GROUP EXPENSES

There are several occasions when you may have to manage group expenses, for example during a trip. Someone anticipates the money, someone else takes care of some expenses, someone else never opens the wallet, but in the end the bills must be done and the total must be divided fairly.

In this situation, model examples will be analyzed to try to understand together where mathematics is used to achieve a correct and consistent subdivision.

Overview "GROUP EXPENSES"

How to manage and split group expenses?

Context
Everyday life
Finances
Travel

Cognitive processes

Managing situations
Mathematising

Content
Quantity and number
Using a calculator

Target group (incl. necessary prior skills and competences)

Adults and young adults with basic math skills and who know how to use the calculator.

Dispositions

Collaboration
Math anxiety

Outcomes and results

Learners will be able to manage and divide fairly of expenses incurred in groups using simple mathematical calculations.

Main information

Content	Quantity and number (even large numbers in the case of large expenses); Addition, subtraction, division. Using calculator.
Target group	Adults and young adults with basic math skills and who know how to use the calculator.
Learning intention	Numeracy for personal and private purposes
Duration	Approximately 3 hours
Material and resources	A model example developed by the teacher.
Group size	Range from 4 to 12 learners.
Problem statement	Group expenses can be safely managed, to be divided fairly and correctly, using a bit of math.
Working questions	– How would you do if you had to manage group expenses (e.g. with friends)? – What should you pay attention to? – Does mathematics have anything to do with it? – In the group can only one person anticipate the money? In that case how do you make sure that all advance money is recovered? – Facing such a situation, what mathematical calculations do you expect to put into practice?
Learning outcomes and results	The students are able to manage and divide group expenses.
Reference to National Qualification Frame	

	Working plan		
Time (lessons)	**Description of content/activities**	**Material**	**Methodical and didactic information**
45'	**1. Activation** The type of situation is exposed to learners, guided by the initial questions present in the "*Working questions*"		Questioning
80'	**2. Model example** Learners are divided into pairs and each one is given an example model to be analyzed and with the aim of dividing expenses equally the expenses incurred by the group. *[An example of a model to be used at this phase is in "Appendix".]* The teacher while learners working in couples tries to support them if necessary.	Model examples	Hands on learning Collaboration [if needed: explicit teaching]
60'	**3. Discussion** This phase is divided into two parts: a first part in which each pair exposes the analyzed model and the worked-out solution. It follows a second part of sharing any doubts or considerations.		Collaboration Feedback

Appendix

AN EXAMPLE OF A MODEL TO BE USED IN PHASE 2 ("MODEL EXAMPLE")

"Adam, Barbara, Cameron and David leave for a weekend together.

Adam pays accommodation for everyone, spending EUR 700;

Barbara takes care of the transport costs used to reach the destination and for the return home for all, spending EUR 450;

Cameron pays lunches for everyone, spending EUR 250;

David pays dinners for everyone and spends EUR 320.

Barbara also spends EUR 50 on museum tickets for herself and David.

Cameron pays EUR 39 of beers for everyone except Adam who doesn't drink.

David also pays EUR 30 to take advantage of the laundry service for his shirt that got dirty during the trip.

At the end of the trip, how are the expenses divided? Anyone has to receive money from someone else?

Write for each participant on the trip how much money they need and how much money they have to receive (possibly)."

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