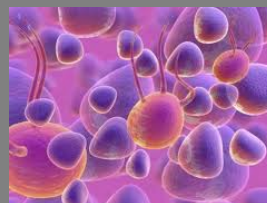


PROFILES IBSE Teaching/Learning Materials – Overview

Compiled by the PROFILES Working Group of Valahia University of Targoviste – România

SHOULD WE BE ALLOWED TO CREATE ORGANISMS?



A Module for Science Instruction – Biology – for Grades 9 to 12

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1. Abstract:

Scientific literacy constitutes a vital element enabling all citizens to play an active role in decision-making concerning scientific and technological issues.



SEVENTH FRAMEWORK PROGRAMME
5.2.2.1 – SiS-2010-2.2.1, Grant Agreement No. 266589
Supporting and coordinating actions on innovative methods in Science education:
teacher training on inquiry based teaching methods on a large scale in Europe



It is up to science teachers to promote the development of scientific knowledge and competences for analysing the consequences and problems related to rapid scientific and technological growth (specific skills, critical thinking, problem solving and decision making). Proposed activity is considered as a contribution to citizenship education, promoting critical thinking skills and specific attitudes and values which certify an active, constructive and responsible role in the evolution of society.

2. Subject: Biology; Integrated Sciences; Civic Education

3. Grade Level: Grade 9 to 12

4. Curriculum content: The Impact of Genetic Engineering in Society

5. Kind of activity: WebQuest (discussion through role-playing and decision making).

6. Anticipated Time: 4 lessons (40 to 50 minutes each)

7. Prior Learning: Some knowledge about Genetics and Genetic Engineering

8. Overall objective/Competencies:

The objective of this task is evaluating the impact of different applications of genetic engineering on our society, with the aim of deciding on the attribution, or not, of a large funding for research in this field. For that, students are expected to:

- Search for information on specific websites;
- Analyse information concerning their initial questions;
- Write an individual report where they present their decisions and their arguments;
- Work in group to make a decision concerning attribution of a funding for research in the field;
- Present their decision to the class;
- Defend their ideas and discuss other's ideas and arguments.



Sections		
1.	Students Activities	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

This teaching/learning material is intended to guide the teacher towards promoting students' scientific literacy by recognising learning in 4 domains: intellectual development, 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.

The approach starts from understanding the current needs of society, promotion of Science for society, but takes into account the student's desire of knowledge.

This uniqueness is specifically exhibited by:

1. Analysis of current problems of society - Student Guide suggests problems in Section Introduction / task;
2. Student-centred emphasis on scientific problem solving, encompassing the learnign of a range of educational and scientific goals - Student Guide proposes an original way of analysis and conclusion of the trialsections and Role Play;
3. Socio-scientific decision making in close relation to the knowledge of students, and responsible citizenship principles.

Acknowledgement:

These materials are taken from the Teaching-Learning Materials Tool compiled by the PARSEL Consortium (Steller și Bolte, 2007) as part of the EC FP6 funded PARSEL Project (SAS6-CT-2006-042922-PARSEL) and adapted by the UVT-PROFILES Working Group – Member of the PROFILES Consortium. For further information see: <http://www.parsel.uni-kiel.de/cms/index.php?id=modules>



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