## Appendix A1
### Math Categories Guide

**TECHNICAL FEATURES**

<table>
<thead>
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<th>Feature</th>
<th>Details</th>
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<td>Number of items</td>
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<td>Other administration conditions</td>
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<tr>
<td>Item type</td>
<td>• MC</td>
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<tr>
<td></td>
<td>• Quantitative comparison</td>
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<td></td>
<td>• Grid-in</td>
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<tr>
<td></td>
<td>• Open-ended</td>
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<tr>
<td>Use of tools</td>
<td>• None</td>
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<tr>
<td></td>
<td>• Standard calculators</td>
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<td></td>
<td>• Graphing calculators</td>
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<td></td>
<td>• Rulers, protractors</td>
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<td></td>
<td>• Other manipulatives</td>
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**Contextualization**

- Contextualized (as in a word problem)
- Abstract

**Interpretation of visual or spatial information**

- Graph
  - in stem
  - in response options
  - to produce
- Diagram
  - in stem
  - in response options
  - to produce

**Formula**

- Need formula (and have memorized it)
- Need formula, but reference information given
- No formula needed
CONTENT

Pre-algebra
- Numbers & operations, including ratio, proportions, number line, rate/time/distance
- Counting & ordering

Elementary algebra
- Using variables
- Substitution
- Operations on polynomials
- Factoring
- Positive integer exponents & square roots
- Linear equations & inequalities
- Polynomials
- Quadratic equations
- Rate, work, percent mixture problems
- Applications to physical problems

Intermediate algebra
- Systems of equations & inequalities
- Graphing
- Exponential & logarithmic functions
- Finite & infinite series
- Quadratic formula
- Radical & rational expressions
- Absolute value equations
- Sequences
- Matrices
- Roots of polynomials
- Complex numbers

Coordinate geometry
- Real number line & (x,y) coordinate plane
- Graphing equations
- Slope, distance, midpoints

- Cones

Plane geometry
- Plane figures
- Angles
- Parallel & perpendicular lines
- Translations, rotations, reflections
- Proofs
- 3D geometry
- Measurement (e.g., perimeter, area, volume)
- Transformations
- Geometric probabilities

Trigonometry
- Right triangles
- Trig functions
- Identities
- Equations

Statistics & probability
- Probability
- Interpretation of data & graphs
- Permutations & combinations
- Standard deviation
- Processing of statistical information
- Sampling & estimation
- Distributions
- Interpolation & prediction

Misc.
- Logic
- Special symbols
- Elementary number theory
- Arithmetic & geometric sequences
COGNITIVE PROCESSES

Conceptual Understanding (knowing "that" or "about")
- Recognize, label, & generate examples & nonexamples of concepts
- Use and interrelate models, diagrams, manipulatives, and varied representations of concepts
- Identify and apply principles
- Know and apply facts & definitions
- Compare, contrast, & integrate relate concepts & principles

Procedural Knowledge (knowing "how")
- Select & apply appropriate procedures correctly
  - apply algorithms
  - read & produce graphs & tables
  - execute geometric constructions
  - perform noncomputational skills such as rounding & ordering
- Verify or justify the correctness of a procedure
- Extend or modify procedures to deal with factors inherent in problem settings

Problem Solving
- Recognize & formulate problems
- Determine sufficiency & consistency of data
- Use strategies, data, models, & relevant mathematics
- Generate, extend, & modify procedures
- Use reasoning (e.g., spatial, inductive, deductive, statistical, or proportional) in new settings
- Judge the reasonableness & correctness of solutions
- Use procedural & conceptual knowledge to confront new situations
Appendix A2
English/Language Arts Categories Guide

Scorer

_________________________

Date

_________________________

Test name

_________________________

Total E/LA Time limit

_________________________
Add together the times for all portions of the English/language arts section of the test.

Total Number of E/LA questions

_________________________
Add together the number of questions for all portions of the English/language arts section of the test.

Other administration conditions (e.g.,
__________________________________________________________________________

Skills included: ___reading, ___editing, ___writing
The-writing section measures the skill necessary for composition including, grammar, diction, style

Weight of each subject: ___reading, ___editing, ___writing, ___not stated.
Can sometimes be found in the descriptive material about the test; however, this information is not always stated.
READING

Number of items for the reading section. _______

If the reading section is interrupted by other sections, combine the reading sections, and enter the total number of questions allotted to reading assessment.

Time limit for the reading section. _______

If the reading section is broken by other sections, combine the times, and enter the total time allotted to reading assessment.

Item type

___ MC (Multiple Choice)
___ OR, short (Open Response, short - e.g., fill in the blank with your own best answer)
___ OR, short with justification (e.g., fill in the blank with your own best answer and explain why you answered as you did)
___ OE, extended (includes essays) (e.g., paragraph, short essay, long essay)

Passage number

If passages are not numbered, number them consecutively from the beginning of the reading section. Start with number one.

If questions are based on more than one passage, list the passage numbers on the same line. E.g., if questions refer to Excerpt 1 and Excerpt 2, list the passage number as 1/2.

Voice

___ Narrative - stories, personal accounts, personal anecdotes (e.g., recollection of personal anecdote), expressing a personal view (e.g., write an essay about an experience or person that changed your life)
___ Descriptive - describes person, place, or thing (e.g., describe a piece of furniture in your home)
___ Persuasive - attempt to influence others to take some action or to influence someone’s attitudes or ideas (e.g., write an essay taking the position that people should give up smoking)
___ Informative - Share knowledge; convey messages, provide information on a topic, instructions for performing a task (e.g., discuss the problems of introducing technology into third world countries)
Topic

____ Fiction (a story, poem)
____ Humanities (e.g., artwork of Vincent Van Gogh)
____ Natural sciences (e.g., the reproductive process of fish)
____ Social sciences (e.g., one man, one vote; cost effectiveness of heart transplants)
____ Personal (e.g., diary account of death of a parent)

Genre

____ Letters
____ Essays
____ Poems
____ Stories
____ Reports
____ Pictures
____ Graphs

Reading skills - Identify one skill for each item
1. Recognize, recall, summarize
Answer can be found directly in the text, or by using the definitions of words or literary devices, or by applying grammatical rules.
E.g.,
____ define
____ identify literary devices
____ correct grammar
____ search for information in text - identify important details

2. Analyze, infer, interpret
Interpret what is already written.
E.g.,
____ identify underlying assumptions
____ relate ideas/opinions in sections of a passage
____ compare characters, ideas, or styles
____ identify cause-effect relationships
____ identify main point of passage/paragraph
____ identify author's point of view
____ generalize about passage content
____ determine meaning from context
____ discerning connections and relationships among ideas within the text
____ relating personal knowledge to text ideas
____ analogies

3. Evaluate style, content, organization
Improve the way the material is written.
E.g.,
____ Style - how text conveys information, expresses ideas or feelings, or communicates a message
____ Content - Insightfulness, analytic proficiency
____ Organization - logical presentation (SAT), development of ideas (SAT), use of appropriate supporting examples (SAT)
EDITING:

Number of items for the editing section ______

If the editing writing section is interrupted by other sections, combine the editing sections, and enter the total number of questions allotted to editing.

Time limit for the editing section ______

If the editing section is broken by other sections, combine the times, and enter the total time allotted to editing assessment.

Item type

___ MC  (Multiple Choice)

___ OR, short (Open Response, short - e.g., fill in the blank with your own best answer)

___ OR, short with justification, (e.g., fill in the blank with your own best answer and explain why you answered as you did)

Passage Level (Answer only if prompt for questions is a passage)

Voice of writing - Answer only if passage (not sentence) used as prompt

___ Narrative - stories, personal accounts, personal anecdotes (e.g., recollection of personal anecdote), expressing a personal view (e.g., write an essay about an experience or person that changed your life)

___ Descriptive - describes person, place, or thing (e.g., describe a piece of furniture in your home)

___ Persuasive - attempt to influence others to take some action or to influence someone's attitudes or ideas (e.g., write an essay taking the position that people should give up smoking)

___ Informative - Share knowledge; convey messages, provide information on a topic, instructions for performing a task (e.g., discuss the problems of introducing technology Into third world countries)

Topic - Answer only if passage (not sentence) used as prompt

___ Fiction (a story, poem)

___ Humanities (e.g., artwork of Vincent Van Gogh)

___ Natural sciences (e.g., the reproductive process of fish)

___ Social sciences (e.g., one man, one vote; cost effectiveness of heart transplants)

___ Personal (e.g., diary account of death of a parent)

Genre - Answer only if passage (not sentence) used as prompt

___ Letters

___ Essays

___ Poems

___ Graphs
Item-level

1. Recognize, recall, summarize

   Answer can be found, directly in the text, or by using the definitions of words or literary devices, or by applying grammatical rules.

   E.g.,
   
   ___ define
   ___ identify literary devices
   ___ correct grammar
   ___ search for information in text - identify important details

2. Analyze, infer, interpret

   Interpret what is already written.

   E.g.,
   
   ___ identify underlying assumptions
   ___ relate ideas/opinions in sections of a passage
   ___ compare characters, ideas, or styles
   ___ identify cause-effect relationships
   ___ identify main point of passage/paragraph
   ___ identify author's point of view
   ___ generalize about passage content
   ___ determine meaning from context
   ___ discerning connections and relationships among ideas within the text
   ___ relating personal knowledge to text ideas
   ___ analogies
3. Evaluate style, content, organization

Improve the way the material is written.

E.g.,

___ Style - how text conveys information, expresses ideas or feelings, or communicates a message

___ Content - Insightfulness, analytic proficiency

___ Organization - logical presentation (SAT), development of ideas (SAT), use of appropriate supporting examples (SAT)

___ Mechanics/Usage - grammar, word choice, idiom, punctuation

If grammatically incorrect and has stylistic problems, code as a mechanics/usage question

___ Rhetorical skills - clarity, precision, style, sentence structure, organization, development, relationships between words, sentence logic, syntax

Editing Question Format and Content

___ Select correct grammar, punctuation, capitalization, spelling, word choice, use of language, vocabulary, sentence structure, etc., from list of choices or identify errors of grammar, usage, diction, and idiom

___ Fill in sentence blanks (displaying knowledge of word meanings, context, sentence logic)

___ Analogy - select pair that best matches relationship of words in the original pair

___ Rearrange words to improve sentence

___ Rearrange sentences to improve paragraph.
WRITING

Number of writing samples________________

Time limit: per writing sample________________

Length per writing sample________________

Genre
____ Letter
____ Essay, biography, autobiography
____ Poem
____ Report
____ Picture
____ Graph

Topic
____ Fiction (a. story, poem)
____ Humanities (e.g., artwork or Vincent Van Gogh)
____ Natural sciences (e.g., the reproductive process or fish)
____ Social sciences (e.g., one man, one vote; cost effectiveness of heart transplants)
____ Personal (e.g., diary account of death of a parent)

Steps in writing process

Genre
____ Essay (compare and contrast, historical development, discuss an idea)
____ Letter
____ Story
____ Report
____ Personal experience, opinion
____ Information learned at school
____ New information

Writing procedures assessed
____ Prewriting/planning
____ Drafting
____ Revising
____ Editing
____ None specified

Scoring criteria for writing samples
____ Mechanics: grammar, punctuation, capitalization, spelling
____ Word choice, use of language, vocabulary, sentence structure
____ Organization, logical presentation (SAT), development of ideas (SAT), use of appropriate supporting examples (SAT)
____ Style, voice, attention to audience
____ Insightfulness, analytic proficiency, accurate understanding of stimulus passage