Test Design Blueprint **Date 10-21-14**

Integrated Science I **2002400** **9th**

Course Title | Course Number | Grade(s)

Main Idea *(Big Idea/Domain/Strand/Standard)*	**Standard Code**	**Percent of Test Based on Time Devoted to Standard**	**Number of Test Questions** *(60 total)*
Define a problem based on a specific body of knowledge.	SC.912.N.1.1	5%	3
Identify what is science and what is not science.	SC.912.N.2.1	2%	1
Explain that a scientific theory is an explanation based on scientific support and evidence.	SC.912.N.3.1	5%	3
Explain that a scientific law is a description based on scientific support and evidence.	SC.912.N.3.3		
Recognize that theories do not become laws and laws do not become theories.	SC.912.N.3.4		
Identify the Big Bang Theory out of other explanations for Earths formation.	SC.912.E.5.1	2%	1
Recognize the solar system, other galaxies, and Earth's perspective in relation to the Universe as a whole.	SC.912.E.5.2	2%	1
Identify scientific discoveries of the past and future explorations based on the technology we have today and identify some of the earliest technological advancements.	SC.912.E.5.7	3%	2
Explain how various landforms have shaped the surface of the Earth we know today AND identify that there are continual changes.	SC.912.E.6.2	3%	2
Using illustrations, concept maps, etc. be able to analyze how matter flows from abiotic to biotic (and back to abiotic) parts of the biosphere through the biogeochemical cycles.	SC.912.E.7.1	2%	1
Identify and give examples of the four states of matter in terms of the amount of energy, the motion of the particles and phase transitions between each).	SC.912.P.8.1	2%	1
Differentiate between chemical and physical properties of matter.	SC.912.P.8.2	2%	1

(Ex. Burning paper is chemical and tearing paper is physical)			
Describe atomic theory and the contributions of Dalton, Thomson, Rutherford, and Bohr.	SC.912.P.8.3	3%	2
Identify the three subatomic particles found in an atom in addition identify their charge and location in an atom.	SC.912.P.8.4	3%	2
Using the periodic table be able to determine the reactivity of an element. (Ex. Iodine is very reactive since it has 7 valence electrons, but Helium is inactive since it has 2 in its outer shell which is complete)	SC.912.P.8.5	3%	2
Differentiate between covalent and ionic bonds based on chemical formulas. In addition be able to state how many atoms are represented in a chemical formula.	SC.912.P.8.7	2%	1
Recognize the transformation of energy in a series of events. (Ex. Battery – chemical energy of the battery holds potential energy that can be transformed in to electrical energy)	SC.912.P.10.1	2%	1
Describe heat transfer by way of radiation, convection and conduction.	SC.912.P.10.4	2%	1
Recognize and apply Newton's three laws of force.	SC.912.P.12.3	3%	2
Recognize a compound microscope and its contribution to cell theory.	SC.912.L.14.4	2%	1
Identify the three parts of cell theory.	SC.912.L.14.1	3%	2
Relate the structure and function of plant and animal cell organelles.	SC.912.L.14.2	3%	2
Compare and contrast plant and animal cells. Compare and contrast prokaryotes and eukaryotes.	SC.912.L.14.3	3%	2
Explain how the theory of evolution is supported by multiple sources of evidence.	SC.912.L.15.1	3%	2
Describe how organisms are classified.	SC.912.L.15.4	3%	2
Explain reasons why some organisms have been reclassified	SC.912.L.15.5	3%	2

(DNA evidence).			
Identify what kingdoms certain organisms should be placed in based on their characteristics.	SC.912.L.15.6	3%	2
Describe different explanations for the origin of life on Earth (endosymbiosis, primordial soup, biogenesis, etc.).	SC.912.L.15.8	3%	2
Use Mendel's laws of segregation and independent assortment to complete a monohybrid punnett squares outcome.	SC.912.L.16.1	3%	2
Describe Mitosis as cell division in which duplicate diploid cells are produced.	SC.912.L.16.14	3%	2
Recognize that crossing over occurs during Meiosis and contributes to genetic variation and produces haploid cells.	SC.912.L.16.16		
Recognize that Meiosis contributes to genetic variation while mitosis does not.	SC.912.L.16.17		
Identify the distribution of life in an aquatic ecosystem based on salinity, light, temperature, tides, etc.	SC.912.L.17.2	3%	2
Predict changes to aquatic ecosystems based on successional changes, climate change and seasonal changes.	SC.912.L.17.4	3%	2
Use a food web to identify producers, consumers, energy transfers, decomposers, and trophic levels.	SC.912.L.17.9	3%	2
Evaluate the benefits and costs of renewable and nonrenewable resources.	SC.912.L.17.11	2%	1
Identify the four categories of macromolecules by their monomers (nucleic acids, carbohydrates, lipids, and proteins).	SC.912.L.18.1	3%	2
Identify the products and reactants of photosynthesis.	SC.912.L.18.7	3%	2
Identify the products and reactants of cellular respiration.	SC.912.L.18.8		
Explain that respiration and photosynthesis are a biochemical pathway.	SC.912.L.18.9		

Identify the special properties of water that enable life. (hydrogen bonds, cohesion, expansion, temperature modulation, etc.)	SC.912.L.18.12	2%	1

TOTALS 60

List All Common Course Teachers:

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