

workshop

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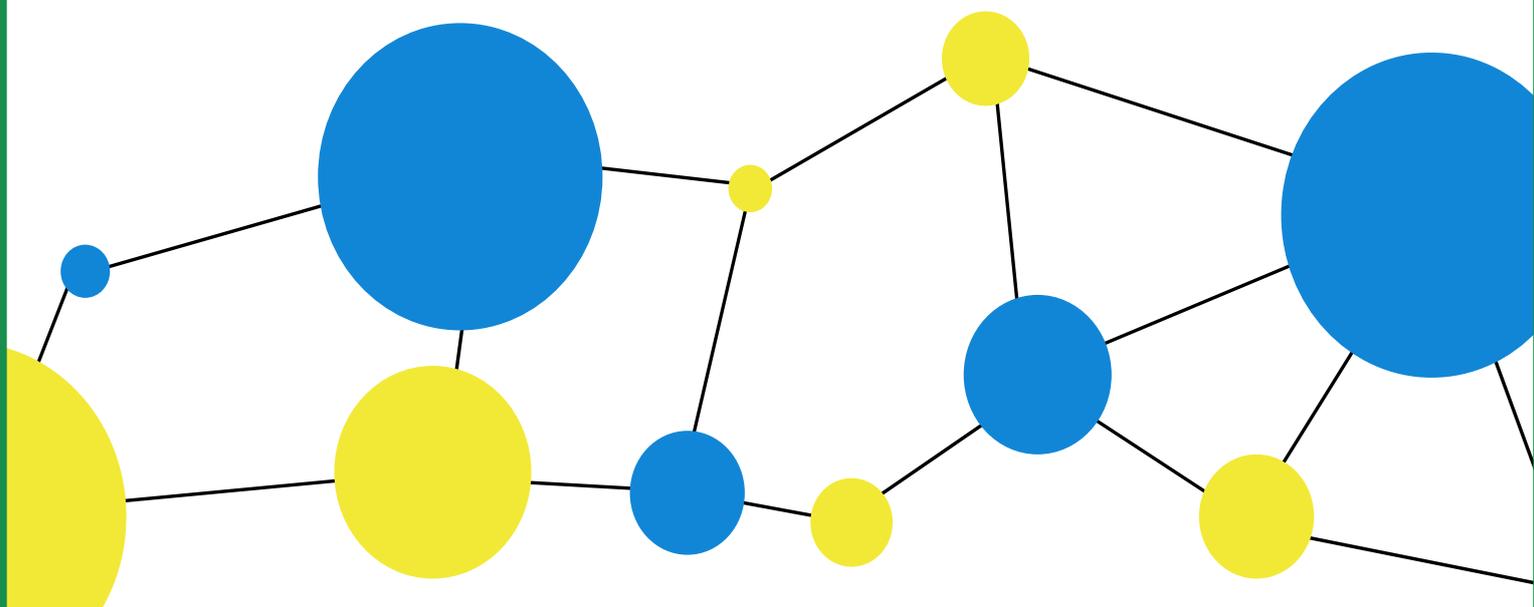


Co-funded by the
Erasmus+ Programme
of the European Union



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gardening and energy



1 what we want to achieve in this workshop?

In this workshop we would like to achieve a better understanding of how energy can be saved in our everyday lives. We would like to consider how to reduce the amount of energy we use while enjoying gardening for relaxation and recreation or for growing food at home or in our communities. We would like to get active in sharing our knowledge and promoting action locally and understanding how our actions affect the environment and the economy.



2 goals: after completing this lesson, you will be able to:

1. Circular Economy

- To have a basic knowledge of what the circular economy is, meaning, use and objectives.
- To know what kind of everyday activities related to your own, or a friend or relatives' garden have an important effect on the circular economy and the environment.
- To recognise examples and situations where a better use of energy could be used regarding gardening.
- To learn and understand the terminologies concerning these issues and to be able to explain them (considering the learner's age).
- To know how to find more information on the internet
- To know how to explain why it is important to consider the use of energy in planning and maintaining a garden and how this affects the planet.
- To recognise examples of good practice.
- To be able to explain what sustainable gardening is and why it is important

2. Energy (negative scenario)

- To understand how we can indirectly use energy while gardening
- To understand how we can reduce energy consumption
- To recognise the ways in which we can be inventive when sourcing what we need.
- To become aware of how we can influence others.

3. Gardening (positive scenario)

- To identify what activities are related to the use of energy in the garden.
- To look at other solutions for using products in the garden that use energy
- To understand how buying and wasting fewer products can have a positive effect on the garden activity.
- To learn and understand the related terminologies to these issues, and be able to explain them (considering the learners' age)
- To know how to get more information using the Internet.



3

theoretical introduction: what is the circular economy? how can we create gardens that are mindful of the energy we use?

The Circular Economy can be related to how we use our energy and resources while creating and working in our gardens. We can consider all the products we buy and all the materials we use. We can ask ourselves if these products and materials are really necessary or if there are ways we create them ourselves. We can ask ourselves how much energy and water we are using and if there are ways we can relate this to how this affects the economy, or planet and our population.

More info links:



- [Garden, outdoor power and power tools industries contributing to the EU circular economy policy](#)
- [Pulp and paper production from the rainforest](#)

Reasons to say yes to the circular economy:

- the battle we have to reduce single use plastics
- the harmful nature of some pesticides
- the unnecessary paper packaging used in garden products which affects rain forests across the world
- ways in which attention to the circular economy can save us money
- the need for use to address the issues of climate change and how this affects choices we make in our gardens
- the need to address water resources
- understanding of where paper packaging come from and how this is related to desertification
- the understanding of how resources can become waste



"it's estimated that 500 million plant pots and seed trays are sold every year. the majority are sent to landfill or are incinerated – very little is recycled and there are few facilities to do so."

Gardener's World.com

Gardening has become a popular pastime. Like many hobbies and pastimes there are always temptations to buy products or engage with activities that damage the circular economy and have a negative effect on the environment.



It is good to be aware that marketing strategies are aiming to sell products and are frequently not considering these issues. In order to be aware of this we need to consider these issues. It is important to get an idea of how much energy we use in the pursuit of gardening in our homes, schools and communities. We need to be aware of what we are using at the moment and to analyse any unnecessary use of energy related to our gardening activities. While considering this information we can see how the effect our possible misuse of energy can have on the environment and on the economy.

When we are at home and in our gardens we are constantly using up the planets resources we are using electricity and water ourselves every day:

- The average home in the UK uses 3700kWh a year
- The average home in UK uses 350 kWh a month
- The average household UK uses 345 litres of water a day

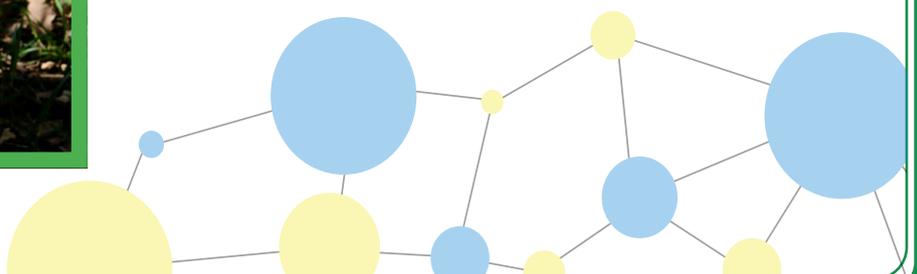
You may like to compare this with the usage in your own country.



More info links:



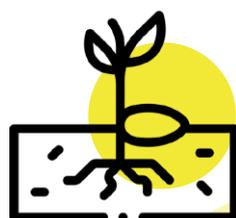
- [Water usage calculator](#)
- [Average Gas & Electricity Usage for UK Households](#)
- [The Increasing Demand for Home & Garden Pesticides](#)
- [At Home with Water](#)



SUPER MICHAEL DENZYL



Last Autumn Michael Denzyl took over the local allotment association. He is a keen gardener and enjoyed working on his allotment to grow vegetables for his family. He was also keen to encourage the other allotment holders to be aware of how the use of energy was an important consideration. He visited all the other allotment holders one by one and got to know what their needs were. He then wrote a leaflet to explain the things that could be easily considered and offered to help them with any changes they needed. He also talked to them firstly about how they saved energy on their home gardens. For example everyday habits such as using washing up water on plants and pots close to the house. Whether homes have lawns, trees and shrubs which need constant watering in the Summer. He suggested ways to not only help the environment but also to reduce energy bills when considering installing an irrigation system or using a thermostat in a greenhouse. He showed how they can help you reduce your heating and cooling costs from 10 to 25 %. These devices learn your habits and stop you from needlessly heating or cooling. He moved on to how these issues were also addressed on the allotment. At the allotment if course they do not have electricity but there are many ways that they could continue saving energy and save themselves some money and produce better plants. He talked about how to conserve water by understanding what kind of soil you have and consider planting types of vegetation that require less water about planting various plants that attracted pests away from the vegetables, so not needing to rely on pesticides which are not only damaging but sold in plastic bottles which cannot be recycled.



biggest water wasters in the garden:

- leaks in your sprinkler and hoses. ...
- overwatering
- losing rainwater
- throwing out household water
- watering at the wrong time
- not mulching
- planting the wrong plants for your climate and/or soil conditions
- not using a compost system



facts

Some food is not grown in fields but in factory conditions. How much energy does it cost to grow a kilo of potatoes?

It takes 1 square metre of space, 400w light for 3 months.



Growing your own vegetables makes a lot of sense. The average household spends £5.11 a week per person on fruit and vegetables. Do you know how much you spend? When we grow our own vegetables we are more appreciative of the effort this takes and we are less likely to waste food. In spite of many policies for change our habits regarding food waste are not improving quickly enough.



alternatives

It is easy to find alternatives to the plastic pots you buy at the garden centre. Old yogurt pots, milk cartons and plastic bottles can all be used. Just cut them down and make a few small holes in the bottom to drain water. For growing seeds egg boxes are excellent. As cardboard is biodegradable you can just tear off each section of the egg boxes and put it into a larger pot when the seeds germinate. In the same way the inside of toilet rolls can be used shoe boxes or cereal boxes can replace plastic seed trays.

More info links:

- [Fruit and vegetables: UK household expenditure-2018](#)
- [UK food waste reduced by almost 5m tonnes per year](#)
- [Biggest Water Wasters in the Garden](#)

tips to create less waste



- Encourage family members to get involved in gardening
- Find out what interests them, is it a place to play sports, meet with friends, grow food they like or grow flowers?
- Buy equipment second hand.
- Share equipment which is infrequently used with others.
- Grow from seed.
- Swap and share plants.
- Set up a group on WhatsApp or a Facebook page to share plants and tips.
- Buy from local nursery and car boot sales rather than the bigger chains.
- Clean garden tools in a place in the garden where the water you use can fall on plants that need it.
- If you can't plant from seed and you buy small plants in plastic pots, save them and reuse them until they are no longer useful. Then recycle them



You can make a compost bin from old woods or pallets. The compost is created with organic food scraps (fruit skins, vegetables, eggshells...) and with the grass you cut from your garden.

[How to make a compost bin.](#)



There are many ways in which rubber tyres can be reused. It is also very durable.

[Ten brilliant uses for old rubber tyres..](#)

4 tip sheets

Age 6-10. Grow some plants and collect together:

- Some tomatos seeds
- Some fine soil from the garden
- Some small stones
- Large yoghurt pot
- Make a few small holes in the bottom of the yoghurt pot.
- Add the stones. This helps the soil to drain. Add the compost and press in 3 seeds each pot. When the seedlings appear, put each out in a pot on its own. When they grow plant them in the garden. You will have created something yourself rather than have bought it ready grown and you will have used some recycled items to do so.



Age 11-15. Look for information, learn and reflect.

Look at some garden centre sites and understand what they sell.

List 3 ways in which we may use energy while gardening.

Find an advertisement for a gardening product you might think is unnecessary.

Make a list of 4 things that marketing companies use to encourage you to buy a product.

NOTES:

Age 16-20. Visit your local community garden

1. Look up a community project near you.
2. Understand how it works.
3. Find out what they need.
4. Think what you can do to help that might save them energy
5. You might offer to help with a facebook page, create a leaflet which highlights how the project does its best to save energy
6. Find out if there are other people who might assist such as a local business who may sponsor an initiative that may save energy.



4 tip sheets

Age 6-10. What could you recycle from the household waste that would be useful for the garden? Which of these things could you recycle and reuse? Tick off the ones you think will work.

- | | |
|--|--|
| plastic food trays <input type="radio"/> | plastic bottles <input type="radio"/> |
| pieces of string <input type="radio"/> | plastic bags <input type="radio"/> |
| plastic pots <input type="radio"/> | cardboard toilet rolls <input type="radio"/> |
| milk boxes <input type="radio"/> | sticks from ice creams <input type="radio"/> |



Can you think of anything else?

Age 10-15. What could you do to make your own garden or a relative's garden:

- more water-efficient?
- not to expire the products of the garden to make less waste? perhaps to be sorted by their expiration date?
- to make it a more sustainable garden by using recycled things? where could you get things to reuse?

Organise a bin in the kitchen for vegetable waste that can be used for compost.



Age 16-20. You are asked by a local organisation to help create a garden from a small patch of wasteland 10 metres x 10 metres. This will be used by those attending activities who just want somewhere to sit down and wait for friends etc. You have already been given a bench but you will need some plants. You have a very small budget and only a weekend in which you can do it.

Focus on how you will achieve this without buying unnecessary products or requiring unnecessary use of energy to maintain the garden. You need to write down a plan to show people who might help.

- Agree a budget
- Agree draw out an overall plan
- Create a list of things you need
- List people who might help with the practical tasks
- List people can you ask for some expertise and connections and how can you find some suitable plants at a low cost
- Work out a timetable for the weekend

NOTES:



5 role-play

Role-playing game.

The allotment holders are interested in getting together to see how they can act on some of the suggestions from the leaflet. Some of the people are quite elderly and don't have a lot of physical energy but do have time and have a great deal of experience. Chose to be a different character:

- an old person, someone good at organising, someone who has a greenhouse
- a young who wants to get involved

How do you think you could get everyone together to swap ideas?

How do you think you could encourage people to swap some of their skills?

How do you think you could organise people to swap excess plants .



working
together is
the best



Icons source: "Flaticon", www.flaticon.com

6 more activities

If you want to continue learning about the circular economy, efficiency, sustainability and responsible consumption, here you have several links to have more information:

Age 6 -10: Digital Breakouts

Age 11-15: Escape-Rooms

Age 16-20: WebQuest

7 conclusion

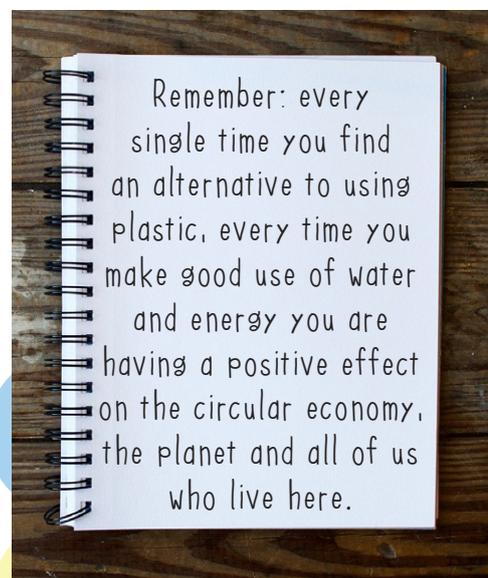
To finish this workshop, we invite you to reflect and dialogue on all that we have learned.

What have you learned?

What solutions should we be focusing on?

How can you share all this new knowledge with your family and friends?

What things can you change to reduce your impact on the environment?





2019-1-UK01-KA204-06144
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CREATIVE EXCHANGE



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