

Years 5–6 assessment techniques and conditions v1.0

Science

This document outlines assessment techniques and conditions to achieve range and balance within an assessment program. Schools consider the local context, and the age and capabilities of the students, when selecting appropriate assessment techniques and conditions.

Techniques	Investigation	Experimental investigation	Test
Description	An investigation assesses students' abilities to research, and to collect, describe, predict, explain and draw conclusions about secondary data and information.	An experimental investigation assesses students' abilities to experiment, generate and analyse primary data.	A test assesses students' responses that are produced independently, under supervised conditions and in a set timeframe. A test ensures student authorship.
	An investigation requires students to locate and use data or information that goes beyond what they have been given and the knowledge they currently have. Research conventions must be followed, e.g. acknowledging sources, regardless of the presentation format.	An experimental investigation requires students to investigate a constructed question and/or problem. The focus is on planning an experimental investigation, and problem-solving using primary data generated by the student. Experiments may be conducted in the classroom or field. An experimental investigation is based on research practices. These practices include locating and using data or information that goes beyond what students have been given and the knowledge they currently have. The research process is iterative, and is based on the exploration of a research question or hypothesis. An experimental investigation follows an inquiry approach that aligns to the Science Inquiry Skills strand for a year level.	A test requires students to respond to one or more assessment items. These items are based on questions or tasks that are typically unseen. Questions or tasks may be based on stimulus material.

Techniques	Investigation	Experimental investigation	Test
Formats (examples only)	Formats include: <ul style="list-style-type: none"> • written <ul style="list-style-type: none"> - report - brochure - news report or article - webpage • spoken/signed or multimodal <ul style="list-style-type: none"> - interview - presentation - debate - webcast - podcast. 	Formats include: <ul style="list-style-type: none"> • written <ul style="list-style-type: none"> - scientific report - article for science journal - record of investigations, including set-up, observations, data gathering and analysis - poster to represent experiment • spoken/signed or multimodal <ul style="list-style-type: none"> - demonstration - model - practical demonstration - scientific phenomena modelling. 	Formats include: <ul style="list-style-type: none"> • short response items <ul style="list-style-type: none"> - single word, true/false, multiple choice or sentence answer - paragraph response (standalone or linked to stimulus) • extended response items <ul style="list-style-type: none"> - explanation longer than one sentence, up to several paragraphs - practical exercise and/or calculation - construction, use, interpretation or analysis of primary or secondary data, graphs, tables or diagrams - application of algorithms or demonstration of mathematical calculations and problem-solving • response to stimulus.
Conditions	Suggested length:* <ul style="list-style-type: none"> • written responses 200–400 words • spoken/signed or multimodal responses 1–2 minutes. 	Suggested length:* <ul style="list-style-type: none"> • written responses 200–400 words • multimodal responses 1–2 minutes • practical demonstration — as negotiated. 	Suggested time: <ul style="list-style-type: none"> • up to 60 minutes, plus 10 minutes perusal. Suggested length:* <ul style="list-style-type: none"> • up to 300 words.

Notes
Responses can be written, spoken/signed or multimodal (integrating visual, print and/or audio features), recorded or live and may be presented digitally.
* Length of student responses should be considered in the context of the assessment. Longer responses do not necessarily provide better quality evidence of achievement.
All practical work must be organised with student safety in mind. Information on creating safe and healthy school environments, along with current work health and safety laws, is available at the Queensland Department of Education website. Schools must ensure their practices meet current guidelines.