



(ENG) Laughing atoms

Introduction

Step 1 - Motivational Stage

Step 2 - Investigational Stage

Step 3 - Consolidation Stage

Introduction



#Online activity #Gamified learning #Teamwork #Literature
#Theatre

This activity combines theoretical definitions related to atoms and humour. The pupils are first introduced to the invention of the word "atomus", the history of theories and models, particle size and elements. Then, they use their knowledge to prepare a short skit or a joke.

Learning Objectives

- ☐ Recognize, identify abstract concept in their reality (my body and my surroundings is build up from atoms)
- ☐ Reframe scientific facts through oral expression and communication
- ☐ Recognize the importance of well-being for learning and working
- ☐ See how humour can be a way to learn, work or confront problems

ACTIVITY DETAILS

Activity Details

Connection of the activity with Art

Stand-up comedy, storytelling, making jokes



Link to local, national School Curriculum —

Chemistry General/Atoms



Equipment required —

- Internet connection
- access to a computer



Duration of activity —

45 minutes



Sources

Photo credit:

Pic. 1

Charles-Antoine Coytel (1694–1752)

The Cheerful Democritus, 1746

oil, canvas, 92.4 x 73.7 cm

private collection

Wikimedia Commons, public domain

Pic. 2

A Follower of Rembrandt

Rembrandt as Democritus Laughing, (c. 1628)

oil, copper, 22.2 x 17.1 cm

private collection

Wikimedia Commons, public domain

Pic. 3

Hendrick ter Brugghen (1588–1629)

Democritus, 1628

oil on canvas, 85.7 cm × 70 cm

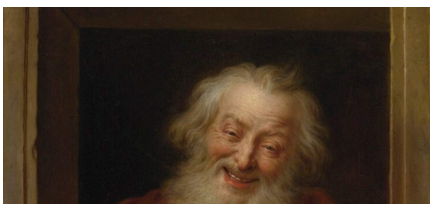
Rijksmuseum

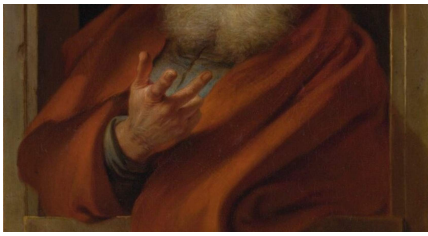
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Step 1 - Motivational Stage



You explain to pupils the "invention" of the atomic theory. Democritus (460 BC-370 BC) was a Greek philosopher, the first to suggest the existence of atoms and invent a word for it. He believed atoms were small invisible particles that build our world. His reasoning was simple: it is impossible to divide matter forever – it has to stop somewhere. Atom in Ancient Greek meant indivisible, uncuttable. His theory was more philosophical than scientific, but it influenced research up until the beginning of the 20th century, when, 2400 years later, atoms and molecules were finally proven to exist.





Pic. 1 Charles-Antoine Coypel, The Cheerful Democritus, 1746, Wikimedia Commons



Pic. 2 A Follower of Rembrandt, Rembrandt as Democritus Laughing, (c. 1628), Wikimedia Commons



Pic. 3 Hendrick ter Brugghen, Democritus, 1628, Wikimedia Commons

Although we are talking about serious scientific facts, Democritus has also proven that science can be fun. He was called a *laughing philosopher*. (Pic. 1)

Democritus' laughing habit is described in a fictional Roman novel, the so-called Letters of Hippocrates. In the philosopher's home city, his compatriots had become concerned at how he laughed at everything he came across (from funerals to political success) and concluded that he must be mad. So they summoned the most famous doctor in the world to cure him. When Hippocrates arrived, however, he soon discovered that Democritus was saner than his fellow citizens. For he alone had recognized the absurdity of human existence and was, therefore, entirely justified in laughing at it.

Show the pupils different portraits of Democritus above and invite them to comment on his facial expressions.

Step 2 - Investigational Stage



STUDENTS' TASKS

1

Task 1

You go through the structure of the general atom theory.

Task 2

You discuss with pupils:



“Does humour help at inventing and learning? What do you need for a good joke?”

Some chemistry jokes:

- *I told a chemistry joke the other day... There was no reaction.*
- *I was going to make a good chemistry joke. But all the good ones argon.*
- *-Did you hear Oxygen and Magnesium are together now?
-Yeah, everybody was like OMg!*

Task 3

You give the pupils suggestions for their jokes or skits:

Dialogue between atoms in oxygen and the atoms in lungs.

Dialogue between the nucleus and the electron (the atom is 100.000 times larger than its nucleus)

An atom picking a fight with the periodic table ...

The pupils can, of course, choose their own topics.

If possible, divide pupils into groups so that they can write together.

Task 4

Pupils present their works to their schoolmates.

Step 3 - Consolidation Stage



Before the end of the class, you discuss why some jokes are funny and connect them with the theory of atoms (to repeat scientific facts).

End of the activity

EXIT