

# Science CM1 lock down lessons with Lisa 2020

**WEEK 3**

**Each in it's place !**  
*Chacun à sa place !*

**You will make your first step as a chemist !**  
*Vous allez faire ici vos premiers pas de chimiste !*

**You have three different liquids: syrup, water and oil.**

*Vous disposez, dans cet atelier de **trois liquides différents** : du sirop, de l'eau et de l'huile.*

**You must pour a small quantity of each of these liquids in to a cup.**

*Il faut que vous versiez, dans un gobelet, un peu de chacun de ces liquides.*

**But be careful, they should not be mixed and each liquid must be clearly distinguished.**

*Mais attention, ils ne doivent pas se mélanger et l'on doit nettement les distinguer.*

**You must find the correct order to put in the different liquids.**

*À vous de trouver l'ordre et la façon de les verser.*

**DO NOT STIR**  
**Ne remue pas**

**You only have two chances. Good luck!**

*Vous n'avez droit qu'à **deux** essais. Bonne chance !*

**BEFORE YOU START – THINK!!!!**

Some of these liquids are lighter or heavier than the others. Some of them do not mix well together. Think about these two things before you start!

**AVANT DE COMMENCER - PENSE !!!!**

Certains de ces liquides sont plus légers ou plus lourds que les autres. Certains d'entre eux ne se mélangent pas bien. Pense à ces deux choses avant de commencer!

# You need :

2 empty cups/containers



2 x A small amount of syrup, water and oil in each small container about 2 spoons should be enough. (about 25mls)



Syrup/cordial

6 small containers :



Oil – Any kind of cooking oil that you have at home.



## Challenge N°3 :

### Some liquids that don't mix ....

Challenge No3 consisted of pouring 3 liquids (water, syrup and oil) into one cup without them mixing up together.

We were able to achieve the result for this challenge because some liquids **are immiscible: they do not mix.** **This is the case of water and oil.**

When we mix water and oil, we can observe:

- First, an **emulsion** (oil bubbles were surrounded by water)
- Then, the oil slowly separated from the water in a separate layer.

**The difficulty was to pour the syrup slowly enough so that it didn't not mix with the water.**





## Défi N°3 :

### DES LIQUIDES QUI NE SE MELANGENT PAS...

Le défi N°3 consistait à verser 3 liquides (eau, sirop et huile) dans un même verre sans qu'ils se mélangent.

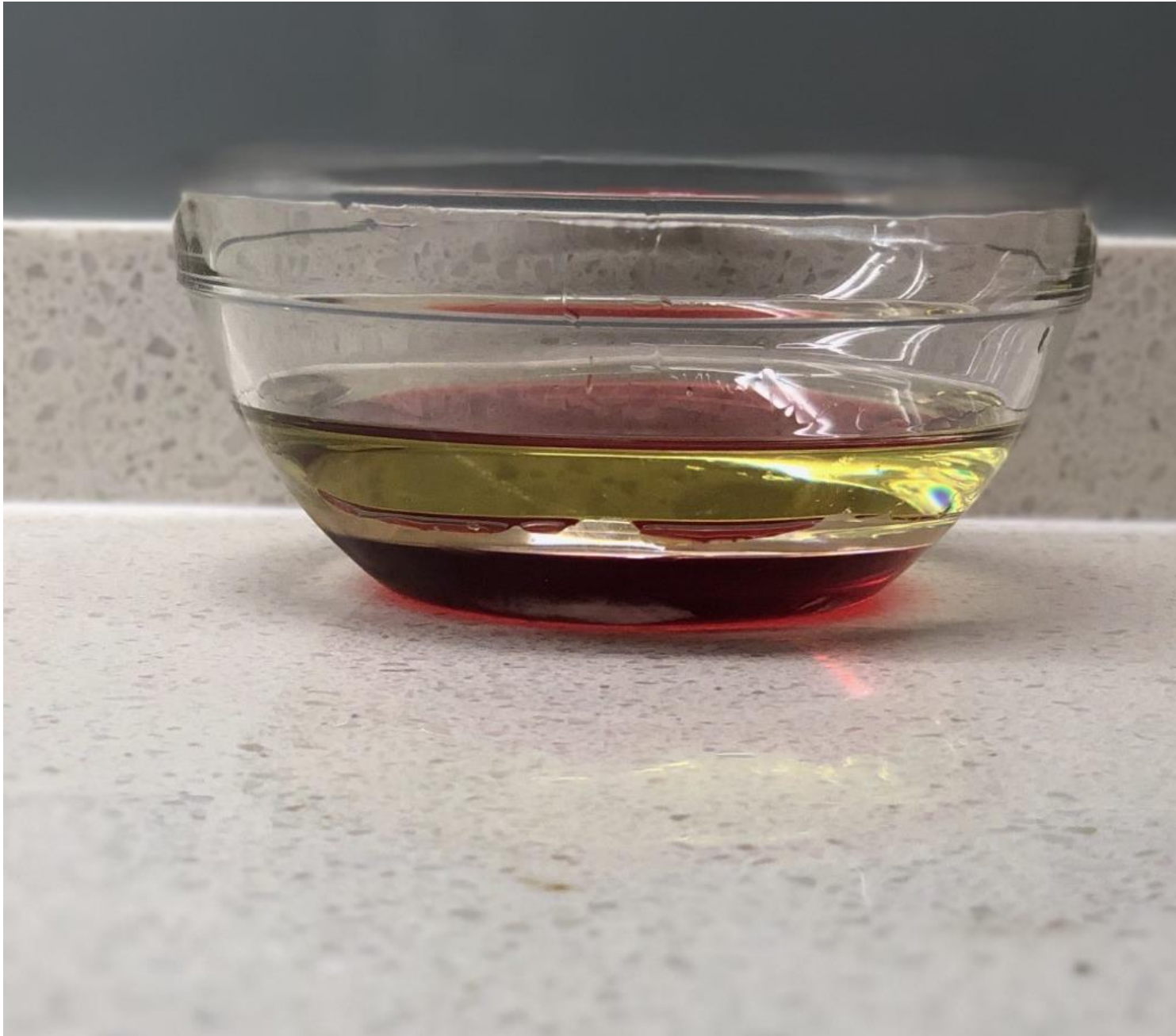
Nous avons pu réaliser ce défi car certains liquides sont **non miscibles** : ils ne se mélangent pas. C'est le cas de l'eau et de l'huile.

Quand on mélange l'eau et l'huile, on voit :

- Dans un premier temps une **émulsion** (des bulles d'huile sont entourées par l'eau)
- Puis l'huile se sépare lentement de l'eau en une couche distincte.

**La difficulté a été de faire couler avec délicatesse le sirop, afin qu'il ne se mélange pas à l'eau.**





1st test: Explain what you will do to solve this challenge **Zoom in (Ctrl+F)**

I don't have syrup at home so i use milk. I will first pour the milk (heavier), then the water and the oil (lightest)

Did you solve this challenge with this first test?  Yes  No

2nd test:

Explain what you will do this time. Is it different from your first test?

I have tried another experience: I replaced the milk by liquid soap.

Did you solve this challenge with this second test?  Yes  No

Conclusion: How did you solve the challenge?

Test 1:  
Oil and water doesn't mix together even if you mix it.(oil stay above because it is lighter.)  
Milk and water mix together. But with some time the bottom of the mixture is wither than top. Top is becoming transparent like water alone. If i had used syrup instead of milk, the syrup would go faster to the bottom because it is heavier.

Test 2  
Soap and oil have made a foam mixture.  
Water became coloured (yellow) because of the soap.

# Sivann

Challenge No. 3: Each in its place!

1st test: Explain what you will do to solve this challenge.

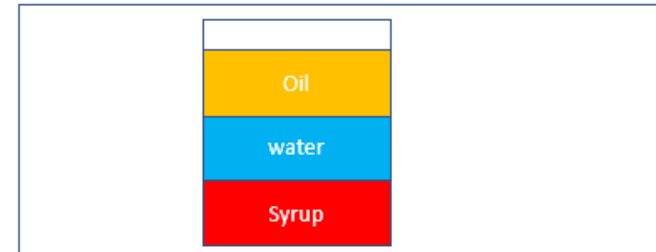
**1- Identify which liquid is the heaviest**

**Syrup is the heaviest liquid -> after is the water -> and the lightest is the oil**

**2 -feed the glass slowly from the heaviest liquid to lightest one**

2nd test:

Explain what you will do this time. Is it different from your first test?



Did you solve this challenge with this second test?  Yes  No

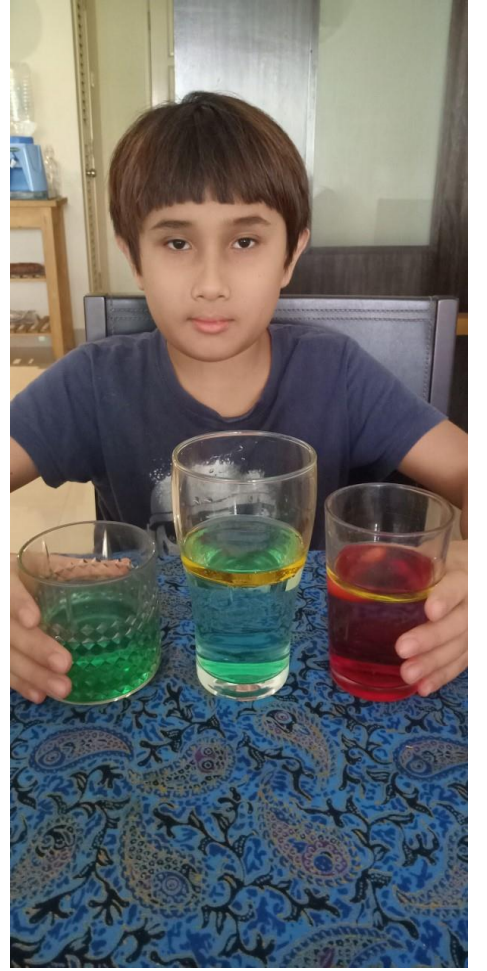
Conclusion: How did you solve the challenge?

**I solved the challenge by asking myself what liquid to put in first and it should be the heaviest.**

**I made also some research on internet to solve the challenge**

# Swann













Did you solve this challenge with this first test? Yes  No

**2nd test:**

Explain what you will do this time. Is it different from your first test?

I will do the same thing except that I will put the water slowly by inclining the glass.

Did you solve this challenge with this second test? Yes  No





















1st test: Explain what you will do to solve this challenge.

- 1 ~~sirop~~
- 1 sirop
- 2 the oil
- 3 the water

Did you solve this challenge with this first test? Yes  No

2nd test:

Explain what you will do this time. Is it different from your first test?

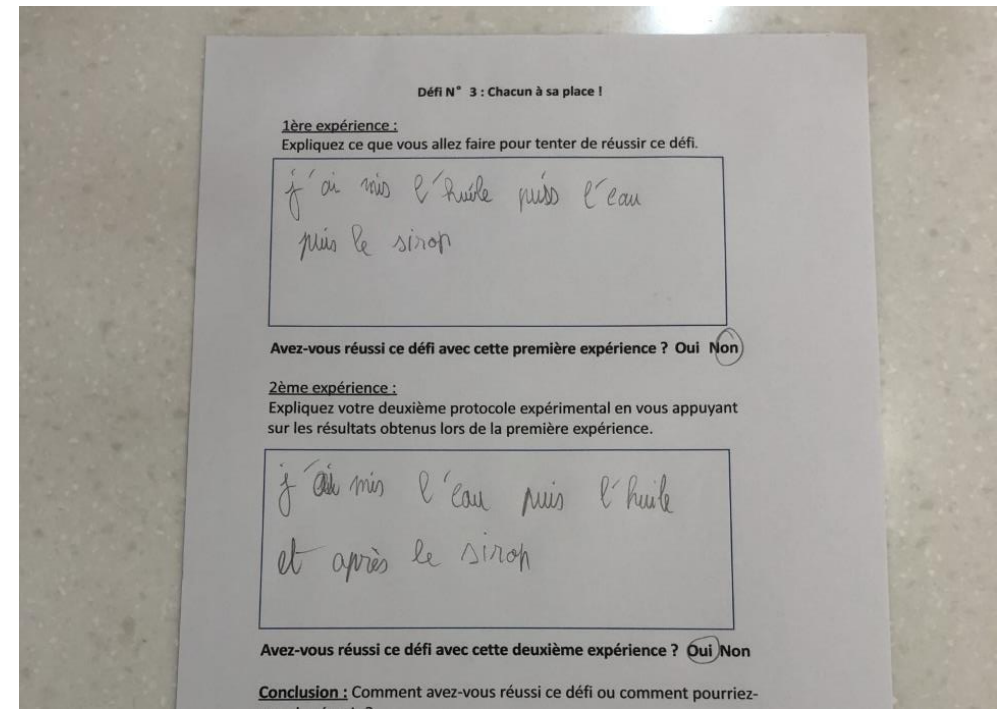
- 1 water
  - 2 the oil
  - 3 the sirop
- Yes it is different because it doesn't mix each liquid is clearly distinguished.

Did you solve this challenge with this second test? Yes  No

Conclusion: How did you solve the challenge?

- 1 the water
- 2 the oil







I will put the sirop first because its the "heaviest" then the oil and the water.

Did you solve this challenge with this first test? Yes

2nd test:

Explain what you will do this time. Is it different from you

I will put the water first then the sirop and after that

Did you solve this challenge with this second test?

Conclusion: How did you solve the challenge?

I put the water first then the sirop and at the top the oil.

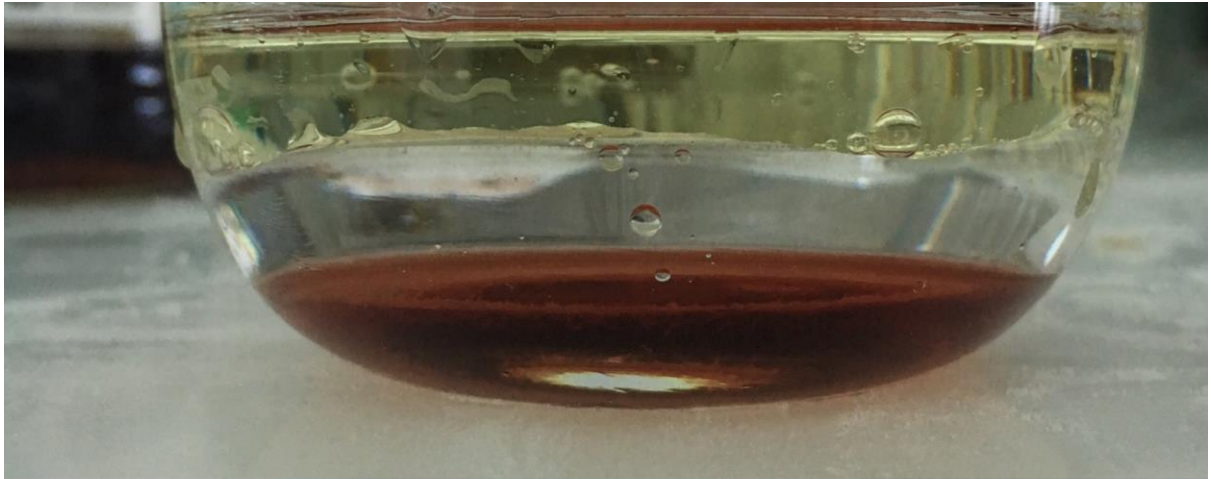
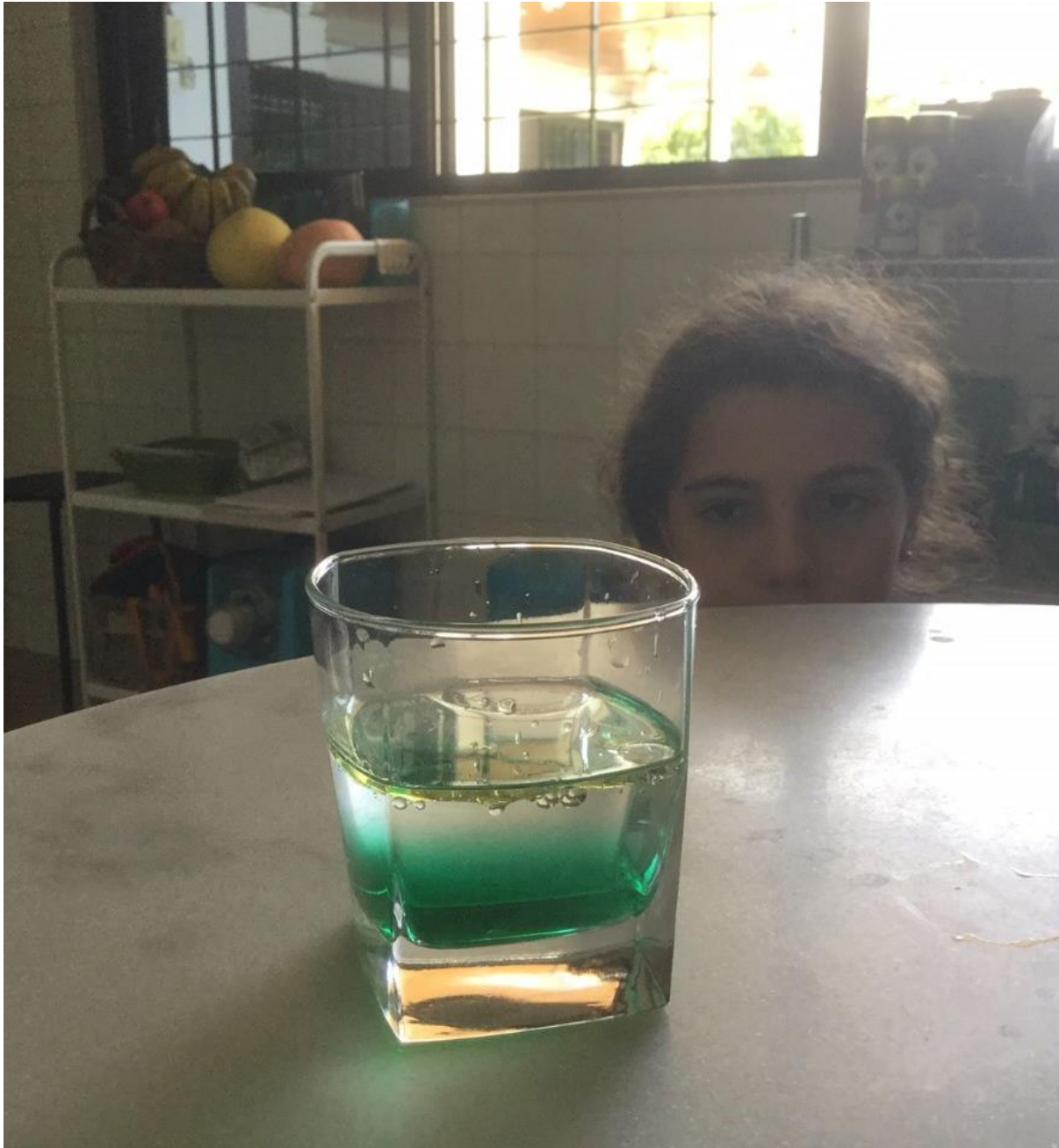
Conclusion:

oil is the lightest liquid and sirop is the heaviest.





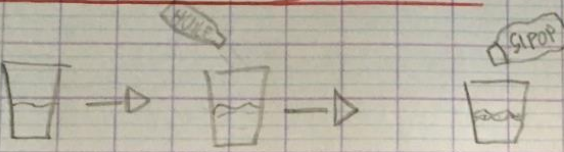








dimanche 21 juin  
sciences - semaine 3



meto de  
au dans  
rene parce  
- je pense  
c'est le  
s léger.

J'ajoute de  
l'huile car  
je pense que  
le sirop est  
plus lourd.

J'ajoute  
ensuite le  
sirop car je  
pense que  
c'est le  
plus lourd

mais avoir mis de l'eau dans un  
verre et j'ai vu qu'elle f  
a versé le sirop dans le verre avec  
l'huile. le sirop allait tout au fon  
dancer.







Mixture is the operation that consists of bringing together several components/substances and mixing them.

Mixture can be :

Coloured : when it has a colour  
 Non-coloured : when it has no colour, it is transparent.

Homogeneous : when the two components mix very well together, there is no deposit (no trace at the bottom of the cup), we cannot see the difference between the two components.  
 A homogeneous mixture is also called a SOLUTION

Heterogenous : when the two components don't mix together completely, we can see a deposit (at the bottom of the cup), we can easily see the two components.

Challenge 1 - some mixtures with water:  
 Please record the results of your experiment in a table like this :

	Coloured	Non-Coloured	homogeneous	heterogenous
oil + salt		X	X	
oil + sugar		X	X	
oil + sand		X		X
oil + oil		X		X
oil + salt	X			X
oil + sugar	X		X	

Expliquez ce que vous allez faire pour tenter de réussir ce défi. 1/12

En premier je vais mettre le sirop puis de l'huile parce que l'huile ne se mélange pas si on ne la mélange pas alors que l'eau se mélange avec le sirop. Donc on met l'eau en dernier.

Avez-vous réussi ce défi avec cette première expérience ?  Oui  Non

2ème expérience.  
 Expliquez votre deuxième protocole expérimental en vous appuyant sur les résultats obtenus lors de la première expérience.

En premier je vais mettre le sirop puis l'eau mais là l'eau se mélange avec le sirop. Et on met l'huile en dernier. Mais l'huile ne va pas se mélanger avec le sirop et l'eau.

Avez-vous réussi ce défi avec cette deuxième expérience ?  Oui  Non

## Mélanges et solutions

1. What is a mixture? (Qu'est-ce qu'un mélange?)  
 C'est quand des matières s'assemblent, mais aucune matière disparaît.

Experiment 1. Explain what you will do to try to solve this challenge. 1/12.  
 Expliquez ce que vous allez faire pour tenter de réussir ce défi.

Il va falloir mettre de l'eau chaude, parce que le sel avec l'eau chaude se fond plus vite qu'avec l'eau froide.

Did you solve this challenge with the first try?  Yes  No  
 Avez-vous réussi ce défi avec cette première expérience ?  Oui  Non

Experiment 2. Explain what you will do this time. How is it different from the first try?  
 Expliquez votre deuxième protocole expérimental en vous appuyant sur les résultats obtenus lors de la première expérience.

Il va falloir mettre de l'eau froide, ce qui met plus longtemps à fondre qu'avec de l'eau chaude.

Did you solve this challenge with the second try?  Yes  No  
 Avez-vous réussi ce défi avec cette deuxième expérience ?  Oui  Non

Conclusion : How did you solve the challenge or how did you try?  
 Conclusion : Comment avez-vous réussi ce défi ou comment pourriez-vous le réussir ?

En mettant de l'eau avec du sel ça marche très bien.

