Syllabus

Descrizione corso

Titolo insegnamento	OFA „Competenza logico-matematica”
Codice insegnamento	400035
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	NN
Lingua	Tedesco
Corso di Studio	Corso di laurea magistrale a ciclo unico in Scienze della Formazione primaria - sezione tedesca
Altri Corsi di Studio (mutuati)	
Docenti	dr. Alexander Ebner, Alexander.Ebner@unibz.it https://www.unibz.it/en/faculties/education/academic-staff/person/55429
Assistente	
Semestre	Primo semestre
Anno/i di corso	1
CFU	0
Ore didattica frontale	16
Ore di laboratorio	0
Ore di studio individuale	0
Ore di ricevimento previste	0
Sintesi contenuti	The course comprises four four-hour face-to-face workshops on logical-mathematical topics. Problem-solving activities in small groups, joint mathematical discussions and the use of analogue and digital teaching materials are planned.
Argomenti dell'insegnamento	The course content includes the representation of natural numbers, an in-depth examination of the properties of arithmetic operations and an introduction to basic algebraic concepts. In addition, various strategies of mental arithmetic and written

	arithmetic are covered. The aim is to develop conscious, flexible and efficient calculation methods. Part of the activities is dedicated to the investigation of objects in plane and space as well as to the acquisition of basic geometric knowledge. In addition, mathematical problem-solving strategies are deepened, whereby different solutions are explored, compared with each other and reflected on together. Other content concerns the acquisition, ordering, representation and interpretation of data as well as fundamental aspects of logic and mathematical argumentation. These are intended to support participants in formulating hypotheses, justifying their own decisions and developing clear, conclusive mathematical thinking.
Parole chiave	Numbers, arithmetic operations, written calculations and mental arithmetic, geometric shapes, problem-solving, data representation, logical reasoning and argumentation.
Prerequisiti	
Insegnamenti propedeutici	
Modalità di insegnamento	In-person attendance, work in small groups.
Obbligo di frequenza	In accordance with the regulation
Obiettivi formativi specifici e risultati di apprendimento attesi	Knowledge and Understanding: - Identifying the nature of the problem. - Recognizing an appropriate method to solving it. - Knowledge of the relevant mathematical laws and formulas. Applying knowledge and understanding: - Execute the solution by following a logical sequence of individual steps. Judgement: - Correct interpretation of the solutions and verification of their validity. Communication: - Present the solutions developed using precise technical language. Learning Strategies: - Generalize specific problems and identify connections to similar problems that require similar solutions.

	- Independently research and evaluate additional literature and materials.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	
Modalità di esame	Written assignment
Criteri di valutazione	Understanding the task, knowledge of the relevant arithmetic laws and formulas, an effective solution strategy and logically consistent execution of the individual steps, correct interpretation of the solutions, and checking whether they are reasonable.
Bibliografia obbligatoria	Jan Boesten Die Mathe-Knobel-Kartei: Fermi-Aufgaben, Klasse 3-6 Open-ended problems in three levels of difficulty with solution guides
Bibliografia facoltativa	
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Istruzione di qualità