

## PROFILES IBSE Learning Module

### Teaching Guide



### Suggestions and learning outcomes

This project allows students to learn about:

- a) Particularities of the human reproductive system;
- b) Intrauterine development of the human being;
- c) A sterile couple possibilities to conceive a child.

At the end of lesson 1, it is expected that students will be able to:

- Compare the anatomy of male and female reproductive systems;
- Explain how the human reproductive system functions;
- Describe the ovarian cycle stages;
- Present the role of sex hormones in fertility.

At the end of lesson 1, it is expected that students will be able to:

- Explain the in-vivo conception of a child;
- Recognize the human embryonic development stages;
- Develop a set of rules to be followed by future parents in order to have a healthy child.

At the end of lesson 3, it is expected that students will be able to:

- Compare the male and female fertility periods;
- Identify the male and female infertility causes;
- Relate health problems during puberty with the couple current conceiving failure.

At the end of lesson 4 is expected that students will be able to:

- Define IVF;
- Describe the steps of this technique;

- Cooperate in teams in order to determine the best solution for the couple;
- Provide objective and clear results.

## Suggested teaching strategy

1. This project is based on students' knowledge in the field and takes advantage of students' interest in this subject, enhanced by the media.
2. Part 1 is a human anatomy and physiology lesson in which students become teachers themselves, by presenting the found information to the whole class.
3. In lesson 2, the students study human intrauterine development while guided by a set of specific questions. They also aim to develop a set of rules that must be followed by future parents, in order to have a healthy baby.
4. In lesson 3, the students investigate possible causes of couple infertility, investigating all male and female matters. Again students are guided by a set of specific questions, but they come up with their own suggestions.
5. In lesson 4, the students work in groups and assume the role of experts to debate the correctness of the decision that the young couple has to use in vitro fertilization. The expert group is composed of a doctor, a biologist, a priest and a human rights lawyer. Each expert will present its own pros and cons of this practice.

## Achieving the Competencies

<b>Competence</b>	<b>How it is acquired</b>
1. Tactfulness to describe the human anatomy and physiology reproductive system	- it is achieved by the students in strong relation to the knowledge that students have already gained on this subject, but it can be deeply developed in the first part of the Module.
2. Deftness to understand certain rules for future parents in the situation to have a normal intrauterine development	- it is achieved in the second part of the students' work, when the teacher is able to notice how well it is clear, by observing the students' notes (second part of the Module).
3. Cleverness to identify possible causes of a couple infertility	- it is achieved depending on the students' curiosity and specific investigative spirit of their age (third part of the Module).
4. Cleverness to analyze the couple possibilities with fertility problems, in order to have a baby	- it is achieved in the last part of the Module, where the students assume their role of experts. The teacher will note the proposed students' arguments and then guide them on how to debate the pros and cons found for the decision to resort to in-vitro fertilization.
5. Ability to find specific information in the suggested websites	- it is achieved throughout their investigation activities whereas students often turn to the proposed web sites.
6. Ability to analyze the selected information in relation to the proposed questions	- it is achieved throughout the work done by the students, in order to move to the next level of investigation.

## Other considerations

It is strongly recommended to be also consulted the following informative sources/links:

1. Stelică Ene, Gheorghe Gămănesci, Gheorghică Sandu, *Biologie - manual pentru clasa a X-a*, Editura LVS Crepuscul, București, 2005
2. <http://www.romedic.ro/cauzele-infertilitatii-la-barbati-0P782>
3. <http://www.scribd.com/doc/57858029/2/FECUNDA%C5%A2IE-SEGMENTARE-MIGRARE-NIDARE>
4. <http://www.romedic.ro/clasificare-lista-completa-de-cauze-de-infertilitate-feminina-0P19046>
5. <http://www.scrigroup.com/sanatate/Fecundatia-migratia-nidatia-Or74293.php>
6. <http://www.csid.ro/family/fertilizarea-in-vitro-are-30-sanse-de-succes-4341346/>