

BEYOND SCHOOL PROJECT

LESSON ACTIVITY PLAN DRAFT

ACTIVITY	Microorganisms in our food: Visit to Prolacto
The aim of the activity	Learn about the microorganisms needed for food production and visit to Prolacto.
Places where the event can be held	Science centers, schools, dairy and food production companies
Age group for the activity	10 – 15 years

A. BEFORE OUT-OF-SCHOOL LEARNING ACTIVITY	
Educational tools	Internet, computer
Method, technique and strategies	Discussion with students, research work
PRACTICE	
Introduction of the activity	Explanation of the importance of microorganisms for food production.
Development of the activity	Research into which microorganisms are most used in food production (e.g. <i>Lactobacillus bulgaricus</i> and <i>Streptococcus thermophilus</i>).
Evaluation of the activity	Creation of a poster about the microorganisms used in food production and their characteristics.

B. IN THE OUT-OF-SCHOOL LEARNING ENVIRONMENT	
Educational tools	
Method, technique and strategies	Guided visit
PRACTICE	
Introduction of the activity	
Development of the activity	Visit to Prolacto, an Azorean company producing dairy products and other food products.
Evaluation of the activity	

C. AFTER OUT OF SCHOOL LEARNING ACTIVITY	
Educational tools	Materials needed to carry out the protocol; internet, computer.
Method, technique and strategies	Practical activity and discussion.
PRACTICE	
Introduction of the activity	Reading and explanation of the procedure of the practical activity.
Development of the activity	Carrying out a homemade yogurt production protocol (Appendix 1).
Evaluation of the activity	Discussion and research into foods whose production depends on the action of microorganisms: yogurt, vinegar, cheese, wine.

APPENDIX-1:

Material:

- 1 Yogurt maker
- 1 Liter of cow's milk
- 1 Small spoon
- 1 Natural yogurt
- 1 Spoon of sugar

Procedure:

- Fill the yogurt maker jar halfway with milk (you can use a small glass jar with a lid);
- Add two teaspoons of yogurt to the milk;
- Stir everything slowly to make sure the yogurt mixes in milk;
- Add a teaspoon of sugar to the bottle and stir again;
- Fill with more milk until it reaches the shoulder of the bottle;
- Close the jar and place it in the yogurt maker (if you don't have a yogurt maker you can place the bottle, properly covered, in a water bath with warm water, at 37°C, for a maximum of 6 hours);
- Cover the yogurt maker and connect it to the electricity;



- Check the yogurt after 6 hours or, if made at night, the next day;
- Add fruit or cereal and you're ready to try!

