**Foundation in Nutrition**

**Learning Outcomes**

* Pupils will learn positive messages about food as a source of nourishment.
* Pupils will understand the connection between eating regularly and how they feel.
* Pupils will understand that certain nutrients are essential for positive mental wellbeing.
* Pupils will learn how different nutrients and physical activity affects our heart, lungs, muscles and bones.
* Pupils will gain an understanding of the kinds of nutrients most often missing in teenage diets.
* Pupils will learn which foods provide these nutrients.
* Pupils will learn how to benchmark their own meal choices against healthy eating guidelines.

**Key vocabulary**

Eatwell plate, food groups, nutrients, vitamins, minerals, macronutrients, micronutrients, fibre, omega 3

**How to sequence the learning in** [**Nutrition Foundation**](http://www.highfive.scot.nhs.uk/secondary-school-teacher-toolkit/nutrition/foundation-nutrition/)

You can consider covering parts 1 and 2 either before or after part 3. If parts 1 and 2 have already been covered in primary school, just touch on them as a bit of a recap and then move on to part 3. Otherwise, start at part 3 and then consider covering parts 1 and 2 just to consolidate what was covered in part 3. Then move on to parts 4 and 5.

**Part 1**

* Use slides 2 to 6 of the [Varied, regular eating](http://www.highfive.scot.nhs.uk/wp-content/uploads/2016/12/VARIED-REGULAR-EATING.pptx) PowerPoint.
* Each slide has notes attached to guide you through it.
* The PowerPoint starts by making the comparison between nutrients we need and nutrients that a tree needs. Plants need 17 nutrients, we need 40!
* If you have time, pupils can draw their own tree and what it needs to grow and stay healthy.
* The focus is on micronutrients that are often lacking in teenage diets, and the impact these have, particularly on our mood, sleep and learning. To emphasise the ‘food & mood’ idea, you can use the [10 tips for de-stressing for teenagers](http://www.highfive.scot.nhs.uk/wp-content/uploads/2016/11/10-TIPS-FOR-DESTRESSING-TEENAGERS.doc.docx)document.

(The analogy can work for a car too: Diesel or petrol, oil in the engine, air in the tyres, water in the radiator, brake fluid etc)

**Optional – Parts 2, 3 and 4 (Adapted primary ‘High 5’ lesson plans.)**

* To consolidate the learning from part 1, you have the option of adapting 3 of primary school High 5 lessons on the [Eatwell Plate](http://www.highfive.scot.nhs.uk/wp-content/uploads/2016/09/Eatwell-plate-picture.doc) and/or [Rising Stars](http://www.highfive.scot.nhs.uk/toolkit/lesson-plans/toolkit-by-subject/), and/or Eatwell/[Physical Activity & Body Parts](http://www.highfive.scot.nhs.uk/wp-content/uploads/2016/09/Physical-activity-Eatwell-body-parts-P5-7.doc). Otherwise, just go straight to Part 5.

**Part 2**

* Have a look at the P4 to P7 Eatwell Plate lesson plan folder from the primary High 5 programme lesson plans. This contains the Eatwell Plate picture, a detailed lesson plan (that some pupils may have used in upper primary school); and [Eatwell Plate Food Group Matching Cards](http://www.highfive.scot.nhs.uk/wp-content/uploads/2016/09/Eatwell-plate-food-group-cards.doc) that you can print off, cut up and laminate.
* Ask the pupils to work in groups to match each food group name to the description of why each food group is important. This should give you a baseline of students pre-existing knowledge and confidence.
* Make sure all the students have a good understanding of the importance of each of these groups before moving on.

**Part 3**

* At this stage, you could consider using or adapting the Rising Stars P4 to P7lesson plan from the primary High 5 programme lesson plans. Some pupils may have used this before. A Rising Stars Booklet was developed to accompany Rising Stars. It is not directly targeted at High school pupils or their families. However, if you read the Centre two pagesyou will quickly learn how this meal evaluation tool works.
* You can ask pupils to “rate” their typical **meal choices** using Rising Stars, for a 48 period. What was their average score?
* Pupils can be asked to think about ways of improving their score. They can repeat the exercise 2 weeks later to see if they have increased their average score (per meal).
* They can also use the model to compare typical choices from different places or meal types. For example:
  + The school menu – how many stars would an average school meal get?
  + A packed lunch
  + Breakfast (link to fibre & breakfast cereal lessons)
  + A meal with food purchased from the local shop or take-away
  + An evening meal at home.

**Part 4**

* The PowerPoint includes an optional slide (slide 7) that refers to the Eatwell, physical activity and body parts P6 /7 lesson plan from the Primary High 5 programme. This lesson plan should work well for High school pupils too (if they’ve not already done it). This links Eatwell and physical activity with the impact on the heart, lungs, muscles and bones (Unlike plants, we need to move to stay happy and healthy!).

**Part 5**

* Parts 1 to 4 have mostly covered the importance of eating a wide variety of foods to get all the nutrients that we need. Equally important is **eating regularly** and avoiding too many **highly processed foods**. The final two slides (8 and 9) cover exactly that, with a strong focus on how this relates to **mood** and **concentration**. See the notes pages within the PowerPoint itself for further guidance on how to use these 2 slides.

**Extra teacher’s notes on macronutrients**

**Protein** for growth and repair of muscles and organs. Vegetarian protein foods like nuts, lentils and beans also provide fibre. Red meat (beef, lamb, venison and offal) are rich in Iron for healthy blood (without which we feel tired). Oily fish is also rich in essential omega 3 fats which is good for our brain and heart (see fish lesson plan)

**Carbohydrate** for energy, in the form of starches (bread, rice, pasta etc) or sugars (in fruit and some vegetables and added to many foods and drinks). ‘Unprocessed’ sources of carbohydrate energy that are still high in fibre are the best (see fibre lesson). These unprocessed versions give us their energy more gradually so it lasts for longer.

**Fat** to store energy, for insulation, and for essential fats (omega 6 and omega 3). Saturated fats from animal and dairy fats are thought to be bad for the heart in excess so there is a “dietary goal” to reduce the intake of this type of fat specifically.

**Note** that these 3 macronutrients don’t tie in neatly with the food groups in the Eatwell Plate. Instead, each one is found in several of the 5 food groups!

**Summary** – We need macronutrients, micronutrients, water and fibre to keep healthy, fit and happy.

**Further resources, information & links:**

NHS Choices website (click on ‘Live Well’ tab, choose ‘Food & Diet’ and then choose ‘Eatwell Plate’ from right hand options)

Also try [www.foodafactoflife.org.uk](http://www.foodafactoflife.org.uk) (run by the British Nutrition Foundation who are funded by the food industry) who have some useful powerpoints and interactive learning resources on various aspects of nutrition. They also produce some excellent posters to re-inforce learning about each of the food groups.

**Next Steps**

You can now move on to further learning about nutrition. With a sound foundation in place, students should now be ready to learn about sugar and fibre, and the concept of processed and unprocessed foods.

Another option is to delay the learning about sugar and fibre, and go straight to the food marketing and sponsorship resources. This section is intended to make students more politically aware, improve their critical consumer skills, and develop some resilience to ‘junk food’ promotions