

COMPUSEL



COMPUSEL

## Computational Thinking in Enhancing Primary Students' Social-Emotional Learning Skills

Odisee  
UNIVERSITY OF APPLIED SCIENCES

Opgroeien  
Vlaanderen  
is kansrijk opgroeien



City of Rotterdam



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CONFERENCE OF INGOS  
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DU CONSEIL DE L'EUROPE



### ENSA General Assembly and Connected Activities 2024

With the support of the Committee on Environmental and Health Crisis, and the participation of the ENSEL Network  
Brussels 22-25 January 2024

# Navigating Emotions Through Computational Thinking: Unpacking the COMPUSEL Project



Co-funded by the  
Erasmus+ Programme  
of the European Union





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# PARTNERS



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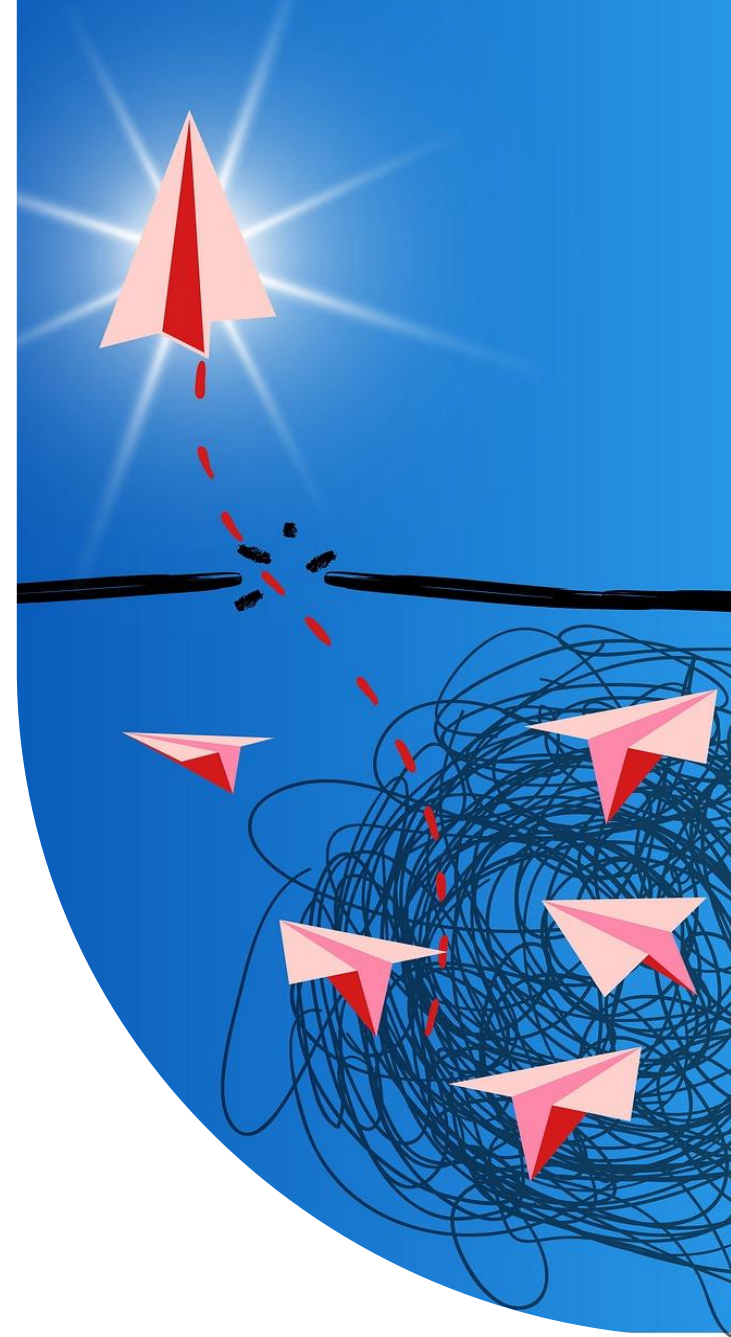


# ABOUT COMPUSEL

# OUR AIM

With this project, we aim to develop a social-emotional learning curriculum to improve the social-emotional learning skills of elementary school students.

Its target audience is Elementary Teachers and Elementary School Students.



# SOCIAL & EMOTIONAL LEARNING

Social-emotional learning describes the process through which individuals acquire essential knowledge, skills, and attitudes necessary for identifying and regulating their emotions, achieving their goals, enhancing their empathy, fostering positive relationships, and making responsible and compassionate decisions in both the short and long term (CASEL, 2020).



# SOCIAL & EMOTIONAL LEARNING

Self Awareness

Self Management

Social Awareness

Relationship Skills

Responsible Decision Making



# SOCIAL & EMOTIONAL LEARNING IN CLASSROOMS

Maintaining Collaborative Relationships

Making Responsible Decisions

Managing Strong Emotions

Effective Relationship with Peers and Teachers

Solving Problems Effectively

Recognizing Their Own and Others' Emotions





# SOCIAL & EMOTIONAL LEARNING IN EUROPE

In Europe, many children of the school-age have social-emotional problems.

Guidance Provided by International Authorities:

UNESCO

UNICEF

OECD

WHO



# SOCIAL & EMOTIONAL LEARNING IMPLEMENTATION APPROACHES ACROSS EUROPEAN CURRICULA

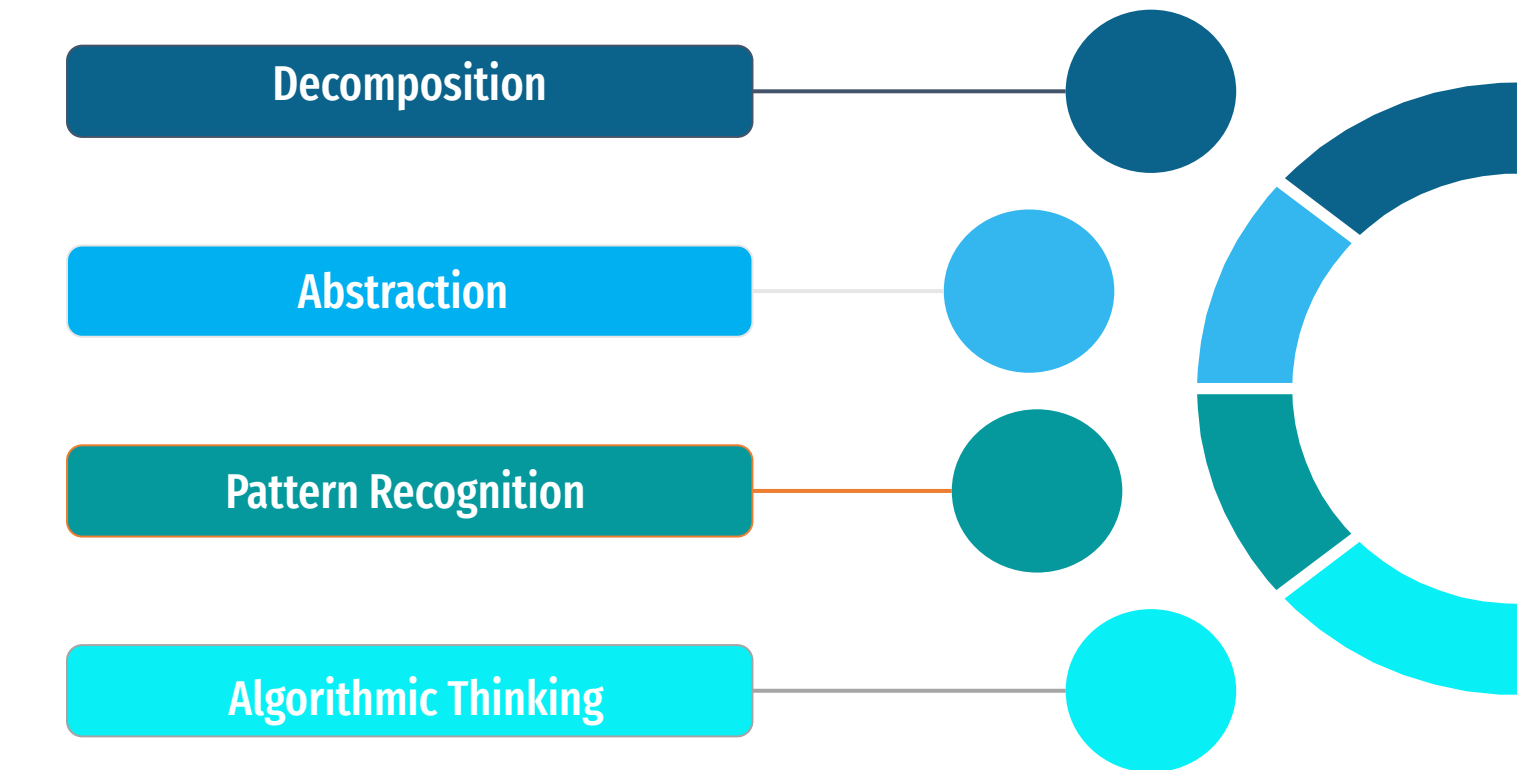
Adopting existing interventions developed in other countries

Another one is developing and implementing their social-emotional interventions



# COMPUTATIONAL THINKING

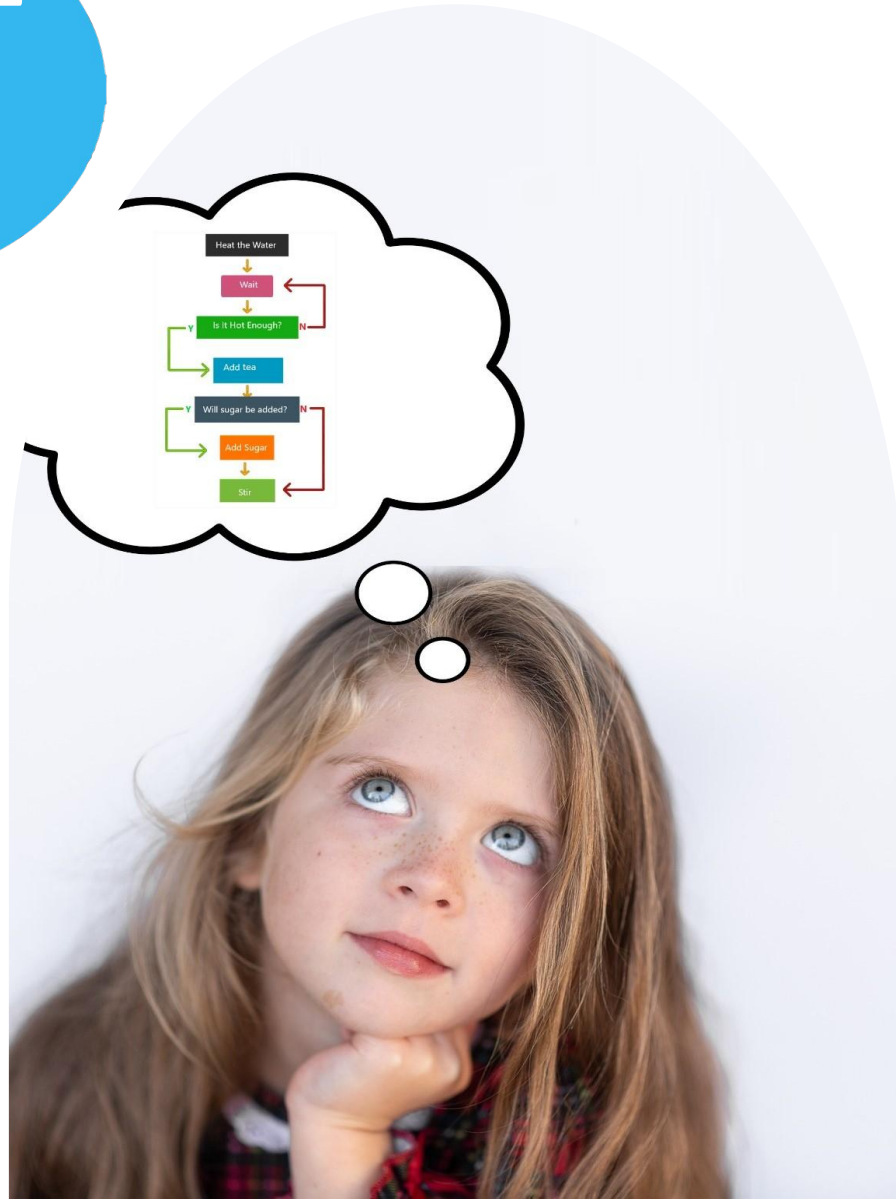
Computational thinking involves dividing and solving a problem into simple steps that even a computer can understand (Lu & Fletcher, 2009).



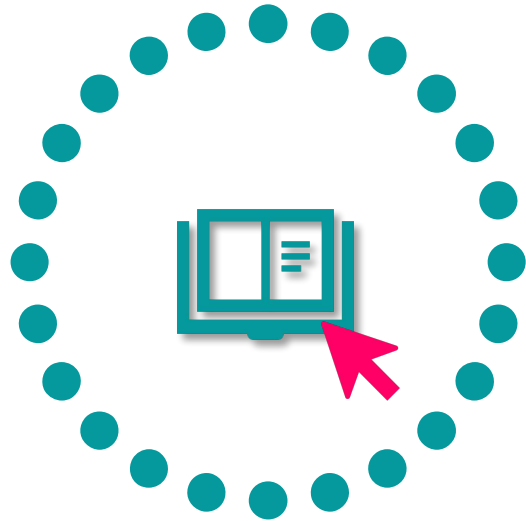
# INTEGRATING COMPUTATIONAL THINKING & SOCIAL-EMOTIONAL LEARNING

Computational thinking requires students to be mindful and intentional throughout the problem-solving process and builds essential attitudes like:

- Embracing ambiguity with confidence.
- Persisting through iteration and experimentation.
- Practicing teamwork.
- Leading learning with inquiry.
- Situating oneself as a lifelong learner.



# OUTPUTS



## Curriculum

Literature reviews and workshops have been conducted as a ground work for the curriculum preparation.



## Digital Stories

Digital stories have been prepared in the form of 2D cartoon.



## Teacher's Guide

Ongoing process of the guidebook for the COMPUSEL learning model

# SCHOOL EDUCATION COURSE CURRICULUM FOR PRIMARY SCHOOL

Consists of 5 modules:

Self Awareness

Self Management

Social Awareness

Relationship Skills

Responsible Decision Making



# MODULE STRUCTURE

## MODULE 5

### RESPONSIBLE DECISION-MAKING

#### SESSION 1

##### *OBJECTIVES*

The students will be able to:

- explain responsible decision-making principles
- analyze different options/alternatives to decide responsibly when faced with an issue
- realize that the decisions made responsibly have positive and negative consequences
- realize that the decisions made responsibly have the short- and long-term impacts
- understand the importance of responsible decision-making in terms of safety
- understand the importance of responsible decision-making in terms of social life
- be eager to make responsible decisions
- evaluate the appropriateness of a decision in terms of responsible decision-making principles
- make responsible decisions in situations encountered

##### *TITLES & CONTENT*

Importance of responsible decision making

Bullying in a classroom

Examples of real-life experiences

Considering ethical standards, social norms, and safety in making decisions

Making appropriate choices in life

# MODULE STRUCTURE

## TEACHING/LEARNING PROCESS

### Situation

The students watch a digital story about a student who has to decide about his friends who bully a new student in the class and ask him to be on their side.

### Introduction

*Drama Activity-* Switching roles

Students will work in pairs. While one of them is assigned the role of the student who defends the new student in the story; the other is assigned the role of a student who bullies. Then, the students are required to switch roles.

### Decomposition

*Class Discussion-* Leading students to decompose the problem through questions such as:

What is the problem in this story?

Who is/are causing the problem?

How students in the classroom behaved toward the new student?

Who opposed them?



# MODULE STRUCTURE

## Abstraction

*Module 5 - Worksheet 1*-Students will be required to complete the "Hourglass Activity". Accordingly, they will identify the behaviors they will focus on to solve the problem encountered in the story.

## Pattern Recognition

*Examples of Real-Life Experiences*- Students will be asked to share a similar unpleasant experience. The teacher encourages appropriate stories to discuss in the classroom. Students will be required to explain the situation, the way they made their decisions and the consequences of their decisions. The similarities and differences between the experiences the students had, and the digital story will also be indicated.

## Algorithmic Thinking

*Worksheet 2*- Students will be required to complete the worksheet to explain how they would overcome the challenges of the story they watched step by step and make a responsible decision.

## Closure

*Class Discussion*- Students will have an opportunity to talk about their decisions regarding the digital story they watched. They will indicate the values that influence their decision. The positive and negative consequences of decisions will also be discussed.

# WORKSHEET 1

COMPUSL

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## MODULE 5 – WORKSHEET 1

### Hourglass Activity

**List A:** Please list the behaviours observed in the story.

**LIST A**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**LIST B**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

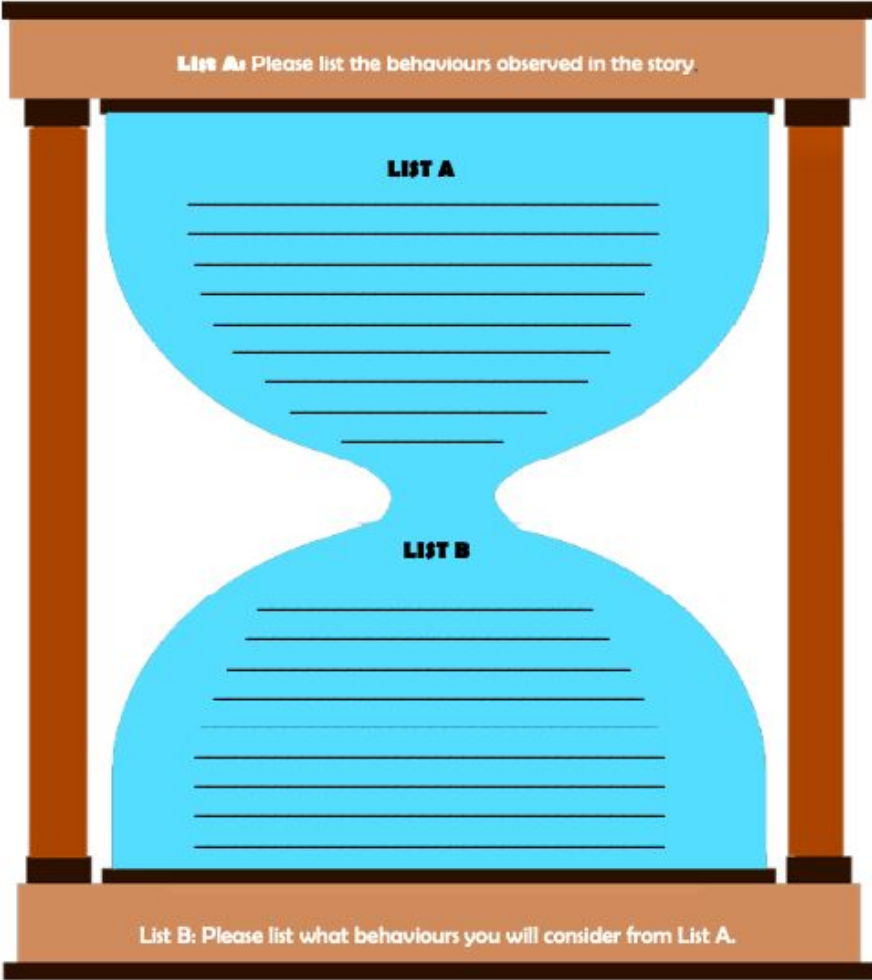
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**List B:** Please list what behaviours you will consider from List A.



# WORKSHEET 2

COMPUSEL

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## MODULE 5 – WORKSHEET 2

Please fill out the worksheet to explain how you will overcome the challenges in the story step by step and make a responsible decision.

What kind of a problem did you observe in the story?

Write your answer

If you were a student who has to decide; identify your choices and evaluate them considering their consequences.

Choice 1

Choice 2

Choice 3

Thumbs up and thumbs down icons are provided for each choice to indicate evaluation.

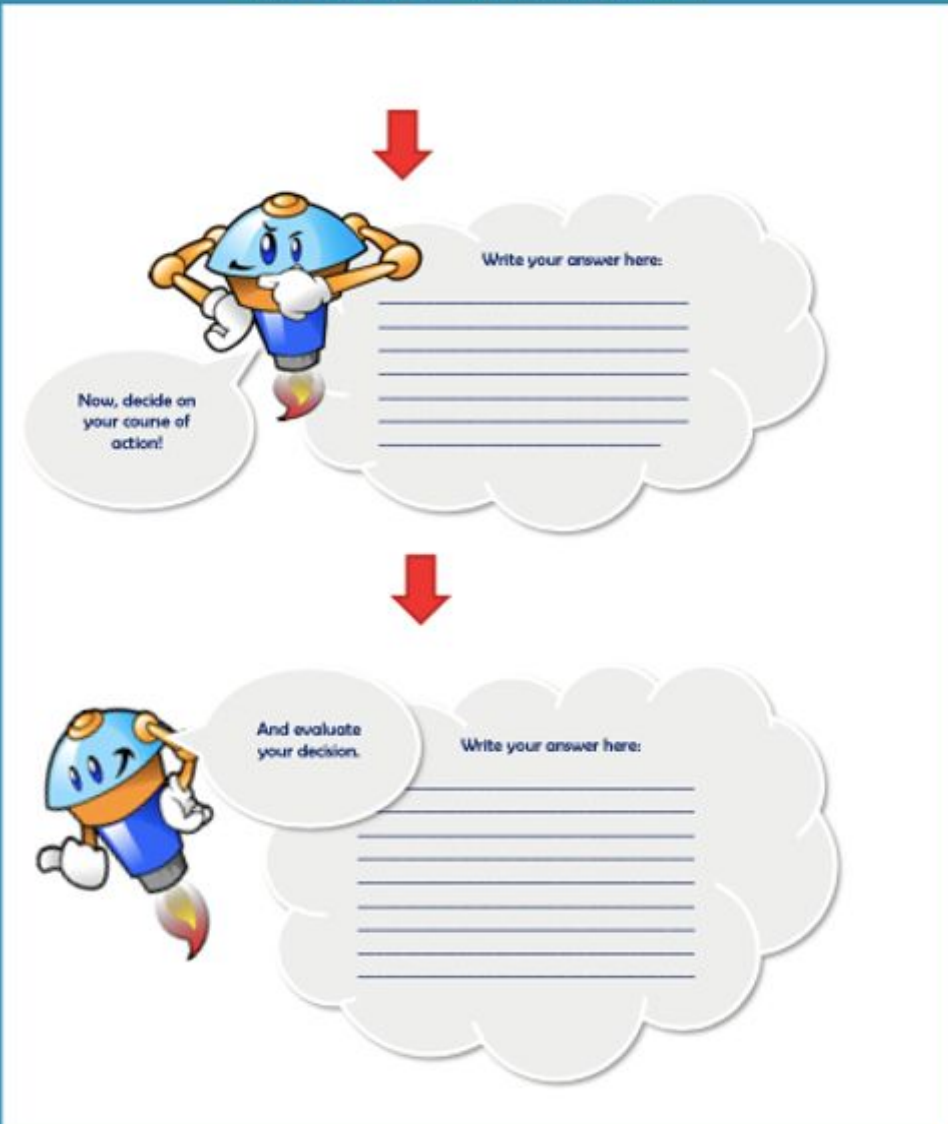
Blank boxes are provided for writing the consequences of each choice.

# WORKSHEET 3

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

## MODULE 5 – WORKSHEET 2



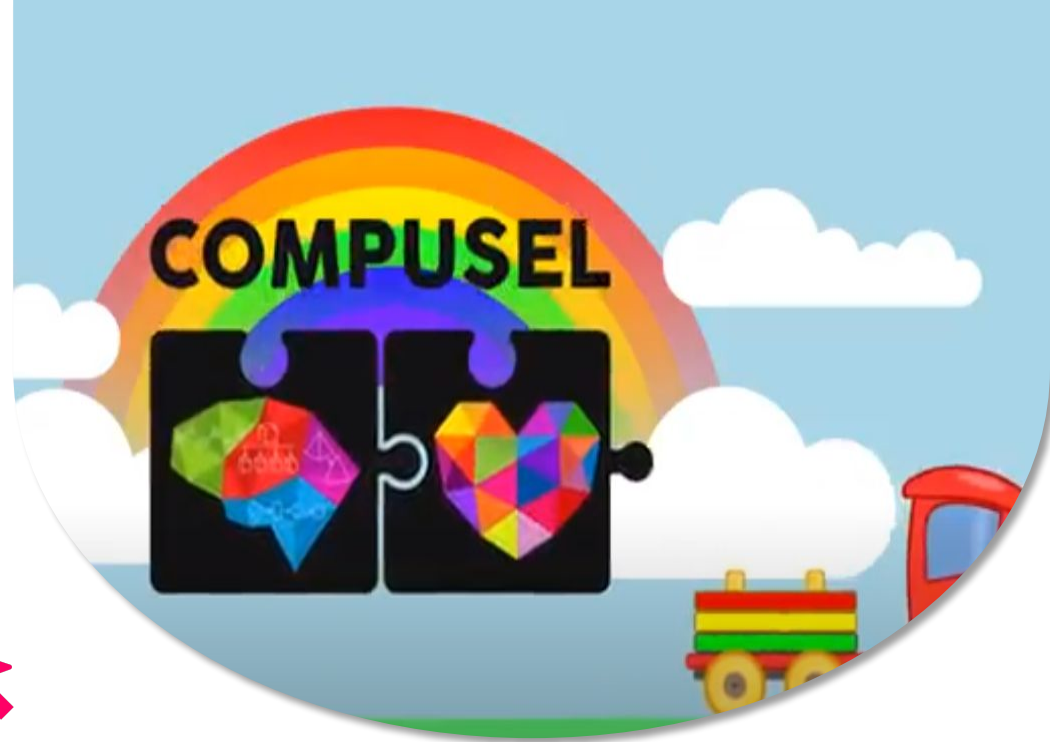
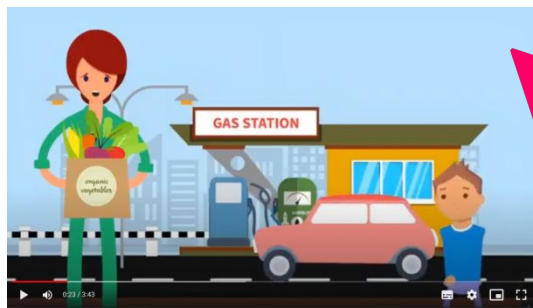
Now, decide on your course of action!

Write your answer here:

And evaluate your decision.

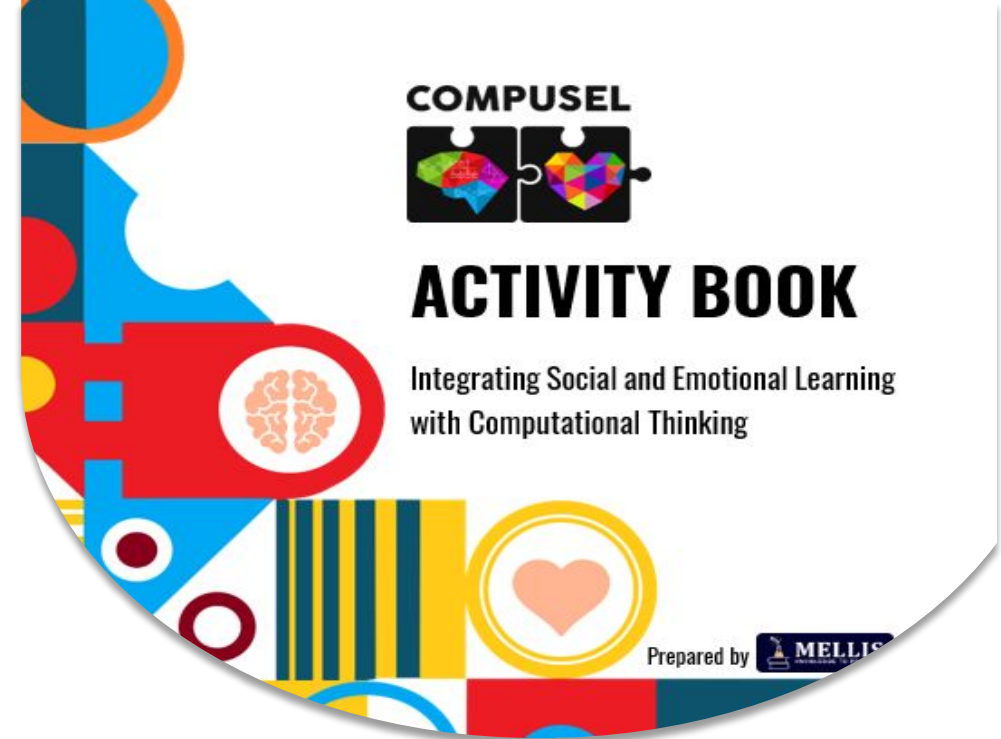
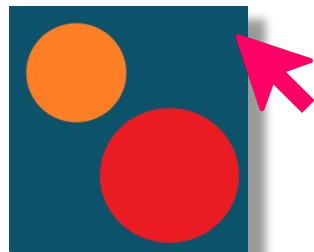
Write your answer here:

# DIGITAL STORIES



# ACTIVITY BOOK

Introduces 20 engaging activities designed to integrate Computational Thinking (CT) dimensions into Social and Emotional Learning (SEL) skills.



# ACTIVITY BOOK LEARNING ACTIVITY STRUCTURE

## Activity Identification

- Activity Number
- Targetted SEL skill

## Engagement

- Problem Situation
- Storification of the Problem Situation
- Reexploration of the problem

## Problem Solving Process through CT

- Decomposition
- Abstraction
- Pattern Recognition
- Algorithmic Thinking

## Learning Technique

- The Most Efficient Technique/s Proposed
- Suggestions to Teachers

## Evaluation

- Students' Future Experiences
- Evaluation of Results

# TEACHER'S GUIDE

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## TEACHERS' GUIDE

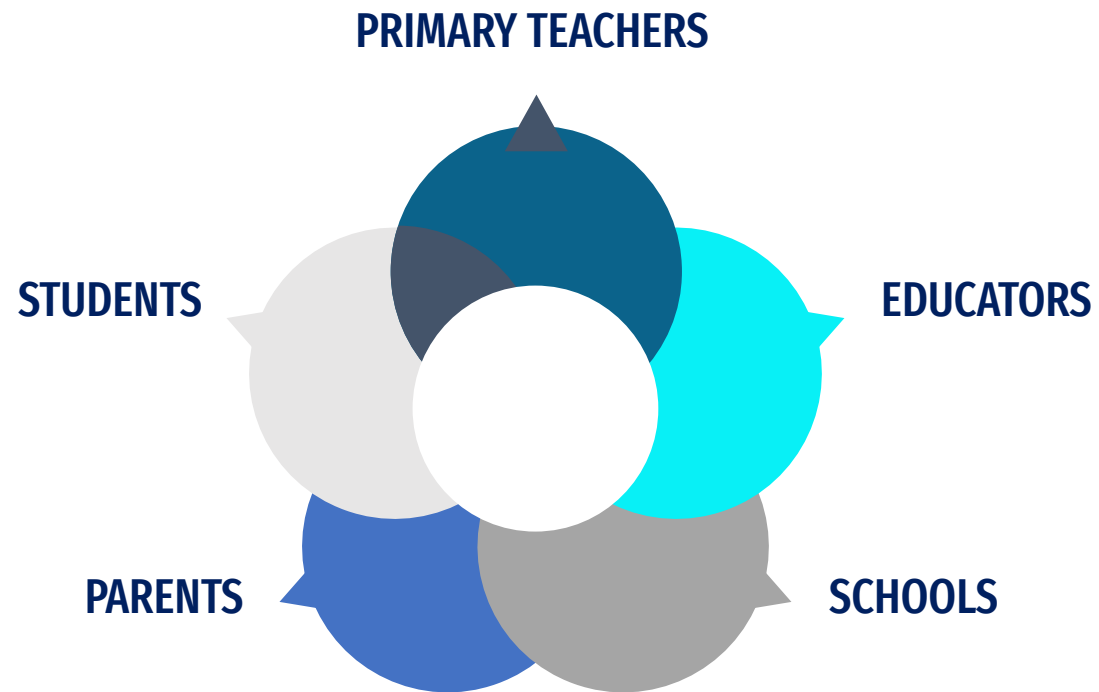






DISSEMINATION

# TARGET AUDIENCE



# WHAT WE HAVE DO SO FAR?

Conducting seminars to present the COMPUSEL project to staff and students in Turkey, Greece, Poland, Portugal, and Romania.

Seminar on the COMPUSEL Project at NCSU (USA)

Presentation at the International Conference on Virtual Learning (Romania)

Presentation at the International Congress on Educational Programs and Instruction (Turkey)

Participating Erasmus Days 2023

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LISTENING

Prof. Dr. Cigdem SAHIN TASKIN  
csahin@comu.edu.tr