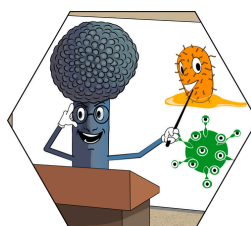


Promoting and Enhancing Scientific Literacy through Service-learning



A quick implementation guide

How to develop a **service-learning** program connecting university students with school pupils



Purpose

This quick guide provides the basic elements for the creation of an educational activity where university students apply their academic knowledge to design and deliver interactive activities for school pupils, fostering knowledge transfer, civic responsibility, and **engagement** with societal issues.



1. Define the Concept and Objectives

What is Service-Learning?

A pedagogical approach combining academic instruction with community service, reflection, and civic engagement. Students:

- Participate in activities meeting community needs.
- Reflect to deepen understanding of course content.
- Develop personal values and civic responsibility.

Program Goals:

For University Students:

- Communicate scientific knowledge clearly to a lay audience.
- Apply theoretical knowledge to create interactive, playful
- activities.

Work collaboratively and evaluate knowledge transfer.

For School Pupils:

- Discover academic topics in an engaging way.
- Connect science to real-world societal issues.

2. Identify a Relevant Theme

- Choose topics with **societal relevance** and strong links to the
- university curriculum (e.g., biodiversity, microbiology, sustainability).
- Discuss with students and teachers to refine the theme based on
- pupils' level and interests.



3. Structure the Program

Timeline Example (For schools):

- October: Define the school area participating in the program.
- November: Inform schools about the possibility to participate (provide information for on-line subscription to the activities).
- December: Confirm interest and gather information from the classes (i.e., addresses and relevant contact information, school grade, number of pupils, schedule for the activities)
- January: Presentation of the program to participating teacher.
- March: Matching with students university students.
- End of May: Feedback on the activities.

Timeline Example (For University students):

- February: Topic selection and initial discussions.
- March–April: Preparation of activities and concept presentation to peers and teachers.
- April–May: Service-learning activities with pupils (in-class, at university, or outdoors).
- End of May: Final presentations and debriefing session.

Workload for Students:

- Topic selection: ~4 hours
- Peer/teacher presentation: ~4 hours
- Material preparation: ~8 hours
- Classroom activities: ~10 hours
- Final presentation: ~2 hours



4. Roles and Responsibilities

University Trainers:

- Guide students in didactics and activity design.
- Ensure alignment with learning objectives.

University Students:

- Prepare the activities and accompanying material.
- Guide the activities with the pupils.

School Teachers:

- Prepare pupils for the activities.
- Facilitate classroom integration.

5. Activity Design Principles

- Make activities **interactive and playful** (games, experiments, storytelling).
- Adapt complexity to pupils' age and prior knowledge.
- Highlight **positive and negative** aspects of the topic and its societal impact.

6. Reflection and Evaluation

- Include structured reflection for students:
 - What did they learn about teaching and communication?
 - How did the activity impact their understanding of the discipline?
- Collect feedback from pupils and teachers.
- Evaluate knowledge transfer and teamwork.



7. Sustainability and Challenges

Challenges:

- Managing expectations between university and schools.
- Time investment for students and teachers.
- Securing long-term funding.

Solutions:

- Start with small pilot projects.
- Seek institutional support and external funding.
- Build partnerships with local schools and educational networks.

Checklist for Implementation

- ✓ Define objectives and theme
- ✓ Recruit school partners early
- ✓ Schedule activities and allocate time
- ✓ Train students in science communication
- ✓ Prepare materials and logistics
- ✓ Conduct activities and reflection sessions
- ✓ Gather feedback and evaluate outcomes



You can find more information on our website.

