

Suggestions to Teachers (Dalton and the atoms)

Expected results

After the lesson, the students are expected to:

1. Verify the power the Dalton's law about the multiple proportions with the examples of compounds.
2. Apply the Dalton's atomic theory in the formulation of the particle of water.
3. Write the differences between the Democritus' atomic theory and the Dalton's atomic theory.
4. Locate in the narration: a) Dalton's interpretations for the formulation of some compounds and b) the conclusions which he formulated.
5. Formulate the reasons in which the Dalton's atomic theory delayed to be accepted by the scientific community.
6. Describe the characteristics of science and the ways it develops, according to the McComas's list, based on the narration as well as the lesson activities.

About the activities of students

The proposed students' activities are indicative and they aim at the accomplishment of the above expected outcomes. Moreover, the teacher may choose some of them for the teaching process in relation to its aims, the needs of students and the available time. Finally, she/he can create her/his own activities.

About the emergence of the characteristics of science in the narration, these characteristics are quoted in the website, comprehensively (in classification of the stories by NOS).

About the locating of the characteristics of Nature of Science in the proposed activities, indicatively, we can quote the following:

A) The activity 3 concerns the characteristic of Nature of Science: a) "Science demands and relies on empirical evidence" and b) "Science has a subjective element".

B) The activity 4 concerns the characteristics of Nature of Science: a) "Science has a subjective element" and b) "Science demands and relies on empirical evidence".

C) The activity 5 concerns the characteristic of Nature of Science: "Science demands and relies on empirical evidence".

D) The activity 6 concerns the characteristic of Nature of Science: "There are historical, cultural, and social influences on science".

E) The activity 7 concerns the characteristics, which are quoted in the previous activities: 3, 4, 5 and 6.

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