Suggestions to Teachers
(Mendeleev and the Periodic System)

Expected results

After the lesson, the students are expected to:

1. Describe the Mendeleev's work about the classification of the chemical elements, based on the narration as well as the suggested electronic resources.

2. Describe the Mendeleev's classification, based on the resources in the web.

3. Locate the meaning of the classification and prediction of chemical elements to the Mendeleev's classification for the evolution of science.

4. Compare the Mendeleev's periodic table with it is accepted today.

5. Locate the reasons are contributed to the discovery of many chemical elements about 1860, based on the information provided.

6. Write a text in which is described, how science functions.

7. Locate the characteristics of the Nature of Science based on the narration as well as the lesson activities, according to the McComas's list.

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 2 concerns the characteristics of Nature of Science: a) "Science has a subjective element" and b) "Science is a highly creative endeavor".
B) The activity 3 concerns the characteristic of Nature of Science: "Knowledge production in science includes many common features and shared habits of mind".
C) The activity 4 concerns the characteristic of Nature of Science: a) "Scientific knowledge is tentative but durable" and b) "Knowledge production in science includes many common features and shared habits of mind"
D) The activity 5 concerns the characteristics of Nature of Science: a) "There are historical, cultural, and social influences on science" and b) "Science and technology impact each other, but they are not the same".
E) The activity 6 concerns the characteristic of Nature of Science: "Knowledge production in science includes many common features and shared habits of mind".

G) The activity 7 concerns the characteristics of Nature of Science, which are quoted in the activities: 2, 3, 4, 5 and 6.

Suggestions to Teachers (Mendeleev and the Periodic System) were written by Aikaterini Rizaki and Panagiotis Kokkotas with the support by the European Commission (Project 518094-LLP-1-2011-1-GR-COMENIUS-CMP) and the NKUA of Greece. This publication reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained there in.