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DG 4 - Reconceptualizing the mathematics curriculum

Key issues in the Portuguese matematics curriculum (grades 1-9) recently reajusted

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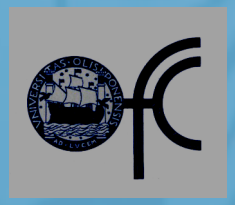
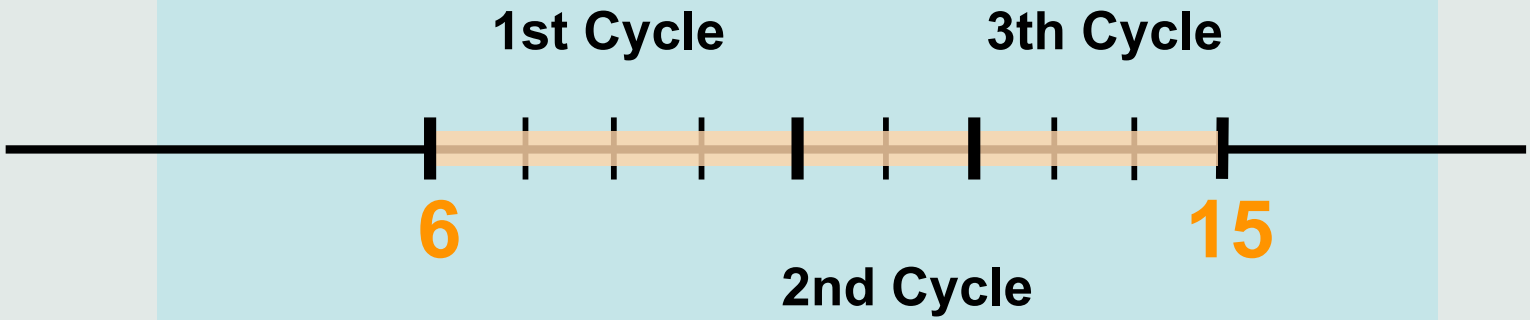


Compulsory education in Portugal



The Portuguese school system

Articulation

Clarification

Actualization

The curriculum readjustment
— underlying main purposes

Articulation

Clarification

Actualization

Curriculum structure

Global programatics orientations

- Aims
- General objectives

of math teaching

- Math themes
- ‘Capacidades transversais’
- Metodological orientations
- Curricular planing
- Assessement

Programatics Orientations by cycle

- 1th cycle
- 2nd cycle
- 3rd cycle

Aims of mathematics teaching

Promover "uma formação que permita aos alunos

compreender e utilizar a Matemática (...)

Understanding and using

uma visão adequada da Matemática e da activi-

dade matemática, bem como o **reconhecimento do**

seu contributo para o desenvolvimento científico e

Vision and valuing

tecnológico e da sua importância cultural e social (...)

Self confidence and positive attitudes

uma **relação positiva** com a disciplina e a

confiança nas suas capacidades pessoais para

trabalhar com ela."

Aims of mathematics teaching

a) To promote and develop in the students the **information**, **knowledge and experience** in mathematics and their hability to its integration and using in varied contexts

b) To develop **positive attitudes** towards mathematics a the disposition to **valuing** this science

Understanding and using

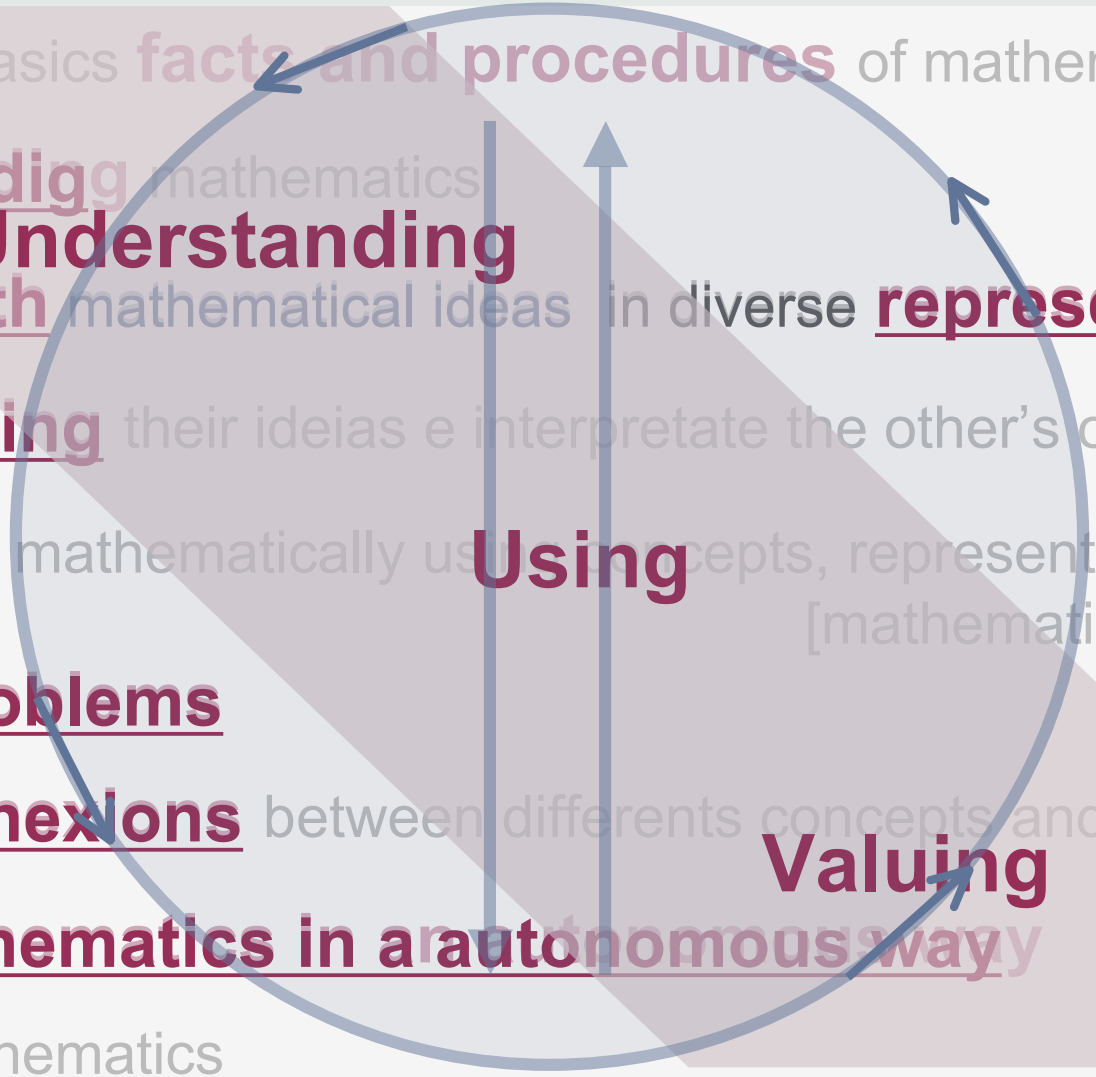
Vision and valuing

Self confidence and positive attitudes

General objectives of mathematics teaching

Understanding • Using • valuing

- **Knowing** basics **facts and procedures** of mathematics
- **Understanding** mathematics
- **Dealing with** mathematical ideas in diverse **representations**
- **Comunicating** their ideias e interpretate the other's ones
- **Reasoning** mathematically using concepts, representations, an [mathematical procedures
- **Solving problems**
- **Making conexions** between differents concepts and relations...
- **Doing mathematics in a autonomous way**
- **Valuing** mathematics



Mathematical themes and 'capacities'

Numbers and Operations

Geometry

Álgebra

Data analysis

Problem solving

Mathematical reasoning

Mathematical comunication

Teaching main purpose

Numbers and Operations	**Number sense**
Geometry	**Spacial sense and visualization**
Álgebra	**Algebraic thinking**
Data analysis	**Handling data and interpertating**

Methodological general orientations

Diversifying diverse tasks

to adquire/develop

to practice/consolidate

to aplicate/mobilize

Diversifying contexts and materials

(mathematical and non-mathematical)

Diversifying the ways in comunicating and interacting in the classroom

Methodological general orientations

Diversifying diverse tasks

to adquire/develop

to practice/consolidate

to aplicate/mobilize

Problem solving, Reasoning and Comunication

Conexions

Representations

Mental computation