

## PROFILES IBSE Learning Module

### Introduction



A grade 10 Science (Biology) Module on Reproduction

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### Abstract

This set of activities allows students to address a current problem in Romania, namely infertility in young couples. Students should investigate the case of a young couple, who are unable to conceive a child, despite attempts over a year. Those activities give students the opportunity to investigate this case in successive stages step by step.

In the first stage students will study the anatomy and physiology of the human reproductive system, using various sources of information. The information collected in this first stage represents the bases on that it will be built the other stages of the investigation. At this stage, the students will address the composition of the human reproductive system, its operation and issues of female ovarian cycle.

In the second stage of the activity, the students will explore issues such as conception, intrauterine development and rules to be observed by prospective parents to have a healthy baby. The students will gather information from the manual, anatomy atlas and suggested web sites, in order to better understand those issues.

The third stage allows students to investigate the causes of male and female infertility, visiting the proposed sites. Students will present the most important causes of infertility linking them to the data collected in the third stage.

In the fourth part, the students assume the role of experts (doctor, biologist, priest, human rights lawyer) to discuss the couple opportunity with the in-vitro fertilization technique.

Students will work in groups of four and will have to present substantiated answers using information collected from the indicated web sites. Finally, each group will present to the class the results of their teamwork: well argued response to the couple related to fertility problems.

Sections		
1.	Student 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
4.	Teacher notes	Provides additional information about Reproduction

**Acknowledgement:**

This module has been developed in the frame of the Continuous Professional Development Programme organized in the frame of PROFILES project, by “Valahia” University Târgoviște. For more information, please consult the local PROFILES website: <http://profiles.ssai.valahia.ro>

**Overall competencies:** The students are expected to learn to be capable of:

- collecting specific information from the proposed web sites;
- analyzing selected information in relation to proposed questions;
- describing the anatomy and physiology of the human reproductive system;
- identifying possible causes of infertility of a couple;
- correlating compliance of certain rules by future parents regarding normal intrauterine development;
- exploring the possibilities of a couple - with fertility problems - to have a baby.

**Curriculum content:** Reproduction

**Kind of activity:** Comparison of male and female reproductive system anatomy and physiology. Research the causes of human infertility. Debate the pros and cons of in-vitro fertilization for the couple.

**Anticipated time:** 4 lessons

**Prior knowledge:** Basic knowledge related to male and female reproductive systems

This unique teaching-learning material is intended to guide the teacher towards promoting students' scientific literacy by recognizing 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 follow a 3 stage model. For this the approach is intentionally from society to science and attempts to specifically meet student learning needs.

This uniqueness is specifically exhibited by:

- a motivational, society-related and issue-based title (supported in the student guide by a motivational, socio-scientific, real life scenario);
- forming a bridge from the scenario to the scientific learning to be undertaken;
- student-centred emphasis on scientific problem solving, encompassing the learning of a range of educational and scientific goals;
- utilizing the new science by including in socio-scientific decision making, to relate the science acquired to societal needs for responsible citizenship.