyphenols, which are powerful antiox
   - Osteoporosis – onion are garlic are rich in calcium, which supports bon
   - Atherosclerosis / coronary heart disease – leek and asparagus are rich in
     which lower blood cholesterol levels and help to prevent the accumulat
   - Anaemia – leek and asparagus provide large amounts of folates and so
     of red blood cells
   - Bowel cancer and/or diverticulitis – asparagus is rich in inulin, which is
     growth of good microflora, which has proven anticancer properties

   Or any other suitable answer.

6. The vegetables are best kept in a:
   - cool place – preferably a fridge for asparagus and leek, but a cool cupbo
     onions and garlic
   - dark place – to protect them from sunlight (which could destroy the vita
     sprouting
   - dry place – to prevent spoilage caused by moulds

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7. Answers could include:
   - Sweet onion: sweet, mild taste; firm texture after cooking; best for: fryin roasted vegetables
   - Red onion: gentle aroma; crunchy; best for: eating raw in salads, sauces, make a chutney
   - White onion: the crunchiest and sharpest in flavour; best used in salads,
   - Yellow onion: all-purpose onion; may be very pungent; great for: roastin in soups and sauces
   - Shallot: mild and subtle in flavour; less pungent aroma; great for: pickli

Mushrooms

1.
   - Different varieties of mushroom require very specific growth conditions, suc warmth.
   - As such, they will mostly grow only in locations which meet these criter
   - Most mushrooms grow in the autumn (with a few exceptions), which m
   - They will not grow in other seasons due to the moisture level or tempera

2. Umami means 'savoury' or 'meaty' and it's a taste caused by reception of glu It occurs in many food products, such as mushrooms, meat, tomatoes, cheese sauce, seaweed, nuts, broccoli and grapes.

3. Students must design three dishes, potentially with the use of different kinds of m low in sodium, total fat, saturated fat and trans fats, as these all affect cardiovascu sodium increases blood pressure, whereas fat, saturated fat and trans fats increas

   The dishes should contain sources of potassium, antioxidants, or dietary fibr pressure and cholesterol levels in the blood, and help to reduce the risk of pl

Tomato

1.
   - Tomatoes require warm, sunny weather to grow and ripen.
   - Naturally grown tomatoes are seasonal foods, because they produce fru
   - Tomatoes can also be grown in polytunnels and, as such, can be grown a them as non-seasonal.

2. The processing of food will affect it in various ways:
   - Drying – will reduce the amount of water in tomatoes, and, therefore, so will be evaporated.
   - Blanching – as this process is quick, it will not affect the nutritional valu
   - Juicing – the pulp containing seeds and skin will be left on the membra fibre and fat-soluble vitamins.
   - Tomato soup – long cooking and high temperature will cause some of th vitamin C – to degrade.

3. Students should name a suitable kind of knife for chopping tomatoes and the provide some advantages or disadvantages of their choice. For example:
   - Vegetable knife – clean edge enables a clean cut and less juice being spil thin slices; minus: the knife can easily slip and cut the hand of the cook
   - Serrated knife – the 'teeth' of the knife can help to avoid slipping and cu safe to use, nicely shaped slices; minus: can cause the tomato to lose mo
   - Claw grip: better to use for slicing large tomatoes
   - Bridge hold: best used to halve small tomatoes, such as cherry or date to

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4. a) Fresh tomatoes do not have any kind of a date mark indicated (like all othe
have a date of packaging shown. Accept some already packed fresh tomato
b) Best before

5. Tomatoes can be subject to:
- Enzymic action – this will help them to ripen, but can then cause them t
- Mould and yeast growth – this will most likely appear as white, green o
surface; may also cause the tomato to become sour

Courgette, pumpkin and cucumber

1. The seasons for these vegetables are:
- Courgette – from June to September
- Pumpkin – late October to December
- Cucumber – from June to September, but, thanks to polytunnels, they ar

2. All of the mentioned vegetables are grown in the UK so can be considered lo
research whether they are grown in the vicinity.

3. Pumpkin, as it has the most iron in general as well as the best ratio of iron to
Vitamin C increases iron absorption so more iron would be absorbed from a
or a cucumber (theoretically, at least, as many other factors interfere with the

4. Students indicate at least two advantages and two disadvantages from:
Advantages
- GM crops facilitate a higher yield, so more food can be grown.
- GM crops can help to alleviate/eliminate hunger.
- GM vegetables can be pest-resistant, so no pesticides would have to be u
- GM vegetables can be higher in nutrients, so could help to prevent malr
- GM crops can be grown even in very poor-quality soil or in high moistu
naturally occurring varieties wouldn't survive.
- GM vegetables have a longer shelf life and are less prone to spoilage, so
losing their nutritional value, flavour or colour.

Disadvantages
- GM crops can lead to the development of resistant pests, which will cau
known pesticides will be able to fight them.
- GM plants lower species variety, as the modified seeds are usually more
occurring species to weather conditions.
- GM crops have unknown effects on human health.
- GM crops can lead to creating new, resistant species of bacteria and viru
- GM crops can increase antibiotic resistance in microorganisms.
- GM crops can increase the risk of allergies.

Or any other reasonable answer.

Root vegetables (Carrot, parsnip, celeriac and swede)

1. Students indicate five dishes which are made mostly from carrot. For examp
- Carrot and coriander soup
- Carrot salad with raisins
- Carrot juice/smoothie
- Roasted carrots
- Carrot and parsnip purée
- Carrot pancakes
- Carrot cake
- Or any other suitable dish

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2. The values below are approximate, calculated using the nutrition requirements publicised by the C

Nutritional value: typical value	RNI for boys aged 16	RNI for girls aged 16	Carrot 100 g	% RNI for boys	% RNI for girls	Parsnip 100 g
Energy	2,964 kcal	2,414 kcal	41 kcal	1.38	1.70	75 kcal
					Macronutrients	
Fat	115 g	94 g	0.24 g	0.21	0.26	0.3 g
Carbohydrates	370 g	301.75 g	9.58 g	2.59	3.17	18 g
Starch (polysaccharides)	351.5 g	287 g	1.43 g	0.41	0.50	6.2 g
Sugars (mono- and disaccharides)	18.5 g	15 g	4.74 g	25.62	31.60	4.8 g
Fibre	25 g	25 g	2.8 g	11.20	11.20	4.9 g
Protein	111 g	90 g	0.93 g	0.84	1.03	1.2 g
					Micronutrients	
Vitamin A	700 mcg	600 mcg	835 mcg	119.29	0.20	0
Vitamin D	10 mcg	10 mcg	0	0.00	0.00	0
Vitamin B1 (Thiamine)	1.1 mg	0.8 mg	0.066 mg	6.00	7.50	0.09 mg
Vitamin B2 (Riboflavin)	1.3 mg	1.1 mg	0.058 mg	4.46	4.06	0.05 mg
Vitamin B3 (Niacin)	18 mg	14 mg	0.99 mg	5.50	0.39	0.7 mg
Folate	200 mcg	200 mcg	19 mcg	9.50	0.05	67 mcg
Vitamin B12	1.5 mcg	1.5 mcg	0	0.00	0.00	0
Vitamin C (Ascorbic acid)	40 mg	40 mg	6 mg	15.00	0.38	17 mg
Calcium	1,000 mg	800 mg	33 mg	3.30	0.00	36 mg
Iron	11.3 mg	14.8 mg	0.3 mg	2.65	0.18	0.6 mg
Sodium (Salt)	1,600 mg	1,600 mg	69 mg	4.31	0.00	10 mg
Iodine	140 mcg	140 mcg	0 mg	0.00	0.00	0 mg
Phosphorus	775 mg	625 mg	35 mg	4.52	0.01	71 mg
Potassium	3,500 mg	3,500 mg	320 mg	9.14	9.14	375 mg
Magnesium	300 mg	300 mg	12 mg	4	4	29 mg

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Bell pepper / sweet pepper

1. Students should indicate at least four differences between types: (the compar
from the USDA database)

Red sweet pepper	Gre
More vitamin C	Fewer calories, carb
More vitamin B2	Less fibre
More niacin	More calcium
More folate	More vitamin K
More vitamin A and beta carotene	Contains phytostero
No phytosterols	Contains more antio

2. Students indicate at least three cuisines which use bell peppers: Hungarian, Spa

Potato and sweet potato

1. A staple food is a food product which is basic for a given diet/region/country
amounts.

2. In the UK, staple foods include:
   - milk
   - meat (such as beef or ham)
   - fish (e.g. mackerel, salmon, pilchards)
   - fruit (such as apples)
   - vegetables (such as carrots and potatoes)
   - beans and lentils
   - cereals (e.g wheat and oats)
   - tea and coffee

3.
   - Sweet potatoes are produced mainly in China (Asia), Nigeria and Ugan
   Tanzania (Africa).
   - Since they aren't grown in the United Kingdom, they have to be import
   - Transport of vegetables for such long distance requires a lot of energy (e
   pollution by emitting greenhouse gases and exhaust gases (containing c
   - Because of this, fields alongside main roads are polluted with heavy me
   (such as carbon dioxide) create a layer around Earth, trapping the warm
   temperature (contributing to global warming).
   - Additionally, potatoes need to be properly packaged for the duration of
   production also contributes to greenhouse gas emissions, deforestation
   pollution afterwards from waste.

Cruciferous vegetables (cabbage, cauliflower and broccoli)

1. Calculated using data from:
   **https://www.gov.uk/government/uploads/system/uploads/attachment_data/
   rni-11dec14.pdf**
   RNI of vitamin C for a 16-year-old is 40 mg (no difference between sexes). Da
   will be satisfied with 83 g of cauliflower, 45 g of broccoli or 110 g of cabbage.

2. Heat transfer methods used are:
   a) Convection (and conduction to preheat the water)
   b) Radiation, convection and conduction
   c) Conduction and convection

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3. Cooking will affect broccoli's:
   - texture (it will soften because fibre will break down)
   - colour (it will become bright green to begin with, but overcooked brocc
     because pigments will break down and dissolve in water)
   - smell (it will be more pronounced due to evaporation of sulfur compou

4. Students should indicate at least two medical conditions in which cruciferou
   from:
   - Thyroid disorders – due to high amount of iodine, which may disrupt p
   - Irritable bowel syndrome (IBS) due to high amount of fibre and sulfur c
     bowel and cause painful bloating
   - Hypertension – because high amount of sodium, especially in sauerkrau
   - Cardiovascular disease – because people who take blood-thinning drug
     vitamin K
   - Kidney and gall bladder stones – because they are rich in purines, whic
     formation of stones

Beetroot

1. Yes. Beetroot may be used in the dietary treatment of anaemia, because it pr
   necessary for proper red blood cell formation. Vitamin C in beetroot may als
   (bioavailability) of iron, also improving the blood condition.

2. Yes. Beetroot is a seasonal plant, usually harvested from late September (sug
   eaten throughout winter.

3. Students show their knowledge and skills in using preference testing and set
   apply various cooking skills.

Green peas, sweetcorn and green beans

1. Green peas have the most fibre so are the most suitable of the three vegetabl

2. Blanching deactivates enzymes in vegetables, which helps to preserve their nu

3. - For example, in the USA sweetcorn is boiled or steamed on the cob and
   - Also in the USA, dried kernels are roasted to obtain popcorn.
   - In Mexico, kernels are added to stews to add colour and texture, or are u
     are dried and ground to obtain cornflour from which tortillas are made.
   - In Great Britain mini sweetcorns or kernels are steamed and served as a
   - Other suitable responses should be accepted.

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Leafy greens (spinach, lettuce, celery)

1. Students indicate five dishes containing spinach, each from a different count
   - spinach and onion bhaji – Indian
   - spinach and ricotta ravioli – Italian
   - spinach quiche – French
   - spinach stir-fry – Chinese
   - spinach with peanut sauce – West African

2. - The salad will contain no vitamin D and no vitamin B12.
   - The salad provides 0% RNI for vitamin D and vitamin B12.

3. Examples of such a vegetable are spinach and garden sorrel.
   To prevent negative effects of oxalates, they should be accompanied with cal
   cream, cream cheese or cheese, but also sesame seeds or almonds.

4. Any four suitable leafy greens, e.g. kale, collard greens, Swiss chard, Chinese

Olives and avocado

1. Apples and bananas release ethylene – a gas which speeds up the ripening o
   next to them if we want them to ripen, but not if we plan to store them for a

2. - This is due to enzymic browning.
   - When we chop fruit or vegetables, their cells are broken down and enzy
     them come into contact with air.
   - The enzymes are activated by the oxygen from the air and turn phenols
     vegetables into brown melanin pigment.
   - This can be stopped by adding lemon or lime juice – which is one of the

3. Olives are mostly produced in the Mediterranean region – Spain, Italy, Greec
   Smaller quantities are grown in the USA, Mexico, Argentina and Chile. For t
   considered local in these countries, but not in the United Kingdom.

4. The RNI is based on:
   **https://www.gov.uk/government/uploads/system/uploads/attachment_data/
   rni-11dec14.pdf**

	RNI for boys	RNI for girls	10 g olives	%
Fats	115 g	94 g	1.53 g	
Carbohydrates	370 g	302 g	0.38 g	
Proteins	111 g	90 g	0.10 g	
Fibre	25 g	25 g	0.33 g	
Vitamin A	700 mcg	600 mcg	2 mcg	
Sodium	1,600 mg	1,600 mg	156 mg	

   Students indicate that olives – in moderation – can be consumed as part of a
   Excessive consumption is not recommended due to high sodium content.

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