

Topic 1: WHAT IS CHEMISTRY? Safety rules.**By the end of the lesson, you will:**

- know and understand safety rules when working in a chemical laboratory and classroom

Student surname:

Exercise 1.

№	Rules	Pictures	Translations
1	Always listen carefully to all instructions given by your chemistry teacher or lab technician before any experiment		
2	Learn all the safety rules necessary for your experiment		
3	Always wear a lab jacket and safety goggles (glasses)		
4	Wear gloves when using heat, chemicals and glassware in experiments		
5	Do not throw any chemicals		
6	Do not touch chemicals with your fingers		
7	Tie long hair		
8	Experiments over the table		
9	Do not eat, drink, smell or taste any chemical		
10	Experiments with liquid substances should be carried out at eye level		
11	Never lick a spoon		

--	--	--	--

Glossary: safety goggles, gloves, heat, glassware, fingers.

Exercise 2.

Write your own classroom rules with emoji's

Nº	Your classroom rules	Translations	Emoji
1			
2			
3			
4			
5			

Exercise 3. Experiments for the curious. What rules did you use?

Take the experience to the next lesson, if possible, make a video

“Fireworks in a glass”

You will need:

- 100 ml warm water
- 20-30 ml of vegetable oil
- 3-4 colors of food coloring, diluted in water in advance
- Plastic or glass cup - 2 pieces
- Tablespoon

Fill 2/3 of one glass with warm water

In a separate glass, add 4 tablespoons of vegetable oil and 4 drops of each food coloring.

Use a spoon to stir slowly until tiny particles form.

Pour the food coloring and oil into the first glass of warm water.

Watch the jar see what happens!

Discussion:

The oil and the water will not mix due to differences in polarity. Water is polar and will dissolve with other polar substances. However, oil is nonpolar, so they do not mix together as the water is more attracted to itself than it is to the oil and vice versa. Moreover, the water is more dense than the oil, so it will always sink below the oil and be the bottom layer. Also, the food coloring is more dense than the oil, so the droplets will also sink to the bottom in the second beaker and differences in polarity also allow them to not mix. When you add the two beakers together, the food coloring is attracted to the water and these two substances can mix

What should you know?

-formulates safety rules when working in chemical laboratory and classroom;