



Commission scolaire
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School Board



COMMISSION SCOLAIRE SIR-WILFRID-LAURIER
SIR WILFRID LAURIER SCHOOL BOARD



ARE YOU READY FOR THE SECONDARY 3 JUNE 2017 SCIENCE & TECHNOLOGY EXAM?

So what's this document for?

This document is designed to help you get prepared for the **Secondary 3 Science & Technology** exam.

Often parents and teachers will ask you 'Are you ready for the exam?' and it's normally quite difficult to answer that question. That's where this document can help you.

This document is a list of statements that you can use to assess which areas require more study. Simply read and reflect on each statement and decide whether or not you can place a checkmark in the 'yes' or 'not yet' column.

So, what if I'm NOT ready?

Don't panic! Knowing that there are some areas that require more work is a good thing as it gives you chance to do something about it and get better prepared.

The first and best resource is always your teacher; go and ask him/her for some extra explanations / help / resources. There are some additional resources, however, that you can use. Speak with your teacher about how to access such resources as LEARN Quebec, Explore Learning, etc.

What this document isn't . . .

This document is designed to help you prepare for the exam and give you an idea of which areas of the curriculum you need to focus on.

In the exam itself you will need to be able to apply these concepts in new situations and contexts, so simply having the knowledge isn't necessarily enough. For this reason, this document is NOT a guarantee that you will succeed even if you have managed to work your way through it all and have placed a checkmark in every 'Yes' box. You would, however, be more likely to succeed!

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LIVING WORLD

	Yes	Not Yet
Digestive system		
I can name the main parts of the digestive tract (mouth, esophagus, stomach, small intestine, large intestine, anus).		
I can explain the role of the digestive tract (decomposition of food, absorption of nutrients and water, elimination of waste).		
I can describe the functions of the main organs that make up the digestive tract (mouth, stomach, small intestine, large intestine)		
I can name the main digestive glands (salivary glands, gastric glands, pancreas, liver, intestinal glands).		
I can describe the function of the main digestive glands.		
I can describe the main biological functions of the different food constituents (water, proteins, carbohydrates, fats, vitamins, minerals).		
I can associate food constituents with their main sources.		
I can describe the two types of transformation of food that take place in the digestive system (mechanical, chemical).		
I can associate the organs in the digestive tract with the type of transformation they perform.		
Respiratory system		
I can describe the function of the nasal cavity and lungs.		
Circulatory systems		
I can determine the compatibility or incompatibility of blood types.		
Lymphatic system		
I can describe two ways of acquiring active immunity (production of antibodies as a result of illness or vaccination).		
Excretory system		
I can describe the function of the kidneys and bladder.		

I can name the main components of urine (water, mineral salts, urea).		
I can explain the role of the kidneys, lungs and sweat glands in maintaining a balanced metabolism.		
Nervous systems		
I can explain the role of the central nervous system.		
I can describe the functions of the brain and the spinal cord.		
I can explain the role of the peripheral nervous system (transportation of nerve impulses from the senses to the brain and from the brain to the muscles).		
I can associate nerves with the transmission of nerve impulses.		
I can distinguish between voluntary acts and reflex arcs.		
Musculoskeletal system		
I can name the main parts of the skeleton (head, thorax, spinal column, upper and lower limbs).		
I can describe the functions of the main parts of the skeleton.		
Cell Division		
I can describe the functions of mitosis (reproduction, growth, regeneration).		
I can describe the function of meiosis (production of gametes).		
I can distinguish between mitosis and meiosis based on their functions.		
Reproduction		
I can name the hormones responsible for the formation of spermatozoa (follicle stimulating hormone [FSH], luteinizing hormone [LH], testosterone).		

EARTH & SPACE

	Yes	Not Yet
Characteristics of the Earth		
I can place the main divisions of the geological time scale (Precambrian, Paleozoic, Mesozoic, Cenozoic) in order.		
Astronomical phenomena		
I can describe conditions conducive to the development or maintenance of life.		

THE MATERIAL WORLD

	Yes	Not Yet
Characteristic properties		
I can explain the concept of density.		
I can determine the density of different substances.		
I can identify a liquid and solid substance by their density using a reference document.		
I can define the concept of solubility .		
I can describe the effect of variations in temperature on the solubility of a substance.		
Solutions		
I can recognize the solute in a given aqueous solution.		
I can recognize the solvent in a given aqueous solution.		
I can define the concept of the concentration of a solution .		
I can determine the concentration of an aqueous solution (g/L or percentage).		
Changes		
I can define the particle model as “ <i>a means of representing the behaviour of matter</i> ”.		
I can represent a decomposition or synthesis reaction using the particle model.		
I can associate known chemical reactions with decomposition or synthesis reactions.		
I can describe different forms of energy (chemical, thermal, mechanical, radiation).		
I can identify the forms of energy involved in a transformation.		



Organization		
I can define a pure substance as <i>“a substance made up of a single type of atom or molecule”</i> .		
I can distinguish between elements and compounds.		
Fluids		
I can distinguish between compressible and incompressible fluids.		
I can name compressible fluids and incompressible fluids in the human body.		
I can explain how fluids move around in the human body, using the concept of pressure.		
I can qualitatively describe the relationship between the pressure and volume of a gas.		
Waves		
I can define the frequency of a wave as <i>“the number of cycles per second (Hz)”</i> .		
I can associate the frequency of a sound wave with the pitch of the sound		
I can define wavelength as <i>“the distance between two identical points on a wave at a given time”</i> .		
I can describe the relationship between wavelength and energy		
I can locate different areas on the electromagnetic spectrum.		
I can determine the focal point of concave and convex lenses.		
I can describe the relationship between the focal point of a lens and the degree of the deviation of light rays in different situations.		

TECHNOLOGICAL WORLD

	Yes	Not Yet
Graphical Language: Standards and representation		
I can represent different types of motion related to the operation of an object using the appropriate symbols (rectilinear translation, rotation, helical).		
Graphical Language: Orthogonal projections		
I can associate the types of projection with their use (multiview and isometric projections).		
I can interpret drawings representing parts in multiview orthogonal projection.		
Mechanical Engineering: Typical functions		
I can define the typical functions (linking, guiding, sealing, lubricating).		
I can associate a typical function with certain parts of a technical object.		
Mechanical Engineering: Function, components and use of motion transmission systems		
I can name motion transmission systems in technical objects (friction gears, pulleys and belt, gear assembly, sprocket wheels and chain, wheel and worm gear).		
I can describe the functions of the components of a motion transmission system.		
I can describe the speed changes or reversibility of a motion transmission system.		
Mechanical Engineering: Function, components and use of motion transformation systems		
I can name motion transformation systems in technical objects.		
I can describe the functions of the components of a motion transformation system.		
I can describe speed changes or the reversibility of a motion		

transformation system.		
Materials		
I can describe the constraints to which different technical objects are subject: tension, compression, torsion.		
I can describe the mechanical properties of different materials (hardness, ductility, elasticity, malleability).		
I can associate the use of different types of materials with their respective properties: Ferrous alloys (cast iron is harder than steel).		