

This infographic contains four levels of learning, from the simplest (level 1) to the most complex (level 4). Each level offers an activity design framework whose core is the school garden. Each level works on a different aspect: nutrition, recycling, environment and the impact of inanimate factors on crops. Each level adds both cognitive difficulty and, in the use and application of technology. The reader should keep in mind that although each level is linked to some core subjects, there is room for more subjects within the framework.

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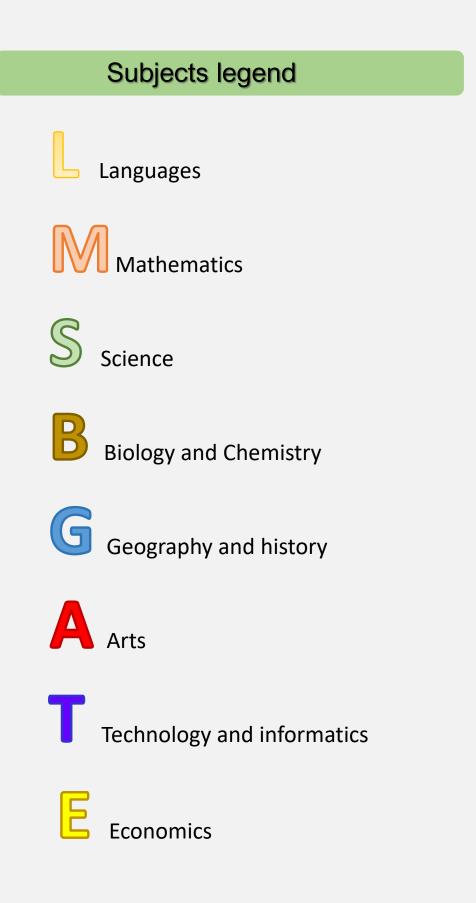












e	<section-header><section-header><text></text></section-header></section-header>			<ul> <li>A healthy diet example: Mediterranean fruits, vegetables and code</li> <li>Vocabulary and grammar structures in English language.</li> <li>Understand the life cycle of local vegetables and herbs.</li> <li>Reflect on the use of vegetables and fruits in our diet.</li> <li>Plant and grow vegetables in the garden (cabbage, lettuces, brock)</li> <li>Plant aromatic herbs, recognize smells and usages.</li> <li>Follow the seeding growth using observation worksheets.</li> <li>Discover the benefits of a Mediterranean diet with seasonal fruits</li> <li>Identify diseases associated with eating habits and how to prevent</li> <li>Make nutritional pyramid sketches.</li> <li>Make a eBook with healthy recipes in English language.</li> <li>Exchange information with classmates from other schools by onling</li> <li>Interact with experts by online conferences as a source of provent</li> <li>Cook the recipes at home and participate with the family of a heat</li> </ul>		
	15 LIFE ON LAND	ainable Development Goals: Lea Efficient use of natural resources	3 GOOD HEALTH AND WELL-BEING	Nutrition and health		Info
	Recognize and understand	Identify basic factors and good practices for the cultivation of an eco-friendly garden (water, soil and compost, weeds and insects )		Identify vitamin groups in vegetables and fruits. Read food labels and recognize organic brands and EU regulations.	Foundation	Seard regai and c Ident
	Argue and negotiate	Argue about larger scale area's ecological farming and possible hazards. Discuss the convenience of buying local products (CO2 footprint, community issues, etc.)		Summarize, ask questions, clarify points and take notes on a presentation given by a doctor from the town hospital and an expert about healthy diet and the importance of eating vegetables and fruit for children and youngers.	Intermediate	Evalu the N in an walls
						11000

Advanced

Observe our breakfast for 3 days. Evaluate

the nutritional and caloric value. Apply

expert recommendations to propose a

Design a recipe book with local and

healthier breakfast.

seasonal vegetables.

Design simple experiments such as generating electricity from potatoes, rust Solve problems and removal, Mendel's laws, apple glucose develop solutions level. etc. to connect science and nature.

contribution.

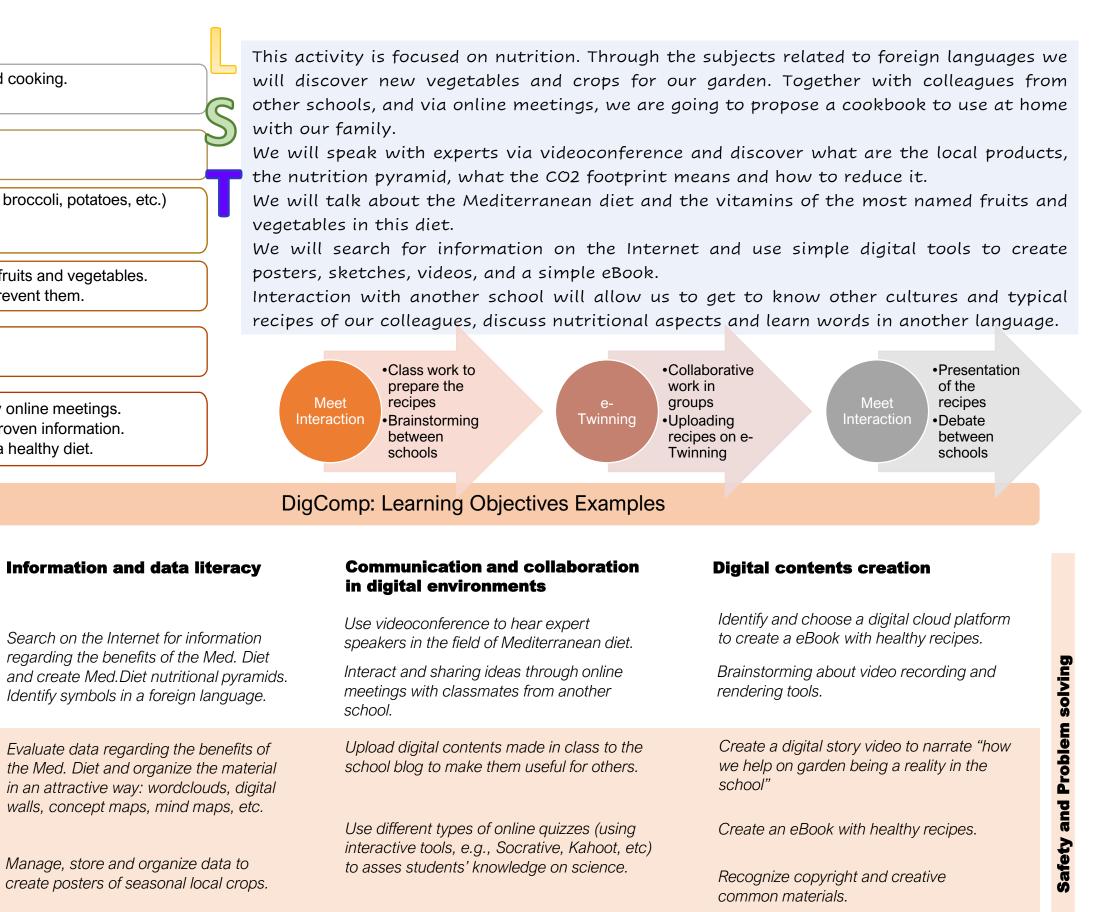
Propose ideas for possible and innovative

solutions about effective organic waste

management in the school and personal

Reflect on one's own

actions



Licence creative common materials.

<section-header>         Concord Case       <t< th=""><th colspan="2"><ul> <li>WORK</li> <li>Explore natural elements needed for composition</li> <li>Discover the changes during decomposition</li> <li>Make a scarecrow, seedbeds, a water reservecycling materials.</li> <li>Built a compost box and a management can</li> <li>Present to the school community a School</li> </ul></th><th colspan="2">in English language. The natural waste useful in composting. The aterials that can be reused or recycled. Different sizes, colors, shapes and qualities. The different sizes, colors, shapes and qualitis. The different size</th></t<></section-header>		<ul> <li>WORK</li> <li>Explore natural elements needed for composition</li> <li>Discover the changes during decomposition</li> <li>Make a scarecrow, seedbeds, a water reservecycling materials.</li> <li>Built a compost box and a management can</li> <li>Present to the school community a School</li> </ul>		in English language. The natural waste useful in composting. The aterials that can be reused or recycled. Different sizes, colors, shapes and qualities. The different sizes, colors, shapes and qualitis. The different size	
10 RESP	Ustainable Development Goals: Learnin	g Objectives Examples		Information and data literacy	
Recognize and understand	Understands the importance of recycling and both minimizing the use of natural resources and preventing pollution.	Understand the importance of composting and recognize the materials that can be decomposed in our compost box.	Foundation	Watch selected videos giving all the information about composting. ( <u>A compost box for your school garder</u> )	
Argue and negotiate	Make a nice scarecrow, a water reservoir and a watering can from the packaging waste. Make crafts and decorative products as New Year's decoration.	Argue about human impact on environment: decomposition and recycling of manufactured products. Connect climate change and natural disasters.	Intermediate	Evaluate data and organize the material in an attractive way: wordclouds, digital walls, concept maps, mind maps, etc.	
Reflect on one's own actions	Organize a school wide zero waste lunch day.	Write a letter to Earth expressing their feelings about pollution and writing what they most love on our planet.			

Raise awareness in the community by

machine.

selling decorative products and use the

money to buy materials for a composting

Solve problems and develop solutions

Design a quiz about the time needed for the materials to decompose in order to understand the impact on the environment. Advanced

ural materials. The act	ent pollution, to be creative and to thin civity evolves in two lines. On the o	tudents to reduce the amount of their waste, nk like designers. ne hand, it promotes the use of recyclable or use in the garden, decorative or for use at					
home. hapes and qualities.	home. On the other hand, it explores concepts related to chemistry on basic elements such as carbon and nitrogen. We will learn the decomposition of materials and apply this knowledge to make a compost box and design a plan for the entire school to participate in						
litrogen. In technologierature factors. simple of		amification and interactive videos to create "zero food waste lunch day" or the collection					
ool food waste. gn to ask for their d by digital materials such	New Year's with compost box Prep	npost box. Responsi- Waste lunch					
Dig	Comp: Learning Objectives Examples	3					
formation and data literacy	Communication and collaboration in digital environments	Digital contents creation					
atch selected videos giving all the formation about composting. <u>compost box for your school garden</u> )	Interacting in a suite for education platform.	Identify and choose a digital cloud platform to create digital interactive games. Brainstorming about vlogs types and use.					
aluate data and organize the material an attractive way: wordclouds, digital	Use of a suit for education platform to visualize videos and teacher's selected	Create digital games and simple interactive resources for classmates and younger students.					

2 Safety and

Practising critical and safe use of ICT

Upload posters and creations to the

material.

education suit.

Licence creative common materials.

Recognize copyright and creative

with recycled materials.

common materials.

Create vlogs about crafts and decorations

eSchool Gar en	<ul> <li>The importance of water and water-related issues: water needs for animals.</li> <li>The garden insects and parasites: benefits and issues.</li> </ul>
Browset sols Digital walls Text arts Web Web Videos Creative Commonapps apps Suite Scenic Common approximation wordelouids Digital walls Department wordelouids Digital walls Text arts Web Web Videos Creative Commonapps apps Suite Scenic Common approximation Wordelouids Digital walls Department wordelouids Department wordelouids Department wordelouids Department	<ul> <li>Understand standard units of measurement and know the important</li> <li>Discover a local natural ecosystem and observe the location, area, human impact.</li> </ul>
WebOnlimmetere apps Outzes vlogs Interactive Interactive Web Coulds Courses USE Licence Videos World Outds Devine rive Copyright Blog3D printers Vlogs Text arts Vlogs	<ul> <li>Work</li> <li>• Use geometric concepts and practice conversion of measures to de garden.</li> <li>• Search for the evolution of local crops and irrigation systems over the simple problems on water consumption.</li> </ul>
Creative Compton BlogDigital walls Verdeue Browsers vlogs Storage platform3D printers Text art Videos Suite Internet Control C	• Explore issues which directly influence the gardening: soil porousne water chemicals reactions, presence of nitrates, setting up "natural sinfluence of vegetation on erosion, benefits of rainwater irrigation, ad
Liternet Digital walls Copyright apps Immersive	• Design and build a school garden: a sustainable, protected, and col space.
Interactive contents and CAD Calborative tools to express simple ideas Collaborative tools to express simple ideas Videos Collaborative tools to express simple ideas Blog Could common function interactive contents interactive Licence Blog Browsers Videos Response tools uite Interactive contents Company interactive contents Quizzes Wordclouds Online meeting Wordclouds Company Response tools Wordclouds Online meeting Wordclouds Company Company interactive contents Online meeting	<ul> <li>Present to the school community a Saving Water Campaign to ask to and to make them aware of individual actions in school and at home materials such as podcasts and digital infographics with qr-code link</li> <li>Manage a photo collaboration digital project supported by eTwinning</li> </ul>
Sustainable Development Goals: Lea	arning Objectives Examples

	6 CLEAN WATER AND SANITATION	Responsible use of water	Endangered species		Infor
Recognize and understand		Identify the cultural wealth of the region: plants, animals, soil and water. Look for legend, myths and local music, etc. with water references.	Identify local animal species that are endangered. Look at the factors that threaten them and understand changes to reduce the vulnerability of individuals.	Foundation	With ti super land u the ch local s officia
Argue and negotiate		Ask questions related to significant problems of the environment using information searched and argue about solutions proposed by experts.	Argue about ethical principles about the influence of humans on the environment and ecosystems. Catch images about plastic impacts on marine species.	Intermediate	Use e conce Use g garde conve
Reflect on one's own actions		Calculate each family's water footprint and compare data with classmates.	Explore the benefits of using less plastic water bottles and explore possible solutions of how to lower the use of them in school and at home.		Share follow with a
Solve problems and develop solutions		Propose practical solutions for lowering the household's water footprint, such as avoiding flushing food leftovers and instead composting them.	Design a plan to install indoor drinking fountains with a campaign to aware school community of using and care them .	Advanced	

or humans, plants and ig l

ance of their use. a, biodiversity, and

design a scale space

time and practice

sness, soil and water ph al soil filters" of water, acid rain impact, etc.

collaboratively managed

k for their collaboration ne (supported by digital nk, etc.) ning EU platform. This activity consists of creating a two-dimensional and/or three-dimensional design project, with the intention of creating a vegetable garden and garden in a physical space existing in the outer space of a school.

Through mathematics we will think like architects of our garden. Water is the common thread of the proposal. We must be responsible consumers both individually and at school and in the garden.

**¬** Space and measurements are essential elements of our activities.

We practice mathematical concepts with digital 3D CAD design tools and apps for geopositioning and visualization of the earth. If possible, we will introduce 3D printing to make small objects to scale.

We learn science with experiments related to soil and water. We explore our environment to discover the biodiversity in it and become aware of its care.



## **DigComp: Learning Objectives Examples**

### ormation and data literacy

h the help of the Internet, teacher's pervised search for information about d used for agricultural purposes and change over the last 20 years. Find al stocks of natural resources using cial web pages.

e educational apps to practice specific preprint of the specific property.

e geopositioned apps to locate the den and apply space and volumetric oversions.

are personal texts of literary intention owing the conventions of the genre, n a playful and creative intention.

## Communication and collaboration in digital environments

Understand blended learning rules and organization with a digital education suit platform.

Interacting with other schools with eTwinning EU platform or similar.

Prepare and manage a photo collaboration digital project under the title – WATER – OUR HERITAGE. Using the eTwinning EU platform, share the students' made photos of their country's biodiversity.

# Design, organize and manage a school blog to structure digital creations.

Practising critical and safe use of ICT

#### **Digital contents creation**

Identify, catalogue and choose several digital cloud platforms to create educative "capsules" (text and voice).

Understand the basic principles of a 3D cad too and 3D printers.

Create a collection of podcasts, slogans and infographics with qr-code links about water saving water.

Use a 3D CAD tool to design scale shapes and objects.

Recognize copyright and creative common materials.

Design an app with scratch about saving water.

Licence WordClouds Pretere and the representation VideoWidelouds Interactive contents Copyright VideoWidelouds Interactive contents Copyright VideoWidelouds Digital walls Copyright VideoWidelouds Digital walls Digital walls D		<ul> <li>amount of light and water, air quality, the soil.</li> <li>Correlate local environmental factors, so different areas in the World.</li> <li>Identify sensors useful to measure enviro.</li> <li>Establish connections between the real of Establish connections between the real of Propose ICT solution to save water where</li> <li>Propose natural solutions to maintain the Propose natural solutions to maintain the Built a 3D printed pluviometer for our water</li> <li>Create a school blog to divulgate ecolog</li> <li>Promote the use of a social network according and the section.</li> </ul>	<ul> <li>e Correlate local environmental factors, soil and crops. Compare the correlation with different areas in the World.</li> <li>e Identify sensors useful to measure environment and soil parameters.</li> <li>Establish connections between the real environment and a ICT supported monitoring.</li> <li>Propose ICT solution to save water when it rains.</li> <li>Propose natural solutions to maintain the temperature of the soil when it freezes.</li> <li>Make climograms about rainfall in different seasons and calculate water saving.</li> <li>Make sketches as information elements of prototyped industrial objects.</li> <li>Built a 3D printed pluviometer for our wather station.</li> <li>Create a school blog to divulgate ecologic news and results of the school garden.</li> <li>Promote the use of a social network account to fast communicate activities in our school garden.</li> </ul>		<ul> <li>Fechnology is very important at this level. We will learn to observe and use observation to make decisions.</li> <li>We learn about macroeconomics and agriculture with a global vision. We will talk about the changes in agriculture throughout history, for example, in crops, extensions, econom and technological development.</li> <li>Inanimate environmental factors are the common thread of the proposal. So we lear about simple sensors but we also build complex ones like the pluviometer with a 3 printer. We are true engineers. We designed and deployed a weather station, humidit sensors and a scarecrow in our garden? why not!</li> <li>We use technology to be the promoters of environmental awareness at school with a bload a channel on social networks.</li> <li> <ul> <li></li></ul></li></ul>		
8 DECENT WOR	The need of technology in agriculture	aardon		<b>Problem solving</b> <i>Install and configure an IDE software for</i>	Communication and collaboration in digital environments	<b>Digital contents creation</b>	
Recognize and understand	Identify usage of technology in different agricultural aspects. Identify technological roles and new needs.	Identify humidity needs of different crops and understand dry and excess thresholds. Identify manual and ICT supported actions to save water in the garden.	Foundation	Arduino programming. Management of widgets and plugins. Understand a basic routine to use a 3D printer.	Identify methods to search, follow and organize the activity on social networks. Promote the use of a social network to fast communicate our school garden activities.	Recognize a data cloud service for IoT. Understand about basics in data transferring frames and formats. Understand the difference about observation and actuation.	
Argue and negotiate	Argue about EU economic strategies in agriculture. Recognize edge-cutting technologies and the potential use in agriculture.	Define a protocol for opening and closing and ICT supported irrigation system in the school garden. Observe the influence of temperature and solar radiation in seasonal crops. Discuss actions to prevent crop suffering.	Intermediate	Understand basics in electronics and make sketches for cable connection of sensors to Arduino kits (or alternative) . Solve basic problems of energy	Design a wiki about garden concepts and applied technology. Use a Control Version Application.	Program read and write functions to operate with sensors and actuators. Insert cloud database push-pull instruction in a algorithm to read-push and write-pull.	
Reflect on one's own actions	Communicate how one's own consumption affects working conditions in the global economy.	Design a suitable irrigation system for a small urban garden to safe water based on observation both manual and ICT supported.		harvesting to supply power to an Arduino kit (or alternative). Design a pluviometer with a 3D cad tool	Design, organize and manage a school	Use standard format structures such as JSON and XML. Choose materials to fabricate a weather	
Solve problems and develop solutions	Design a local fruits and vegetables consumption calendar. Map and analyse sourcing routes for non- local fruits and vegetables.	Build ICT supported resources collaboratively to monitor our school garden.	Advanced	and fabricate a prototype with a 3D printer. Practising critical and safe use of ICT	blog to divulgate ecologic news and garden results.	station with criteria of economy, security and respect for the environment. Participate in the design of an app to observe the weather station measures.	

