

METODE PEMBELAJARAN MATEMATIKA



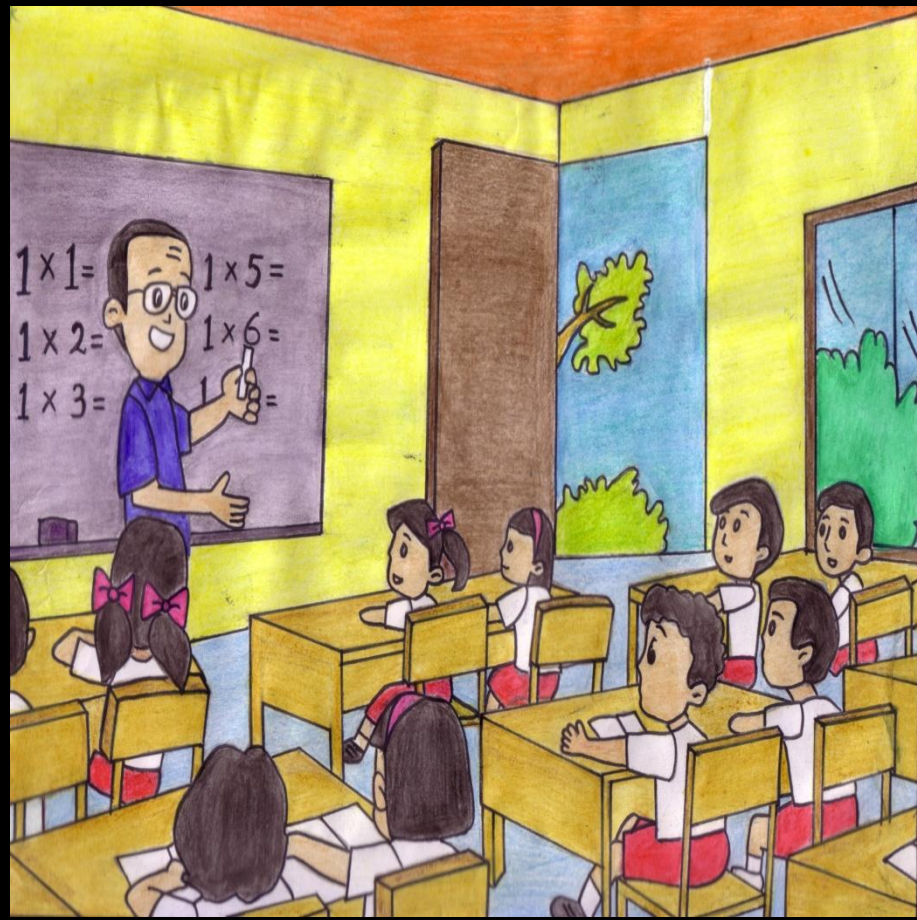
**REALISTIC MATHEMATICS EDUCATION (RME)
&
PENDIDIKAN MATEMATIKA REALISTIK
INDONESIA (PMRI)**

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A



B





PERUBAHAN PARADIGMA

Behaviorism → Constructivism

Teacher Centered → Student Centered

PENDEKATAN PEMBELAJARAN BARU

PBL

IL

CTL

CL

RME

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1

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2

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3

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4

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BACKGROUND (Freudenthal)

Each individual discovers mathematical structures in its own living environment and creates a personal concept of mathematics

Mathematics must be connected to reality, stay close to children and be relevant to society

“ Mathematics is a human activity ”

Freudenthal Institute
for Science and Mathematics Education
department of Natural Sciences

Universiteit Utrecht





3 PRINCIPLES OF RME

❖ Guided Reinvention

❖ Didactical Phenomenology

❖ Emergent Modeling





5 CHARACTERISTICS OF RME

- ❖ The use of context
- ❖ The use of model
- ❖ The use of student's own production
- ❖ Interactivity
- ❖ Intertwinement

Dutch Contexts



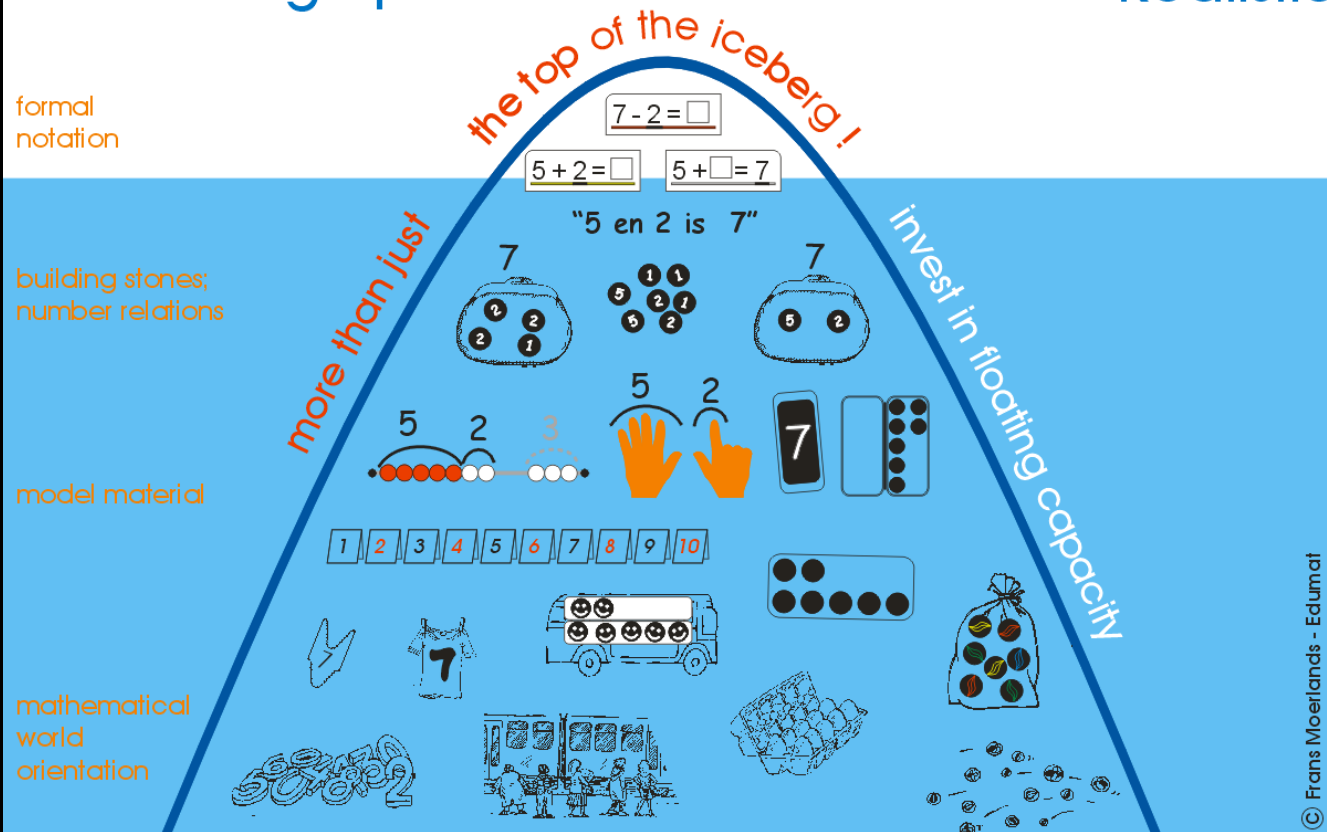
Indonesian Contexts



ICE BERG (Gravemeijer)

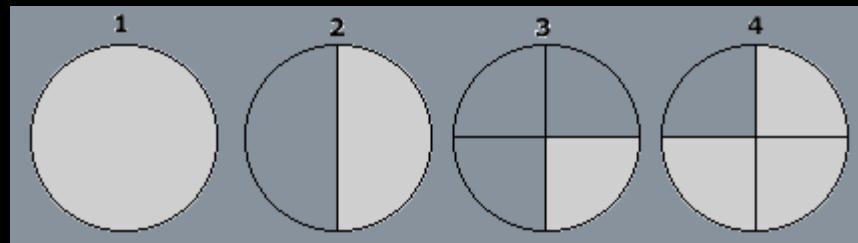
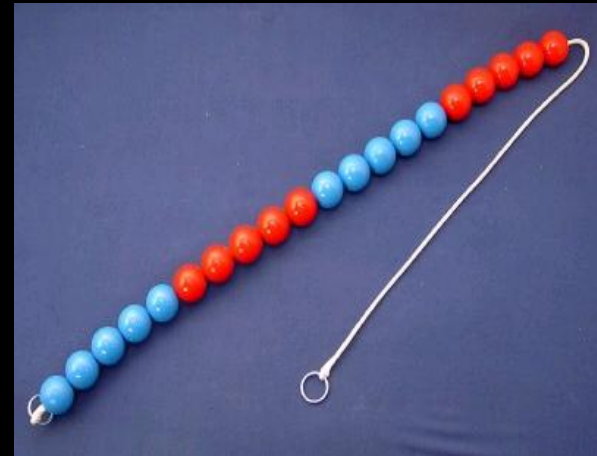
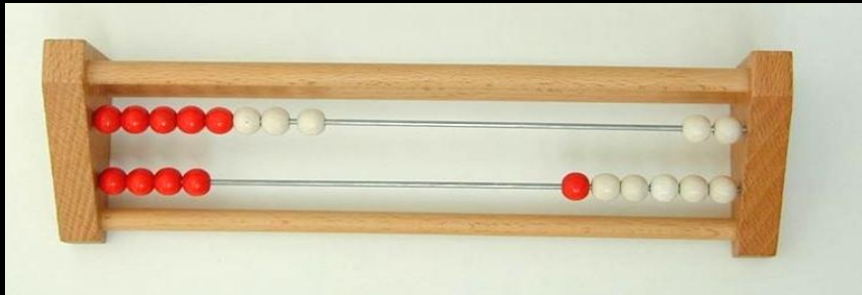
Calculating up to 10

Realistic



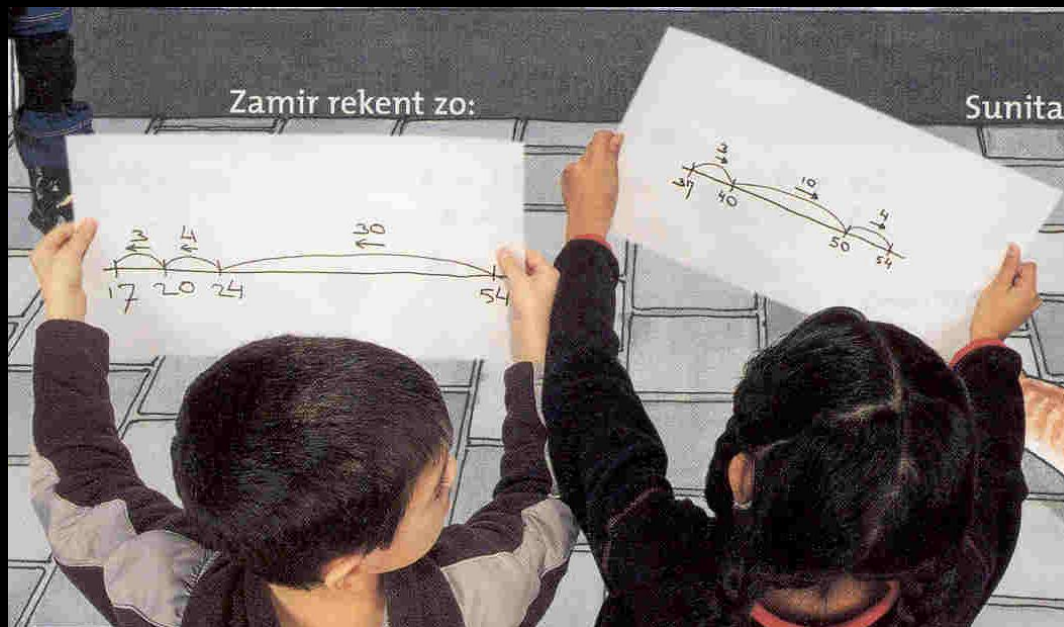
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Models



Student's Production

54 - 37



Interactivity

Vertical Interaction

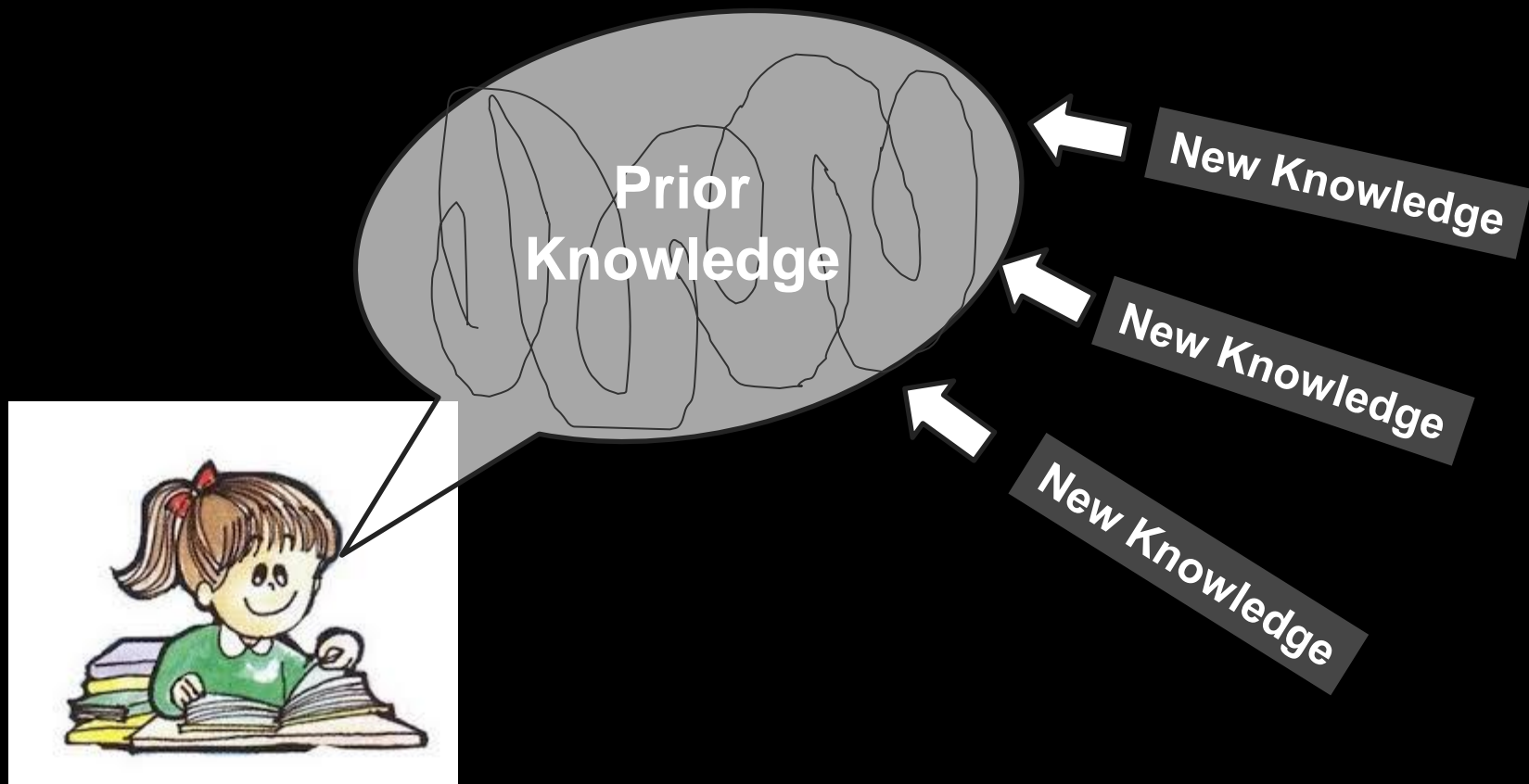


Interactivity

Horizontal Interaction



Intertwinement





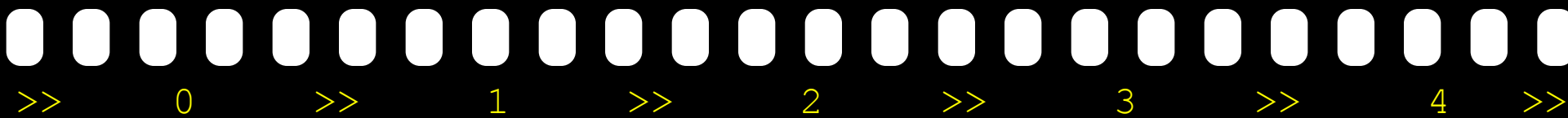
MATHEMATIZATION (Treffers)

- **Horizontal Mathematization**

going from the world of life into the world of symbols

- **Vertical Mathematization**

moving within the world of symbols





PMRI → Adaptation of RME

- bottom-up implementation
- materials and frameworks based on and developed through classroom research
- teachers being actively involved in designing investigations and developing associated materials
- day-by-day implementation strategies that enable students to become more active thinkers
- the development of contexts and teaching materials that are directly linked to school environment and interests of students



Thank You Very Much