



NATURAL SCIENCES_ SENIOR PHASE_ MWAZVITA CHIKOPO_ 29-10-2021

TO: Teachers

TOPIC:

- ✓ THE ROLE OF PRACTICAL WORK IN THE TEACHING AND LEARNING OF SCIENCE CONTENT (SCIENTIFIC KNOWLEDGE)

MESSAGE OBJECTIVE(S):

- ✓ discuss the role of practical work in the teaching and learning of science at school level
- ✓ Encourage teachers to motivate learners to carry out their own scientific enquiries so that they can acquire scientific knowledge for themselves

MESSAGE:

1. Learning science: a constructivist view:

Where the teaching of abstract ideas is involved, transmission simply does not work. The learner must play an active role in 'taking on' the new knowledge. He or she has to 'make sense' of the experiences and discourse of the science class and use it to 'construct meaning'.

2. Why practical work is essential for developing students' scientific knowledge:

Learning science should involve seeing, handling and manipulating real objects and materials, and teaching science should involve acts of 'showing' as well as of 'telling'.

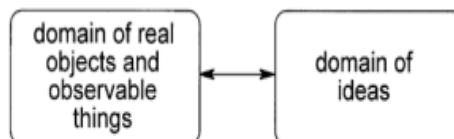
3. Practical work involves action and reflection:

A typical practical activity will be followed by a period of discussion of the observations and measurements made, of patterns in them (such as similarities, differences, correlations and trends), and of how they might be interpreted and explained.

4. Making links between two domains of knowledge:

"The role of practical work in the teaching and learning of science content is to help students make links between two 'domains' of knowledge:

- ✓ the domain of objects and observable properties and events and
- ✓ the domain of ideas on the other." (Millar et al., 2002).



Practical work: linking two domains of knowledge

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REFERENCE:(LINKS TO WEBSITE DOCUMENTS): <https://nect.org.za/materials/for-teachers>