

## GSE Quick Reference

GSE Number	GSE Title	GSE Simplified
<b>R2</b>	Vocabulary Strategies	Using strategies (prefixes/suffixes, common roots, word origins, context clues, dictionaries, glossaries, thesauruses) to unlock meaning
<b>R3</b>	Breadth of Vocabulary	Identifying synonyms/antonyms, homonyms, shades of meaning, analogies, idioms, or word origins (ex. Explaining the meaning of terms appropriate to the content of a text)
<b>R4</b>	Initial Understanding of Literary Texts	Making logical predictions and/or identifying any changes in character, setting, problem, or plot as appropriate to text; Paraphrasing or summarizing, generating questions; Identifying the characteristics of a variety of types/genres; Identifying literary devices (simile, metaphor, rhyme, scheme, alliteration, foreshadowing, personification...)
<b>R5/R6/R16</b>	Analyzing Literary Text Citing Evidence	Explaining and supporting logical predictions (drawing conclusions), examining characterization (stereotype, antagonist's motivation, or interactions, citing thoughts, words, or actions; Making inferences about cause and effect; Examining how point of view or style is evident and affects interpretation; explain supporting evidence; Comparing stories or text to personal experience or prior knowledge
<b>R7</b>	Understanding of Informational Text	Using information from the text to answer questions; Organizing information to show understanding; Identifying the characteristics of a variety of types of text
<b>R8</b>	Analysis of Informational Text	Explaining, synthesizing, and drawing connections within and across texts; Distinguishing fact from opinion; Making inferences about cause and/or effect
<b>R11</b>	Fluency and Accuracy	90-94% Accuracy, Reading with appropriate silent and oral fluency, with phrasing and expression, and attention to text features
<b>R14/R15/R17</b>	Breadth of Reading	Reading with frequency (in-school, out-of-school, summer reading); Reading from, a wide range of genres; Self-selecting reading material; Participating in in-depth discussions about text; Identifying, and evaluation sources; Organizing, analyzing and drawing conclusions
<b>W-1</b>	Structure of Language	Varied sentence length, using paragraph structures appropriately, chronology, compare/contrast, cause/effect
<b>W-2</b>	Response to Text	Summarizing key ideas, connecting what has been read (plot/ideas/concepts) to prior knowledge, other texts, world
<b>W-3</b>	Response to Text	Use of a thesis, making use of the author's choice of words, style, bias, literary techniques, or point of view, using specific details or citations in support of thesis/conclusion, organizing ideas, using transitional words
<b>W-4</b>	Expressive Writing (Narrative)	Creating a clear story line, maintaining a point of view, using a variety of transitional devices (flashback, foreshadowing, imagery) to enhance meaning, establishing and maintaining a theme, establishing a sense of closure
<b>W-5</b>	Expressive Writing (Narrative)	Creating images to advance the story line, using dialogue to advance the story line, developing characters, using voice, selecting and elaborating important ideas, Intentional use of sentence length and punctuation
<b>W-6</b>	Informational Writing	Using a text structure (compare/contrast, cause/effect, chronology, deductive/inductive reasoning) to focus thesis, selecting appropriate and relevant information to set context, drawing a conclusion by synthesizing information, listening and citing sources
<b>W-7</b>	Informational Writing	Establishing a topic, stating and maintaining a thesis, Using precise and descriptive language
<b>W-8</b>	Informational Writing	Including facts and details relevant to thesis, including sufficient details, addressing reader's concerns, commenting on the significance of the information
<b>W-9</b>	Writing Conventions	Applying rules of grammar (subject-verb agreement, pronoun-antecedent, consistency of verb tense, case of pronouns), capitalization rules, punctuation rules
<b>W-10</b>	Writing process	Pre-writing, drafting, revising, editing...
<b>W-11</b>	Habit of Writing Extensively	Writing in a variety of genres: journals, reader's/writer's notebooks, learner's logs, scientific observations, free writes, poetry
<b>W-12</b>	Expressive Writing (Poetry)	Writing poems (sonnet, free verse, ballads, haiku, odes, or concrete poems)
<b>W-13</b>	Expressive Writing (Poetry)	Selecting vocabulary for effect, using, rhyme, rhythm, meter, setting, plot, characters, simile, personification, alliteration, onomatopoeia, metaphor
<b>W-14</b>	Expressive Writing (Reflective Essay)	Engaging the reader by establishing a purpose, reflecting on personal learning/growth, questioning, comparing, connecting, interpreting, analyzing, describing, providing closure
<b>OC-1</b>	Interactive Listening	Following verbal instructions, summarizing, paraphrasing, questioning, or contributing to information presented, identifying the thesis of the presentation, participating in large and/or small group discussions
<b>OC-2</b>	Making an Oral Presentation	Exhibiting logical organization and language use, maintaining a consistent focus, use of illustrations, visuals, effectively respond to audience questions and feedback, using a variety of strategies of address (eye contact, speaking rate, volume, enunciation, pronunciation, inflection), using technology to enhance meaning
<b>M(N&amp;O)1</b>	Rational Numbers	Knowing why a real number is rational
<b>M(N&amp;O)2</b>	Real Numbers	Solving problems that involve ordering and comparing subsets
<b>M(N&amp;O)4</b>	Solving Problems	Involve but not limited to proportional relationships, percents, ratios and rates
<b>M(N&amp;O)6</b>	Mental Computation	Calculates perfect square, percentages and fractions, (Intent is to embed mental arithmetic throughout instruction)
<b>M(N&amp;O)7</b>	Estimation	Determining the level of accuracy needed and analyzing the accuracy of results. (ex. Tips, discounts, tax, non-perfect square root or cube root. (Intent is to embed estimation throughout instruction)
<b>M(N&amp;O)8</b>	Properties of Numbers	Simplify computations or compare and contrast the properties and number systems
<b>M9G&amp;M)2</b>	Formal Proofs: Arguments	Angles, lines, circles, distance, midpoint and polygons
<b>M(G&amp;M)4</b>	Concepts of Congruency	Solving problems on or off a coordinate plane. Using matrices to represent reflections, translations, and rotations
<b>M(G&amp;M)5</b>	Concepts of Similarity	Within the mathematics or across disciplines or contexts. Similarity of right triangles with trig functions. Uses ratio of the sides of special right triangles.
<b>M(G&amp;M)6</b>	Two-dimensional Figures	Perimeter, circumference or area of two-dimensional figures, or surface area or volume of three-dimensional figures. Also can apply trig functions (law of sines/cosines)
<b>M(G&amp;M)7</b>	Uses Units of Measure	Makes conversions, uses successive approximations, decides appropriate degree of accuracy
<b>M(G&amp;M)9</b>	On and off coordinate plane	Involves distance, midpoint, perpendicular and parallel lines, or slope

<b>M(G&amp;M)10</b>	Spatial Reasoning	Generates three-dimensional objects from two-dimensional perspectives. Performing and justifying construction with a compass or straightedge
<b>M(F&amp;A)1</b>	Patterns	Represented by models, tables, sequences, or graphs to solve problems
<b>M(F&amp;A)2</b>	Linear & Nonlinear Functions	Analysis of constant, variable, or average rates of change, intercepts, domain, range, maximum and minimum values, increasing and decreasing intervals and rates of change; describes how change in one variable relates to change in the value of the second variable
<b>M(F&amp;A)3</b>	Algebraic Equations	Simplifying expressions, evaluating expressions, or by translating problem situations into algebraic expressions
<b>M(F&amp;A)4</b>	Equality	Solving problems involving algebraic reasoning; translating problem situations into equations; solving problems and expressing the solution set graphically
<b>M(DSP)1</b>	Interpretation of Data	(Box-and-whisker plots, scatter plots, bar graphs, circle graphs, line graphs, histograms, frequency charts) Make observation, analyze data, answer questions, formulate or justify conclusions, make predictions, or solve problems
<b>M(DSP)2</b>	Analysis of Data	Determining, analyzing, or using measures of central tendency, dispersion or correlation to solve Problems
<b>M(DSP)3</b>	Representation of Data	<i>** Same representations identified in DSP 1**</i>
<b>M(DSP)4</b>	Using Counting Techniques	Involving combinations or permutations
<b>M(DSP)5</b>	Solving Problems	Predicts the probability of an event and test the prediction
<b>M(DSP)6</b>	Response to question	Decide the most effective method and sampling techniques to collect the data necessary to answer the question
<b>LS1</b>	Cellular Survival	Explaining the relationships between the specialized structures of the cell and their functions; Explaining that most, multicellular organisms have specialized cells to survive; Comparing the role of Sub-cellular structures in unicellular organisms
	DNA Alteration	Describing the DNA structure; Explaining how DNA may be altered; Describing how DNA contains the code for the production of specific proteins
<b>LS2</b>	Disturbance of Energy	Defining and giving an example of equilibrium in an ecosystem; Describing ways in which humans can modify ecosystems; Describing ways in which natural events can modify ecosystems
	Cycling of Matter & Energy Flow	Diagramming the energy flow in an ecosystem; Explaining how the chemical elements and compounds pass through food webs
	Environmental Impact	Applying scientific data to develop logical arguments concerning the environment
<b>LS3</b>	Technology of Genetic Relationships Reproduction & Natural Selection	Using data to explain how genetic variation has developed Investigating how information is passed through heredity; Investigating how the sorting and recombination of genes in reproduction results in great variety; Citing evidence of natural selection and its consequences
	Evolution of Characteristics	Illustrating the characteristics of change in an environment; Distinguish between microevolution and macroevolution; Providing explanation for natural selection and its consequences
<b>LS4</b>	Effects of Environmental Factors	Researching scientific explanation to explain gene mutations or disease; Explaining how the human species impacts the environment
	System & Homeostasis	Explain how the various systems work together to maintain homeostasis; Investigating the factors that affect homeostasis
<b>ES1</b>	Prediction of Earth Events	Plotting locations to identify any existing patterns
	Theory of Plate Tectonics	Using giving data to explain how scientific knowledge has changed over time
	Heat Fuel Geologic Process	Explaining how heat affects the rock cycle; explaining how convection initiates the movement of plates which then cause seismic activity
	Geologic Dating Methods	Describing various dating method to determine age of rock structures
<b>ES3</b>	Structure of the Universe Theories	Using diagrams, charts, narratives, etc. to explain how scientific knowledge has changed over time
	Big Bang Theory	Using diagrams, charts, narratives, etc. to explain how the "big bang" theory has developed over time
	Electromagnetic Waves	Applying the properties of waves/particles to explain the movement, location, and composition of bodies in the universe
	Nuclear Reactions, Origin of Elements & Life Cycle of Stars	Relating the process of star formation to the size of the star; Describing the ongoing process of star Formation
<b>PS1</b>	Substance ID by Properties	Identifying substances; Determining the degree of change in pressure
	Atoms & the Atomic Theory	Explaining how the understanding of atomic structure has changed over time
	Elements in the Periodic Theory	Explaining the basis for the arrangement of elements (trends, valance electrons, reactivity, ionization...); predicting the properties of an element
	Electron Configuration	Comparing protons, electron, and neutrons; Writing formulae for compounds; Explaining how atoms Interact with one another
<b>PS2</b>	Transformation of Energy	Describing the changes in energy; Explaining the law of conservation
	Energy Flow in a Chemical Reaction	Writing balanced chemical equations; Identifying whether a reaction will release or consume energy; Differentiating between fission and fusion
	Electric Charges, Magnetic Fields, Electromagnetic Forces & Atomic Particles	Explaining that like charges repel and unlike charges attract; Explaining the effects of distance and the Amount of charge on the strength of an electrical force; Explaining the relationship between moving electric parts and magnetic fields
<b>PS3</b>	Predicting & Explaining Motion	Predicting the path of an object in different reference planes; Explaining how distance and velocity change over time
	Inertia, Motion & Momentum	Using Newton's Laws
	Wavelength & Frequency as Electromagnetic Waves	Investigating examples of wave phenomena (ripples, sound waves, seismic waves); Comparing and Contrasting electromagnetic and mechanical waves; qualifying the relationship between frequency and wavelength