

2018-19 TNReady Science Field Test Assessment Fact Sheet

Science Field Test Assessment Overview

This fact sheet provides information about the TNReady science field test assessments. The science assessments will assess the Tennessee Academic Standards through measurement of student mastery and will require students to demonstrate a deep conceptual understanding of the three dimensions: disciplinary core ideas, science and engineering practices, and cross-cutting concepts. The science assessment will be delivered in one subpart. Specific information with regards to timing, calculator usage, item types and reference pages can be found below.

Mode of Test Administration

Grades/Course	Delivery Mode
Grades 3-4	Paper-based assessment and separate answer document
Grades 5-8	Computer-based assessment (Nextera platform)
Biology	Computer-based assessment (Nextera platform)

Test Design Timing

Grades/Course	Subpart Timing
Grades 3-4	<ul style="list-style-type: none"> ● One subpart ● 30 items ● 50 minutes
Grades 5-8	<ul style="list-style-type: none"> ● One subpart ● 45 items ● 75 minutes
Biology	<ul style="list-style-type: none"> ● One subpart ● 45 items ● 75 minutes

Test Design Information

The TNReady science assessment will include discrete items and cluster sets of items.

Discrete items: Grades 3-8 and Biology

Discrete items are multiple-choice or multiple-select items that do not have any connection to other items on the assessment. Discrete items align to the disciplinary core area of a grade-level standard and may or may not align additionally to science and engineering practices or cross cutting-concepts. Grades 3-4 will only have discrete items.

Cluster Set: Grades 5-8 and Biology

A cluster set is a group of items that is designed around a common phenomenon. Cluster item sets are designed to fully address the multi-dimensionality of the Tennessee Academic Standards for Science. While the items in the set will share common stimulus material, the items are independent from one another with regards to scoring. The only item types that will appear as part of the cluster item sets are multiple-choice or multiple-select items.

Description of Item Types

Multiple-Choice Items	All multiple-choice items have four answer options and only one correct answer.
Multiple-Select Items	All multiple-select items have five options and either two or three correct answers. Multiple-select item stems will always indicate the number of correct answers by stating, "select two" or "select three."

Reference Sheets

Grade/Course	Reference Sheet
Grades 3-5	No reference sheet
Grade 6	No reference sheet
Grade 7	TNReady approved periodic table (here)
Grade 8	No reference sheet
Biology	No reference sheet

Science Calculator Policy

The Tennessee Academic Standards for Science incorporate mathematical concepts in a grade-appropriate manner and vertical progression that aligns to the Tennessee Academic Standards in Mathematics. Recognizing that students at some grade levels may encounter science items that involve the use of mathematical skills, and because the test is designed to look for mastery of the science standards not the mathematical ones, the Department has developed the following calculator guidance for the TNReady science assessments.

Grade/Course	Calculator Policy	Rationale
3-5	No calculator permitted	Tennessee Academic Standards for Science in grades 3-5 do not have a mathematics component or require any quantitative analysis. There is no need for any student to have a calculator as there will be no assessment items that require math calculations.
6-8	Calculators permitted. Students may use any hand-held calculator listed on the approved calculator list for grades 6-8 located (here). The Nextera online platform will also have an embedded calculator with the same functionality.	Tennessee Academic Standards for Science in grades 6-8 include the introduction of mathematical skills within the context of science. There may be items on the assessment that incorporate grade-level math computation, and therefore, all students are permitted to use a calculator on the assessment.
Biology	Calculators permitted. Students may use any hand-held calculator listed on the approved calculator list for high school located (here). The Nextera online platform will also have an embedded calculator with the same functionality.	Tennessee Academic Standards in Biology require students to analyze and interpret data at a level that may involve some mathematical calculations. Therefore, all students are permitted to use a calculator on the assessment.

Grade 7 Reference Sheet

Periodic Table of the Elements

Key	
11 ←	Atomic Number
Na ←	Element Symbol
Sodium ←	Element Name

1																	18		
1 H Hydrogen												13	14	15	16	17	2 He Helium		
2	3 Li Lithium	4 Be Beryllium												5 B Boron	6 C Carbon	7 N Nitrogen	8 O Oxygen	9 F Fluorine	10 Ne Neon
3	11 Na Sodium	12 Mg Magnesium	3	4	5	6	7	8	9	10	11	12	13 Al Aluminum	14 Si Silicon	15 P Phosphorus	16 S Sulfur	17 Cl Chlorine	18 Ar Argon	
4	19 K Potassium	20 Ca Calcium	21 Sc Scandium	22 Ti Titanium	23 V Vanadium	24 Cr Chromium	25 Mn Manganese	26 Fe Iron	27 Co Cobalt	28 Ni Nickel	29 Cu Copper	30 Zn Zinc	31 Ga Gallium	32 Ge Germanium	33 As Arsenic	34 Se Selenium	35 Br Bromine	36 Kr Krypton	
5	37 Rb Rubidium	38 Sr Strontium	39 Y Yttrium	40 Zr Zirconium	41 Nb Niobium	42 Mo Molybdenum	43 Tc Technetium	44 Ru Ruthenium	45 Rh Rhodium	46 Pd Palladium	47 Ag Silver	48 Cd Cadmium	49 In Indium	50 Sn Tin	51 Sb Antimony	52 Te Tellurium	53 I Iodine	54 Xe Xenon	
6	55 Cs Cesium	56 Ba Barium	57 La Lanthanum	72 Hf Hafnium	73 Ta Tantalum	74 W Tungsten	75 Re Rhenium	76 Os Osmium	77 Ir Iridium	78 Pt Platinum	79 Au Gold	80 Hg Mercury	81 Tl Thallium	82 Pb Lead	83 Bi Bismuth	84 Po Polonium	85 At Astatine	86 Rn Radon	
7	87 Fr Francium	88 Ra Radium	89 Ac Actinium	104 Rf Rutherfordium	105 Db Dubnium	106 Sg Seaborgium	107 Bh Bohrium	108 Hs Hassium	109 Mt Meitnerium	110 Ds Darmstadtium	111 Rg Roentgenium	112 Cn Copernicium	113 Nh Nihonium	114 Fl Flerovium	115 Mc Moscovium	116 Lv Livermorium	117 Ts Tennessine	118 Og Oganesson	

58 Ce Cerium	59 Pr Praseodymium	60 Nd Neodymium	61 Pm Promethium	62 Sm Samarium	63 Eu Europium	64 Gd Gadolinium	65 Tb Terbium	66 Dy Dysprosium	67 Ho Holmium	68 Er Erbium	69 Tm Thulium	70 Yb Ytterbium	71 Lu Lutetium
90 Th Thorium	91 Pa Protactinium	92 U Uranium	93 Np Neptunium	94 Pu Plutonium	95 Am Americium	96 Cm Curium	97 Bk Berkelium	98 Cf Californium	99 Es Einsteinium	100 Fm Fermium	101 Md Mendelevium	102 No Nobelium	103 Lr Lawrencium