LEARNING BOX OF UNPLUGGED ACTIVITIES

The library return rush

In this unplugged gamified and collaborative activity, participants are part of a team that has just realized they have multiple overdue books from different libraries. Each book belongs to a different location, has different due dates, and may involve penalties or urgency levels.

The challenge is to work together to organize, prioritize, and coordinate the return of all books as efficiently as possible while minimizing penalties and time spent. Teams must assign roles, share information, and make quick decisions under time pressure.

The activity is structured as a game with rounds. In each round, teams receive updates such as new penalties, time constraints, travel limitations, or unexpected events (e.g., one library closes early, transport delays, additional overdue items). Teams earn points based on how efficiently they return books, reduce penalties, and justify their strategy.

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

- Analyze a complex, time-sensitive situation involving multiple constraints and variables
- Apply decomposition to break down tasks into manageable components such as items, locations, deadlines, and constraints
- Identify patterns in deadlines, locations, and priorities to support decision-making
- Apply abstraction to focus on key factors such as urgency, distance, and impact while ignoring

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Theme

Logistics, time management, and prioritization in everyday coordination tasks

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

irrelevant details
- Collaboratively coordinate roles and decisions within a team to solve a complex problem

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

- Prioritize multiple tasks under time constraints
- Identify urgent items based on deadlines, penalties, and other constraints
- Break down complex logistical problems into manageable components
- Recognize patterns in schedules, locations, and procedural requirements
- Coordinate effectively with others through shared roles and responsibilities
- Develop and execute structured plans to optimize outcomes within constrained scenarios

Notes

- Create a sense of urgency without causing confusion: time pressure should drive decisions, not overwhelm participants.
- Prepare diverse “library cards” with different due dates, distances, penalties, and opening hours to force prioritization.
- Ensure no single optimal solution exists—different strategies (by urgency, location grouping, penalty minimization) should all be valid if justified.
- Encourage teams to assign clear roles (e.g., route planner, urgency checker, coordinator, penalty tracker) to improve collaboration.
- Introduce round-based updates (e.g., new overdue books, library closures, transport delays) to simulate a dynamic environment.
- Promote communication within teams: decisions should be discussed, not made individually.
- Make trade-offs explicit: returning one book earlier may delay others or increase penalties elsewhere

COMPUTATIONAL SENIORS

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The library return rush

Step 1: Understand the situation and assign roles

Participants are organized into teams and presented with a scenario: several overdue books must be returned to different libraries. Each book has specific details such as due date, penalty level, location, and opening hours.

Teams review all the information and assign roles (e.g., coordinator, logistics planner, urgency checker) to support collaboration and ensure all information is managed effectively.

Computational thinking focus: Decomposition , breaking the situation into books, locations, deadlines, penalties, and constraints.

Step 2: Plan and adapt under changing conditions

Teams create an initial plan for returning the books in the most efficient way possible, deciding the order of actions and how to minimize penalties and delays. The facilitator introduces new events in rounds (e.g., library closures, transport delays, changes in deadlines, new overdue books).

Teams must adjust their plan collaboratively, communicate clearly, and make decisions under time pressure.

Computational thinking focus: Abstraction, focusing on key factors such as urgency, distance, and penalties while ignoring less relevant details.

Step 3: Execute and present the final strategy

Teams finalize their return strategy and present how they organized the process. They explain the sequence of actions, how responsibilities were distributed, and why they made specific decisions under changing conditions.

Computational thinking focus: Algorithmic thinking, creating a structured, step-by-step plan to solve a dynamic coordination problem efficiently.

ACTIVITY CARDS

The library return rush

Card Categories

Team role

Library books

Events

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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COORDINATOR

Leads the discussion.

Ensures everyone contributes.

Makes sure decisions are reached.

ROUTE PLANNER

Plans the best order for visiting libraries

DEADLINE CHECKER

Monitors due dates and urgency

PENALTY TRACKER

Calculates penalties and keeps score

HISTORY OF EUROPE

Library: Central Library

Due Date: Yesterday

Late Fee: €1 per day

Travel Time: 15 minutes

HEALTHY COOKING

Library: East Branch

Due Date: Today

Late Fee: €2 per day

Travel Time: 25 minutes

BASIC COMPUTER SKILLS

Library: North Library

Due Date: Three days ago

Late Fee: €0.50 per day

Travel Time: 30 minutes

ENGLISH FOR BEGINNERS

Library: Community Library

Due Date: Tomorrow

Late Fee: €1 per day

Travel Time: 10 minutes

GARDENING GUIDE

Library: South Library

Due Date: Today

Late Fee: €3 per day

Travel Time: 35 minutes

JOB INTERVIEW SKILLS

Library: West Branch

Due Date: Two days ago

Late Fee: €1.50 per day

Travel Time: 20 minutes

TRAVEL PHOTOGRAPHY

Library: Central Library

Due Date: Today

Late Fee: €2 per day

Travel Time: 15 minutes

FAMILY BUDGETING

Library: East Branch

Due Date: Tomorrow

Late Fee: €1 per day

Travel Time: 25 minutes

LIBRARY CLOSES EARLY

North library closes one hour earlier than expected.

Review your route

Priority: Essential

TRANSPORT DELAY

Add 15 minutes to your travel time.

Priority: Medium

HEAVY TRAFFIC

Roads to the West library are congested.

You can not go directly from central library to west

Choose an alternative route.

Priority: Essential

LATE FEE INCREASE

Central library doubles its daily penalty.

Review your priorities.

Priority: Essential