



GUIDEBOOK FOR DEVELOPING SUSTAINABLE FOOD HABITS AT DAYCARE

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This guidebook is a guide of activities related to food sustainability. The activities are simple, and material is easily available. It is intended to provide teachers in a daycare, material to practice with children about sustainability and food waste. It is divided in 3 parts: Introduction to sustainability; Food journey; and Food waste and ways to re-use it.

Each part has small lines of 1. explanation, 2. activities, 3. videos, and 4. tips:



Besides these symbols I used also for 5. indoor activities and for 6. outdoor activities:



The symbols are meant to make the guidebook more visual appealing and easy to understand and use it.

With this guidebook I hope that teachers who has not yet worked on these subjects with children, will find this useful to start working on these subject and for others to get inspired to continue and get more ideas. It is intended to create awareness on children of the things they can do to protect the planet as their present and future home.

Introduction to Sustainability



We all can do something to make sure that our amazing planet is able to keep providing us all with all that we need in the future. These list of books shows the wonders and traits of the planet and the importance of taking care of it without harming the environment. Although these books cover all the aspects related to earth, there are also specific chapters linked to food sustainability. These books are excellent choice to let children learn and be aware of what is going on in our planet, highlight the idea of maintaining the planet clean, make use of the things as long as possible, avoid buying new things, etc.

Activity

Educators can read these books any time in morning or afternoon circles, during quiet time or including in their lessons related to the theme.

List of books (available in Helmet libraries):

- “Dear Earth” (2020) by Isabel Otter
- “The tale of a toothbrush” (2020) by M.G. Leonard
- “Living Planet” (2020) by Camilla de la Bédoyère
- “The Great Big Green Book” (2015) by Mary Hoffman and Ros Asquith
- “A planet full of plastic” (2019) by Neal Layton
- “What a waste” (2019) by Jess French
- “Helping our planet” (2020) by Jane Bingham
- “What if there were no bees?” (2011) by Suzanne Slade
- “Climate crisis for beginners” (2021) by Usborne

“Earth is full of natural resources, but we need to be careful not to use them all up.”

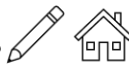
Food Journey

Where does the food grow?



Children will learn new concepts and the importance of knowing where the food comes from, helping them do understand the origin of the ingredients that they eat and the long process it is to have food in our plates.

Activity: Where these foods grow?



In a circle of a small group of children, teacher will have a set of laminated cards of fruits and vegetables (Picture 1) and will talk about these 2 groups of food. The focus is “Where these foods grow?” in trees, vines, bushes, or soil.

The teacher will start with a card with a fruit that grows on a tree. He/she asks them “what is this in the card”? and the lesson move forward with each child taking a card and telling what it is and where it grows. It is beneficial that there are some real examples of vegetables and fruits to show them, example apple, cucumber, potato, carrot, tomato, and lemon. By bringing real vegetables and fruits, kids will have chance to touch, smell and observe them.

For the meantime, children will be asked to draw in a big, recycled paper, the fruits, and vegetables which they pick from the set of cards. At the end they can colour the drawing with different colourful pencils. The picture 2 is an example of a drawing that children made during the activity.



Picture 1 – Cards of fruits and vegetables

Picture 2 – Drawing “where it grows”.

Glossary for the activity above:

Fruit: the part of a flowering plant that has seeds

Seeds: small parts of plants that can grow into new plants

Vines: plants with long stems that often grow along the ground

Vegetables: plants or plant parts without seeds that are eaten

Shrubs: a woody plant which is smaller than a tree and has several main stems arising at or near the ground

Stem: is one of two main structural axes of a vascular plant, the other being the root

Video supporting the activity:

“Where Do They Grow Song | Fruit and Vegetables”.

https://www.youtube.com/watch?v=iTLQn_XeE5Q

Food Supply Chain

A food supply chain refers to the processes that describe how food from a farm ends up on our tables. The processes include production, processing, distribution, consumption, and disposal. Every step of the supply chain requires human and/or natural resources.

Before it gets to the supermarket shelves, our food passes through an extensive process. Every step of the supply chain requires human and/or natural resources. This is called the food supply chain. Even those products that are minimally processed, such as fresh fruit and vegetables, are nonetheless sorted and packaged to meet the consumers' need for acceptable, visually appealing food with a reasonable shelf life.

Activity:

With a picture of Food Supply Chain (Picture 2) ask the children where we get our food. If they say a market or the grocery store, ask them where do the markets and grocery stores get the food?

Tell them that food starts with the farmer. Ask them to think about all the things that might happen to the food before it is eaten.

Hold up the picture Food Supply Chain (picture 3). Tell the children that there are five major steps that must happen for food to be available:

- Getting ready to grow food.
- Growing the food
- Moving food from the field
- Processing, selling, or storing the food.
- Preparing and eating the food.



Picture 3 – Food supply chain

Video supporting the activity:

“Why not to waste food tutorial for kids”.

<https://www.youtube.com/watch?v=My-KFPmrwzM&t=5s>

The video shows the amount of time, land, water, and energy that takes to grow food and to reach to our plates. And if we waste food all these resources are wasted, and it harms the environment. The video will support children to practice visual thinking, observation, and interpretation of images through versatile visual expression.

Food waste and ways to re-use it

Food waste is one of the most significant issues when it comes to environmental concerns and food — although many people are unaware of how big a problem it is. Around one-third of the food produced in the world each year never gets eaten.

Wasted food is food we throw away like:

- extra food
- spoiled food
- food scraps
- uneaten food

"Wasting food also wastes water, money, energy, hard work."

Some Waste breakdown:

- banana peel – 3-4-weeks
- glass bottles – unknown
- plastic straws – 200 years to break down into tiny pieces.
- cans – 450 years

What can we do?







- Compost, putting the nutrients of the food back into the soil to grow more food.
- Eat leftovers for lunch instead of throwing them out.
- Grow our own food near our home in allotments.
- Buy seasonal food that grows in our country. (Note: Check the “*Why eat local and seasonally*” in the end of the guidebook)





Providing a variety of engaging, enjoyable food-related activities and experiences sets a good tone for fostering curiosity and interest in different foods and the methods used to produce and prepare them. Food evokes innate excitement and joy in children. Food provides a multisensory feast with its many textures, colours, shapes, and smells, and it offers a lot of opportunities to broaden one's horizons. If we realize it or not, the act of eating keeps us connected to nature on a regular basis. (Selly 2012)

Activities:

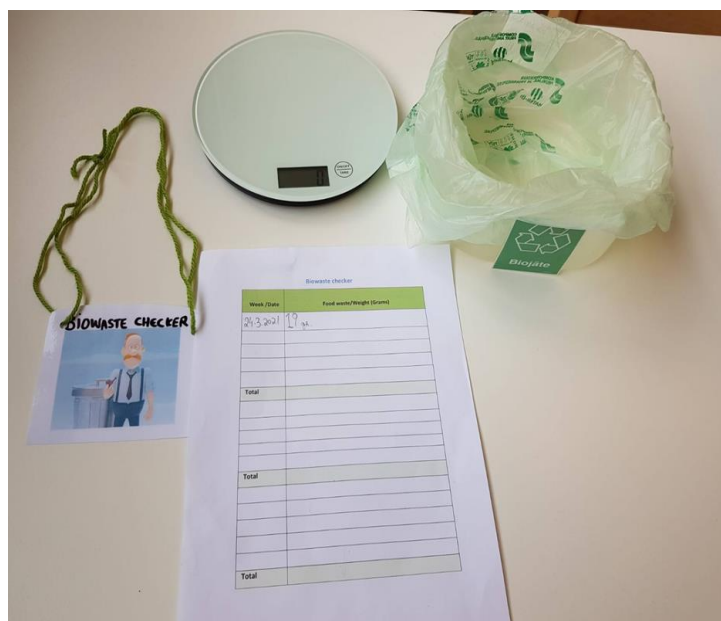
- **Bury litter** (for example, apples, bananas, plastics, and other materials) In the beginning of Autumn and then months later, for example in Spring, go to the same place to dig it up and observe the biodegradable waste and what does not deteriorate.

- **Re-grow** 
The link below, teaches how to grow 25 foods from the leftover scraps and seeds that normally is throw out:
<https://www.diyncrafts.com/4732/repurpose/25-foods-can-re-grow-kitchen-scraps>
- **Timeless tomatoes**  
Wash and dry some seeds, plant them in pots in Spring. When the plants are a few centimeters high, move them outdoors (or move into slightly bigger pots and keep them on the windowsill if the weather is chilly). Taken from the book "This book will help cool the climate" (2020).
- **Immortal carrots**  
Line a saucer with wet cotton pads. Press a carrot (or turnip or parsnip) top into the cotton. Keep the cotton pads wet. Once the tops sprout, plant them in soil outdoors (or indoors in a tall container). Taken from the book "This book will help cool the climate" (2020).
- **Growing Plants** 
Up-cycle your food scraps
<https://svswa.org/schools/kids-corner/>

"Scrap growing is great for children because plenty of scraps grow rapidly and it gives kids a big picture view of the life cycle of food."

- **Make Natural Dyes** 
with Leftover Fruits and Vegetables
<https://www.popsugar.co.uk/smart-living/Homemade-Natural-Dyes-42747468>
- **Bio-waste checker** 
Every day at lunch time there will be a bio-waste checker (a different child every time). The job of the checker is to weight the amount of food children wasted at the lunch time. After checking the weight in a kitchen scale, the child will write in a chart with the help of the teacher. At the end of the week, teacher and children will look at the chart and check if the weight of waste is dropping or not. This activity will help children to remember how important is to not waste food and get motivated by checking on the scale the weight of their lunch waste.

Teacher can use this time to remind them that with small changes we can make a positive impact on the planet.



Picture 4 - Material for the bio-waste checker

- **Ugly Food Taste Test** 

In this activity teacher present children with a “normal” looking carrot and one oddly/ugly shape carrot. Then the child will taste each carrot (blindfolded or not). After tasting the two carrots, teacher will ask for the similarities and differences.

The outcome is that the appearance of the food does not affect the taste. In the activity children can use 4 senses (sight, taste, smell, touch). Ripe bananas and “normal” bananas can also be a food to the ugly test.

At the end, use the fruits/vegetables for a smoothie or for a cake. In case there is no time right after the activity for making the smoothie, freeze the bananas and next day make a smoothie.

- **Recipes to do with leftovers:** 

Saving edible food rather than chucking it in the bin. Teachers can do these recipes anytime there is leftovers. It is an excellent way to teach children to make use of leftovers.

1. Mini pizza bread-end

<https://static.wrap.org.uk/lfhw/activity-pack/assets/files/Mini%20pizza%20bread%20end%20recipe.pdf>

2. Mini pizza from bread-end-crusts
<https://lovefoodhatewaste.com/recipe/mini-pizza-bread-end-crusts>
3. Banana bread with very ripe bananas
<https://savethefood.com/recipes/banana-bread>
4. Carrot juice pulp crackers
<https://jerryjamesstone.com/recipe/carrot-juice-pulp-crackers/>
5. Bananas that are totally ripe, peel them, break into chunks and store in the freezer to make smoothies. For more recipes go to:
<https://lovefoodhatewaste.com/recipes>


Compost


New research has found that almost half of the food waste in the average rubbish bin could have been composted. You can do your bit to reduce the amount of waste sent to landfill or other more costly forms of treatment by composting your food and garden waste at home.

Activities

- **Build the earthworms' house** 

Necessary materials: a plastic bottle, a pair of scissors to cut the side of the bottle, a kilogram of soil, a little sand, an adhesive strip, a bag of black plastic or a piece of aluminum foil to cover the bottle (to make it dark so that the worms would not suffer from the light). Other important things were food leftovers, fruit peelings and rotting fruit and, most important, a few earthworms. They cut a large strip on one side of the bottle through which they could dispose of the layers of soil, sand, dry leaves, and fruit peelings. Finally, they put in the earthworms and covered everything with dry lettuce leaves. They then covered the bottle with black plastic. Every day, the plastic was removed to observe what had happened. After four weeks, the difference was quite visible: the layers were now all mixed. The colour and the composition of the materials inside the bottle had changed. While those 'soil workers' (as one child commented) were working producing humus, the children were investigating on the Internet. A few days later, when the manure was ready, the children put it in the plant pots and replanted the flower that had lost its flowerpot.
<https://unesdoc.unesco.org/ark:/48223/pf0000159355/PDF/159355eng.pdf.multi>

- **Step-by-step how to compost:** 
<https://www.recyclenow.com/reduce-waste/composting/guide>

- **Using your compost:** 
<https://www.recyclenow.com/reduce-waste/composting/using-your-compost>

Earth Day Activity

Use an egg carton seed as a tray to plant. Cut off the container lid and put it under the bottom of the carton. Poke holes in the bottom of each egg cup and any moisture will drain out and into the lid underneath. Fill each egg cup with potting soil and place seeds into the appropriate depth. Water the container to get the soil moist but not soaking. To keep it warm as the seeds, germinate, simply put the carton in a plastic vegetable bag from the grocery store—another good way to reuse materials. Once they sprout, you can remove the plastic and set your container in a sunny, warm spot until they are ready to be planted outside.
<https://www.gardeningknowhow.com/garden-how-to/propagation/seeds/egg-carton-seed-tray.htm>

Why eat locally and seasonally?

By eating food that is produced close to where we live, we reduce the energy required to transport food long distances. A lot of items found in our supermarkets travelled from places that are far away, which contributes significantly to carbon emissions. By choosing food grown locally and in season we can reduce our carbon footprint and support local farmers. Local and in-season produce also tastes better as it is picked closer to when it is ripe and ready to eat with a shorter travel time from farm to table.
<https://janegoodall.ca/wp-content/uploads/2019/04/jgi-canada-sustainable-food-guide-web.pdf>

Eat seasonally in Finland

The link under is a quick guide of seasonal food in Finland, what to eat in each season of the year. Here teachers can talk with children about the food that grows in Finland in each season and its benefits when eaten at the right time of the year.
<https://www.myhelsinki.fi/en/eat-and-drink/quick-guide-how-to-eat-seasonal-food-in-helsinki>

YouTube Videos:

1. SavingFood Educational on food waste. Video tailored to children to help them comprehend the food waste problem and adopt environmentally and socially

responsible behaviour.

<https://www.youtube.com/watch?v=0eqxgvZNn0I>

2. Food Waste, Global Hunger & You. An important message to us all about food waste in the world.

https://www.youtube.com/watch?v=TVP3j7_W7og

3. What is Food Waste?

<https://www.youtube.com/watch?v=-6in-HVHzVs>

4. Save the Planet song for kids | Environment song for children | Earth Day song

<https://www.youtube.com/watch?v=IJToF8D9bdU>

How can we waste less food?

- Take only what you can eat.
- Eat what you take.
- Store leftovers for later.
- Learn how to store food so it lasts longer.
- Plan meals ahead of time.
- Use what is in the refrigerator first.
- Freeze uneaten food.
- Use your extra food in a new recipe.

“No one will protect what they don’t care about. And no one will care about what they have never experienced.”

Sir David Attenborough



https://www.zazzle.com/save_the_planet_earth_and_hands_poster-228361540349534571