

Sample: The Achievement Chart for Science and Technology, Grades 1–6 Ontario Ministry of Education

Knowledge and Understanding – Subject-specific content acquired in each grade (knowledge), and the comprehension of its meaning and significance (understanding)				
Categories	Level 1	Level 2	Level 3	Level 4
	The student:			
Knowledge of content (e.g., facts, terminology, definitions)	demonstrates limited knowledge of content	demonstrates some knowledge of content.	demonstrates considerable knowledge of content	demonstrates thorough knowledge of content
Understanding of content (e.g., concepts, ideas, theories, principles, procedures, processes)	demonstrates limited understanding of content	demonstrates some understanding of content	demonstrates considerable understanding of content	demonstrates thorough understanding of content
Thinking and Investigation – The use of critical and creative thinking skills and inquiry and problem-solving skills and/or processes				
Categories	Level 1	Level 2	Level 3	Level 4
	The student:			

Use of initiating and planning skills and strategies (e.g., formulating questions, identifying the problem, developing hypotheses, scheduling, selecting strategies and resources, developing plans)	uses initiating and planning skills and strategies with limited effectiveness	uses initiating and planning skills and strategies with some effectiveness	uses initiating and planning skills and strategies with considerable effectiveness	uses initiating and planning skills and strategies with a high degree of effectiveness
Use of processing skills and strategies (e.g., performing and recording; gathering evidence and data; examining different points of view; selecting tools, equipment, materials, and technology; observing; manipulating materials; proving)	uses processing skills and strategies with limited effectiveness	uses processing skills and strategies with some effectiveness	uses processing skills and strategies with considerable effectiveness	uses processing skills and strategies with a high degree of effectiveness
Use of critical/creative thinking processes, skills, and strategies (e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence, developing solutions, considering diverse perspectives)	uses critical/creative thinking processes, skills, and strategies with limited effectiveness	uses critical/creative thinking processes, skills, and strategies with some effectiveness	uses critical/creative thinking processes, skills, and strategies with considerable effectiveness	uses critical/creative thinking processes, skills, and strategies with a high degree of effectiveness
Communication – The conveying of meaning through various forms				
Categories	Level 1	Level 2	Level 3	Level 4
	The student:			

Expression and organization of ideas and information in oral, visual, and/or written forms (e.g., diagrams, models, articles, project journals, reports)	expresses and organizes ideas and information with limited effectiveness	expresses and organizes ideas and information with some effectiveness	expresses and organizes ideas and information with considerable effectiveness	expresses and organizes ideas and information with a high degree of effectiveness
Communication for different audiences (e.g., peers, adults, community members) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms	communicates for different audiences and purposes with limited effectiveness	communicates for different audiences and purposes with some effectiveness	communicates for different audiences and purposes with considerable effectiveness	communicates for different audiences and purposes with a high degree of effectiveness
Use of conventions, vocabulary, and terminology of the discipline in oral, visual, and/or written forms (e.g., symbols, formulae, International System of Units)	uses conventions, vocabulary, and terminology of the discipline with limited effectiveness	uses conventions, vocabulary, and terminology of the discipline with some effectiveness	uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness	uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness
Application – The use of knowledge and skills to make connections within and between various contexts				
Categories	Level 1	Level 2	Level 3	Level 4
	The student:			

Application of knowledge and skills (e.g., concepts and processes; procedures related to the safe use of tools, equipment, materials, and technology; investigation skills) in familiar contexts	applies knowledge and skills in familiar contexts with limited effectiveness	applies knowledge and skills in familiar contexts with some effectiveness	applies knowledge and skills in familiar contexts with considerable effectiveness	applies knowledge and skills in familiar contexts with a high degree of effectiveness
Transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment and technology, investigation skills) to new contexts	transfers knowledge and skills to new contexts with limited effectiveness	transfers knowledge and skills to new contexts with some effectiveness	transfers knowledge and skills to new contexts with considerable effectiveness	transfers knowledge and skills to new contexts with a high degree of effectiveness
Making connections within and between various contexts (e.g., connections between sciences; connections to everyday and real-life situations; connections among concepts within science and technology; connections involving use of prior knowledge and experience; connections among science and technology and other disciplines, including other STEM [science, technology, engineering, and mathematics] subjects)	makes connections within and between various contexts with limited effectiveness	makes connections within and between various contexts with some effectiveness	makes connections within and between various contexts with considerable effectiveness	makes connections within and between various contexts with a high degree of effectiveness
Proposing courses of practical action to deal with problems relating to our changing world	proposes courses of practical action of limited effectiveness	proposes courses of practical action of some effectiveness	proposes courses of practical action of considerable effectiveness	proposes highly effective courses of practical action

Source: [Ontario Ministry of Education](#)