

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER 2007: BED III PRIMARY

COURSE NUMBER: PEC 376

COURSE NAME: CURRICULUM STUDIES IN SCIENCE AND MATHEMATICS

TIME ALLOWED: 3 HOURS

- INSTRUCTIONS:
1. THIS PAPER IS DIVIDED INTO TWO SECTIONS. SECTION A IS FOR PEC 376 and SECTION FOR PEC 377.
 2. ANSWER TWO QUESTIONS FROM EACH SECTION.
 3. DOCUMENTS REFERRED TO IN SOME OF THE QUESTIONS ARE ATTACHED. IF YOU CAN'T FIND THEM ASK FOR THEM.
 4. ANY PIECE OF MATERIAL WHICH IS NOT FOR MARKING PURPOSES MUST BE CROSSED OUT CLEARLY

SPECIAL REQUIREMENTS: NCC BOOKS: GRADE VII MATHEMATICS
GRADE VII SCIENCE

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION IS GIVEN BY THE INVIGILATOR

SECTION A - CURRICULUM STUDIES MATHEMATICS

Answer **ANY TWO** questions from this section 1. Use the answer book provided for all answers.

Question 1

Study the lesson provided in appendix 1 and then answer the questions that follow:

- a. Identify, with reason, difficulties children might have studying this lesson. (10)
- b. Suggest an approach you use to ensure that children are motivated for this lesson. (15)

Question 2

'Many children have difficulty answering word problems correctly'

Discuss this statement with respect to language issues studied in this course. Use your own experience to illustrate your points(s) where possible (25)

Question 3

Study the mathematics Grade 5 course provided in appendix 2

- a. Discuss its organisation, level and sequencing. (15)
- b. Suggest, with reasons, an effective way of assessing learning of these units. (10)

SECTION B - Curriculum Studies Science

Answer **ANY TWO** questions from this section.

Question 4

Sonto, a Grade 3 teacher was teaching about floating and sinking. She provided her class with a variety of objects of different sizes, shapes, colour and weight as well as containers with water.

Teacher:	Have you ever seen anything float in water?
Students:	Yes teacher
Teacher:	What makes things float?
Student 1:	When you put it on water, like this.
Student 2:	When it does not go into the water like my ball, it does not go into the water.
Teacher:	Look at the things in front of you, which one will float?
Students 2 & 3:	This one pointing at a small object
Teacher:	What makes you think it will not sink?
Students:	Because it is small
Teacher:	Do you think a big thing sink and a small thing floats?
Students:	Yes teacher.
Teacher:	Now I want you to find out if you are correct. What will you do?

After much activity students modified their response to "heavy things sink and light things float". Further experience with floating things modified this idea to "things float because they have air in them". Sonto felt that this last explanation was a good one.

- Discuss the role of language in this class indicating how this might affect learning among Swazi children. (10)
- Evaluate the approach used by Sonto in her science class. Indicate the issues relating to how concepts/skills/processes are developed in this lesson. (10)
- Do you agree with Sontos final conclusion about the last explanation and why? (5)

Question 5

Supposing you are posted to an old school which has a good track record of student performance. All teachers in the school teach classes rather than subjects and thus they all teach science. Supposing many of them have long teaching experience and that you are bringing to them contextualisation as a new approach they all need to adopt.

- Show, with reasons, what you would say to them to introduce this new approach. (10)
- Explain to the administration the issues involved in the curriculum change process and thus why teachers need a proper introduction to it. (15)

Question 6

- a) Describe, with example(s) from science what misconceptions are to a group of science teachers who were trained more than ten years ago. (15)
- b) Indicate how you would teach to deal with misconceptions. (10)