



Converting Masses in Culinary Arts

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Subject:

Culinary Technology

Grade:

National Vocational Qualification NVQ (EQF 3) / Professional Title (EQF 3) / NVQ in 3 years) / Apprenticeship preparation (EQF 3)

Observations:

- As apprentices have very different educational backgrounds, it is difficult to determine an overall level of knowledge in the classroom.

Learning objective(s):

- Level 1: Associating Units and Quantities
- Level 2: Naming the unit for the quantity
- Level 3: Convert kg to gr, gr to kg without calculator

Expected results:

We found that apprentices sometimes found it difficult to transfer their mathematical skills, which are essential, to the professional field. They pass the exercises in the theoretical Mathematics class, but encounter difficulties in applying the mechanism during the practical course. However, this skill is essential for them because the books display the recipes in Kg and L while their measuring tools display in g or mL. Our goal is therefore to be able to train our apprentices so that they gain speed and autonomy in the conversion.



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Content of the unit:

Technology in baking, cooking and pastry is an essential component of vocational training: it mixes theory and practice. Apprentices discover the fundamentals of baking, cooking and pastry, from the selection of ingredients, their specificities and the ways of preparing them. They must acquire the hygiene standards specific to the profession, but also precise skills in the techniques of shaping, cutting, cooking and elaborating the recipes listed in the reference system.

Applied mathematics also plays an important role in the CAP. They help to solve real-world problems encountered in everyday working life. Calculations of production costs and profit margins, proportionality, conversions, etc.

How will I motivate students? :

Our two main motivational levers:

- For students in difficulty: create an automatic system for unit changes.
- For students who are more comfortable: train and develop this automatism to strengthen it.

Work on the AUTONOMY of learners in their practice. Know how to weigh quickly and accurately.

Pedagogical differentiation

Students who pass the placement test can be used as a resource during the theoretical input phase.

Structure your learning unit / Assign a tool to each step:

1. Positioning test on WOOLAP

The objective is first of all to start with the equipment that the apprentices use on a daily basis: the recipe! As the latter are always indicated in Kg and L, the aim is to show them the importance of the conversion mechanism to be acquired in order for them to be able to use their measuring tools. Observation – lesson – manipulation.



In order to take stock of the level of the class, we can run a WOOC LAP test. It will make it possible to identify apprentices who are having difficulty with conversions and to adapt more quickly to

their needs: if the whole class passes the test overall, we know that the notion is acquired – if this is not the case, or only for a few apprentices, a pedagogical differentiation can be envisaged. The aim here is not to draw a note but really to make an assessment of the level of the apprentices. The test is rather quick with 12 questions.

[Excerpt from the WOOC LAP positioning on the subject and its interface on the phone:](#)

The image displays two screenshots of the WOOC LAP mobile interface. The top screenshot shows a matching exercise titled "Associer chaque instrument de mesure à la grandeur mesurée." (Associate each measurement instrument with the measured quantity). The interface lists four instruments on the left: Balance (1), Verre doseur (2), Thermomètre (3), and Règle (4). On the right, four quantities are listed: Masse (A), Température (B), Contenance (C), and Longueur (D). The bottom screenshot shows a multiple-choice question: "Quelle est l'équivalence en grammes d'1 kilogramme ?" (What is the equivalence in grams of 1 kilogram?). The options are 10, 100, 10000, and 1000. The option 1000 is selected and highlighted in green, with a "100%" and "1 / 1" indicator. To the right of the screenshots, a vertical strip shows the corresponding dropdown menus for the matching exercise and the multiple-choice options for the second question.



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The **WOCLAP** tests the apprentices' ability to associate measuring instruments with quantity, quantities and their units, units and their symbols, equivalences from one unit to another (L \square mL), some basic knowledge of cooking or their ability to convert volumes into mass.

In addition, WOCLAP allows you to observe the answers given to the question without indicating the author of the question by name or indicating the correct answer. This can be an opportunity to discuss with the apprentices and argue about how they achieve the result: "Why did you choose this answer, why?" Peer-to-peer conversation is part of the learning process: apprentices can explain their tips or habits for converting, for example. The teacher can then bring up the correct answer on the board and start explaining.

We can also imagine the positioning test in paper format such as multiple-choice questions, or even as a practical test to be conducted in co-animation with practice colleagues. The exercise could thus become a timed challenge in which apprentices would have to handle their tools. With the same ingredient, different measurements are indicated to be carried out with the teacher's validation. This would be a diagnostic assessment whose results would be compared with those of the final summative assessment.

2. Theoretical input on sheet and SWAY

The Applied Mathematics teacher then provides theoretical support that guides the apprentices in our learning objectives:

- The Masses
- Capacities
- Temperatures
- Measuring instruments
- Water: equivalent between mass and capacity.

This course is posted on the VET school's YPAREO intranet to which students have access, and it can be presented to them through an attractive digital tool: SWAY. Projected on the blackboard, the course transposed to SWAY becomes more interactive and dynamic, by scrolling horizontally or vertically for example, by highlighting the key points to remember.



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[Access to the Sway "Quantities and Measurements" + excerpts:](#)

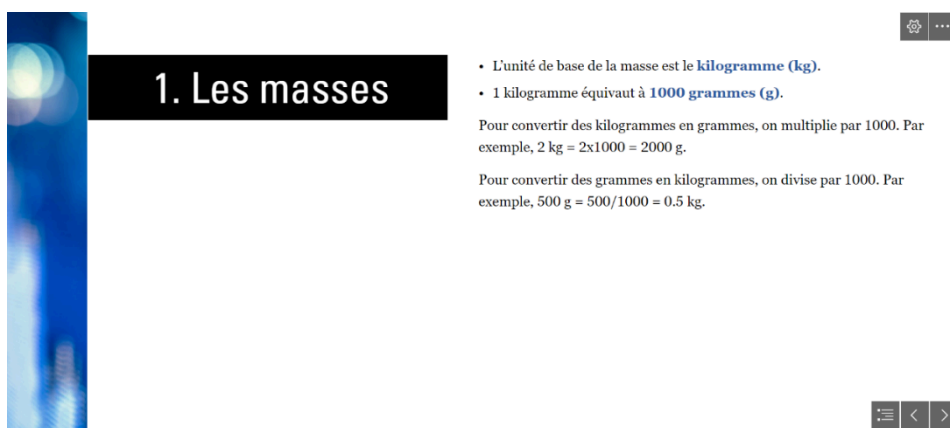
File Word or click [here](#) on any medium (phone or computer)

	01	02	03	04	05
Grandeurs et mes...	1. Les masses	2. Les contenances	3. Les températures	4. Instruments de ...	5. L'eau : équivale...
	L'unité de base de la masse est le kilogramme (kg)	L'unité de base de la contenance est le litre (L).	L'unité de base de la température dans le système	Pour mesurer les masses, on utilise une balance ou	L'eau a une particularité intéressante : à tempéra



Please note: the content of the paper course is strictly the same as that offered on SWAY.

Above all, the interface makes it possible to make content more dynamic and fluid in a simple and fast way in order to make it more attractive.



1. Les masses

- L'unité de base de la masse est le **kilogramme (kg)**.
- 1 kilogramme équivaut à **1000 grammes (g)**.

Pour convertir des kilogrammes en grammes, on multiplie par 1000. Par exemple, 2 kg = 2x1000 = 2000 g.

Pour convertir des grammes en kilogrammes, on divise par 1000. Par exemple, 500 g = 500/1000 = 0.5 kg.

In addition, in remote and screen sharing, SWAY offers an interface that adapts better than a simple projected or shared Word document.



3. Exercises to automate the process on QUIZLET

After the theoretical course, we move on to the exercises that aim to automate the process and make conversions faster for the apprentices. **QUIZLET** works very well in this type of workshop in which questions and answers are combined in the form of flashcards. The tool allows, among other things, to work on vocabulary from one language to another or to link a term to its definition, but it can also be transposed with mathematical data. The idea here is to work on the conversion mechanism: we indicate data in Kg on one side and we associate it with various data in g on the other side.

On **QUIZLET**, you can find modes where the learner learns by observation: you turn over a card that displays the correct answer or more active modes where the apprentice manipulates by associating the right cards together or by selecting a correct answer.

In addition, it should be remembered that **QUIZLET** offers various types of games: as activities in the whole class or in independent study particularly adapted to asynchronous operation or as part of distance learning.

Types of exercises on QUIZLET:

Mathématiques / Arithmétique / Nombres entiers

Conversion de masses (g/kg) Débutant

★ Laisser la première évaluation

Activité de classe

Quizlet Live Évaluation

Étude autonome

Cartes Apprendre Test Associer Q-Chat

By sharing the QUIZLET list with learners, they are able to choose their game mode based on their preferences or goals.

This is a way to make learning more autonomous.

Choisissez un objectif pour personnaliser votre apprentissage

Apprendre rapidement
Développez votre mémoire à court terme

Tout mémoriser
Développez votre mémoire à long terme

In addition, after a short questionnaire, one can target the type of learning and the level of difficulty of the quiz undertaken. This has a double interest for the apprentice: knowing how to position himself/herself and understanding how to learn better according to his/her desires or appetites.



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Si vous avez commencé à l'apprendre, nous démarrerons par des questions plus avancées.



C'est tout nouveau pour moi



J'en connais une partie



J'en connais la majorité

The possibilities are numerous on QUIZLET and the tool is even constantly evolving. Recently, the platform has been equipped with a powerful artificial intelligence (Q-Chat) that can learn, question, put knowledge into practice or answer a question from the learner

Excerpts from the Q-chat conversation:

Apprends-moi



Today, we're diving into the world of **metric conversions** from kilograms to grams! 🌍🌟 In this lesson, we'll explore various conversions from kilograms to grams, ranging from **0.005 kg** to **10.000 kg**. Remember, when converting from kilograms to grams, we multiply by **1000** since there are **1000 grams** in a kilogram. By the end of this session, you'll be a pro at converting these weights in no time! Let's get started! ✍️🧠

Kilogram (kg): A kilogram is a unit of measurement for mass, and it is equal to 1000 grams. It is commonly used to measure the weight of objects.

Example: If you have a bag of apples that weighs 2 kilograms, how many grams does the bag of apples weigh?

Interroge-moi



Question: If a box of chocolates weighs 0.750 kg, how many grams is that equal to?

Q What is 0.250 kg in grams?

250



Great job! You converted 0.250 kg correctly to grams. Keep up the good work!

Q Since you correctly converted 0.250 kg to grams, can you convert 0.500 kg to grams?





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Different types of exercises on QUIZLET:

Associate: Here we need to match cards that correspond to the same values.

Note: once the list has been created, **QUIZLET** automatically transposes this type of exercise. The teacher doesn't need to do any manipulation.



Test: once again, we use the data from the basic list to create a questionnaire.

The latter is configurable by choosing the number of questions and their nature (true/false, multiple choice, matching, written answer) and can be exported as a PDF file.

1000 g



Sélectionnez le terme correspondant

1 -4,000 kg

2 1,005 kg

3 1,100 kg

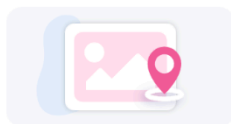
4 1,000 kg



Explain why you chose the digital tools:

WOOCLAP is an interactive platform designed to energize classes and presentations. The possibilities of use are varied and are constantly improving with the regular addition of new categories of questions. The pedagogical uses are no longer to be proven and the platform encourages the teaching staff by offering examples by subject for those who would encounter difficulties in understanding the tool. The members of the **WOOCLAP** team are also reachable and answer any questions or recommendations their users may have.

Economy and Management [Montrer tous les exemples >](#)



TROUVER SUR L'IMAGE

Where is the break-even point on this graph?



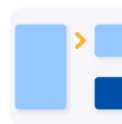
QUESTION OUVERTE

One word to describe how you feel after today's session



MATRICE

SWOT Analysis: Write down the elements that come to mind by...



MATRICE

Fill in each category forces framework.



These are sample questions, but pre-filled templates of quizzes also exist on the site.

Overall, the platform is intuitive and quick to use, with the possibility of quickly duplicating or sharing existing questionnaires. It is therefore quite possible to share questionnaires between professors of the same discipline. The data collected can be exported in PDF or Excel format, indicating the success percentages of each question as well as the overall questionnaire, which makes it relatively practical to use in the context of a formative assessment, for example. Finally, it should be noted that EFMA has made premium accounts available to its teachers and that they have been trained on this tool.

SWAY is a tool developed for the Microsoft 365 license to create dynamic and interactive presentations. The content generated by SWAY is smooth and adapts to different types of screens. The main advantage of SWAY is its ease of use and an attractive result. Finally, the teacher no longer needs advanced technical skills to offer interactive content. The course obtained is also very well adapted to distance learning. SWAY is available to all users of the Office 365 license.

QUIZLET was first conceived as a learning platform for students. Its pedagogical interests are therefore multiple: its basic concept is simple, the platform is easy to use, it offers a variety of materials that make it possible to better target types of learning, it makes it possible to energize a course – even those that would seem unattractive – and it is constantly evolving. **QUIZLET** also adapts very well to distance learning and offers follow-up to teachers by a possible export of results. Finally, **QUIZLET** uses a concept that can also be transposed to face-to-face meetings with the possibility of extracting flashcards in PDF format to print and laminate them, for example.



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