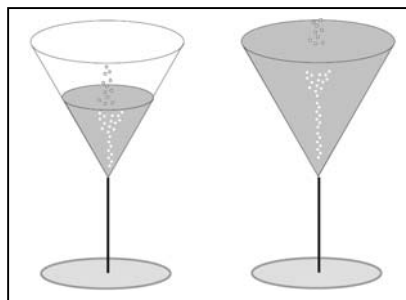


Teaching –learning module compiled by the PARSEL consortium
as part of an EC FP6 funded project (SAS6-CT-2006-042922-PARSEL) on
Popularity and Relevance of Science Education for scientific Literacy



How much Champagne could you afford?

A grade 8-9 mathematics module on
getting scientific information



Abstract:

This task needs calculation on the content of a champagne-glass and on the risk to go over the limit of the alcohol-content in the blood. It needs to deal with volume and percentage of volumes. The visualising of the calculation is made over the price of a half full or a full glas.

Sections included

1.	Student activities (for students)	Describes the scenario in more detail and the tasks the students should perform
2.	Teaching guide	Suggests a teaching approach
3.	Assessment	Gives suggested formative assessment strategies

Developer: Martin Lindner (adapted from piko (Physics in context), developing leader: Prof. Dr. Silke Mikelskis, IPN

Institution: IPN - Leibniz-Institute of Science Education

Country: Germany

Overall Objectives/Competencies: The students are expected to:

- Calculate the volume of a cylindrical pyramid.
- Estimate the difference between two levels of volume in a cylindrical pyramid.
- Calculate the result of drunken alcohol to the blood content of alcohol.
- Compare levels of different countries to the consume of alcohol.
- Work together in groups and discuss their partner results with the group.

Curriculum content: Calculation of volumes, part per Million as an use of volume-calculation.

Kind of activity: Group and classroom discussion, hands-on only as an illustration to their mathematical data.

Anticipated time: 2 lessons

This unique teaching-learning material is intended to guide the teacher towards promoting students' scientific literacy by recognising learning in 4 domains – intellectual development, the process and nature of science, personal development and social development.

Its uniqueness extends to an approach to science lessons which is designed to be popular and relevant. For this the approach is intentionally from society to science and attempts to specifically meet student learning needs.

This uniqueness is specifically exhibited by:

1. a society related and issue-based title (supported in the student guide by a scenario);
2. student-centred emphasis on scientific problem solving, encompassing the learning of a range of educational and scientific goals;
3. including socio-scientific decision making to relate the science acquired to societal needs for responsible citizenship.

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