

# What are the fundamental principles of learning and teaching sustainability?

There are several fundamental principles of learning and teaching sustainability which are important for the promotion of sustainable development. Some of these principles are presented on the diagram below.



# Figure 6. Some fundamental principles of learning and teaching sustainability

Source: Own study.

# Holistic and interdisciplinary learning

Sustainability is a complex concept that requires a holistic and interdisciplinary approach to learning. This involves integrating knowledge and skills from multiple disciplines, such as science, social science, economics, and the humanities.

# Experiential learning

Sustainability education should be based on experiential learning, where students learn through direct experience, reflection, and action. This involves engaging students in real-world sustainability challenges and providing opportunities for them to apply their knowledge and skills to address these challenges.

# Systems thinking

Sustainability education should emphasize systems thinking, this involves understanding the interconnectedness of environmental, social, and economic systems. This requires an understanding of how actions in one system can have an impact on other systems.

# Collaborative learning

Sustainability education should emphasize collaborative learning, where students work together to address sustainability challenges. This involves promoting communication, teamwork, and shared decision-making.

# Critical thinking and problem-solving

Sustainability education should promote critical thinking and problem-solving skills, which involves analysing complex issues and developing innovative solutions to addressing sustainability challenges.





## Values and ethics

Sustainability education should promote values and ethics that support sustainable development, such as social justice, equity, and respect for the environment.

## Action and reflection

Sustainability education should emphasize action and reflection, where students take action to address sustainability challenges and then reflect on their experiences in order to identify opportunities for improvement.

By incorporating these fundamental principles of learning and teaching sustainability into education and training programmes, we can prepare individuals to become agents of change who can contribute to sustainable development in their personal and professional lives.

In addition, it is worth noting the tips for shaping sustainability competencies that were proposed by the Beth Conklin, Vanderbilt University Professor of Anthropology. The tips are summarized in the figure below.

#### Beware of Student Overload

Feelings of cognitive or emotional overload can cause students to feel disengaged, disempowered, which can disrupt the learning process.

#### Avoid Doom and Gloom

Teaching students about the many challenges to environmental sustainability will introduce some risk of overload. Teachers can limit this by being sure to discuss environmental success stories.

# Peer Engagement and Support

Engage students in group discussions and projects in which they have the opportunity to engage in dialogue and support one another. Problem-solving, debate, analysis, teamwork, and reflection are absolutely crucial for the development of critical thinking and leadership skills that students need to face complex problems.

#### Student Analysis of Data

Students may learn more about a given environmental problem by wrestling with empirical data for themselves, rather than receiving pre-digested analyses from lectures or secondary sources.

#### Focus on Quality of Life Issues

If students reflect on prior research findings (Consumerism and its Discontents, To Do or to Have? That Is the Question), they will often argue that the happiness and quality of life are not highly correlated with high levels of consumption and resource use, thereby providing the basis for a positive discussion about alternative lifestyles and the social changes associated with them.

#### **Deconstruct Eco-rhetoric**

Spend time investigating the historical origins and often conflicting uses of environmental terminology such as "sustainability," "environmentalism," "stewardship," and even "nature" itself, as well as other examples.

#### **Embrace Interdisciplinarity**

A critical and thorough understanding of issues related to environmental sustainability necessarily involves contributions from a wide variety of disciplines throughout the natural sciences, social sciences, and humanities. This may be daunting for students and educators alike since it often requires us to think outside of our area of intellectual expertise.

# Figure 7. Beth Conklin tips for learning and teaching sustainability

Source: https://cft.vanderbilt.edu/guides-sub-pages/teaching-sustainability/ (20.02.2022).

