

Summer Bridging Task: Nutrients in Food Science & Nutrition (WJEC Level 3)

Task Overview

Your job over the summer is to build a strong foundation in **nutrition science** by exploring the **six main nutrient groups**, their **functions**, **food sources**, and the **effects of deficiency and excess**. This knowledge underpins everything you'll study next year.

You will create a **nutrient portfolio** that shows clear understanding, research skills, and the ability to communicate scientific information.

Part 1 — Research the Six Nutrient Groups

For each nutrient group below, create a clear, well-organised page (digital or handwritten).

For each nutrient group, include:

- **Main functions** — What does the nutrient do in the body
- **Food sources** — Natural, processed, and fortified
- **Deficiency symptoms** — What happens if we don't get enough
- **Excess symptoms** — Where relevant
- **Special considerations** — e.g., vegans, athletes, pregnancy

Nutrient groups to cover:

- **Carbohydrates**
- **Proteins**
- **Fats**
- **Vitamins**
- **Minerals**
- **Water**

Part 2 — Deep Dive Case Studies

Choose **two** nutrients from your research and create a **mini case study** for each.

Each case study should include:

- A fictional person with a deficiency or excess
- Their symptoms
- Likely causes (dietary or lifestyle)
- Recommended dietary changes
- Foods/meals that would help correct the imbalance

Part 3 — One-Day Meal Plan

Create a **balanced one-day meal plan** for a healthy 17-year-old.

- Breakfast, lunch, dinner, 2 snacks
- A short explanation of how the meals meet nutrient needs
- Highlight where key nutrients appear in the diet

Specification:

https://www.wjec.co.uk/qualifications/level-3-alternative-academic-qualification-in-food-science-and-nutrition/#tab_keydocuments

Useful Websites & Online Resources

- **British Nutrition Foundation** – nutrient profiles, dietary needs
- **Food Standards Agency** – food safety, legislation
- **NHS Food & Diet** – health guidance
- **EFSA (European Food Safety Authority)** – scientific opinions on food risks
- **Institute of Food Science & Technology**

Reading list:

- WJEC Level 3 Applied Diploma in Food Science & Nutrition – *Student Book for the legacy course – if you can get this book second hand it will be useful, but we do have copies at school.*
- Food and Nutrition – Anita Tull
- Understanding Nutrition – Whitney & Rolfes
- Essentials of Human Nutrition – Mann & Truswell
- British Nutrition Foundation resources
- Public Health England – Eatwell Guide
- NHS Nutrition & Health
- Food Allergies: A Complete Guide