

**ACP Blueprint  
Science 6 Pre-AP  
Semester 1, 2018–2019**

Test Code	Year	Form
3161	18	3
Last Revision Date: 04/23/2018		

SE Descriptions	TEKS/SE	No. of Items	% of Test
1. Know that an element is a pure substance represented by a chemical symbol and that a compound is a pure substance represented by a chemical formula.	6.5A	2	7%
2. Identify the formation of a new substance by using the evidence of a possible chemical change such as production of a gas, change in temperature, production of a precipitate, or color change.	6.5C	2	7%
3. Compare metals, nonmetals, and metalloids using physical properties such as luster, conductivity, or malleability. <b>S</b>	6.6A	2	7%
4. Calculate density to identify an unknown substance. <b>S</b>	6.6B	2	7%
5. Research and discuss the advantages and disadvantages of using coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources.	6.7	2	7%
6. Compare and contrast potential and kinetic energy. <b>S</b>	6.8A	2	7%
7. Identify and describe the changes in position, direction, and speed of an object when acted upon by unbalanced forces.	6.8B	2	7%
8. Calculate average speed using distance and time measurements. <b>S</b>	6.8C	2	7%
9. Measure and graph changes in motion. <b>S</b>	6.8D	2	7%
10. Investigate methods of thermal energy transfer, including conduction, convection, and radiation.	6.9A	2	7%
11. Verify through investigations that thermal energy moves in a predictable pattern from warmer to cooler until all the substances attain the same temperature such as an ice cube melting.	6.9B	2	7%
12. Demonstrate energy transformations such as energy in a flashlight battery changes from chemical energy to electrical energy to light energy. <b>S</b>	6.9C	2	7%
13. Classify rocks as metamorphic, igneous, or sedimentary by the processes of their formation.	6.10B	2	7%
14. Identify the major tectonic plates, including Eurasian, African, Indo-Australian, Pacific, North American, and South American.	6.10C	2	7%
15. Describe how plate tectonics causes major geological events such as ocean basins, earthquakes, volcanic eruptions, and mountain buildings.	6.10D	2	7%
<b>Total</b>		<b>30</b>	

**Note:** **S** = Supporting Standard. This test is consumable. Percentages are rounded to the nearest whole number. A copy of the Grade 8 Science STAAR Reference Materials will be printed with the test. Schools must ensure that students have access to calculators with four-function, scientific, or graphing capability – at least one calculator for every five students; however, features or functions that are not allowed must be disabled. (A list of these features and functions to disable will be posted to the Assessment website as soon as the list is made available by TEA.)  
CAS calculators are **NOT** allowed.

**Scientific Investigation and Reasoning Skills Eligible for Assessment**

<b>Descriptions</b>	<b>SE</b>
1. Demonstrate safe practices during laboratory and field investigations as outlined in Texas Education Agency-approved safety standards.	6.1A
2. Practice appropriate use and conservation of resources, including disposal, reuse, or recycling of materials.	6.1B
3. Plan and implement comparative and descriptive investigations by making observations, asking well defined questions, and using appropriate equipment and technology.	6.2A
4. Design and implement experimental investigations by making observations, asking well defined [well-defined] questions, formulating testable hypotheses, and using appropriate equipment and technology.	6.2B
5. Collect and record data using the International System of Units (SI) and qualitative means such as labeled drawings, writing, and graphic organizers.	6.2C
6. Construct tables and graphs, using repeated trials and means, to organize data and identify patterns.	6.2D
7. Analyze data to formulate reasonable explanations, communicate valid conclusions supported by the data, and predict trends.	6.2E
8. Analyze, evaluate, and critique scientific explanations by using empirical evidence, logical reasoning, and experimental and observational testing, so as to encourage critical thinking by the student.	6.3A
9. Use models to represent aspects of the natural world such as a model of Earth's layers.	6.3B
10. Identify advantages and limitations of models such as size, scale, properties, and materials.	6.3C
11. Relate the impact of research on scientific thought and society, including the history of science and contributions of scientists as related to the content.	6.3D
12. Use appropriate tools, including journals/notebooks, beakers, Petri dishes, meter sticks, graduated cylinders, hot plates, test tubes, balances, microscopes, thermometers, calculators, computers, timing devices, and other necessary equipment to collect, record, and analyze information.	6.4A
13. Use preventative safety equipment, including chemical splash goggles, aprons, and gloves, and be prepared to use emergency safety equipment, including an eye/face wash, a fire blanket, and a fire extinguisher.	6.4B