OVERVIEW
This topic corresponds with Unit 1: Diet and Health, and Consumer Awareness of the CCEA GCSE Home Economics specification.

Aim
The aim of this topic is to teach students on how to analyse and interpret nutrition information on Front of Pack (FoP) labelling schemes.

Learning Intentions
At the end of this topic students should be able to interpret nutrition information on Front of Pack (FoP) labels and be able to use this information to plan a healthy balanced diet and make healthy food choices.

Resources
– Classroom slides
– Information sheets
– Activity sheets
– Additional Teacher’s Notes

SLIDE 1
The eatwell plate

Screen Description
This screen shows an image of the eatwell plate.

Teacher
To begin ask the students what is the eatwell plate and what are the five food groups that make up the plate.

Additional Teacher’s Notes
There are five food groups:
– fruit and vegetables
– bread, rice, potatoes and pasta and other starchy foods
– milk and dairy foods
– meat, fish, egg, beans and other non-dairy sources of protein
– food and drinks high in fat and/or sugar.

We need to eat more from some groups than others.

For more information about the eatwell plate visit:
http://www.nidirect.gov.uk/eatwell
http://www.nidirect.gov.uk/eatwellguide.pdf (page 11-12)
Making healthy food choices – the label link

Screen Description
This screen explains to students how food labels can be used to make healthy food choices.

Teacher
Before showing the slide ask the students how food labels can help a consumer make healthy food choices. Discuss the content of this slide with students showing the association between using the label and making healthy food choices.

Resources
Activity 1 – Ask students to complete this in class or as homework. There is opportunity to extend this activity using the information provided on the food labels to link learning in relation to other aspects of the Home Economics specifications. For example, where do these foods fit within the eatwell plate?

Additional Teacher’s Notes
When choosing a healthy diet one of the key things to do is to cut down on fat (especially saturated fat), salt and added sugars. The consumer might:
- use the label to choose a food from the meat, fish and alternatives group that has less fat, for example, minced meat
- read the label before buying frozen vegetables, for example, the label may show that broccoli with sauce has more fat than plain broccoli.

Food labels can be used to make healthier, safer and more informed food choices when choosing between products. Food labels can assist understanding on what nutrients manufactured food products contain. The ingredients label and nutrition panel on the back of pack can help to make healthier choices. Consumers can find useful information on food labels about particular nutrients. For example, teenage girls, who often eat fewer calories than teenage boys, may not get enough calcium and iron. They can use the label to help them choose foods that give a good supply of those nutrients.

The use of traffic lights and Guideline Daily Amounts (GDAs) on the front of pack, where available can help in the choice of foods with less fat, salt and sugars. If the consumer learns how to moderate and balance their food choices, they can eat healthily every day.
SLIDE 3
The facts behind the issues – superfoods

Screen Description
This screen describes what the term superfoods means. It also displays images of three foods being marketed as superfoods.

Teacher
Discuss the information on the slide with students. Ask them for more examples of foods they have seen promoted as superfoods and if they have ever bought a product because it was labelled a superfood. Examples include: avocados, broccoli, beetroot, garlic, ginger, flax seed, acai, goji berries and mangosteen.

Additional Teacher’s Notes
Superfoods is a term that has been used by some manufacturers/retailers to suggest a food can protect against certain diseases. Under EU legislation, use of the term superfoods is not allowed unless it is accompanied by an authorised health claim that explains to consumers why the product is good for their health.

Blueberries have often been labelled a superfood (or superfruit) because they contain significant amounts of antioxidants, anthocyanins, vitamin C, manganese, and dietary fibre.

The term is not in common use amongst dietitians and nutritional scientists, many of whom dispute the claims made that consuming one particular foodstuff can have a health benefit. There is no legal definition of the term and it has been alleged that this has led to it being overused as a marketing tool. Individual fruit and vegetables are often promoted by manufacturers and retailers as superfoods. The evidence for the link between health and fruit and vegetables is for all fruit and vegetables rather than individual ones.

For more information on superfoods visit: http://news.bbc.co.uk/2/hi/health/6252390.stm

SLIDE 4
The facts behind the issues – functional foods

Screen Description
This screen explains to students that information is often added to food labels voluntarily by food manufacturers or retailers.

Teacher
Discuss the information on the slides with students using the examples given.

Additional Teacher’s Notes
There are a wide range of nutrients and other ingredients that might be used by food manufacturers to produce functional foods. Examples of these are vitamins, minerals including trace elements, amino acids, essential fatty acids, fibre, various plants and herbal extracts.

In addition, the labelling, presentation and advertising of such foods must not:
– mislead or deceive the consumer as to the nutritional merit of the food
– mention or imply that a balanced and varied diet cannot provide appropriate quantities of nutrients.

For more information on legislation associated with functional foods visit: http://www.food.gov.uk/northernireland/niregulation/niguidancenotes/foodsuppguidance
The facts behind the issues – nanotechnology

Screen Description
This screen explains what nanotechnology is.

What is nanotechnology?
Nanotechnology is the addition of ingredients in the form of tiny nanoparticles to food products. In the food sector, nanotechnology can be used to improve flavour and make processed foods healthier by reducing the amount of fat and salt needed in production. More research is necessary into what effect the use of nanotechnology in food has on human health.

For more information visit: FSA Link: http://www.food.gov.uk/gmfoods/novel/nano

Teacher
Explain to the students what nanotechnology is and discuss with them how it is a new technology with some examples already on the market in certain parts of the world.

Additional Teacher’s Notes
To inform consumers of the presence of engineered nanomaterials in food, the European Commission plan to provide a definition of engineered nanomaterials. ‘Engineered Nanomaterial’ means any intentionally produced material that has one or more dimensions of the order of 100 nm or less or that is composed of discrete functional parts, either internally or at the surface.

One nanometer is about 60,000 times smaller than a human hair in diameter (about the size of a virus). A typical sheet of paper is about 100,000 nm thick, a red blood cell is about 2,000 to 5,000 nm in size, and the diameter of DNA is in the range of 2.5 nm.

Nanometre (nm) = $10^{-9}$ metres

Supporters of nanotechnology say that it could be used to lengthen the shelf-life of food, improve safety and traceability and, for example, create packaging that would warn if food is going off or approaching its ‘use by’ date. Some believe that by helping to ‘lock’ nutrients in food for longer it could make a major impact in addressing inadequate diets and nutrition in developing countries. The opposing argument to this is that the problem of inadequate diets is due to food access and poverty, rather than what’s in the food. Supporters of nanotechnology suggest that it will also allow healthier individual products to be created. For example, nanoparticles of chocolate could, in theory, be filled with tiny droplets of water to make low-fat chocolate, so that people might indulge their taste for chocolate without consumption of excess calories associated with existing fat content of chocolate.

In terms of food labelling ‘nano’ ingredients will need to be clearly identified as an ingredient in the labelling of prepacked foods. For example, the name of the ingredient will be followed by the word ‘nano’ in brackets in the ingredient list.
GCSE Topic 3 Teacher’s Notes

SLIDE 6
Front of Pack (FoP) labelling schemes

Screen Description
This screen looks at Front of Pack labelling schemes and their role in making healthy food choices.

Teacher
Introduce the Front of Pack labelling schemes to students highlighting the two different types, that is, traffic light labelling and Guideline Daily Amounts (GDAs).

Additional Teacher’s Notes
Front of Pack labels usually give a quick guide to:
- calories
- sugar content
- fat content
- saturated fat content
- salt content.

SLIDE 7
Traffic light labelling

Screen Description
This screen looks at Front of Pack labelling schemes and their role in making healthy food choices.

Teacher
Explain to students what traffic light labelling is used for, what the colours mean and why it is important.

Resource
Activity 2 – Ask students to complete this in class or as homework.

Additional Teacher’s Notes
Traffic light labelling has been developed by the Food Standards Agency.

Food products which display traffic light labels on the front of the pack show the consumer at a glance if the food they are thinking about buying has high, medium or low amounts of fat, saturated fat, sugars and salt, helping the consumer to choose the healthier option.

In addition to traffic light colours the consumer will also see the number of grammes of fat, saturated fat, sugars and salt in what the manufacturer or retailer suggests as a ‘serving’ of the food.
Traffic light labelling continued

What do the colours mean?
A red light on the front of pack means the food is high in something consumers should try to cut down on in their diet. It is fine to have the food occasionally, or as a treat, but the consumer should watch how often they choose these foods, or try eating them in smaller amounts.

An amber light, means the food isn't high or low in the nutrient, so this is an acceptable choice most of the time. The consumer might want to go for green for that nutrient some of the time.

A green light means the food is low in that nutrient. The more green lights, the healthier the choice. Many of the foods with traffic light colours that the consumer sees in shops will have a mixture of red, amber and green. So, when choosing between similar products, the consumer should choose foods with more greens and ambers, and fewer reds, to ensure healthier choices.

What is the criteria for traffic light labelling?
The traffic light colour approach to nutritional signpost labelling requires criteria that define the green (low), amber (medium) and red (high) boundaries for the key nutrients fat, saturated fat, sugars and salt.

Which food products display traffic light labelling?
Traffic light colours are used on processed convenience foods such as ready meals, pizzas, sausages, burgers, pies, sandwiches and breakfast cereals. This is because consumers have told the Food Standards Agency (FSA) that they find it difficult to understand the nutritional content of these types of foods.

Why is traffic light labelling important?
Traffic light colours can help consumers get the balance right by helping them to choose between products and keep a check on the amount of foods high in fat, saturated fat, sugars and salt that they are eating. Consumers can use signpost labelling to help make informed decisions about healthier food choices.
Guideline Daily Amounts (GDAs)

What are GDAs?
Guideline Daily Amounts (GDAs) are guidelines about the approximate amount of particular nutrients required for a healthy diet.

GDAs provide the approximate amount of calories, fat, saturated fat, carbohydrates, total sugars, protein, fibre, salt and sodium required for a healthy diet.

GDAs help consumers make sense of the nutrition information provided on food labels. They translate the science into consumer friendly information, providing guidelines on packs that help consumers put the nutrition information they read on a food label into the context of their overall diet.

Who are GDAs for?
- GDAs have been developed for men and women, over 18 years of age of normal weight and for those who are trying to maintain a healthy weight
- GDAs have been established for children

What are the values based on?
GDAs are based on government recommendations for a healthy balanced diet.

Benefits of GDAs
- Provide companies with a consistent approach to nutrition labelling
- Provide consumers with additional information which they can use to gain a better understanding of their daily intake of specific nutrients
- Help consumers make sense of complex information already provided on the back of packs
- Help consumers achieve a balanced diet
**SLIDE 9**

**How to calculate GDAs**

**Screen Description**
This screen explains where GDA labels can be found on food products and how to calculate GDAs. It displays two images:
- a table that explains GDAs for adults and children
- a formula for calculating the contribution a nutrient makes towards a GDA.

**Teacher**
Discuss the information on the slide with the students.

**Resource**
Activities 4 and 5 – Ask students to complete in class or as homework.

**SLIDE 10**

**New European Union Food Information Regulation**

**Screen Description**
This screen explains that a new Food Information Regulation (FIR) was published in the Official Journal of the European Union on 22 November 2011. Many of the current food labelling requirements of the Food Labelling Regulations (Northern Ireland) 1996 will remain but there are some significant changes. The additional requirements will come in over a 3–to–5 year period.

**Teacher**
Discuss the future changes and developments with the students using the information on the information sheets provided.

**Resources**
Information sheets 1 and 2 – Ask students to discuss this in class.

**Additional Teacher’s Notes**
The new Food Information Regulation includes:
- mandatory origin labelling for fresh and frozen meat
- energy information on alcoholic drinks may be given voluntarily
- mandatory ‘back of pack’ labelling for pre packed foods. However, the way the information is presented will differ
- GDA nutrition information and FSA traffic lights can still be used voluntarily
- allergen information to be highlighted in the ingredients list
- drinks with a high caffeine content to have a warning ‘not recommended for children, or pregnant or breast feeding woman’
- the ability to use ‘Northern Ireland’ as place of provenance without reference to the UK, for example, ‘Made in Northern Ireland’
- where an origin claim is made and the primary ingredient is of a different origin, further origin information will need to be provided (the European Commission are currently working on implementing rules and guidance)
- voluntary Front of Pack (FoP) nutrition labelling for five nutrients (energy, fat, saturates, sugars and salt) can continue with a slight change, for example, information on energy must be provided per 100g and per portion and also must be expressed in both kilojoules and kilocalories.
**New European Union Food Information Regulation**

**Transitional arrangements**
Timings apply from 22nd November 2011 when the Food Information Regulation (FIR) was published in the Official Journal of the EU.

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<thead>
<tr>
<th>Action</th>
<th>Date</th>
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<tbody>
<tr>
<td>Food Information Regulation came into force</td>
<td>13 December 2011</td>
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<td>Foods voluntarily using new nutrition declaration can be sold</td>
<td>13 December 2011</td>
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<td>Mandatory declaration of presence of nanotechnology in food is required on the labelling</td>
<td>13 December 2014</td>
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<td>Application date for the majority of provisions</td>
<td>13 December 2014</td>
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<tr>
<td>Current legislation (including 200/13 and 90/496) repealed</td>
<td>13 December 2014</td>
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<td>Foods on the market or labelled prior to 3 years after the Regulation can be sold until food stocks are exhausted</td>
<td>Food stocks are exhausted</td>
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<tr>
<td>Foods bearing a nutrition declaration on a voluntary basis must comply with the requirements of the FIR</td>
<td>13 December 2014</td>
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<td>Application date for the nutrition declaration becoming mandatory</td>
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<td>Foods on the market or labelled prior to 5 years after the regulation which do not have nutrition declaration can be sold until food stocks are exhausted</td>
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