

## Suggestions to Teachers (Lichtenberg and the electrophorus)

### Expected results

After the lesson, the students are expected to:

1. Describe the Lichtenberg's experiment of electrophorus, based on the narration as well as the proposed electronic resources.
2. Explain the production of sparks in the Lichtenberg' electrophorus.
3. Describe the specific patterns from the dust in the resin cake of the Lichtenberg's electrophorus and b) explain the way in which he interpreted them.
4. Research in the web and write a text to explain scientifically the specific patterns of the Lichtenberg's electrophorus.
5. Research in the web and write a text to describe the Wilcke's electrophorus and the Volta's electrophorus.
6. Locate in the narration and the lesson activities, the characteristics of the Nature of Science, 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 characteristic of Nature of Science: "Science demands and relies on empirical evidence".
- B) The activity 3 concerns the characteristic of Nature of Science: "Science has a subjective element".
- C) The activity 4 concerns the characteristic of Nature of Science: "Scientific knowledge is tentative but durable".
- D) The activity 5 concerns the characteristics of Nature of Science: a) "Scientific knowledge is tentative but durable", b) "Science has a subjective element" and c) "Science is a highly creative endeavor".
- E) The activity 6 concerns the characteristic of Nature of Science, which are quoted in the activities: 2, 3, 4 and 5.

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