St. Mark's Primary School, Hamilton

Significant Aspects of Learning
Assessing progress and achievement in the Sciences

Significant aspects of learning in the sciences

There are eight significant aspects of learning within the sciences:

- **Planet Earth**
- **Forces, electricity and waves**
- **Biological systems**
- **Materials**
- **Topical science**
- **Inquiry and investigative skills**
- **Scientific analytical thinking skills**
- **Skills and attributes of scientifically literate citizens**

These have been drawn from the five main organisers of the sciences curriculum and the scientific skills detailed in the Principles and Practice Paper. These are summarised below.

Knowledge and understanding of scientific ideas, principles and concepts of Planet Earth, Forces, electricity and waves, Biological systems, Materials and Topical science

Drawing on their learning across the Experiences and Outcomes, learners

- demonstrate a secure knowledge and understanding of the big ideas and concepts of the sciences
- develop a curiosity and understanding of their environment and their place in the living, material and physical world
- develop skills in the accurate use of scientific language, formulae and equations
- develop an understanding of the Earth's resources and the need for responsible use of them.

Inquiry and investigative skills

As they experiment and carry out practical scientific investigations and other research to solve problems and challenges, learners:

- plan and design scientific investigations and inquiries
- carry out practical activities
- analyse, interpret and evaluate scientific findings
- present scientific findings.

Scientific analytical thinking skills

In order to make sense of scientific evidence and concepts learners:

- develop a range of analytical thinking skills.

Skills and attributes of scientifically literate citizens

Children and young people develop as scientifically literate citizens with a lifelong interest in science by:

- recognising the impact the sciences make on their lives, the lives of others, the environment and on society
- expressing opinions and making decisions on social, moral, ethical, economic and environmental issues based upon sound understanding
- developing scientific literacy skills.