The Story of our Food

Food Choices and Food Labels – Lesson Plan (40-60 mins)

Lesson Aim: To improve food literacy, to raise awareness about the origins of various food items, and to increase participants' awareness of the impacts of their food choices on the environment.

Lesson Objectives:

- Initial introduction by facilitator explains basic information about food and where it comes from (with examples provided).
- Discussion expands to packaging (using images), text and oral presentation, and how to use Record Sheets to store information.
- Individual learning will be facilitated through discussions and personal findings using regular household food packaging.
- Peer to peer learning will be facilitated via the use of 'Team Record Sheets' for groups of students to use, and through further discussion about personal findings, team findings and overall conclusions.

Curriculum: Geography, SPHE, CSPE, Home Economics.

Audience: All - Junior and Senior Primary, Secondary Students and Staff. This activity is suitable for all ages, with simple adjustments on level of detail, vocabulary and pitch, as indicated throughout the materials. NB: There is a Junior Record Sheet and a Senior Record Sheet – choose the one that suits your audience the best.

Skills: Depending on the age, and the associated extent of this exercise, students will use some or all the following skills: Reading; Communication skills; A Sense of Place; Using maps; Questioning; Investigating; Analysing; Recording and Abstract Thinking.

Resources Required:

- ✓ Images for **Presentation** (see below) (whiteboard, or laptop and projector (no sound required) or printed off in advance of session) to include:
  - Map of the world, or a globe (plus string and pins/tape if mapping locations).
  - See PDF section below for:
    - Basic info on Food Miles
    - Basic wholefoods versus processed foods
    - Basic info on organic versus non-organic farming
    - Basic info on packaging materials

- ✓ **Script Notes** - See **Global Topics Cards** for more detailed background information.

- ✓ Materials for the **Labels Workshop** element include:
  - **Printed Record Sheets** (**junior** and **senior** options available) and pen/pencil **–** one per person or one per group (depending on abilities/ages)
  - **Food items including packaging** from regular household food items – participants can bring these, or facilitator, or mix of both. Some good (discussion point) items to bring include:

A box of organic eggs	Bag of apples
Fairtrade and organic bananas	Box/packet of biscuits
A highly processed chocolate bar, e.g. snickers, mars bar etc.	Jar of Nutella
Irish organic yogurts	Soft-drink can/bottle
Juice drink	Bread
Net of oranges	Irish-labelled fruit

"*Food Choices and Food Labels*" Workshop Outline

Element	Duration	Details	Resources Required
Presentation & Discussion	10 mins	Using the PwrPt Images (below), present the various slides and the content relating to the: - The Apple example - The Eggs example	Images (below).
	(10 mins)	**Optional:** cut out the relevant images (at end of pdf) for the Apple and the Egg examples and ask student groups to put them into the right sequence 'farm to fork'	**Optional:** Images and icons (below) printed & scissors & lamination sheets &laminator
Presentation & Discussion	10 mins	Using the PwrPt slides (below) – present overview, with audience-appropriate detail, relating to the themes and topics, including: - Food Miles, - Organic Farming - Wholefoods V Ultra-processed foods - Packaging	Slides below See **Global Topics Cards** for more detailed background information
Food and packing analysis by individuals and group	10 mins	Show the group the Record Sheet, and how to fill it in. Divide the group into pairs or small groups. Assign each team one or more food items/wrappers. Ask each team to fill in the information for their own food item(s). Note: The scoring systems **are** somewhat subjective, so expect discussions!	Record Sheet per team One or more food items/food wrappers per team Pen/pencil per team to fill in sheet
Class feedback	10 mins	Ask each team to **feedback overall scores**. Ask some of the discussion/prompt questions included at the end of the powerpoint as time allows.	
	(10 mins)	**Extension:** using string and a globe or world map, plot out the distances that all of the food items have travelled.	String and pins to map out distance and direction food/wrappers have come from to the classroom.

The Story of Our Food

Lesson & Activity

Green-Schools' Global Citizenship

Food and Biodiversity Theme

Green-Schools
An Taisce

Where does our food come from, how is it grown, what is in it, how is it made?

Do we always know the answers to these questions?

Do we always ask these questions?

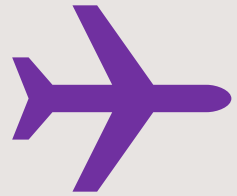
Case-study: Apples from Brazil

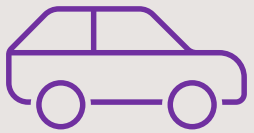
How does an APPLE get to your table?

APPLES are ...

1. ..<u>grown</u> on trees at farm
2. ..<u>picked</u> and <u>transported</u> to a factory
3. ..<u>sorted</u> (and <u>stored</u>) at factory then ... <u>transported</u> to shop
4. ...<u>stored</u> and on sale in the shop
5. ...<u>collected</u> by you or I and transported home to the table

Put the images in the correct order, and decide which icons are most relevant for the transport stages.





How does an APPLE get to your table?

APPLES are ...

1. ..**grown** on trees at farm
2. ..**picked** and **transported** to a factory
3. ..**sorted** (and **stored**) at factory then ... **transported** to shop
4. ...**stored** and on sale in the shop
5. ...**collected** by you or I and transported home to the table

Put the images in the correct order, and decide which icons are most relevant for the transport stages.

Case-study: Eggs from Ireland

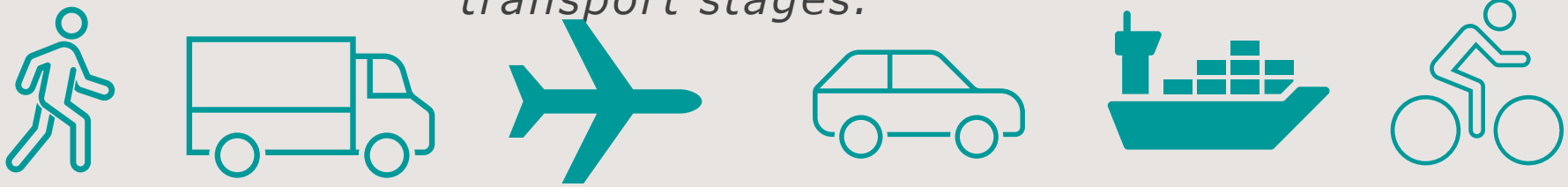
How does an EGG get to your table?

Eggs are...

1. ..<u>laid</u> by hens on a farm
2. ..<u>collected</u> & <u>brought</u> to sorting area/warehouse
3. ..<u>sorted</u> (and <u>stored</u>) at warehouse

   ... <u>transported</u> to shop
4. ...<u>stored</u> and on sale in the shop
5. ...<u>collected</u> or bought, and then transported home to your table

Put the images in the correct order, and decide which icons are most relevant for the transport stages.



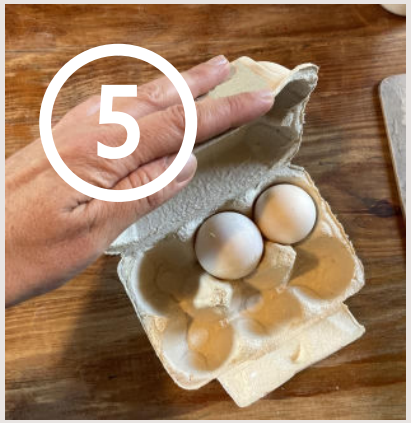
How does an EGG get to your table?

Eggs are...

1. ..<u>laid</u> by hens on a farm
2. ..<u>collected</u> & <u>brought</u> to sorting area/warehouse
3. ..<u>sorted</u> (and <u>stored</u>) at warehouse

   ... <u>transported</u> to shop
4. ...<u>stored</u> and on sale in the shop
5. ...<u>collected</u> or bought, and then transported home to your table

Put the images in the correct order, and decide which icons are most relevant for the transport stages.



General Discussion/Prompt Questions

- *Does anyone have an apple tree at home? If so, how many transport stages would be skipped compared to the example (see above)?*
- *Does anyone have hens at home? If so, how many transport stages are there involved with you collecting your eggs?*
- *If apples came from France instead of Brazil, would the journey be different?*
- *Where or how can we find out where our food items have come from, if we haven't grown them ourselves?*

Food and Food Labels Activity

Food Label Activity

What can we discover about our food?

Using the information on the slides below, discuss each of the relevant categories*, before distributing the foods and/or wrappers, and completing the record sheets.

**note there is one less category/column on the junior sheet*

Food & Food Labels Recording Sheet - Junior

Name of food Item	From where, distance?	Is it 'organic'?	Wholefood or ultra-processed?	What kind of package	Result
E.g. Banana	Costa Rica >8000km X	Yes √	Wholefood √	Soft Plastic X	2 √ 2 X

- Using a tick √ or smiley face 😊 you can indicate that your food item does not harm the environment.
- Using an X X or a sad face ☹ you can show that your food item negatively affects the environment.

Food & Food Labels Recording Sheet - Senior

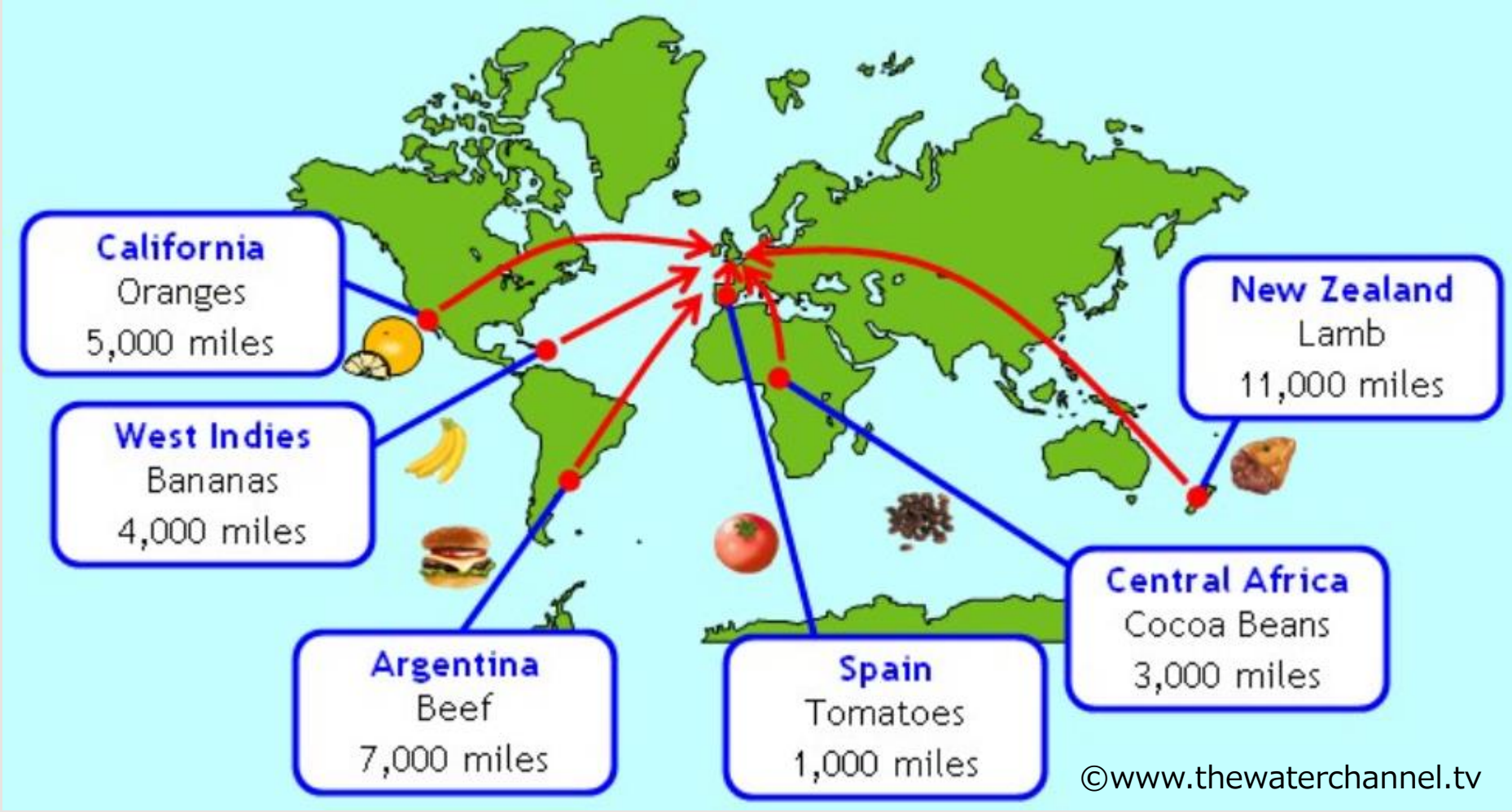
Name of food Item	From where, distance?	Is it "organic"?	Wholefood or ultra-processed?	Does it contain palm oil?	What kind of package?	**Overall Result**
E.g. Banana	Costa Rica, >8000km = 0 Stars	Yes = 5 star ☆☆☆☆☆	Wholefood = Zero processing ☆☆☆☆☆	No = 5 star ☆☆☆☆☆	Soft Plastic, Worst type of pack=0 stars	Average stars = 3 (i.e. 15 stars/5) ★★★

- You can assign star scores: Zero stars would indicate the worst option for the environment for that category, whereas 5 stars would indicate the best option for the environment for that category.
- E.g. Category of "distance" you might assign stars as follows: 0 stars = > 2,500kms, ★ = < 2,500kms, ★★ = < 1,500kms ★★★ = < 500 kms, ★★★★ = <200kms ★★★★★ = < 100kms Etc.

Food Miles

Where has our food come from?

Definition: *a mile over which a food item is transported during the journey from producer to consumer, as a unit of measurement of the fuel used to transport it.*



A major problem with foods coming from far away is the fossil fuels that are required to power that journey – most vehicles release a lot of Greenhouse Gases (GHGs) when travelling, which contributes to global warming and **climate change**.

NB: Food packaging or **crate labels** at the shop tell us where the food has come from.

Organic versus Non-Organic Farming

How has our food been treated?

Organic Farming Definition:

"...a farming system that uses ecologically-based/ nature-based pest controls, and biological *fertilizers which come largely from animal and plant wastes and nitrogen-fixing cover crops.* ***It does not use chemical pesticides or synthetic fertilizers"***

Compared with conventional agriculture, organic farming

- uses fewer pesticides*,
- reduces soil erosion,
- decreases nitrate leaching/running into groundwater
- decreases nitrate leaching/running into surface water, &
- recycles animal wastes back into the farm.

*Pesticide-use (especially the use of **neonicotinoids**) has been associated with worldwide declines in bee populations.

Food packaging or **crate labels** at the shop tell us if the food is organic.
If it does not read 'organic' it is assumed that pesticides and other chemicals have been used to produce the food item, although further information on the chemicals used is not required or given.

Processed Foods & Palm Oil

What is in our food?

Wholefood... Is food, that has had as little processing or refinement as possible, and is free from additives, or other artificial substances.

For example: apples, bananas, cabbage, peas, beans, nuts, berries, eggs.

Wholefoods are typically high in nutrients and have a relatively low environmental impact.

Processed food ⋯ is any food that has been altered in some way during preparation.

Food processing can be as basic as freezing, canning, baking or drying. **Processing can be a valuable tool for extending the life of food, and reducing food waste, so certain processing can be good for the environment.**

However, **highly processed foods**, referred to as '**ultra processed**' foods, often require **resource-intensive** processing (e.g. high water or energy use), and ingredients (e.g. Palm oil and soy), the production of which negatively affects biodiversity.

Palm Oil

Palm oil *is a common ingredient in processed foods.*

It grows best in the tropics, where the native biodiversity-rich ***tropical rainforest*** *habitat is cleared in order to grow monoculture Palm plantations over large areas of land.*

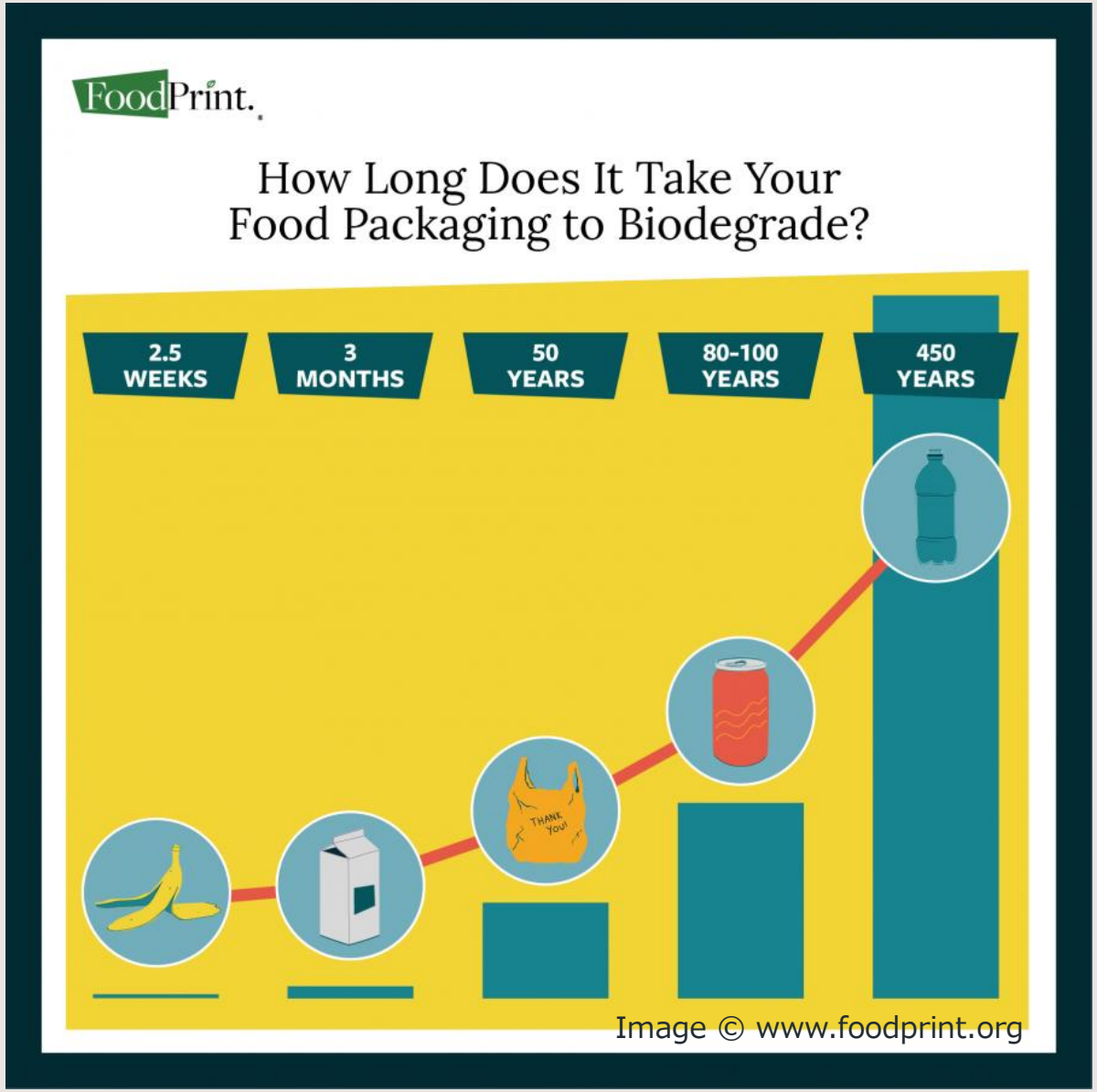
Packaging

How is our food packed?

The environmental impact of food packaging is immense; aside from the huge draw on resources such as water, energy and raw materials that go into making the packaging; long-lasting litter often ends up in the natural environment, and in water bodies.

Litter from food packaging, especially plastics, pose a threat to marine life. Much of it ends up being ingested, having been mistaken for food e.g. plastic bottle caps by albatross birds, mistaking them for fish, and plastic bags by turtles, mistaking them for jellyfish.

Plastics, along with other discarded waste such as fishing gear also pose a risk of entanglement to marine animals of all sizes.



Information on the make-up of food packaging (and how to dispose of it) is usually found on the outer package.

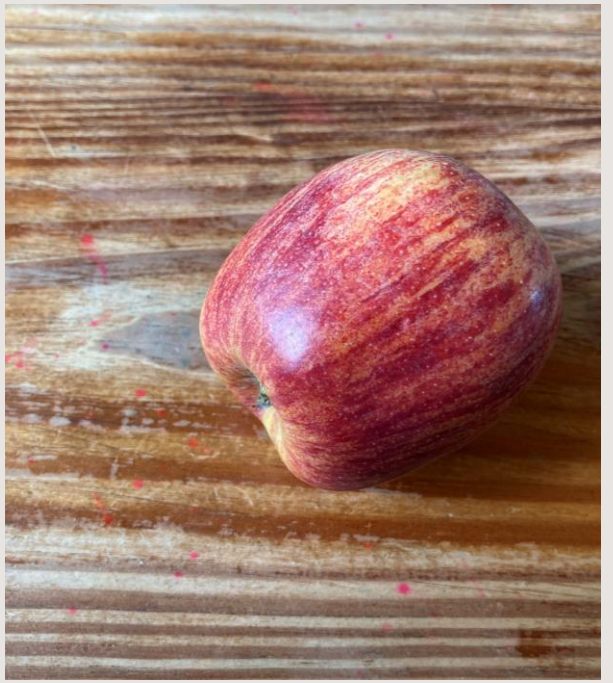
Some General Discussion/Prompt Questions

- *Could you find all the information you wanted on the food wrappers?*
- *What additional information (if any) would you like to know?*
- *Did you find any information that was confusing/misleading/not clear? (E.g. a chocolate bar being labelled as 'from England' – but does Cocoa really grow in England!?)*
- *Was there anything that surprised you?*

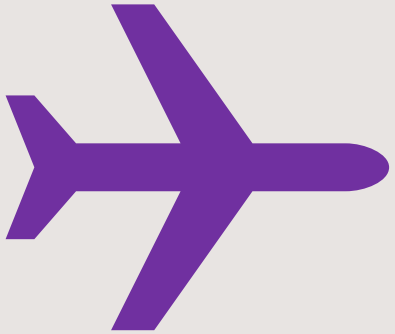
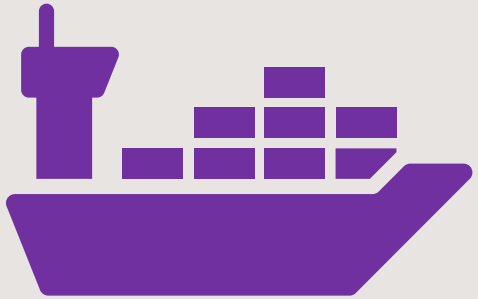
Some General Discussion/Prompt Questions, continued...

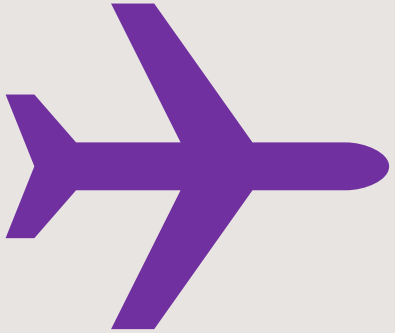
- *Did you learn anything new from this activity?*
- *Do you think that all of the pesticides, preservatives and other chemicals that our food is exposed to during growth and transportation should be listed on the food labels?*
- *Are there any things you would like to investigate more about? If so, what?*
- *Do you think people consider these things every day? If not, why not?*
- *Why do you think warnings about the damage of palm oil, or chemicals, or air miles are not printed on our food wrappers?*
- *Now that you know this information, can you list why growing your own food might help you protect the environment?*

Extra Resources and Images for completing the activities

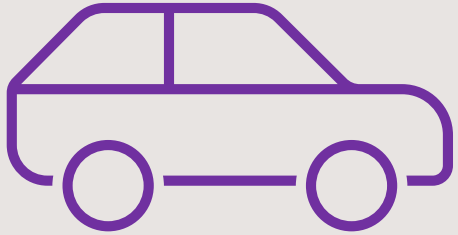
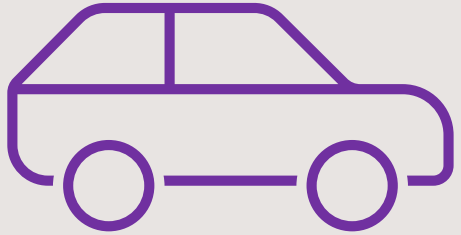


You can cut out and laminate images for groups/individuals to do this activity independently.

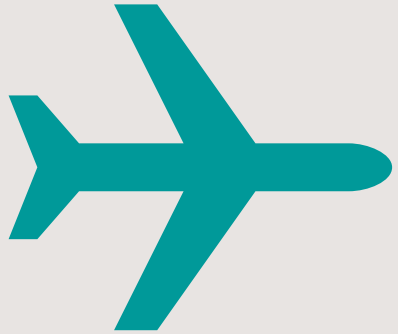





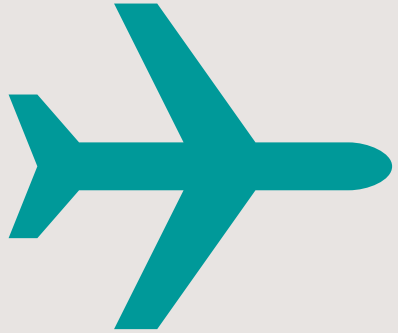



Cut out and laminate these symbols for groups/individuals doing this activity independently.

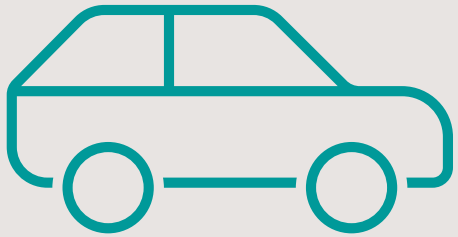
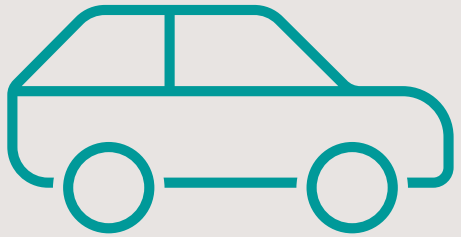
You can cut out and laminate images for groups/individuals to do this activity independently.







Cut out and laminate these symbols for groups/individuals doing this activity independently.

Food & Food Labels Recording Sheet - Junior

Name of food Item	From where, distance?	Is it 'organic'?	Wholefood or ultra-processed?	What kind of package	Result
E.g. Banana	Costa Rica >8000km X	Yes √	Wholefood √	Soft Plastic x	2 √ 2 x

- Using a tick √ or smiley face 😊 you can indicate that your food item does not harm the environment.
- Using an X x or a sad face ☹ you can show that your food item negatively affects the environment.
- Using a 0 or a straight face 😐 you can indicate that you think the impact is neither good nor bad.

Food & Food Labels Recording Sheet - Senior

Name of food Item	From where, distance?	Is it "organic"?	Wholefood or ultra-processed?	Does it contain palm oil?	What kind of package?	**Overall Result**
E.g. Banana	Costa Rica, >8000km = 0 Stars	Yes = 5 star ☆☆☆☆☆	Wholefood = Zero processing ☆☆☆☆☆	No = 5 star ☆☆☆☆☆	Soft Plastic, Worst type of pack = 0 stars	Average stars = 3 (i.e. 15 stars/5) ★★★

- You can assign star scores: Zero stars would indicate the worst option for the environment for that category, whereas 5 stars would indicate the best option for the environment for that category.
- E.g. Category of "distance" you might assign stars as follows: 0 stars = > 2,500kms, ★ = < 2,500kms, ★★ = < 1,500kms ★★★ = < 500 kms, ★★★★ = <200kms ★★★★★ = < 100kms Etc.

For more information on the topics of food miles, ultra-processed foods, palm oil and organic agriculture, download our ‘global topics’ cards from **here**:

www.greenschoolsireland.org/wp-content/uploads/2022/01/Global-Topic-Cards-All.pdf

Green-Schools
An Taisce