

**Descriptive Report of the Activity  
called**

**“Ecologic School Garden”**

**of**

**San Pablo School**

**Carried out by the students**

**Of 6th Primary**

**Justification**

Nowadays we live in a developed industrial society that is evolving towards a society of services. Most of the population lives in the cities, so we can say that this society is predominantly urban.

This development has led to the disappearance of orchards and vegetable gardens, to the ignorance of the processes of production by the consumer, to appreciate an agricultural product not as food but for its price, size, colour, etc, in short to the disappearance of the agricultural culture.

The ecologic agriculture consists in the joining of the knowledge of the traditional agriculture together with the modern biological and technological researches.

This is the pattern that we are going to use not only for reasons of health or respect to the environment, but because above all we have to talk about culture, that culture which is disappearing at expenses of a not well understood progress and which is turning towards a sustainable progress.

### **Why a school garden?**

The aim of this ecologic school vegetable garden is that it should be the trigger or starting point of a real environmental education at the school, understanding as environmental education the interdisciplinary process that it must prepare to understand the interrelation of the human beings among them and with the nature, all together with a global educational project.

### **Why an ecologic school garden?**

Because we have to be the most respectful as possible with the environment to be consistent with this attempt of educating in an environmental way. Nowadays, the ecological agriculture is the only type of agriculture which respects the environment.

There are other reasons which also justify the obligatoriness of confronting the ecological approach as the inadmissibility of using chemical products in a school, with the consequent dangers, or the renunciation of the priority in the research of the production of the harvest in a plot of intensive agriculture in favour of the variety and exemplary and didactical utilization of the crops.

### **Characteristics of an ecologic garden**

I will preserve the health of the school garden using natural methods of control consisting in understanding that the plagues and diseases are only that when the plant which has any plague or any disease can't go on with its development due to the overpopulation of the agent of this plague.

In order to succeed in this aim we have to respect four basic principles:

#### **1- We have to make shift of crops.**

In this way all the nutrients of the land are exploited and the development of the plagues is reduced.

#### **2- Propitious and adverse associations.**

The plants present an interaction which becomes in a bigger development if they don't have as neighbours particular plants, for reasons of emissions of smells, moving the plagues away...

#### **3- Biological method of control of plagues.**

In a school garden we must never resort to the utilization of insecticide products not only for environmental reasons, but also because the use of these products by students can be dangerous.

That's why we need to have other choices. Sometimes examining the crops regularly, trying to discover the attacks and taking any quick action before the disease spreads, it's enough.

Other times the most biologic method consists in taking the insect away or destroying the first generations.

#### **4- Fertilizations.**

Fertility and biologic activity of the land must be kept by the incorporation of organic fertilizers of animal origin, green fertilizers which come from the crops of leguminous plants and the so called compost, resulting product of the decomposition of the organic matter of weeds, leaves, branches, left over food...

## **Aims or objectives**

As **General Aims or Objectives** I have chosen 5 of the many that the Conference of Tibilisi (organized by the UNESCO in 1977) proposed for Environmental Education, because despite the time passed from that they are still valid:

1. *Awareness*. Help the students acquire sensitivity for environmental problems.
2. *Information*. Encourage the knowledge of the environment, its elements, the interrelations that happen to be in it and also its problems.
3. *Behaviours*. Encourage the acquisition of values that should motivate us to feel interest and worry about the environment.
4. *Aptitude and skill*. Train the students so they can take part in the research of solutions to the environmental problems detected.
5. *Participation*. Provide the students the possibility of participating actively in the proposed solutions.

As **Specific Aims or Objectives** I have chosen 5 that link the activities of the school garden with the academic objectives of the different subjects and the school itself:

1. Encourage the Environmental Education in the School.
2. Achieve a better relationship with the environment from a change in the attitudes and values of the students.
3. Take the first steps in agricultural labours in the school garden.
4. Know the techniques of crops of the ecologic agriculture.
5. Establish and appreciate the connections between the environment and the human activities.

Finally, I propose 5 **Educational or Didactic Objectives** characteristic of the practical work that we'll do in the school garden.

1. Direct contact and manipulation of the elements such as the earth, water, fertilizers, seeds...which provides the students an enriching experience.

2. Understanding of some of the most important biological cycles, the cycle of the plants, of the matter and energy, the seasons...

3. Production of practical works guided to give information of how the school garden works and the needs and cares of every plant.

4. Knowledge and use of the tools and agricultural implements for the work in the school garden.

5. Differentiation between the techniques of intensive agriculture and traditional agriculture (biological)

### *Characteristics of our ecologic school garden*

#### *Premises*

- \*Small dimensions.
- \*Sunny area.
- \*Easy availability to water.
- \*Impossibility of maintenance during the summer.
- \*Not very good levelling.
- \*Need of fertile land

#### *Criteria for the choice of crops.*

- \*Well known and close to students vegetables.
- \*Adaptable cycles to school calendar.
- \*Possibilities of gradual sowings in order to get at the same time the same species in different states of vegetative development
- \*They must tolerate drip irrigation.
- \*They must be usable (leaves, roots, bulbs and fruits)
- \*Possibility of easy workshops.

\*Importance of the connection between different species, from a biological viewpoint in order to prevent and control plagues.

*Chosen species.*

Potatoes, onions, lettuces, broad beans, aubergines, carrots, tomatoes, Swiss chards, peppers, strawberries, garlic, green beans, pumpkins, courgettes, aromatic plants (rosemary, sage, mint, lavender), marigolds.

### **The activities in an ecologic school garden**

For the achievement of this objective we need a series of activities that they should permit us the experimentation, and that they will lead us to personal experiences that modify our knowledge and attitudes.

We shouldn't present this school garden as something that one day appears in the schoolyard and the students don't think about it as something personal, we should present it as something that they will be involved with since its very beginning. That's why it's worth carrying out activities to encourage the students previously and with which we will make them love to start a school garden in common and that everybody would like to take part in it. The **motivating activities** will lead to activities of the school garden.

### **Specific activities for the school garden.**

#### **Agriculture works.**

- Preparation of the land: tossing, hoeing, smoothing down the land, demarcation of the furrows.
- Incorporation of fertilizers, production of compost.
- Sowing of seeds in the seedbeds, ridges...

- Transplant of plantlets that have taken root in the seedbeds.
- Irrigation: flooding, drip irrigation.
- Maintenance: hoeing, raking, earthing up the land.
- Ecologic treatment of plagues.
- Harvest.

### Field study

- The seeds, the types.
- The germination. Favourable conditions.
- The plants feed themselves and breathe.
- Cycles of the crops.
- Physical-chemical conditions of the land.
- The importance of natural fertilizers.
- Different techniques of sowing, irrigation and maintenance.
- The seasons and the crops in the different seasons.
- The water in the life of the plants.
- Study of local climate.
- Calendar of lunar sowings.
- Benefits of medicinal plants.

### **Proposed activities by the school garden to encourage the practice:**

#### **Spanish (mother tongue)**

- ◆ Riddles, proverbs, popular sayings and expressions.
- ◆ Index cards with the school garden vocabulary.
- ◆ Compositions, descriptions.

#### **Arts and crafts**

- ◆ Collage with leaves, seeds, flowers, stones
- ◆ Produce label cards with name and picture.
- ◆ Utilization of natural elements in works: pumpkins, potatoes

- ♦ Draw and take pictures of the school garden in order to see its change.

## **Mathematics**

- ♦ Carry out measurements of the school garden and plots.
- ♦ Find the areas of the zones agriculturally useful.
- ♦ Schedule of the name of vegetables, the weight, dimensions.
- ♦ Measurement of the growth of the plants and their sections. Analysis.

## **Geography and environmental education**

- ❖ Explanation of the influence of the sun in the plants (photosynthesis)
- ❖ Description of the connection between the living beings, the light, the water and the temperature.
- ❖ Explore the most important autochthonous plants of the community.
- ❖ Establish the connections between the different types of vegetation and the place to where they belong.
- ❖ Assessment of the importance of the conservation of the environment.
- ❖ Identification of the different atmospheric phenomena (rain, cold, heat, wind...) and their effects.
- ❖ Acknowledgement of the unpredictable consequences that the modification of any element (water, wind, land) of the natural environment could cause.
- ❖ Description of the existing connection among the essential elements of the physical environment (water, wind, earth) and the life of the people.
- ❖ Identify the repercussions throughout the health of some habits of diet and hygiene.
- ❖ Observations of the climate, rain, temperature.



- ❖ Index cards of crops. Index cards of seeds.
- ❖ Description of the plants.
- ❖ Study of the roots and study of the leaves. Example.
- ❖ Observation of the different animals in the school garden: ants, earthworms, greenflies, plant lice...
- ❖ Observation of the germination of seeds. Favourable agents.
- ❖ Carry out sketches and maps of the plots of land.
- ❖ Find crops in the sketches.
- ❖ Analysis of the data collected in a systematic way in the school garden.
- ❖ Production of a herbarium of spontaneous species.