CommNet

The CommNet Competence Framework for Children and Young People about Food, Fisheries, Agriculture and Biotechnology

CommNet

SEVENTH FRAMEWORK PROGRAMME

Contents

The CommNet Competence Framework

The CommNet Competence Framework is progressive tool that identifies three areas of knowledge:

- where does food come from;
- know about your food,
- you and your food.

These areas of knowledge have been identified through analysis of European funded FP6/7 projects. Under each of these areas are key subject themes, supporting the development of children's and young people's knowledge. These themes are underpinned by the development of knowledge and understanding related to food sustainability, food safety and biotechnology.

The nature of these subjects dictates that they are interrelated and therefore can be identified across themes. The Framework is based on classroom learning skills which increase in difficulty ensuring progression across the themes.

Using the food chain as a metaphor, the concept is to create a resource that takes the learner on a journey, from the origin of food/drink through to its consumption/impact on health and wellbeing. The aim is to ensure that future EU citizens have a firm foundation in different aspects of related science, helping to build understanding to become informed consumers.

The Framework not only shows the areas of knowledge that we believe children and young people should demonstrate an awareness or understand, but also how this should be differentiated for different ages and abilities.

The CommNet education project divides the age range into the following phases:

- Phase 1: 5 – 8 years
- Phase 2: 8 – 11 years
- Phase 3: 11 – 14 years
- Phase 4: 14 – 16+ years

However, the ages within these phases may be different depending on the Member State in which you work. These are therefore only to act as a guide, showing progression in understanding from one phase to the next. The competences are progressive and cumulative from one age phase to the next.

Using the Framework

The Framework could be used in a variety of ways, such as:

- a guide for developing resources for children and young people;
- an audit tool for schools and other settings to plan lessons;
- support for curriculum development.

The Framework

Area of knowledge: (1) Where does food come from? **Themes:** · Food origin · Food production and processing · Food safety · Food technology and biotechnology			
Interrelated themes: · Food sustainability · Animal welfare			
Food origin			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Know that food comes from plants and animals Be aware that food can be farmed, caught or grown at home Be aware of the different types of agriculture and fisheries	Know the basic steps in the food production from farm to fork Know that food is farmed, caught or grown in Europe and all around the world Know that food is grown, farmed or caught on a large scale and sold Know that the food produced is dependent on climate, resources, and other factors	Understand the different stages in food production from farm to fork Understand how geography and climate impact on the availability of food and drink	Describe and evaluate food production in Europe and the rest of the world Explain the diversity of farming systems and fishing around the world
Food production and processing			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 1, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that some foods are changed between growing/farming and consumption Be able to name foods which have changed between farming and consumption	Explain some of the ways food is processed to make it edible and safe Know that food is processed around Europe and the world using different techniques	Know about a variety of food production and food processing techniques	Describe some new technologies that may impact on food production and processing Explain the effects of food processing, of food and drink fortification and cooking on the nutritional value of food and drinks

Food safety			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that food safety and hygiene is important from farming through to consumption. Know about personal hygiene when preparing and cooking food	Be aware that there are systems in place for the safe production and processing of food throughout Europe Know that it is important to store, prepare and cook food safely and hygienically	Know about a range of systems and how they are used for the safe production and processing of food throughout Europe Understand how to buy, store, prepare and cook food safely for good health	Know about food safety and hygiene in different situations Explain how external factors such as lack of resources can affect food safety , e.g. refrigeration Know about HACCP and the importance of food safety throughout the phases of food production from farm to fork
Food technology and biotechnology			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Have an awareness of the science in the production and processing of food	Be aware of different types food and drink and the way they have been processed or manufactured Know about traditional uses of biotechnology e.g. making yogurt, bread and cheese Be aware, and have practical experience of, different characteristics of a range of ingredients Be introduced to the use of some modern and future applications of biotechnology	Apply knowledge of ingredients, skills and resources to achieve desired outcomes for different recipes Know about a range of food processing, manufacturing and packaging techniques Know about traditional, modern and future uses of biotechnology and the underpinning science	Understand that food and drinks can be reformulated to improve their taste and/or nutrient profile Be able to define modern biotechnologies and understand how they are used in food and drink production Consider the possible future developments in biotechnology for food production Explain the scientific principles of different modern biotechnologies e.g. genetically modified organisms, nanotechnology

Food sustainability			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware of the different foods which are in or out of season Recognise that some foods grow locally/nationally and some are imported Be aware of recycling and food composting	Be aware of the foods which are produced locally/nationally and those imported Understand the variety of factors that contribute to sustainable food production e.g. waste, packaging, use of energy	Be able to define factors contributing to sustainable food production and processing Know about farming and fishing methods which have taken steps taken to reduce impact on the environment	Understand the principles of sustainable food production, (farm to fork), and their role in ensuring a secure, environmentally sustainable and healthy supply of food Be aware of research and developments in food sustainability in Europe
Animal welfare			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that farm animals and fish provide a wide range of food and looking after these animals is important	Be able to explain the needs of captive and free living wild animals and how they are looked after Know that captive and free living wild animals have different needs and are cared for in different ways Be aware of animal welfare standards that ensure good conditions	Know about animal and fish farming and the standards for maintaining their welfare Be aware and use food labelling schemes about animal welfare	Understand higher welfare food labelling and farm assurance schemes

Area of knowledge: (2) Know about your food Themes: · Food choice · Information and food labelling			
Interrelated themes: · International food culture and tradition · Supply and demand – (developing countries food supply / The use of science and technology in food supply)			
Food choice			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Know that family and friends may make different food or drink choices Be able to choose from a selection of food and drinks Be able to talk about food and drinks they like and dislike	Understand the factors involved in food and drink choice Be aware that it is important to choose an appropriate portion size for their needs Explain why some food and drinks cost more than others	Use the information on nutrition labels to make informed food and drink choices Identify and understand some of the factors that affect diet and food and drink choice Know why it is important to be aware of portion size when choosing food and drinks Compare costs of food, drinks and meals	Understand and evaluate the effect of personal food and drink choice on health in the short and long term Be aware of and be able to evaluate the external factors that affect food and drink choice in relation to their own and others' diets Be able to apply budgeting skills when choosing food and drinks and planning menus based on healthy eating recommendations Be able to be a prudent and critical consumer
Information and food labelling			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that food packaging provides information	Make use of information on food and drink packaging	Be able to list the information which needs to be provided on food and drink labels Know about and use front of pack labelling schemes to make informed choices Know about protected food names	Be able to make informed choices based on food labels, nutrition information panels and health claims and explain their reasons Know about food assurance schemes

International food culture and tradition			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Understand that different food is eaten depending on the time of the day, occasion, culture and lifestyle Be aware that a wide variety of foods are grown and consumed around the world	Be aware that around the world people choose different foods to make up their diet Understand that diets around the world will vary according to cultural preference, food availability, religion and resources	Use a range of ingredients from other countries Understand that food is an important part of religious observance for many different faiths	Understand and evaluate the relationship between food culture, culinary practices, beliefs and traditions
Supply and demand			
Phase 1 (5-8 years) By the end of phase 1, young people should:	Phase 2 (7-8 years) By the end of phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that some people do not have access to a constant supply of varied food and drink	Know that there may be an imbalance in food consumption between developing and developed countries that can contribute to poor health Know that some foods are only available at certain times of the year	Understand the relationship between rising food prices and food choice Investigate how new and emerging technologies can be used to increase or improve food efficiency	Investigate and evaluate the principles of food security nationally and internationally Be aware that food can be fortified to help tackle malnutrition e.g. crops, Prosafe beef Investigate how micronutrient supplementation and fortification of foods can help with malnutrition Understand and explain the consequences and/or impact of increasing food production

Area of knowledge: (3) You and your food Themes: · Diet and health · Diet and life stages			
Interrelated themes: · The use of science and technology in diet and health · Food supplements			
Diet and health			
Phase 1 (5-8 years) By the end of phase 1, young people should:	Phase 2 (8-11 years) By the end of phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Know that food and water are essential for life Be aware that a balance and variety of food and drinks are needed to be healthy Be aware that more of some food is needed more than others Be aware that it is important to get enough fluid	Know that food and drinks provide energy Know that different food and drinks provide different amounts of energy Know that food and drinks provide different substances that are important for health (nutrients, water and fibre) Know that food and drinks can affect their health and understand the advantages of healthy eating and drinking Know that they need different amounts from each food group Know that all food and drink can be part of a healthy varied diet and active lifestyle Know that it is important to drink regularly throughout the day to stay hydrated	Understand that the health effects of the diet come from the diet overall, not from a single food, drink or nutrient Use current healthy eating advice to choose a balance and variety of food and drinks Understand that different nutrients have different functions Understand the short and long term effects of diet on health Know that their bodies contain water and that they need fluids from the diet to keep the body working properly Understand the digestion of food and drinks	Be able to apply knowledge of healthy eating and drinking to their own and others' diets Understand why, when and how to make changes to their diet Describe a variety of dietary related diseases and their associated risk factors Identify and use reliable sources of information on food, drinks and health Critically appraise diet and health information from a variety of sources Understand that there are substances in food and drinks which are not nutrients but may have positive or negative effects on health Understand that their need for fluid is affected by many factors, especially the weather and levels of physical activity Be able to explain the consequences of dehydration

Diet and life stages			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
Be aware that different people need different types and amounts of food	Name the key stages in life Know that nutritional needs change through life	Understand why needs for different amounts of energy and nutrients change through life Understand how nutritional needs change during puberty	Describe the energy and nutrient requirements of different life stages to maintain health
Science and technology in diet and health			
Phase 1 (5-8 years) By the end of Phase 1, young people should:	Phase 2 (8-11 years) By the end of Phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
		Be aware of new food technologies and cooking techniques	Understand and explain a variety of food manufacturing processes and techniques
Food supplements			
Phase 1 (5-7 years) By the end of phase 1, young people should:	Phase 2 (7-11 years) By the end of phase 2, young people should:	Phase 3 (11-14 years) By the end of Phase 3, young people should:	Phase 4 (14-16 years) By the end of Phase 4, young people should:
	Understand some people require additional amounts of nutrients through food supplements	Identify groups of the population which require food supplements and the reasons why	Names the types and amounts of food supplements required by certain groups of the population
			Explain the impact of food supplements may have on the nutrient status of groups of the population