

Senior Lesson Plan 4

Dairy and Eating Sustainably

Objective

To develop pupils' understanding of how food and dairy production impacts climate change, the importance of eating sustainably and to raise awareness of sustainable food choices. Duration: **30 minutes** (approximately).



Curricular Links

SPHE:

Myself and the wider world ⇨ Developing citizenship ⇨ Environmental care

Geography:

Environmental awareness and care ⇨ Environmental awareness and caring for the environment



Words of the Day

Greenhouse Gas Emissions – Gases, such as CO₂ that trap the heat of the sun in our atmosphere, causing it to heat up (just like a greenhouse).

Climate Change – Due to excess greenhouse gas emissions, the Earth is heating up, causing the climate to change.

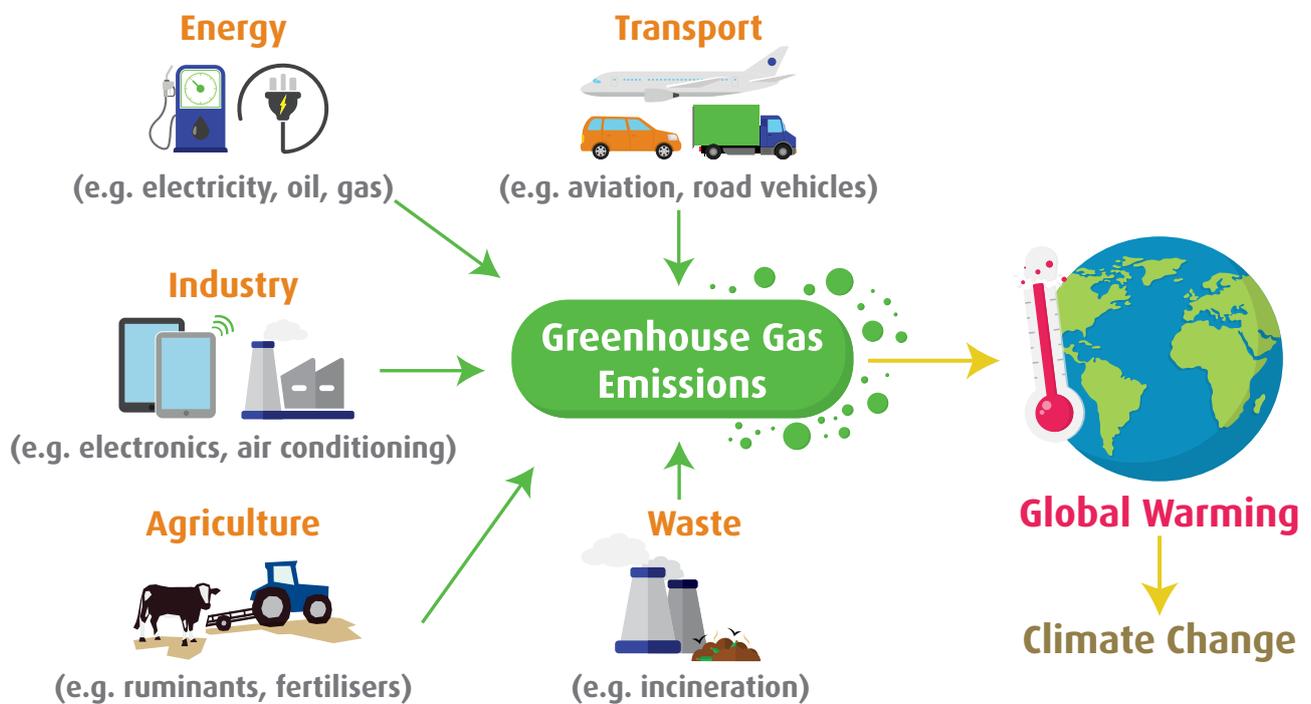
Food Production – How our food is grown, processed and packaged.

Food Miles – The distance food travels from the farm to our plates. The further your food has to travel, the higher its food miles will be.

Grass-based Dairy Production – Ireland has a mild and wet climate which gives us rich grasslands. This is ideal for grass-based dairy farming. Grass-fed animals are those whose diet consists almost entirely of grass.

Sustainable Eating – Sustainable diets include foods that are nutritious, acceptable and affordable, while limiting the impact on the environment. To eat more sustainably, we can: Look to the Department of Health's Food Pyramid for healthy choices; Opt for less packaging; Reduce food waste; Choose Local and Seasonal foods.

Human activities which contribute to greenhouse gas emissions



Group Discussion

1 Inform pupils that they will be learning about eating sustainably, how dairy is produced in Ireland and where it fits in a sustainable diet. Ask pupils, working in groups, to use the 'words of the day' section and discuss the following points, noting their ideas on a mind map:

- How is food production connected to greenhouse gas emissions?
- How can eating sustainably reduce climate change?
- What do you understand about grass-based dairy production?
- Why do you think Ireland is among the best in the world for sustainable milk production?
- How can we tell if milk is farmed in the Republic of Ireland?

2 Ask each group to discuss their mind map with the class. Using the diagram above on page 15, consider where food production might be involved in contributing to greenhouse gas emissions. Expand on the ideas already explored in groups touching on the following points:

- Food production uses natural resources such as land and water, and includes activities that can increase greenhouse emissions, such as agriculture and transport.
- Irish dairy farms have some of the lowest levels of greenhouse gas emissions in the EU. Grass-based dairy production is more sustainable for the environment than other dairy production methods. Due to our mild, wet climate, our cows graze outdoors on lush green grass on average 240 days each year!
- Our grass-based dairy production uses up to 20% less water than most European countries. Approximately 99% of water used in Irish farms is supplied naturally by rainfall, which leads to almost zero impact on water stress.
- Grasslands soak up carbon from the atmosphere, helping to partly offset some of the carbon emissions produced by agriculture farming.
- Using locally grown or locally sourced seasonal food uses fewer food miles.
- Using food with little or no packaging or biodegradable packaging helps to reduce waste.
- The *Farmed in the Republic of Ireland* guarantee indicates that milk is sourced and processed in the Republic of Ireland and supports local jobs on dairy farms.



Class Discussion

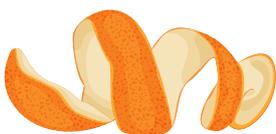
- 1 Display a list of the following foods on the board: milk, yogurt, cheese, fish, potatoes, bananas, strawberries, avocados, pineapples, oranges, carrots and chillies. Discuss the following points:
 - Which items from this list do you think can be grown/produced in Ireland?
 - Do you see a lot of variety or different brands of these foods in the market?
 - Do you recognise Irish brands (e.g. milk, yogurt, cheese)?
 - When do you think these foods are 'in-season' (grown naturally and at their freshest)?
 - Can you identify the origin of some of these foods? Where do you think we may import avocados from? pineapples? Etc.
 - How are food items imported into Ireland? What modes of transport might be used?
 - When you see these foods in the supermarket, how are they packaged? Do you pay attention to the packaging/labels?
 - Do you and your family usually eat all of the food you buy? How much is thrown away? How can we reduce our food waste?



- 2 Discuss the following points on balancing nutritional and safe dietary choices to minimise the impact on climate change:
- Milk, yogurt and cheese, certain types of fish (like salmon and mackerel), potatoes, carrots and strawberries can all be produced in Ireland but many of these items are imported too. This is especially true when we buy foods that may not be in season or that are not frozen.
 - We have access to a large variety of Irish milk and dairy products. Remember that you can look for the *Farmed in the Republic of Ireland* guarantee. For other items, we may need to carefully read their labels. Look for Irish brands of cheese and yogurts when shopping. If possible, buy fish fresh and from your local fish monger. You can also look out for the 'Responsibly Sourced Seafood' logo. Always read the origin label on the foods you choose.
 - We can use Bord Bia's 'Best in Season' calendar (<https://www.bordbia.ie/whats-in-season/best-in-season/calendar/september>) to discover which foods are in season. Apples for example, start coming into season in September and strawberries start in May.
 - Items may be transported to Ireland by plane, ship, and trucks. Imported foods can still be healthy foods that we may need as part of our diet; what's important is that we try to choose local and in season when we can. By eating locally grown/produced food, we reduce our food miles and support Irish farmers.
 - Many foods in the market are packaged in plastic. We can avoid packaged foods by choosing loose fruits and vegetables and using reusable bags. This helps to reduce food waste.
 - One third of the world's food is wasted every year by getting spoiled or uneaten. Considering the resources used to produce food, food waste is a major contributor to climate change.
 - Eating a balanced diet ensures that we consume the foods we need to grow healthy and strong and that we consume the correct amount, so that we do not overuse or waste resources. See Lesson Plan 1: Dairy in My Diet.

Pair Activity

Ask pupils to work in pairs and complete the **Mindful in the Market** activity sheet. Discuss the choices they made on their worksheet and if they were able to choose the most environmentally-friendly options.



Personal Activity

Design a poster for your local milk brand or your School Milk Scheme. Include the *Farmed in the Republic of Ireland* guarantee. Create a slogan and description that will convince people to buy local! Display your poster in the classroom.

Extension Activities

- 1 Invite a farmer to speak to the class about the importance of buying local.
- 2 Grow your own plants in the classroom! Plant some herbs or vegetables with your pupils.
- 3 Encourage pupils to try and reduce their waste by making the most of what they have in their fridge. Milk and yogurt can be combined with some fast-ripening berries/banana to make a delicious fruit smoothie. Wilted broccoli or soft tomatoes that you might normally throw in the bin, can be used in a tasty vegetable soup! Send your pupils home with our recipe template on page 25!

Bring it Home

- 1 On your next visit to the market, identify 5 food items that are produced or grown in Ireland. Remember to look out for the *Farmed in the Republic of Ireland* guarantee on milk!
- 2 Share your **Mindful in the Market** activity sheet with your family and test it further with some of the foods in your home. How far did these items travel? Make a family contract to shop local for more food items in your home.

