

## PROJECTX Nº 011

# “SOLDER ELECTRONIC COMPONENTS”

## PRESENTATION



**Promotingschool:**

EscolaProfissionalValdoRio  
Oeiras. Portugal



## A. GENERAL DESCRIPTION

### Title of the ProjectX

**SOLDER ELECTRONIC COMPONENTS**

### Core area

GENERAL / KNOWLEDGE      **ASSEMBLY AND REPAIR OF ELECTRONIC CIRCUITS**

PARTICULAR / ACTIVITY:      **SOLDERING BASICS**

### Promoting school

VALDORIO

### Schools participants in the revision of the ProjectX

LYSEE ISAAC NEWTON  
UNIVERSITY OF PITESTI  
MERAM VOCACIONAL SCHOOL

### Reference to ECVET Credit System and EQF / NQF

ECVET	EQF	REFERENCE TO NATIONAL QUALIFICATIONS (NQF)						
		Spain	Finland	Romania	Portugal	UK	Turkey	France
2	4	4	4	3	4	3	4	4

### Learning Outcomes achieved (to be developed in the future related with ECVET credit system)

1. Demonstrate safety in welding process of electronic components
2. Learn to identify the necessary material and conditions to perform welding work of electronic components
3. Identify malfunctions arising from the welding process

### Time that is necessary to do the ProjectX (in hours)

Theory:      5 hours  
Practice:      20 hours

### Link to real companies in your region (it is just informative)

1. NAME: CLARITY LDA      WORKPLACE: CELL PHONE REPAIR
2. NAME: TELFAX LDA      WORKPLACE: REPAIR OF SECURITY SYSTEMS AND TELEPHONES



## B. THEORY

### Objectives of the theoretical Knowledge

1. Frameworks about the welding process
2. Handling electronic assemblies
3. Welding techniques
4. Repair electronic circuits

### List of activities

1. Theoretical assessment questionnaire
2. Video of demonstration of typical malfunctions
3. Demonstration of work and rework

## C. PRACTICE

### Brief description of the Practice

Unsolder Components  
Assembly of electronic components on a circuit board  
Weld flat cable

### Steps or activities to be performed by the student

- |         |   |
|---------|---|
| First:  | Learn how to unsolder a component                     |
| Second: | Identify the various types of soldering.              |
| Third:  | Perform Assembly of electronic circuit                |
| Fourth: | Repair an electronic circuit using proper temperature |



#### D. DETAILED DESCRIPTION OF LEARNING OUTCOMES.

<b>Learning Outcome:</b>	<b>Demonstrate safety in welding process of electronic components</b>
<b>Knowledge</b>	
-	Learning to weld safely
<b>Skills</b>	
-	The student must ensure their safety at the time of welding
<b>Competences</b>	
-	The student to ensure your safety in the use of welding equipment

<b>Learning Outcome:</b>	<b>Learn to identify the necessary material and conditions to perform welding work of electronic components</b>
<b>Knowledge</b>	
-	The student should know how to identify the electronic equipment to properly use the type of welding
<b>Skills</b>	
-	The student must secure the necessary equipment to weld components properly
<b>Competences</b>	
-	Having the ability to identify and weld components

<b>Learning Outcome:</b>	<b>Identify malfunctions arising from the welding process</b>
<b>Knowledge</b>	
-	The student must be able to identify errors welding
<b>Skills</b>	
-	Detect errors in a poor weld
<b>Competences</b>	
-	Identify and repair small errors on welding

