LEARNING BOX OF UNPLUGGED ACTIVITIES

The recipe with limited ingredients

In this unplugged activity, participants are given the task of preparing a complete meal using a limited set of available ingredients. Each participant or team receives a predefined “pantry list” with a small selection of ingredients, along with basic constraints such as portion size, dietary requirements, or preparation simplicity.

The challenge is to design a coherent and realistic recipe using only the provided ingredients. Participants must decide how to combine, organize, and sequence the cooking steps to create a functional meal, even with limited resources.

Target Group

- ☑ Low-skilled adults with low digital competences
- ☑ Low-skilled adults with limited formal education or qualifications
- ☑ Low-skilled adults with low participation in lifelong learning / training opportunities

Learning Objectives

- Design a viable solution using a restricted set of resources
- Identify effective combinations of elements based on function, compatibility, and constraints
- Recognize patterns in common structures and processes within recipes and problem-solving sequences
- Apply abstraction to focus on the essential properties of elements when making decisions
- Organize a process into a logical, coherent, and executable sequence of steps

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Theme

Everyday problem-solving in cooking and meal planning under resource constraints

Duration

60 mins

Level

Intermediate

Computational Thinking Steps Used

- ☑ Decomposition
- ☐ Pattern recognition
- ☑ Abstraction
- ☑ Algorithmic thinking

Methodological Approach

- ☐ Gamification
- ☐ Challenge-Based Learning
- ☐ Collaborative learning
- ☑ Experiential learning

Competence Areas

a) Innovation Competences

- ☑ Creativity
- ☑ Critical thinking
- ☑ Problem solving
- ☐ Communication
- ☐ Collaboration

b) Information Literacy Competences

- ☑ Ability to access, understand and critically analyse information
- ☐ Interpretation of digital and visual content
- ☐ Awareness of media influence and biases

c) Life and Career Competences

- ☑ Flexibility and adaptability
- ☑ Initiative and autonomy
- ☐ Sociability and intercultural competence
- ☐ Productivity
- ☐ Leadership and responsibility

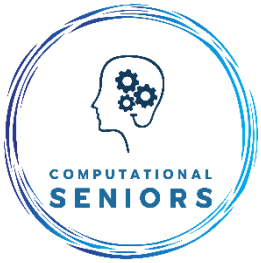
Learning Outcomes

- Design a complete solution (meal) using a restricted set of resources (ingredients)
- Identify suitable combinations of elements based on function, compatibility, and constraints
- Recognize patterns in how structured solutions (e.g. recipes) are constructed
- Focus on essential properties of elements when making decisions
- Organize a process into a clear, logical, and executable sequence of steps

Notes

- Ensure the ingredient lists are realistic and familiar (e.g., rice, eggs, vegetables, pasta, spices) so participants can focus on reasoning rather than food knowledge.
- Keep the number of ingredients limited enough to create constraints, but sufficient to allow multiple valid recipes.

- Avoid overly complex dietary or culinary requirements; constraints should be simple and understandable.
- Encourage creativity—there should be no single “correct” recipe. Different combinations can all be valid if justified.
- Highlight structure in recipes (sequence, preparation steps, cooking order) rather than just final dishes.



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Step 1: Understand the ingredients and constraints

Participants receive a fixed list of available ingredients and a set of constraints (e.g., number of servings, dietary restriction, time limit, or kitchen tools available). They cannot add new ingredients.

They first explore what is available and clarify what the final outcome must achieve (a complete, edible, and coherent meal).

Computational thinking focus: Decomposition, breaking the problem into key components such as ingredients, constraints, and meal requirements.

Step 2: Select and organize ingredients into a recipe idea

Participants decide how the available ingredients can be grouped and combined into a potential dish. They define the structure of the meal (e.g., starter, main component, seasoning, side) and decide how each ingredient will be used.

They start forming a clear recipe concept by assigning a role to each ingredient.

Computational thinking focus: Abstraction, focusing on the function and purpose of each ingredient rather than its isolated characteristics.

Step 3: Build and present the cooking process

Participants design a complete step-by-step recipe, explaining how the dish will be prepared using only the available ingredients. This includes the order of actions (preparation, cooking, assembly) and how the final meal is achieved.

Computational thinking focus: Algorithmic thinking, creating a clear, ordered sequence of steps to transform ingredients into a finished meal.

ACTIVITY CARDS

The recipe with limited ingredients

Card Categories

Ingredients

Contrains

Priority Levels

Essential
Extremely necessary to take into consideration

High
Importance

Medium
Helpful to take into consideration

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Print and cut the cards on the following slides to use in the activity.

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Rice

Pasta

Bread

Eggs

Chicken Breast

Tuna

Cheese

Onion

Tomatoes

Carrots

Spinach

Frozen Peas

Lettuce

Sweetcorn

Garlic

Olive Oil

LESS TIME

You now have only 20 minutes to prepare the meal.

Priority: High

EXTRA GUEST

Prepare one additional portion.

Priority: High

NO FRYING

You cannot fry any ingredients.

Priority: High

HEALTHY MEAL

Reduce the amount of oil and focus on healthier cooking methods.

Priority: High