TEMPLATE

REPLICATE IBL IN YOUR CLASSROOM - GUIDELINES & TEMPLATE

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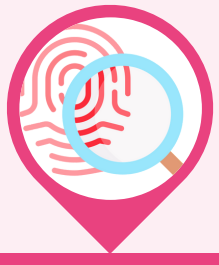
In order to create your course resources using the training programme of Let's STEAM, the proposed inquiry approach has been translated into an open and directly usable template, divided into 3 parts i.e. how to collect data, how to show these data and how to analyse them to learn from the experimentation. The following template gives you hints and information on how to use it to produce your own lesson plans.



Step 1 - Present the project as a whole

We invite you through this template to get creative while getting technical support in designing a unique and inclusive project! You are free to develop your own solution or to be inspired by solutions proposals. In the end, depending on the path you choose, your solution will be unique!

Describe your project

Name your project: _____

Short introduction of what your project is about, the problem tackled behind, the pedagogical objectives

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Reflect on equity and inclusiveness

ASPIRATIONS & MOTIVATIONS

How do you feel when doing STEM? What motivates you in STEM? What motivates your students? Are all your students motivated by the same? What would they like to do?

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ISSUES AND BARRIERS

What worries your students? What frustrations do they have? Are there any differences that make them be at a disadvantage to other students? And regarding robotic and digital in STEM activities?

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KEYWORDS

Indicate 3 or more keywords that describe the reality of your students regarding STEM/STEAM activities

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- Review the table of potential use cases available at the end of this book for inspirations
- Review the **"Resources on inclusive education - Activity sheet 1 - R2AS1"** for reflecting on inclusiveness.
- Use the **Canva 1 - Emphatise (page 102)** for performing the activity.

Step 2 - Collect data thanks to the board and its embedded sensors - 1/2

At this stage, you are required to find a programming solution to collect your data, identify which sensors to be used and how to program them on MakeCode for the platform to communicate with your board.

ORIENTATION

Define what is the problem to be solved, what are data to be collected, what are the learning objectives behind the programming topic?

CONCEPTUALISATION

Formulate a hypothesis to answer the given problem regarding data collection

Step 2 - Collect data thanks to the board and its embedded sensors - 2/2

INVESTIGATION

Describe the steps you need to collect the data that will be necessary for your project

For helping you in your developments and choices, check the resources available in **PART II - PROGRAMMING EASILY THANKS TO LET'S STEAM ACTIVITY SHEETS.**

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Provide screenshots of the MakeCode platform and of your board

DEBRIEF

Identify the knowledge mobilized during this phase, think about your classroom and identify possible learning, add references issues that may come up

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INCLUSIVENESS

At this stage, you start to have a clear idea of how the project and the activity will be performed! But have you thought of the inclusiveness and equity requirements while designing it!? Let's check this out by answering the **Canva #2 - Checklist available page 103**.

Step 3 - Display the data to get the needed information - 1/2

At this stage, you are required to find a programming solution to display your data, enabling, now you have asked a sensor to obtain information, to make this information known to the user.

ORIENTATION

Define what is the challenge in the display of the data you need? For you? For your classroom? For the user?

CONCEPTUALISATION

Formulate a hypothesis to answer the given problem regarding data display

Step 3 - Display the data to get the needed information - 2/2

INVESTIGATION

Describe the steps you need to display and show the data that will be necessary for your project

For helping you in your developments and choices, check the resources available in **PART II - PROGRAMMING EASILY THANKS TO LET'S STEAM ACTIVITY SHEETS.**

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Provide screenshots of the MakeCode platform and of your board

DEBRIEF

Identify the knowledge mobilized during this phase, think about your classroom and identify possible learning, add references issues that may come up

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INCLUSIVENESS

Getting a bit further in your project, let's perform an addition inclusiveness check! Data collection is a crucial step in terms of potential privacy and sharing issues! Reflect on this and on the whole process by answering the **Canva #2 - Checklist available page 103**.

Step 4 - Analyse the data and learn from them - 1/2

Now we are able to display data instantly, we need to analyze them to perform monitoring of our information (for instance, monitoring of temperature, of alerts, motion, frequency ...). This stage is made for enabling this analysis on the editor.

ORIENTATION

Define what is the challenge in this step according to your project. What is your challenge in analysing and extracting the relevant information applied to your context?

CONCEPTUALISATION

Formulate a hypothesis to answer the given problem regarding data analysis

INVESTIGATION

Describe the steps you need to analyse and monitor the data that will be necessary for your project

For helping you in your developments and choices, check the resources available in **PART II - PROGRAMMING EASILY THANKS TO LET'S STEAM ACTIVITY SHEETS.**

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Provide screen shots of the MakeCode platform and of your board

DEBRIEF

Identify the knowledge mobilized during this phase, think about your classroom and identify possible learning, add references issues that may come up

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INCLUSIVENESS

At this point, it is relevant to reflect about the whole learning process proposed by your activity. You can go through the **Canva #2 - Checklist available page 103** one last time. When you have implemented the whole activity in your classroom, we encourage you to also fill in the **Table of Final Analysis available in this manual on page 107.**