

Theoretical Vision of Scientific Thinking for Young children.

Current view in Malta


Suzanne Gatt
University of Malta



Education in Malta is regulated by the National Minimum Curriculum

This is the legal document
that sets out what each
and every child in Malta is
entitled to in education.

http://www.curriculum.gov.mt/docs/nmc_english.pdf

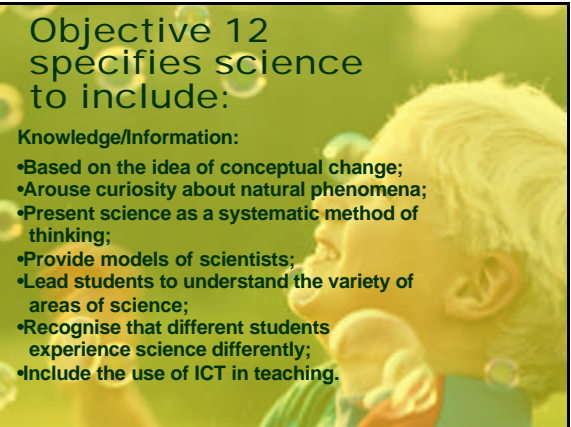


The NMC is built on:

- * 15 principles;
- * 13 Educational objectives.

Objective 12:

Greater Awareness of the
role of Science and
Technology in everyday
life.



Objective 12 specifies science to include:

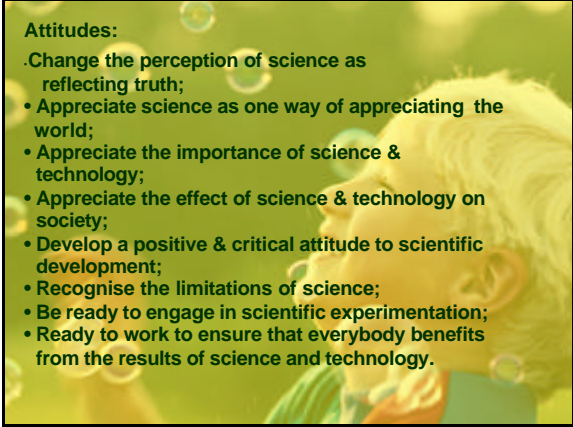
Knowledge/Information:

- Based on the idea of conceptual change;
- Arouse curiosity about natural phenomena;
- Present science as a systematic method of thinking;
- Provide models of scientists;
- Lead students to understand the variety of areas of science;
- Recognise that different students experience science differently;
- Include the use of ICT in teaching.




Skills:

- Develop cognitive skills;
- Be able to apply scientific knowledge to everyday life;
- Make effective use of scientific apparatus;
- Use ICT in scientific investigations;
- Safeguard the natural environment




Attitudes:

- Change the perception of science as reflecting truth;
- Appreciate science as one way of appreciating the world;
- Appreciate the importance of science & technology;
- Appreciate the effect of science & technology on society;
- Develop a positive & critical attitude to scientific development;
- Recognise the limitations of science;
- Be ready to engage in scientific experimentation;
- Ready to work to ensure that everybody benefits from the results of science and technology.



Vision within Pre-service teacher-training

The vision within which primary school teachers are trained is the **constructivist** view.



Constructivist View

The child is considered to be cognitively active during the learning process.

Approaches in Constructivist view include:

- Conceptual Change;
- Cognitive conflict;
- Scaffolding;
- Metacognition, among others

