

Women in science

1st teaching period

1st Activity: Introduction

Time: 10'

Type of activity: initial activity

Class organisation: class work

Actions/Tasks: Teacher starts by asking students which scientists or inventors they know. Names can be collected on the blackboard or teacher may share a jamboard where students can write the names they know (example: <https://jamboard.google.com/d/1IQZ2BGQJW-f4JFi4nulUIJuxfIDJGpwQf68ZQDZMpcw/edit?usp=sharing>).

2nd Activity: Famous scientists

Time: 15'

Type of activity: video

Class organisation: individual work

Actions/Tasks: Students watch the video [Top 10 Scientists in History!](#) and do the activities of the H5P "Scientist": they should complete the name of the scientists and find the scientist who have been honoured with 2 Nobel prizes in 2 different sciences.

3rd Activity: More scientists

Time: 20'

Type of activity: H5P activity and short investigation

Class organisation: pair work

Actions/Tasks: Students should find the scientists of the grid "Find more scientist!". After that they should find information about them, what have they done?

4th Activity: Review activity and introduction

Time: 15'

Type of activity: review activity

Class organisation: class work

Actions/Tasks: Having seen the scientists' information, it is appropriate to go to the list that pupils have originally made. Are there any difference? Who are they?. Are they scientists of the same discipline? And the most important question for this scenario: how many are women? Teacher can ask how many women scientists know apart from Marie Curie, haven't they exist? In this scenario we are going to try to find out and meet them.

2nd teaching period

1st Activity: Scientists women

Time: 10'

Type of activity: introduction activity

Class organisation: class work

Actions/Tasks: Previously, teacher should think how he/she's going to organize the class in groups of five members. Each team will have a colour.

Teacher explains to students the Scenario objective: to discover European scientists women who have played an important role in history. Each of them will be a scientist, and without telling the teams to the pupils, teacher distribute one scientist to each student.

2nd Activity: Who am I?_1

Time: 15'

Type of activity: search information

Class organisation: individually

Actions/Tasks: Teacher gives a card/accreditation to each student. Accreditations or cards are named after a scientific woman, or a relevant woman to other areas of knowledge, from past times to present. Students are asked to search for information from the character of their accreditation.

3rd Activity: Five physical and chemical women discovering elements

Time: 20'

Type of activity: H5P activity.

Class organisation: individual/pair work

Actions/Tasks: These activities ("How did women contributed to our history"; "Marie Curie"; "Lise Meitner"; "Ida Noddack"; "Berta Karlik"; "Marguerite Perey"), which is done in H5P Moodle format, can serve as an example of initial activity to visualize women in the construction of knowledge, especially in the STEAM field. It has often not been easy for them to develop activities with roles assigned to men, especially in the past, nor has it been recognised that their task was important. The aim is to promote equal opportunities and reducing gender bias.

4th Activity: important scientists nowadays_introduction

Time: 5'

Type of activity: **homework**.

Class organisation: individual work

Actions/Tasks: Before finish activity Who am I?, teacher should explain the activity for next day because students need to do a previous task. They have to think of a nearby scientific woman: she may be a famous personality of the locality or the country but she may also be a person in their environment: familiar, friend, neighbour,... For the next session they must bring information about her, as they have done with the famous scientist. They can search for information, make an interview, ... It is very important to know what she has studied and how she has reached the present situation; they can also ask about the difficulties she has encountered in being women. .

5th Activity: Who are we?

Time: 10'

Type of activity: sharing

Class organisation: group

Actions/Tasks: Students gather together depending on the colour of their card and share who they are in the rest of the group.

3rd teaching period

1st Activity: Who am I?_2

Time: 10'

Type of activity: write information in a database

Class organisation: individually/group

Actions/Tasks: In the database "Historical woman in science", students must make an entry to enter a brief information from the scientific woman of his/her accreditation (last name, first name; birth date; country of birth; death date; relevant personal biography data; most relevant professional facts; image of the female scientist or related to her work;...). Collect database is a type of activity you can propose to students, in the Moodle database format or in another format, to work cooperatively with the aim of sharing information.

2nd Activity: Historical female scientists

Time: 15'

Type of activity: reading

Class organisation: individually/pair/group

Actions/Tasks: After entering the scientific woman's information from their accreditation, they will all be able to access the information they have entered between them all.

3rd Activity: Scientist women around us

Time: 20'

Type of activity: preparing an oral presentation

Class organisation: individually/pair

Actions/Tasks: With the information that students have searched for some scientific woman close to them, they must prepare a small oral exhibition in order to share the experiences of these women to the rest of their colleagues. The presentation can also be made in pairs and each pair explains the experience of two women.

4th Activity: witnesses of current female scientists

Time: 15'

Type of activity: oral presentations

Class organisation: group class

Actions/Tasks: Oral presentations by students about current female scientists. The objective of this activity is to visualize the role of women in the STEM field, to promote the presence of girls in studies in this field to decrease the gender bias.

It may be very gratifying to continue at a later teaching period so that they can see all the witnesses. Students may also be thought to record their oral presentations so they can be shared and students may watch them at home.