

How is Science Literacy defined?

For the purposes of the NAP, science literacy is defined as:

the capacity to use scientific knowledge, to identify questions, investigate and to draw evidence-based conclusions in order to understand and help make decisions about the natural world and the changes made to it through human activity.

This definition of science literacy has been adopted in accordance with Australian and international practices and recommendations.

The NAP-SL assessment domain and instruments were developed in consultation with curriculum experts from each state and territory and representatives from the Catholic and independent school sectors. The assessment domain comprises three main strands:

- **Strand A:** formulating or identifying investigable questions and hypotheses, planning investigations and collecting evidence.
- **Strand B:** interpreting evidence and drawing conclusions from their own or others' data, critiquing the trustworthiness of evidence and claims made by others, and communicating findings.
- **Strand C:** using science understandings for describing and explaining natural phenomena, and for interpreting reports about phenomena.

In addition, the items or questions developed for the assessment instrument have been drawn from four concept areas found most widely in states and territory curriculum and assessment frameworks including: Living Things; Earth and Space; Energy and Force; and Matter. A Science Literacy Progress Map has been developed to map progression across five levels.

A proficient standard was established as part of the first cycle of the national sample assessment in 2003 to provide educators, parents and the community with a clear picture of the level of proficiency that students are expected to demonstrate by the end of Year 6. The proficient standard is a challenging but reasonable level of performance, with students needing to demonstrate more than minimal or elementary skills to be regarded as achieving it.

Furthermore, a table of the major scientific concepts found to be most widely used in the various state and territory documents has been developed to accompany the Science Literacy Progress Map.

What are the outcomes of the assessment?

The main purpose of the NAP-SL sample assessment is to monitor and report on the overall progress being made towards achieving high standards of science literacy nationally. This in turn provides nationally comparable state and territory data and reporting on overall trends. No individual student or school results will be published.

A Public Report on the results of the NAP-SL sample assessment, to be released in 2013, will document achievement in relation to the defined proficiency levels. This report will include:

- an analysis of the performance of different groups of students e.g. the relative achievement of boys and girls, students from different geographic locations, Indigenous and non-Indigenous students and students from diverse geographic locations and language backgrounds, and achievement by state and territory. The results of government and non-government schools will not be compared.
- changes or trends from 2003–2012. Some questions are common across assessment cycles to enable comparison of performance over time.

Schools will also receive information summarising their students' performance on the test in early December 2012.

NAP-SL 2012

NATIONAL ASSESSMENT PROGRAM

Science Literacy

Information for Schools



In 2012, a sample of Year 6 students across Australia will take part in the National Assessment Program–Science Literacy (NAP-SL) sample assessment.

What is the NAP-SL sample assessment?

The NAP-SL sample assessment program recognises science literacy as an essential skill for all students to develop. It measures students' understanding of natural phenomena and their ability to apply a broad range of conceptual understandings of science to make sense of the world. This assessment may involve interpreting media reports about scientific issues, asking investigable questions, conducting investigations, collecting and interpreting data and making decisions at a Year 6 level.

The purpose of the sample assessment is to inform schools, education ministers and the community about the achievements of Australia's Year 6 students. It is part of the National Assessment Program (NAP) which includes a suite of assessments designed to monitor students' progress towards the goals outlined in the *Melbourne Declaration on Educational Goals for Young Australians 2008*. The NAP monitors student achievement in literacy and numeracy (through annual NAPLAN tests); and in science literacy, civics and citizenship and ICT literacy through sample assessments which are undertaken in three-yearly cycles. The NAP-SL sample assessment was previously held in 2003, 2006 and 2009.

How is the NAP sample assessment program run?

The Australian Curriculum, Assessment and Reporting Authority (ACARA) is the independent authority responsible for the National Assessment Program, including the development of the sample tests. It does this in consultation with appropriate curriculum and testing authorities in each state and territory, and with key education stakeholders. ACARA contracted a private provider, Educational Assessment Australia (EAA), to develop and deliver the 2012 NAP-SL assessment to schools.

How are schools and students selected to participate?

A sample of around 13,000 Year 6 students from approximately 600 government and non-government schools from all states and territories across Australia will take part in the study. This sample is the outcome of a rigorous random sampling process undertaken in consultation with state and territory authorities.

The sample is 'stratified' to ensure that metropolitan, rural and remote schools and government, Catholic and independent schools are properly represented. Within each sampling stratum, schools are selected at random.

A Year 6 class (or, in some cases, two small classes) from each selected school will be randomly chosen.

When and how will the sample assessment be conducted?

The test will be held in October 2012. The nominated School Contact Officer (SCO) in each selected school will receive a detailed manual from the private provider, EAA, explaining the procedures. The SCO will coordinate activities within the school such as scheduling the sessions, notifying teachers and students of the test, notifying parents/carers and overseeing the receipt and dispatch of the test material.

The test administrator, usually the classroom teacher, will conduct the test sessions and complete the associated student participation form under the guidance of the SCO.

What does the NAP-SL sample assessment look like?

The 2012 NAP-SL sample assessment comprises three sessions:

- an objective (pencil and paper) test comprising multiple-choice and short-answer questions (60 mins);

- a practical task requiring students to carry out an investigation in groups of three and then to respond individually to a set of questions (45 mins); and
- a student survey which seeks to gather information about students' perceptions of and attitudes to science and their experiences of science learning at their school (10 mins).

The assessment is designed to 'bring out the best' in students and to encourage their full participation by making the test an engaging experience.

Selected 2012 NAP-SL School Release Materials from the sample assessment will be provided in July 2013 at www.nap.edu.au.

Materials from previous tests are currently available on the website for teachers' use and information.

Further information

Schools will be notified of the class required to participate in the test in June 2012. The School Contact Officer Manual will also be available at this time.

General information about the National Assessment Program and Science Literacy sample assessment can be found at: www.nap.edu.au or by contacting ACARA at info@acara.edu.au.

Support for participating schools is available via:

NAP-SL Helpline (toll free): 1800 231 085

NAP-SL Email: NAPSLHelpdesk@eaa.unsw.edu.au

Fax: (02) 8344 2136