LESSON PLAN: TO HEALTH

The role of read meat in a healthy, balanced diet

Lesson overview

This lesson explores the role of red meat, including beef, lamb, and pork, within a healthy, balanced diet. Red meat provides a range of important nutrients, including protein, iron, zinc, selenium, phosphorus, potassium and B vitamins such as thiamin (B1), riboflavin (B2), niacin (B3), vitamin B6 and vitamin B12.

The lesson also considers current food trends and changing dietary choices, the recommended intake of red and processed meat, and how different foods can work together to support nutrient absorption. For example, vitamin C helps the body absorb non-haem iron from plant foods. A healthy, balanced diet comes from eating a variety of foods in appropriate amounts. Red meat can contribute important nutrients to the diet, alongside other sources of protein.

The purpose of this lesson is to enable pupils to:

- **Understand** what counts as a portion of red and processed meat and how this relates to dietary guidance.
- **Explore** how different foods can work together to support nutrient absorption, including the role of vitamin C in helping the body absorb non-haem iron.

1

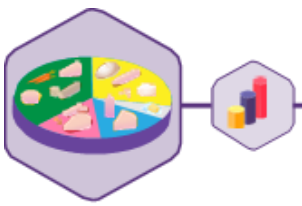
Research: current food trends and consider how they may affect health and dietary choices.

2

Clarify: the role of red meat within a healthy, balanced diet using the Eatwell Guide. The key nutrients found in red meat understand why they are important to the body.

3

Consolidate: understanding through discussion and practical examples of balanced meal combinations



Curriculum for Excellence experiences and outcomes covered in this lesson

Level: Third

Subject Area: HWB

SaoL: **The Food Experience** - I enjoy eating a diversity of foods in a range of social situations. **HWB 3.29a**

SaoL: **Developing Healthy Choices -** By taking part in practical food activities and taking account of current healthy eating advice, I can prepare healthy foods to meet identified needs. **HWB 3-30a**

SaoL: Nutritional Needs Through practical activities using different foods and drinks, I can identify key nutrients, their sources and functions, and demonstrate the links between energy, nutrients and health. **HWB 3-31a**

SaoL: The Journey of Food - Having explored a range of issues which may affect food choice, I can discuss how this could impact on the individual's health. **HWB 3-34a** Using my knowledge of nutrition and current healthy eating advice, I can evaluate the information on food packaging, enabling me to make informed choices when preparing and cooking healthy dishes. **HWB 3-36a**

Level: Fourth

Subject Area: HWB

SaoL: **The Food Experience** - I enjoy eating a diversity of foods in a range of social situations. **HWB 4-29a**

SaoL: **Nutritional Needs** - I can apply my knowledge and understanding of nutrition, current healthy eating advice and the needs of different groups in the community when planning, choosing, cooking and evaluating dishes. HWB 4-31a

SaoL - **The Journey of Food** - Having explored a range of issues which may affect food choice, I can discuss how this could impact on the individual's health. **HWB 4-34a** By investigating the different influences on the consumer, I can discuss how the consumer can be influenced by external sources. **HWB 4-37a**

Having investigated the effects of food processing on the nutritional value of foods, I can critically assess the place of processed foods in a healthy balanced diet. **HWB 4-34b.**



Presentation

This PowerPoint presentation will cover the following key topics:

- Current food trends and how they can affect our health
- The nutrients found in red meat and why they are important
- What counts as a portion of red meat
- How different foods can work together to help our bodies absorb nutrients

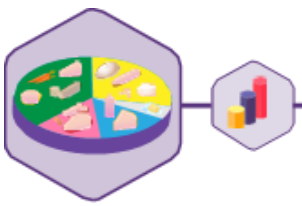
There are **"I see, I think, I wonder"** and **"Think, Pair, Share"** questions included throughout this presentation to encourage discussion.

The presentation includes a recipe and video link for Scotch Beef and Roasted Red pepper burger, and you may wish to use this recipe in the classroom after discussing the content. There is also reference to a healthier burger recipe and video which may give you some ideas for burger challenges to create with your class.

The links to the recipe videos are featured in the 'Video and links' section of the lesson.

- Click here to download the presentation as a PowerPoint.
- Click here to download the presentation as a PDF.

Did you know? Red meat is naturally low in salt and is a rich source of protein.



Individual Task

This task begins to explore the nutrients found in red meat and what they do for our bodies. It can also be complemented with our online game **'Make it a Match'**.

Meat – a rich source of protein but what else?

Red meat belongs in the protein food group (beans, pulses, fish, eggs, meat and other proteins) but is meat only a source of protein? Does meat contain any other nutrients?

Use the worksheet to look at the nutrients that meat contains and explore their functions within the body.

- **Click here to download the Red Meat Nutrients Worksheet.**
- **Click here to download the Red Meat Nutrients Worksheet Answers.**

Did you know? Our bodies absorb iron and zinc from meat more readily than from plants.



Group Task

The group tasks can be carried out in pairs or in small groups.

The first task will get students thinking about current dietary goals and food trends and their impact on both the red meat industry and the wider food industry.

The second task is considered an extension task and asks pupils to think about food fortification. There is a simple, yet useful experiment which can be carried out to investigate iron fortification.

Group 1: Dietary Goals and Trends Activity

In pairs or small groups:

- List the current top health/disease public health concerns and priorities for Scotland and which nutrients have the biggest impact (use online research if necessary)
- List recent dietary trends related to health and which nutrients are connected to the trend
- List how many of these have or will have an impact on the food industry/red meat industry
- Discuss answers and share with the class.

Useful links:

Scottish Government Dietary Goals

FSS Scottish Dietary Goals Explained

Public Health Priorities

Group 2: Food Fortification Activity

As you will have discovered from working through this lesson, red meat, specifically beef, is a great source of iron and many other nutrients. Ideally, we would all get the nutrients we need from the food we eat, but some people have nutritional deficiencies. Food fortification is one solution to nutritional deficiencies.

In pairs or small groups, consider the following questions and carry out the mini experiment:

- Which foods are fortified that you know of, and with what?
- Are they fortified by law or voluntarily?
- Are there any vitamins or minerals that you think food should be fortified with and why?

Mini experiment to extract iron from fortified cereal

Supporting video

Did you know? Farming and butchery techniques have significantly lowered the fat content of meat.



Videos and Links

Below you will find a selection of complementary videos and useful links which will aid further in-depth learning.

Videos:

- Educational video highlighting the role of red meat as part of a healthy, balanced diet
- Scotch Beef and Red Pepper Burger recipe (Scotch Kitchen)
- Educational cooking video with Daniela Forbes

Useful links:

- Food Standards Scotland 'The Eatwell Guide'
- British Nutrition Foundation 'Find your Balance'
- McCance & Widdowson's The Composition of Foods dataset (2015)
- Scottish Government Public Health Priorities
- Scottish Government Dietary Goals
- STEM Learning Experiment – Extracting Iron from Cornflakes

