

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER MAY 2017: BED.III PRIMARY

COURSE NUMBER: PED377

COURSE NAME: CURRICULUM STUDIES: SCIENCE II

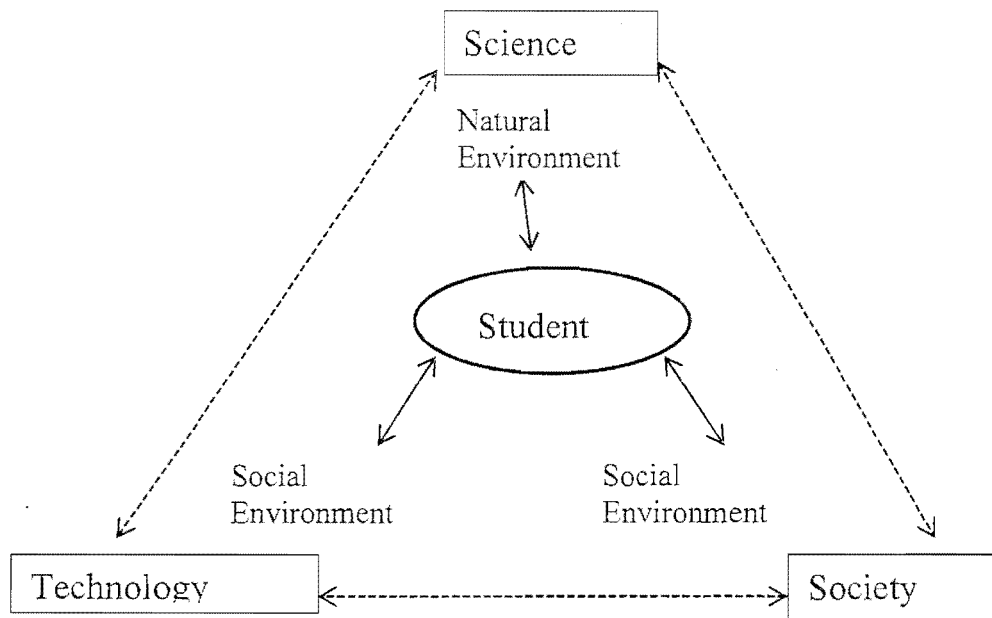
TIME ALLOWED: 3 HOURS

- INSTRUCTIONS:
1. THIS PAPER HAS SIX QUESTIONS.
 2. ANSWER ANY **FOUR** QUESTIONS.
 3. EACH QUESTION IS WORTH 25 MARKS
 4. DOCUMENTS REFERRED TO IN SOME OF THE QUESTIONS ARE ATTACHED. IF YOU DO NOT FIND THEM, ASK FOR THEM.
 5. ANY PIECE OF WRITTEN WORK WHICH IS NOT FOR MARKING PURPOSES MUST BE CROSSED OUT CLEARLY.

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

Answer any **four** questions from this paper.

Question 1



- a) Study the diagram above showing the relationship of the learner with the various environments. Describe, with reason how this situation supports Science, Technology and Society (STS) education. (15)
- b) Suggest, with justification, **two** levels of implementation of STS for teaching primary science in Swaziland. (10)

Total

25 Marks

Question 2

- a) Identify **five** examples of misconceptions in science showing how they may arise. (15)
- b) Supposing a class of student hold the misconception that *anything that moves is living*. Suggest how you would deal with this misconception in your class. Your answer should show your understanding of the principles involved in dealing with misconceptions and conceptual change teaching. (10)

Total

25 Marks

Question 3

- a. Describe how theories of learning affect the choice of teaching methods in science. (10)
- b. Outline, with examples, **three** steps involved in concept development. (9)
- c. Suggest **one** strategy you might use to foster concept development when teaching electric circuits to grade 6 learners. (6)

Total

25 Marks

Question 4

- a. Distinguish among the 'declared curriculum', 'null curriculum' and 'hidden curriculum'. (15)
- b. Describe **three** principles involved in selecting each of the following for a given curriculum: (10)
 - (i) Content
 - (ii) Learning activities.

Total

25 Marks

Question 5

Study Appendix A which is part of an examination for primary leaving certificate (SPC)

- a) Write a specification grid for the questions (10)
- b) Construct a five item test and its marking guide for a lesson shown in Appendix B (see attachment). The test should have at least one of each of the following types of questions: multiple choice question(s), True or false, and an open ended question(s) (15)

Total

25 Marks

Question 6

... Planning is essential for any educational practice.

- a. Discuss the importance of planning a scheme of work in teaching. (15)
- b. What are:
 - (i) Drivers of curriculum change
 - (ii) Reasons for resisting curriculum change? (10)

Unit 5

5.1 Technology changes our lives

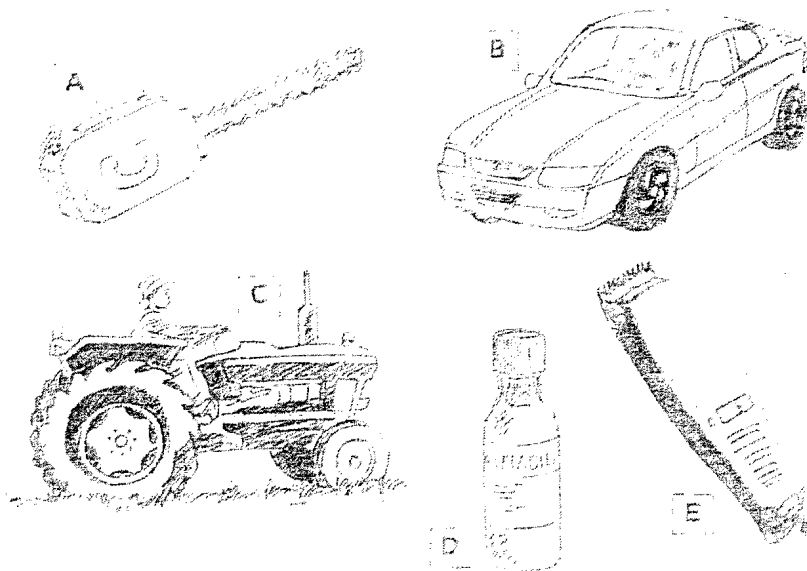
In Grade 4 you learnt about various objects made through technology. Technology is the use of tools and materials to produce something (an end product). In technology today, people use their scientific knowledge and skills to make new and better things that can help to improve their lives.

In this lesson you should be able to:

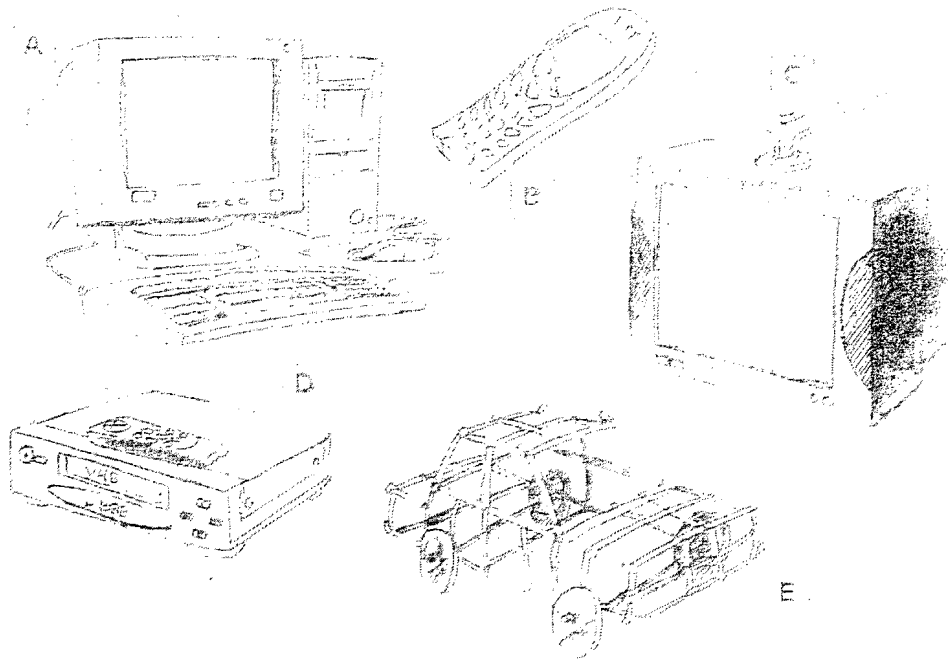
- describe some of the ways in which technology has changed our lives
- state the advantages and the disadvantages of various technological objects

Try this!

Look at the pictures and discuss each object with your partner.



APPENDIX K



Try to think of one advantage and one disadvantage of each object in a person's life. Write these under three headings in your exercise book. Your headings should be:

- Name of object
- Advantage
- Disadvantage

Find out!

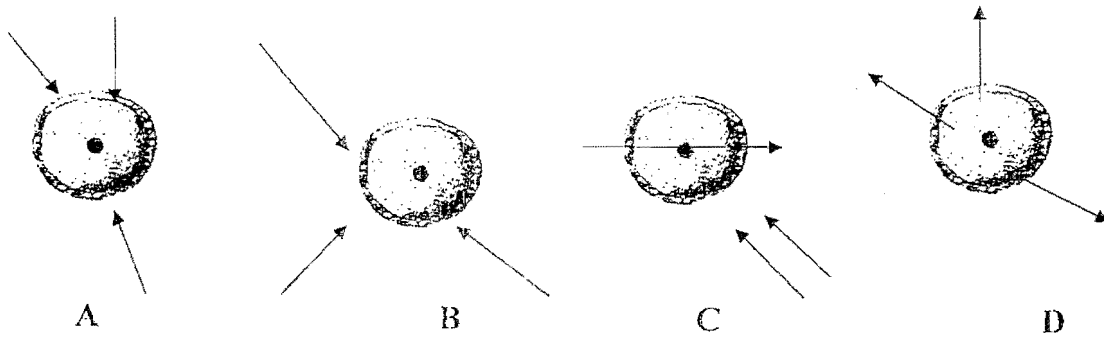
Is technology good or bad for us?

You are going to debate this question in groups. Some of you will give reasons to explain why technology is good for us and others will give reasons to explain why technology is bad for us. Ask members of your family at home for their opinions to help you come up with some good reasons.

7 Which of the following instruments is used for measuring wind speed?

- A anemometer
- B stethoscope
- C telescope
- D wind vane

8 The lines with arrows in the diagrams stand for sperms. Identify a diagram that shows fertilisation of an egg in animals.



9 Which of the following describes invertebrates?

They have..

- A an exoskeleton.
- B vertebrae.
- C body cavities.
- D body scales.

- 10 What is the name given to the instrument used to measure body temperature?
- A clinical thermometer
 - B maximum thermometer
 - C maximum thermometer
 - D wet bulb thermometer
- 11 Peter observed some beautiful colours on a big soap bubble while washing his school shirt.
- What characteristic of light was observed by Peter on the bubble?
- A Bubbles can reflect light.
 - B Light is made up of many colours.
 - C Bubbles are made up of many colours.
 - D Light travels fast and in a straight line.
- 12 Which of the following is a process involved when water vapour changes to a liquid?
- A condensation
 - B evaporation
 - C freezing
 - D melting