

## Lesson Plan The Olive tree

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| <b>School:</b> IC "Libero Andreotti"  | <b>Teacher:</b> Stefania Porciani  |
| <b>Title :</b> Exploring the Olive Tree and its Life Cycle  | <b>Time :</b> 2-3 class sessions   |
| <b>Subject :</b> Italian , ICT, Science, Art  |  |
| <b>Aim:</b> <ul style="list-style-type: none"> <li>• To introduce students to the life cycle and characteristics of the olive tree.</li> <li>• To develop curiosity, observation skills, and a scientific approach to exploring nature.</li> <li>• To understand the natural cycles involved in olive oil production.</li> <li>• To identify connections and relationships in the natural world.</li> </ul> |  |
| <b>Key CS elements:</b> decomposition, pattern recognition, abstraction, practicing algorithms  |  |
| <b>Age group :</b> Primary school 8 - 9 years old   |  |
| <b>Learning situations:</b> class, art room, computer lab, school garden and olive farm.  | <b>Activity type :</b> individual work, group work; cooperative learning |
| <b>Resources :</b> <ul style="list-style-type: none"> <li>• Olive tree or pictures of olive trees</li> <li>• Olive oil samples</li> <li>• Observation nursery behind the school</li> <li>• Classroom materials (whiteboard, markers, paper)</li> </ul>  |  |
| <b>Learning development:</b>  |  |
| <b>1. Decomposition</b><br><b>Activity 1: Introduction to Olive Trees (30 minutes)</b> <ul style="list-style-type: none"> <li>• Start with a brief discussion about olive trees and their significance.</li> <li>• Decompose the topic into smaller segments: life cycle, characteristics, olive oil production, and natural cycles.</li> </ul>   |  |

## 2. Pattern Recognition

### Activity 2: Observing Olive Trees (45 minutes)

- Visit the observation nursery behind the school to observe olive trees up close.
- Discuss patterns and characteristics observed in olive trees, such as leaves, fruit, and growth stages.
- Introduce the concept of a life cycle by showing pictures or diagrams of an olive tree's growth stages.

## 3. Abstraction

### Activity 3: Exploring Olive Oil (45 minutes)

- Abstract the key principles of olive oil production, including the transformation of olives into oil.
- Discuss the importance of olive oil in nutrition and daily life.
- Show samples of olive oil and discuss its nutritional qualities.

## 4. Algorithm Design

### Activity 4: Nature Walk and Discussion (60 minutes)

**Step 1:** Take a nature walk to observe natural cycles, such as seasonal changes, plant growth, water cycles, and animal behaviors.

**Step 2:** Guide students to make observations and assumptions about the environment:

- How do olive trees grow in this area?
- What environmental factors (sunlight, rain, soil) affect their growth?
- How do natural cycles (seasons, weather) relate to olive trees?

**Step 3:** Discuss their findings and help students create a step-by-step "algorithm" that explains the growth and production of olives:

- **Input:** Plant an olive tree in suitable soil and climate.
- **Process:** The tree grows, flowers, and produces olives based on environmental conditions.
- **Output:** Harvest olives and press them to produce oil.
- **Feedback:** Provide nutrients and water as needed to maintain the tree for future growth.

**Step 4:** Encourage students to ask further questions, test their assumptions, and refine their algorithm based on their new understanding of how natural cycles impact olive tree growth and olive oil production.

**Assessment:**

- Assessment will focus on students' engagement in observation and discussion during the nature walk.
- Students will create simple diagrams or drawings showing the olive tree's life cycle.
- Classroom discussions and group activities will be assessed based on participation and understanding of the natural cycles.

**Expected results:**

- **Students will have a basic understanding of the olive tree's life cycle, characteristics, and nutritional qualities of olive oil.**
- **Enhanced observation skills, curiosity, and scientific thinking.**
- **Increased awareness of natural cycles in the environment and the interconnectedness of living things.**

**Notes:**

The project was born from having discovered in the immediate vicinity of the school, the farm "Giusti Nicola", specialized in the cultivation of olive trees. This plant, a beautiful and ancient tree, has become the main protagonist of the economy of our territory, both for the production of new plants in the many nurseries, both for the production of excellent oil. The curiosity of children, the desire to explore and know, pushed me to make the territory a "great open book"