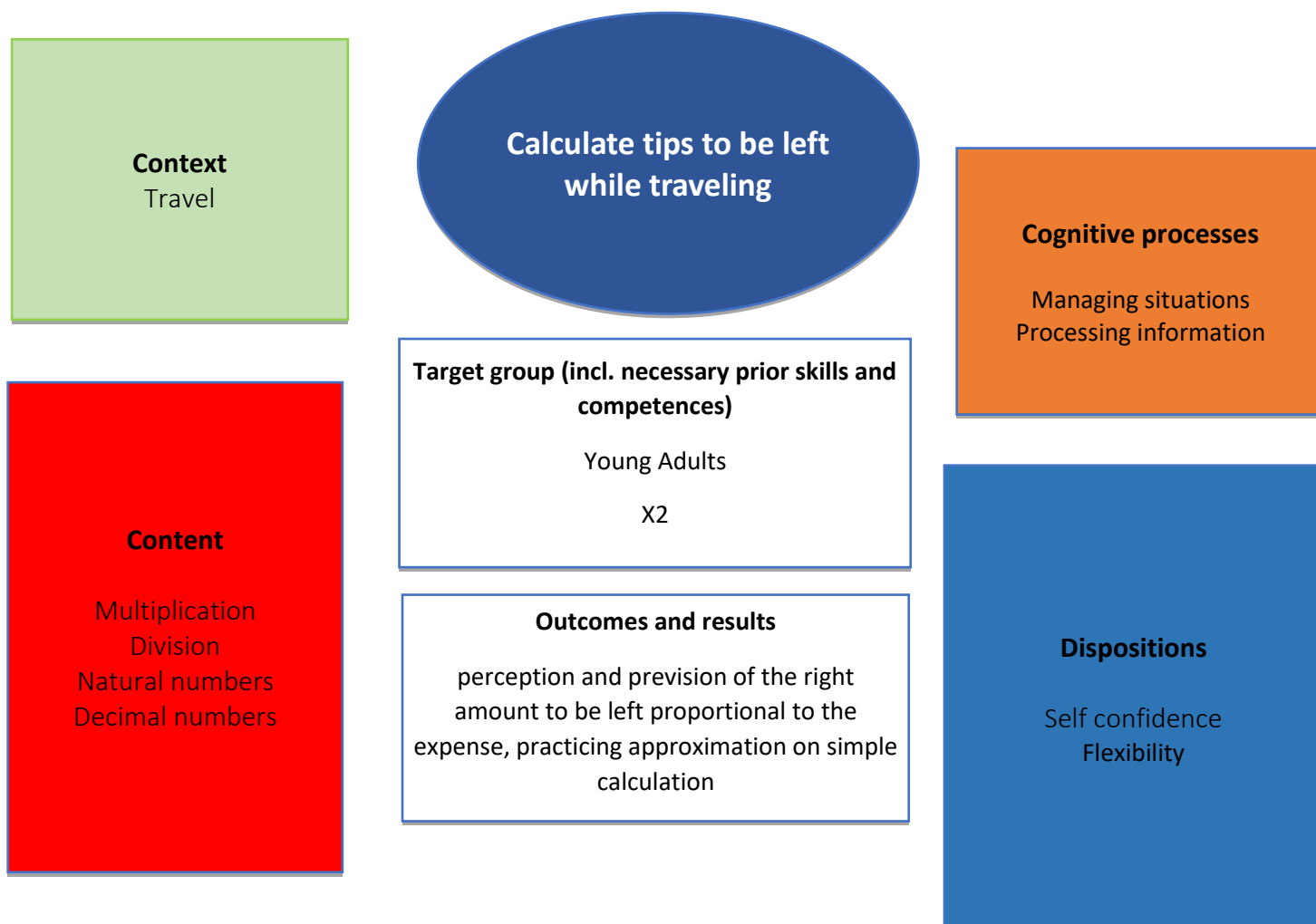# DON'T BE STINGY!

How to calculate tips to be left

In some countries it is good manners to leave a tip at the end of the service proportional to total expense. Sometimes, for example in America, the amount of the tip is well known or directly indicated, usually expressed in percentage. Other times the amount it is just suggested, as a good standard, like in some countries of Europe.
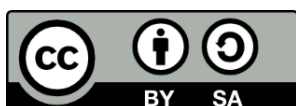In this situation the focus will be on the calculation of percentage and on the perception and prevision of the right amount, just to train the learners on approximation of this simple calculation.

Overview "DON'T BE STINGY"

Context
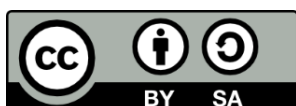Travel

Calculate tips to be left while traveling

Cognitive processes

Managing situations
Processing information

Content

Multiplication
Division
Natural numbers
Decimal numbers

Target group (incl. necessary prior skills and competences)

Young Adults

X2

Outcomes and results

perception and prevision of the right amount to be left proportional to the expense, practicing approximation on simple calculation

Dispositions

Self confidence
Flexibility

Main information

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Content	Natural numbers Decimal numbers Multiplication and division
Target group	Young adults Learners: • cope with one-step, simple operations such as counting, performing basic arithmetic operations to cope with everyday situations; • are self-confident in getting involved with small group activities that require intuition and simple mental calculations for approximation
Learning intention	Numeracy for personal and private purposes
Duration	2UE +
Material and resources	Cards developed by the teacher
Group size	Small group work: 2 learners
Problem statement	Traveling abroad can lead you to visit places where it is good practice, if not mandatory, to leave a tip at the end of a service. This practice can be seen as an indication of appreciation of the service received, but often, in some countries, it could even represent the main source of income of the staff who served you. Whether it is a bar, a restaurant or an accommodation facility, a tip is requested when paying the bill, usually expressed as a percentage. Having a good familiarity with this mathematical topic can help you to quickly derive the amount of the tip or, in cases where it is presented already calculated, to assess whether it has been indicated correctly. It often happens that people take advantage of tourists, right is not to be stingy, but with the knowledge that you are not getting cheated!
Learning outcomes and results	Learners are able to do percentage, know after targeted exercise approximate the figure for the percentage
Reference to National Qualification Frame	Optional (country's decision)

Working plan			
Time (lessons)	Description of content/activities	Material	Methodical and didactic information[1]
30'	**1.Discover** The teacher develops and introduces material showing the most frequently used percentage values for tips. After this presentation, a little time to discussion could take place; the learners are young adults who are approaching at working world and it could be interesting hearing their opinion about a system that is different from the European one, or to get what they think about tips, etc..	Presentation or similar developed by the teacher	Explicit teaching Questioning Feedback
45'	**2. Calculate the percentage** Using the most commonly used percentage values seen in step 1, the teacher checks if learners know how to calculate percentages through a collaborative learning activity in which they are given percentages to derive.	Exercises (see appendix 1)	Collaborative learning Feedback

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[1] for description and explanation of kinds of tasks, HITs and other background information please consult the teachers'/user's guide

45' +	**3.Checking the check** Learners do an activity of checking on some fake receipts in which the tip to be left by the customer is already indicated as calculated. The learners should get if the number shown is coherent and probable. *This activity should be done without calculator, just getting the result with an approximation. For this reason the tips in the receipts prepared by the teacher hasn't to be very close to the actual numbers.*	Fake receipts (see appendix 2)	Hands on learning Metacognitive strategies
60'	**4. Role-play** For convenience some people simply suggest adding $1 or $2 to the total amount to be paid instead of calculating the percentage. Learners will create fake receipts in pairs, providing two alternatives: pay the percentage value or a couple of extra dollars. These receipts will be used to role-play with the other pairs in the class, in which the giver of the receipt takes on the role of the waiter while the receiver of the customer. Clearly the goal is to find the correct alternative. A moment of discussion can also arise from this activity during which the parties taking role in the game have to justify their decision on their own, either in front of the teacher who might take on the role of the "clever" owner or another customer at the table who wants to save his or her company of friends money.		Metacognitive strategies Hands on learning Collaborative learning Feedback

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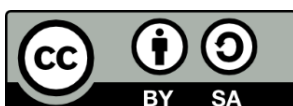
2.CALCULATE THE PERCENTAGE

Exercise examples:

- You spent $47.50 and choose to leave a 15% tip because you particularly enjoyed the service. How many dollars do you leave?

- You spend $65.80 and have to leave a 10% tip but you only have $4 cash in your wallet, is that enough?

- The receipt shows a total of $215. How many dollars of tip do you leave if you want to leave the minimum?

Appendix 2

3.CHECKING THE CHECKS

Faking checks example:

Alfred

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1 fettuccine…………$ 15

2 spaghetti………….$ 36

4 bruschette………..$ 32

1/2l white wine……..$ 22

2 coffee……………..$ 6

1 apple pie …………$ 8


  +10% tip


TOTAL…………….$ 135
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