

Tool 5.1

Regenerating soils

CLARITY Competence Area:

Taking collective action for climate resilience, ecosystem regeneration, and societal transformation

GreenComp Competence Area:

Acting for sustainability

Why use this tool?

Healthy ecosystems require healthy soils. The latter contribute to sequestering carbon, and absorbing water which limits risks of flooding and helps refill aquifers. Soil biodiversity also helps sustain the biodiversity of the ecosystems at large, and makes food more nutrient-rich which is essential to human physical and mental health. Besides, connecting with soil through activities like gardening, walking barefoot on natural ground, or simply touching soil can offer a range of positive effects on both physical and mental health. Regenerating the soil is essential to achieve long-term climate resilience.

Activity 5.1.1

Creating a school compost

Overview

Creating a school compost is a hands-on activity that teaches learners the importance of regenerating soil health and reducing waste. Composting turns organic waste into nutrient-rich soil, which can be used to grow healthier plants, reduce the need for chemical fertilizers, and increase the carbon-sequestration potential of school gardens.

Note: Creating food composts requires a permit in Sweden. When in doubt, check the local legislation regarding the possibility of composting food scraps among other organic material.

Curriculum linkage

Science (Biology), Geography and Sustainability & Climate Education.

Competences built

Collaboration, care, interconnectedness and nature connectedness.

Prep Work

Sourcing the materials for composting bins.

Competences/activities to practice first by the teacher:

Basic knowledge of composting principles.



BASIC INFO

Age range:

7+

Duration:

1-2 hours for setup; ongoing maintenance

Group size:

Flexible. Classroom or school-wide participation

Level of difficulty:

Moderate

Materials/space required:

- Compost bin or materials to build one
- Organic waste (fruit peels, vegetable scraps)
- Brown materials (leaves, cardboard),
- Shovel or pitchfork

Location:

Outdoor

Engagement of external stakeholders:

None



Steps in the activity

1. Building the compost bin/structure
2. Depositing waste
3. Maintenance and follow-up
4. Using the compost

Step 1: Building the Compost Bin/structure

1. Create or assemble a compost bin using wood pallets or other materials, ensuring airflow through slats or holes. The bin should have three main sections: one for depositing new waste, one for active composting, and one for finished compost.
2. Explain the importance of layering green and brown materials, keeping the compost moist but not soggy, and turning it regularly to introduce oxygen.

Step 2: Depositing Waste

1. Involve learners in regularly depositing organic waste from school lunches (e.g., fruit peels, vegetable scraps) into the compost. Remind them to add brown materials (like leaves or cardboard) to maintain a good balance.
2. Teach learners which materials can and cannot be composted (e.g., no meat, dairy, or oily foods)..

Step 3: Maintenance and Follow-up

1. Schedule regular turning of the compost with a shovel or pitchfork to aerate it, helping to speed up the decomposition process (weekly or bi-weekly).
2. Monitor the compost for the right conditions: warmth, moisture, and smell (it should not smell foul).
3. Once the compost is dark and crumbly (3-4 months approximately), it's ready to be used in school gardens or flower beds.



Learners sharing and explaining their solarpunk visions with the group.

Photo by Carmelo Zamora, REAL School Budapest.



Step 4: Using the Compost

Use the finished compost to enrich garden soil, fostering healthy plant growth. Discuss how this process contributes to carbon sequestration and soil regeneration, linking it back to climate resilience and sustainable land use.



Students add cardboard and stir the school compost bin.

Photo by Carmelo Zamora, REAL School Budapest.

Dos and don'ts

Do:

- Place the compost bin in a sunny spot to help with decomposition.
- Ensure the area is accessible to learners and staff but away from classrooms to avoid odors or pests.
- Keep the compost bins covered to prevent pests like rodents, insects, or stray animals from getting in.
- Place clear signs by the compost bin showing what can and cannot be composted. You can also label bins for food scraps, brown materials, and non-compostable items



- Optional: Form a team of learners, teachers, and possibly parents or staff who will be responsible for managing the compost system.

Don't

- Don't add meat, dairy, or oily foods, as they attract pests and slow decomposition. Also, don't add plastic, glass or metal as they can contaminate the compost.
- Don't add diseased plants or weeds with seeds, these can survive the composting process and spread diseases or weeds to your garden when the compost is used.

Adaptations:

If learners are very young or have limited mobility, consider a worm bin (vermicomposting) as an alternative. This method is easier to manage and can be done indoors. Here you can check for more information on [Vermicomposting at school](#).

You can link the compost tool with creating and maintaining a permaculture garden (5.1.2).

We invite you to adapt this activity to the specific needs of your learners, including by taking into account their neurodiversity. When adapting tools and activities for neurodivergent learners, please note it is not about treating others how *you* want to be treated, but how *they* want to be treated. Ask, listen, and stay open to different ways of learning and engaging.

References

This activity was designed by REAL School Budapest.

- Trautmann, N. M., & Krasny, M. E. (1998). *Composting in the classroom: Scientific inquiry for high school students*. Kendall/Hunt Publishing Company.
- If you would like a more in-depth guide for a school compost, we recommend you checking [School Composting - Let's Get Growing! Guide from Cornell Waste Management Institute](#)



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