TREE
Micro- and project-based learning programme for Teaching ciRcular Economy and Ecological awareness in VET

Funded by the European Union

R2. A1.2 PRACTICAL ACTIVITY TEMPLATE

Title	○ **Sound (production of various pipes from waste)**
Part of the training course referred to in this lesson	○ Part 1 X **General information about sustainability and CE** Part 2 □ Specific Information about: · Wood sector · Plastic sector · Agrifood sector
Duration	2 hour (theory development and presentation) 1 hour (material collection) 3 hours (production of musical instruments)
Location	X Outside X Inside
Specific location requirement	Do not use flammable materials
Equipment needed	Bottles, balloons, disposable gloves, combs, foil, parchment paper, straws, cardboard tubes, marker tubes, popsicle sticks, gummy bears, cocktail tubes
General Learning objective(s) according to the Bloom Taxonomy	X **Create** □ Produce new or original work (design, assemble, construct, investigate, formulate) □ **Evaluate** □ Justify a stand or decision (appraise, argue, defend, critique, select, support) □ **Analyze** □ Draw connections among ideas (differentiate, organize, relate, compare, distinguish, test, experiment) X **Apply** □ Use information in new situations (execute, implement, solve, use, demonstrate, operate) X **Understand** □ Explain ideas or concepts (classify, discuss, describe, identify, locate, translate) □ **Remember** □ Recall facts and basic concepts (define, duplicate, list, memorize, repeat)
Specific learning objective(s)	To find out the information about the secondary use of different material; To get acquainted with the possibilities of production of various sounds; To give instructions for students how to produce musical instruments from secondary raw materials.
Cognitive, socioemotional and	**SDG 7 Affordable and Clean Energy** Cognitive learning objectives:

behavioural outcomes based on https://www.unesco.de/sites/default/files/2018-08/unesco_education_for_sustainable_development_goals.pdf	• The learner knows about different energy resources – renewable and non-renewable – and their respective advantages and disadvantages including environmental impacts, health issues, usage, safety and energy security, and their share in the energy mix at the local, national and global level. • The learner understands the concept of energy efficiency and sufficiency and knows socio-technical strategies and policies to achieve efficiency and sufficiency. • The learner knows about harmful impacts of unsustainable energy production, understands how renewable energy technologies can help to drive sustainable development and understands the need for new and innovative technologies and especially technology transfer in collaborations between countries. Socio-emotional learning objectives: • The learner is able to communicate the need for energy efficiency and sufficiency. • The learner is able to assess and understand the need for affordable, reliable, sustainable and clean energy of other people/other countries or regions. • The learner is able to cooperate and collaborate with others to transfer and adapt energy technologies to different contexts and to share energy best practices of their communities. Behavioural learning objectives: • The learner is able to apply and evaluate measures in order to increase energy efficiency and sufficiency in their personal sphere and to increase the share of renewable energy in their local energy mix. • The learner is able to apply basic principles to determine the most appropriate renewable energy strategy in a given situation. • The learner is able to analyse the impact and long-term effects of big energy projects (e.g. constructing an off-shore wind park) and energy related policies on different stakeholder groups (including nature). **SDG 12 Responsible Consumption and Production** Cognitive learning objectives: • The learner understands how individual lifestyle choices influence social, economic and environmental development. • The learner understands production and consumption patterns and value chains and the interrelatedness of production and consumption (supply and demand, toxics, CO2 emissions, waste generation, health, working conditions, poverty, etc.). • The learner knows roles, rights and duties of different actors in production and consumption (media and advertising, enterprises, municipalities, legislation, consumers, etc.).

	• The learner knows about strategies and practices of sustainable production and consumption. <u>Socio-emotional learning objectives</u>: • The learner is able to communicate the need for sustainable practices in production and consumption. • The learner is able to encourage others to engage in sustainable practices in consumption and production. • The learner is able to differentiate between needs and wants and to reflect on their own individual consumer behaviour in light of the needs of the natural world, other people, cultures and countries, and future generations. The learner is able to envision sustainable lifestyles. • The learner is able to feel responsible for the environmental and social impacts of their own individual behaviour as a producer or consumer. <u>Behavioural learning objectives:</u> • The learner is able to evaluate, participate in and influence decision-making processes about acquisitions in the public sector. • The learner is able to promote sustainable production patterns. • The learner is able to take on critically on their role as an active stakeholder in the market. • The learner is able to challenge cultural and societal orientations in consumption and production.
Green skill(s) addressed	X Creative problem-solving □ Forward-thinking X Monitoring skills X Analytical skills X Lean production □ Maintenance and repair skills X Pollution prevention X Eco-design □ Management skills □ Impact quantification □ Life-cycle management □ Science skills X Waste management X Environmental auditing □ Ecosystem management □ Other_____

Step by step instructions to implement the activity	Lip accordion. It is made from one or two identical combs and butter paper.A detailed instruction on: https://i.ytimg.com/vi/CkGwVO6KuMI/maxresdefault.jpg Lip accordion (Option 2). It is made from coffee for mixing three sticks, rubber bands cut from a bicycle inner tube, paper tips. Blowing produces a sound. Balloons. Take different types of balloons that differ in size, thickness, shape. Inflate them. Letting the air out of the balloons little by little, pull right up to the neck behind the sides of the balloons and get sounds of different pitches. Bottles. Take two or three glass or plastic bottles. Add an unequal amount of water in them. Depending on the amount of added water, we hear sounds of different frequencies when blowing. The disposable glove. Take a box of chips, put on an air-filled glove, pierce a hole in one finger, insert a cocktail straw and blow. Musical tubes for foil wrapping. We take toilet paper, foil wrapping tubes, pierce holes and make sounds by blowing. Felt-tip pens – scrapers. Take one type of felt-tip pens that are no longer needed, and remove the cores from them. Cut the tubes of the felt-tip pens to different lengths, because the length of the tube depends on the pitch of the sound. Tape around the tubes and have great scraps when blow. Carrel's pipe. Take a sprig of carrel, cut the end diagonally, make two slits, break the peel to make it spring back, and cut off the core. At the top of the core, from the diagonal cut to the first hole, cut a 0.03 mm strip. Then put the peel back on and the pipe is ready. (P.s. the bark of the pipe peels only in early spring.)
Assessment tool / methodology	To assess: ● Descriptions of the instruments chosen by students; ● Originality of the product; ● Variety of emitted sounds.
Additional resources	ЕС: Научный доклад JRC для политиков. Биоэкономика. (2016). Что такое низкоуглеродная экономика замкнутого цикла? https://www.tetrapak.com/ru/sustainability/planet/circular-economy Тсуй-Шан Ту (2018). ФИНСКАЯ ПЯТЕРКА: Решения экономики замкнутого цикла https://www.goodnewsfinland.com/ru/feature/finskaya-pyaterka-resheniya-ekonomiki-zamknutogo-tsikla/
Source	Garsas – Sound. https://wikilt.icu/wiki/Sound RAGICKAITĖ, B. (2022) Plastiko atliekų Žemėje dar niekad nebuvo tiek daug: didinti gamybos apsukas pavyksta, perdirbimo – niekaip. https://www.delfi.lt/tvarilietuva/tvarumo-kursas/plastiko-atlieku-zemeje-dar-niekad-nebuvo-tiek-daug-didinti-gamybos-apsukas-pavyksta-perdirbimo-niekaip.d?id=91342445 Wikihow. (2021). How to Make Musical Instruments with Recycled Materials.

	https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.wikihow.com%2FMake-Musical-Instruments-with-RecycledMaterials&psig=AOvVaw0xGciZ3H8lkqYmgadIDqPo&ust=1664796753588000&source=images&cd=vfe&ved=0CA0QjhxqFwoTCLC_p6y5wfoCFQAAAAAdAAAAABAD