

POLI ESCOLA SUPERIOR EDUCAÇÃO COMUNICAÇÃO DESPORTO TÉCNICO GUARDA	SUBJECT DESCRIPTION	MODELO PED.012.03
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<i>Course</i>	Master in Pre-School and Primary School Teaching					
<i>Subject</i>	Didactics of Environmental Study in Pre-School and Primary School					
<i>Academic year</i>	2023-24	<i>Curricular year</i>	1st	<i>Study period</i>	2nd semester	
<i>Type of subject</i>	Compulsory	<i>Student workload (H)</i>	Total: 189	Contact: 90	<i>ECTS</i>	7
<i>Professor(s)</i>	Maria Eduarda Revés Roque da Cunha Ferreira/Urbana Bolota Cordeiro/ Jorge Alberto Pereira da Fonseca Trindade/Ana Lopes					
<input checked="" type="checkbox"/> <i>Area/Group Coordinator</i> <input type="checkbox"/> <i>Head of Department</i>			Maria Eduarda Revés Roque da Cunha Ferreira <i>(select)</i>			

PLANNED SUBJECT DESCRIPTION

1. LEARNING OBJECTIVES

Understand the role of Science Didactics;

Understand the importance of a proper science education, to mobilize for an innovative intervention in science teaching;

Understand the organization and management of the "Knowledge of the World" curriculum guidelines according to educational contexts and children's characteristics;

Understand the organization and management of essential learning|articulation with the students' profile, of Environmental Studies according to educational contexts;

Deepen pedagogical approach of science;

Promoting skills for organizing and managing the curriculum guidelines of the World Knowledge and Environmental Studies as a function of educational contexts and the needs of learners;

Develop active methodologies, incorporating different knowledge's;

Promote skills for interdisciplinary curricular planning;

Analyze procedures for collecting direct and indirect data and of the relationship with the physical and social environment;

To promote reflection on interactions between science, technology, society and environment;

Encourage the organization and coordination of educational projects in science;

Develop an attitude of interest and appreciation for science and its teaching.

2. PROGRAMME

- Nature of teaching: concepts and domains
- Curriculum Guidelines, Programme, Curriculum and Essential Learning of Knowledge of the World in Pre-school and Primary School

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- Knowledge, skills and attitudes expressed in the essential learning of the Environmental Studies program
- Strategic Teaching Actions Oriented to the Students' Profile, from the Environmental Studies program
- Guidelines and objectives expressed in the curriculum guidelines for preschool education and in the programme of the 1st cycle of basic education and its national curriculum
- Teaching and learning strategies
- Social constructivism and science learning
- Science - Technology - Society – Environment perspective
- Exploration of textbooks and other teaching resources in teaching-learning of science
- Educational projects in science
- Proposals for teaching-didactic practices focused on the "Study of the Environment" and "Knowledge of the World"

3. COHERENCE BETWEEN PROGRAMME AND OBJECTIVES

The purpose of this Unit is to provide fundamental knowledge, both in terms of conceptual and methodological nature of pedagogical / didactic to contribute effectively to design and plan the content knowledge of the World Study and Environmental Medium at the Preschool and 1st Cycle of Basic Education, to improve teaching practices. It seeks to develop skills aimed at promoting the innovative, reflective, and investigative teaching-learning process.

4. MAIN BIBLIOGRAPHY

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- Carvalho, G. S., & Freitas, M. L. V. (2010). *Metodologia do Estudo do Meio*. Angola: Plural Editores.
- Centro de Divulgação Científica e Cultural – USP (2005). *Ensinar as Ciências na Escola da educação infantil à quarta série*. São Carlos, Brasil.
- Cooper, H. (2002): *Didáctica en la Historia en la educación infantil y primaria*. Madrid: Morata.
- Darling Hammond, L. et al (2015). *Powerful learning: What we know about teaching for understanding*, John Wiley & Sons.
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- Gonzalez, X. M. S. (1999). *Didáctica de la Geografía. Problemas sociale sy conocimiento del medio*, Ediciones del Serbal, Barcelona, 2ª edição.
- Martins, I.P., Veiga, L., Teixeira, F, Tenreiro-Vieira; C; Vieira, R., Rodrigues, A.V., Couceiro, F. (2006) *Educação em ciências e ensino experimental no 1º ciclo EB*. Lisboa: Ministério da Educação – Direção Geral de Inovação e Desenvolvimento Curricular (ME – DGIDC).
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Martins, I.P., Veiga, L., Teixeira, F, Tenreiro-Vieira; C; Vieira, R., Rodrigues, A.V., Couceiro, F., Pereira, S. (2009). *Despertar para a ciência: actividades dos 3 aos 6 anos*. Lisboa: ME – DGIDC.

Monk, M., Dillon, J. (1996). *Learning to Teach Science - Activities for Student Teachers and Mentors*. The Falmer Press: London.

Prats, J. et al. (2011). *Didáctica de La Geografía y la Historia*, Ediciones Grao, Barcelona.

Thouin, M. (2008). *Ensinar ciências e a tecnologia nos ensinos pré-escolar e básico 1º Ciclo*. Instituto Piaget, Horizontes Pedagógicos, Lisboa.

Trindade, J. F. (2013). O valor do ensino experimental em ciências. In Trindade, J.F., Zenóbio, S.M. e Jerônimo, F. (Editores). *A Experimentação e as TIC no Ensino das Ciências Exatas*. Bubok Publishing, Brasil: Natal.2013.

Vieira, R.M. (2011). *A educação em ciências com orientação CTS*. Areal

Ward, H.; Roden, J.; Hewlett, C.; Foreman, J. (2010). *Ensino de ciências*, 2.ª ed. Porto Alegre: Artmed

São também utilizados outros recursos, nomeadamente: Artigos de investigação, *Software* educativo e recursos online.

5. TEACHING METHODOLOGIES (INCLUDING EVALUATION)

With the aim to develop in our students the capacity for analysis and reflection, as well as attempting to integrate theoretical knowledge in the teaching-learning process, we will use various methodologies, including interactive lessons with questioning of conceptual and theoretical aspects, individual and group work, encouraging individual and collective research and reading the documentation available on the proposed content. Will used other learning aids, such as schemas, multimedia, texts from different sources for reflection and discussion.

Assessment is a process with a formative dimension, agreed with the students. It is defined operationally through the following elements: active participation in classes, preparation of group reports, construction of a teaching script or a research-action project guided by the professor, carried out individually/in groups, with an oral presentation and discussion. Each professor's assessment is proportional to the teaching load.

The assessment of the course, agreed with the students, covers the following parameters: group work on an action plan (40%), a written test (50%) and attendance (10%).

6. COHERENCE BETWEEN TEACHING METHODOLOGIES AND OBJECTIVES

The program of this curricular unit focuses on developing the conceptual and methodological, of a pedagogical/didactic nature, so that they can contribute effectively to designing didactic strategies, in the classroom and outside the classroom, for lessons/teaching unit(s)/activities to be developed with children. At the same time, to develop the ability to establish links between the knowledge inherent in the didactics of environmental studies at different levels, namely at interdisciplinary, transdisciplinary, and contextual levels. These contents aim to deepen the understanding of didactic and content knowledge, with an emphasis on experimentally-based environmental studies teaching.

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7. ATTENDANCE

Attendance at lessons is compulsory.

8. CONTACTS AND OFFICE HOURS

eroque@ipg.pt

Wednesday: 14:30h-17:30h

ubolota@ipg.pt

3ª feira - 13:30h – 14:30h e 5ª feira - 13h -15h

jtrindade.ipg@gmail.com

DATE

19 de fevereiro de 2024

SIGNATURES

Professor(s), Area/Group Coordinator or Head of Department signatures

Professor

(signature)

Professor

(signature)

Professor

(signature)