

# Technology NCEA Level 1 Achievement Standards: Technology

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Compulsory Core (20 credits)	value	Draft Activities
AS90045 (1.1) Develop a Technological Solution to address a given brief	6 credits  internally assessed	<p><b>CO2 Cars - Building and Racing</b>            Stakeholders (<i>Client(s), users, teacher, student, parents, public, special interest groups, competitors etc.</i>)            Design Specification:( <i>Time, cost, materials, safety, production facilities, knowledge, expected use, current models/ uses, finish, appearance,, structure, specifications, aesthetics etc.</i>)            Plan: (including timeline for learning with milestones, allocation of resources, consultation plan and re-evaluation)            Production: (prototype, final evaluation and evidence of compliance with brief and the specifications).</p>
AS90046 (1.2) Formulate a brief to address a given issue	6 credits internally assessed	Target an area of possible improvement on an aspect of the car track or functioning of the starting or finishing gates, the firing method, the crash barrier or the track itself that will improve the system. Write it up as a brief
AS90047 (1.3) develop a technological solution by widening the use of an existing technology	6 credits internally assessed	Take existing kitsets and/or designs and develop a technological solution to address the brief in AS90045, or other supplied brief. This may be done using existing kitsets or by using chosen materials (2 or more) and providing justification for choice.
AS90049 (1.5) demonstrate understanding of relevant technological knowledge	4 credits externally assessed	Underpinning relevant knowledge: May include: understanding of drag coefficients, friction and its effect, how to reduce friction, mechanical system of firing, calculations for speed, spray painting technology, wind tunnels, weight and its effect on a moving body.
AS90050(1.6) Present a technological solution that addresses the requirements of a brief	4 credits externally assessed	Working Prototype from AS90045 task finished to a high standard, supporting documentation (must include: documentation, drawings showing brief addressed. May include: (explanation and action taken after appraisal of effects of weight, wheels alignment, and drag on the car) Production: (prototyping, testing and evaluating of results, final evaluation and evidence of compliance with brief).
AS90051(1.7) describe the interactions between a technological innovation and society.	4 credits externally assessed	Research topic: Explain key technological innovations and advances made in timing products in society and analyse both the impact the innovation has had on society and the impact society has had on the innovation.