

Integration of Disciplines

This project allows working on curricular skills of:

Experimental Science			
Social Science			
Technology & Engineering			
Arts			
Mathematics			

To carry out the project, the work in each discipline is:

	CE	CS	TE	A	M
Not mentioned or marginally worked (Level 0)					
Can be approached independently (Level 1)					
You need to work on it to carry it out (Level 2)					
It is necessary to establish connections with other subjects (Level 3)					
The limits of this subject vanish and it merges with others (Level 4)					

Yellow level

It allows to work curricular competencies of the course to which it is oriented. The teachers will be able, at the end of the project, to give matter of their subject as passed and generate a score of the degree of acquisition of the standards in their subject for each of the students.

The points of view and ways of working of the different disciplines are integrated. The process requires the interrelation of concepts and could not be achieved if these relationships were not established. There is a clear dependence between them and requires the coordination of the teaching staff.

Educational Process

The problem is realistic (from the children's perspective)

Students explore different solutions using Project-based learning

The learning process involves students actively

Children discover new knowledge by themselves

The motivational context is enough to get children's attention

Students gain knowledge and skills solving a real problem

The project allows students to cover plenty of the mandatory curriculum

Yellow level

The starting situation makes sense and is credible to the students.

The project is open to various approaches and many solutions are valid.

In the sessions, the verbs in which the children are active (eg search, read, listen, investigate, summarize, discuss) predominate over the passive verbs (eg look, see)


Overt explanations are balanced with guided discovery. The content is adapted to allow autonomous learning.


Children may create the need to solve the proposed problem on their own.

There is a balance between content (what they learn) and competence (what they do with what they learn). The project does not neglect either of the two aspects.

The project is not an additional work to the curriculum, but rather it replaces or complements the way in which it is taught.


Integration of Children

Children collaborate with others (collaborative-learning) 

Children need one-another to carry out the activities 

The grouping recommended in the guide is adequate for the tasks 

The project can be adapted to the Country, school, group, each child 

Students reflect on their team's work and on their own performance 

Yellow level


Although there are moments of individual work, the project encourages dialogue, group reflection and peer learning.


A true collaboration is generated. Interdependent tasks are reflected in the project.


The project includes realistic indications on the composition of the groups as homogeneous / heterogeneous or the abilities and aptitudes of the members.


Geographical, cultural and individual variables can be changed to facilitate adaptation to the specific context. Moments of metacognitive reflection on the individual and group learning process itself have been planned.

Body & Mind integration

There is a good hands-on brains-on balance 

Children discover new knowledge by experimenting 

Hands-on work leads critical thinking and on-topic discussions 

Children will be able to apply their learning in other settings 

Yellow level


There are activities aimed at the mobilization of deep thought, the elaboration of hypotheses and the complementary reflection of "learning-by-doing".


Although there are expository moments of complex concepts, the work allows the learning of new concepts and not the mere practice of what is exposed.

Manipulative activities are designed to provoke reflection and are difficult to carry out if you are not actively thinking about the project.


The knowledge acquired is not restricted to the specific context of the project and the generalization of ideas is encouraged.

Process Orchestration

Children interact with their teacher 

The teacher mainly acts as a coach 

The Useful Question's section provoke deepful thinking 

The teacher has a clear view of his/her goals 

The activity promotes self-management 

Teachers can handle the time requirements in the schedule 

The suggested formative assessment encourages the learning process 

Yellow level

Classroom dynamics are centered on the student's work groups and not on the teacher, with whom they interact freely.

The teacher is not located from the beginning at the destination, but accompanies the children troughout the process and helps them to travel the indicated path.

The project makes available to the teacher a large list of open questions that encourage deep thinking and the development of hypotheses.

At all times the teacher knows where learning is headed and the reasons why students work on each proposed activity. Everything has a purpose.

The project generates classroom moments in which the teacher is practically unnecessary since the students know where they are and where they are going.

The project can be carried out in the planned sessions. Time planning is clear and realistic.

There are numerous times when students can retrace their unsuccessful points to redo their work and use teacher feedback.

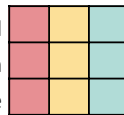
Levels of Knowledge & Knowledge Transfer

Children will be able to apply the CT skills they learn:

- Only if CT is presented without context (e.g. look for this pattern)
- Only in the same situation (e.g. given some data, look again for a pattern)
- If we make a reference to the activity (e.g. given some similar data)
- In general contexts (e.g. instinctively use the "look for patterns" strategy)
- In an abstract setting (e.g. Deeply understand Pattern Recognition)

Adaptation to different contexts/settings and Countries

- The project can be adapted to the Country, school, group, each child
- The project can be aligned with your national curriculum
- The project gets the most out of the ICT resources you have available



Computational Thinking Skills developed

Data collection	Red	Yellow	Teal
Data analysis	Red	Yellow	Teal
Data representation	Red	Yellow	Teal
Problem decomposition	Red	Yellow	Teal
Pattern Recognition	Red	Yellow	Teal
Debugging	Red	Yellow	Teal
Abstraction	Red	Yellow	Teal
Algorithms and procedures	Red	Yellow	Teal
Automation	Red	Yellow	Teal
Simulation	Red	Yellow	Teal
Parallelization	Red	Yellow	Teal
Generalization	Red	Yellow	Teal