

The CCRLS for Mathematics Guidebook

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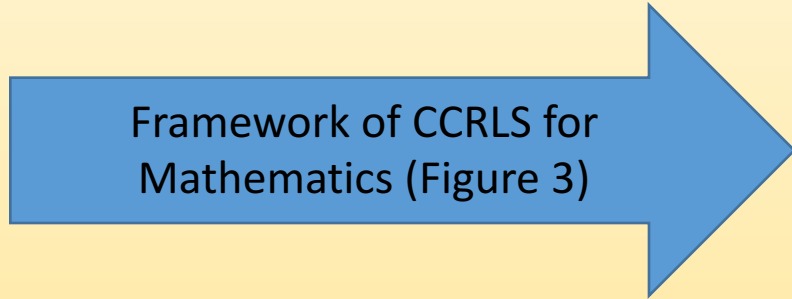
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Introduction to the CCRLS for Mathematics

- Purpose of the SEAMEO CCRLS project
- Aim of CCRLS for Mathematics
- Emphasis of CCRLS and the ASEAN 7 priority areas
- CCRLS was developed based on the
 - nature of mathematics,
 - 21st century skills based on competency (OECD, 2005)
 - 17 sustainable goals
 - idea of creating a harmonious ASEAN society

Framework of CCRLS for Mathematics



Emphasis of context in the learning mathematics

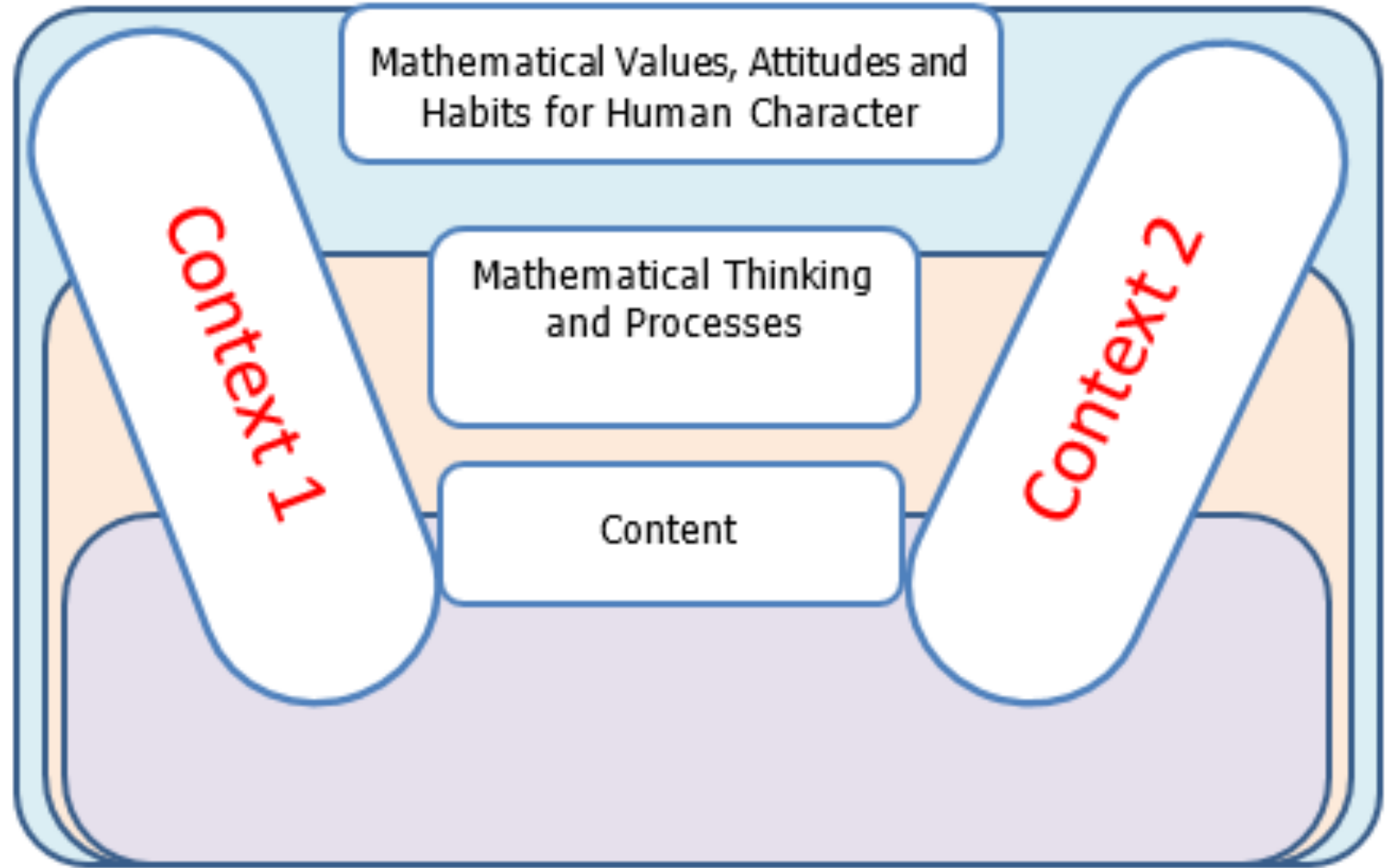
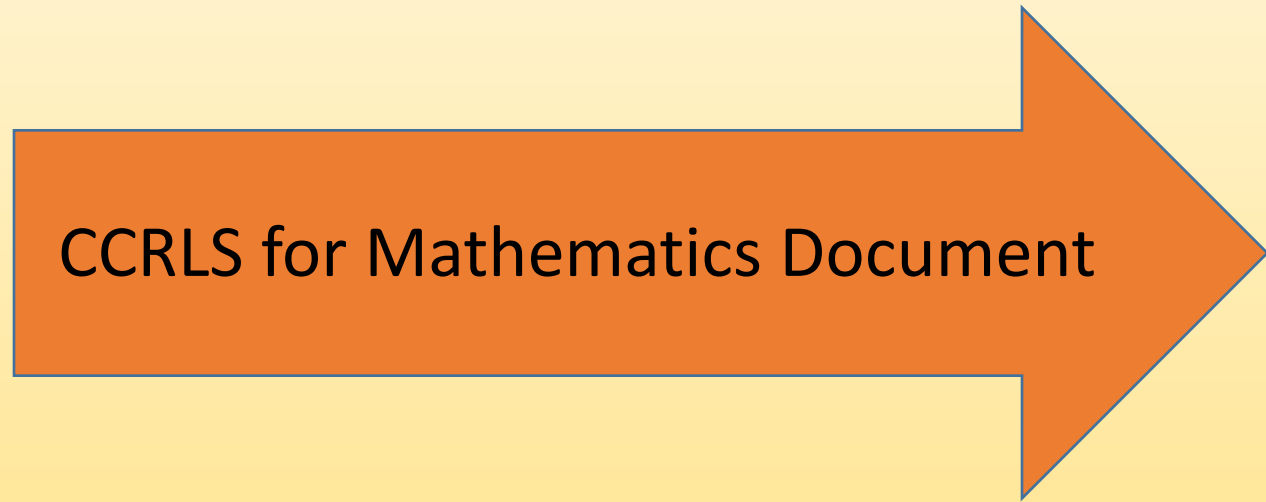


Figure 4: Interlinking of the three components with the context

SEA-BES CCRLS for Mathematics



CCRLS for Mathematics Document

Invitation to contribute in the guidebook project for CCRLS for Mathematics

- Do not explain the CCRLS itself
- Every country has its own national curriculum standards with their unique interpretation of the content.
- This guidebook emphasises in helping the users in understanding the learning standards **through rich tasks and discussions.**
- The expected users and readers of the guidebook : curriculum developers, **teacher educators**, researchers, textbook authors and **teachers.**

Impact:

- Clear understanding of the selected learning standards, particularly by the teacher educators and teachers:
- Bring about effective teaching and **optimise student learning** of mathematics

Learning standards:

- concise, written descriptions of what students are expected to know and be able to do at a specific age of their education
- Standards should help teachers set targets and monitor achievement and develop programs that support and improve student learning.

Example:

- The learning standards used in this example are about fractions, based on **Numbers and Operations** in K1 (key stage 1)- as in the coding
- and **Extention of Numbers and Operations** in K2 of the CCRLS.

Coding of CCRLS for
Mathematics

Source of reference:

- CCRLS for mathematics
- Understand the flow and layout of the document (with codings)
- 3 key stages, each key stage has 4 strands (12 strands)
- Each strand has several topics
- Each topics has a set of standards.

Where to start your writing?

- Refer to CCRLS for mathematics document
- Identify your strand in the key stage , the topic, then narrow down to the standard
(refer to coding in file 1 or slide #9)
- Read through the chosen learning standard. What are the key ideas in the learning standards that a teacher/teacher educator/user need to know/understand?

Your task:

- How to help teachers/educators understand the selected learning standards?
- Through 3 ways of approach:
 - highlight misconception
 - based on previously learned knowledge
 - through explaining
- The approach is done through creating situations with rich questions and discussion to raise teachers'/users' awareness, and understanding.

How to design the task?

- Use hand-outs with [Examples](#) as reference
- K1NO9-1
 - What is the meaning of fractions?
 - Use of half, a quarter of ...
 - Count a quarter, two quarters, three quarters
 - Compare simple fractions

What is the meaning of fractions?

- What is the understanding of teachers/teacher educators about fractions?
- Also considering the ways to help the teachers/teacher educators/users through:
 - How do you introduce the meaning?
 - Using Diagrams, concrete objects, or other ways?
 - If using diagrams,
 - common errors used by teachers
 - what questions /discussion that lead to learn the meaning?

3 ways to approach the task:

- Type A misconception
- Type B knowledge previously learnt
- Type C Explaining

Appendices:

- CCRLS for mathematics
- Coding of CCRLS Mathematics
- Examples of tasks as reference
- List of contributors

Expected work dateline:

1. December 2017 - Summary of your intent/proposal and confirmation
2. February 2018 - Submission
3. April 2018 - Finish editing

- Submit tasks proposal to:

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