

Effects of the excess of nitrates in vegetables and drinking water on consumers health

a Service - Learning Project

Jaume Casas Ortega, June 2023



THEORETICAL CONTEXT

- ↑ use manure in agriculture \cong ↑ concentration of nitrates = contamination problems.^[1]
- Some vegetables accumulate nitrates^[2] in the leaves.^[3]
- Ingestion of vegetables / water with ↑ % of nitrates = problems on consumers health.^[4]



CONTEXT
Use of manure to fertilize a vegetable patch

SOCIAL CONTEXT

- High cultural diversity
 - High-complexity centre
 - Low academic performance
- ↗ ? % of some cases of school failure
↘ ↓ % of students continuing studying

MAIN OBJECTIVES

- Raise awareness about the risks of nitrates contamination.
 - Motivate students to
- ↗ ↑ interest in science
↘ continue studying after ESO

SERVICE DESCRIPTION

WORK GROUP 2ⁿ ESO, 11-12 students

SCHEDULE

- Thought in science class 4x of 1 hr. in 1 week

PREPARATION

2x Observation sessions
- Brainstorming

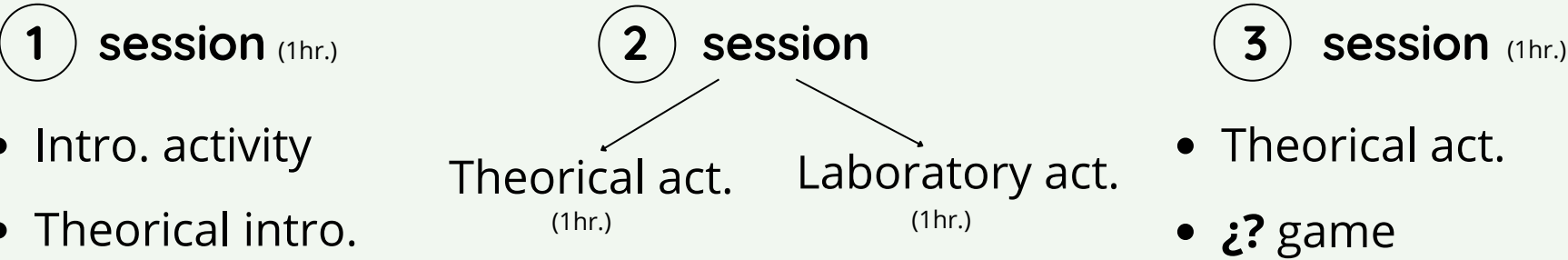


Fig. 1. Laboratory activity



Fig. 2. Vegetables samples of Lab. act.

CONCLUSIONS

- Simplify + repeat concepts = + results
 - Importance of the teachers social work
 - Personal + Academic enrichment
- } Adapting to the target
= Limitations