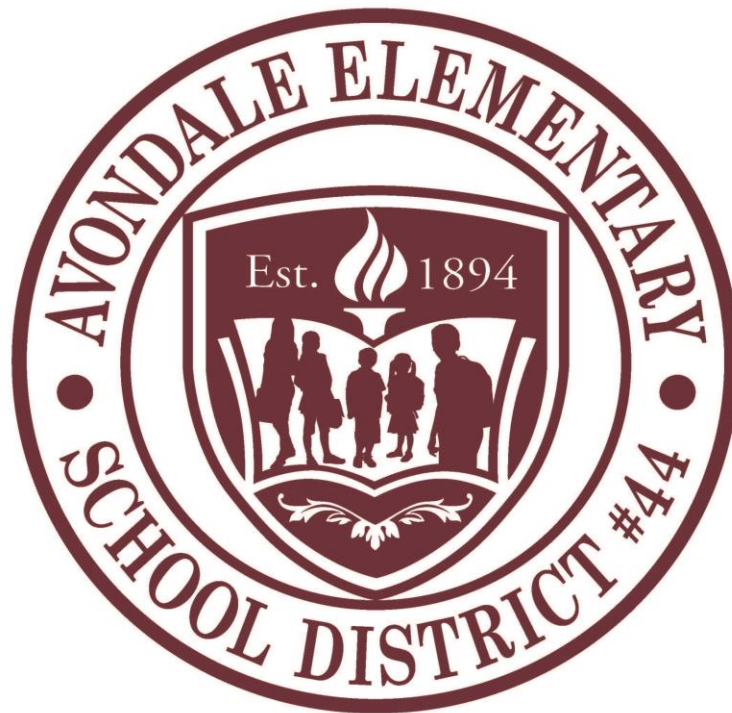


In Avondale, **every student** will grow as a **thinker**, **problem solver** and **communicator** to pursue a future without limits.



COLLABORATIVELY REVIEWING AND REVISING COMMON UNIT ASSESSMENTS ALIGNED TO STANDARDS

Opportunity to learn (OTL) has the strongest relationship with student achievement of all school-level factors. It may seem like common sense, but data shows that success in mastery learning is directly related to **“whether or not students have had an opportunity to study a particular topic or learn how to solve a particular type of problem presented by the test.”** (Husen)

Prepared Especially for the Collaborative Learning Team of
AVONDALE ELEMENTARY SCHOOL DISTRICT

by Dan Mulligan, a Virginia (now an Avondale Guy)
July 2017

AGENDA FOR UNWRAPPING STANDARDS AND CREATING ALIGNED ASSESSMENT ITEMS

THE GOAL:

To clarify the knowledge, concepts, skills, vocabulary, potential guiding questions, and end-of-unit/module assessments essential to ensuring student mastery of standards.

THE RATIONALE:

Backward Design (Mc Tighe & Wiggins) is a method of designing educational curriculum by setting goals before choosing instructional methods and forms of assessment. Backward design of curriculum typically involves three stages:

1. Identify the results desired (big ideas and skills) *What do students have to know and be able to do?*
2. Determine acceptable levels of evidence that support that the desired results have occurred (culminating assessment tasks) *How will we know if they learned it?*
3. Design activities/tasks that will make the desired results happen (learning events) *What will we do if students didn't learn or if they already know it?*

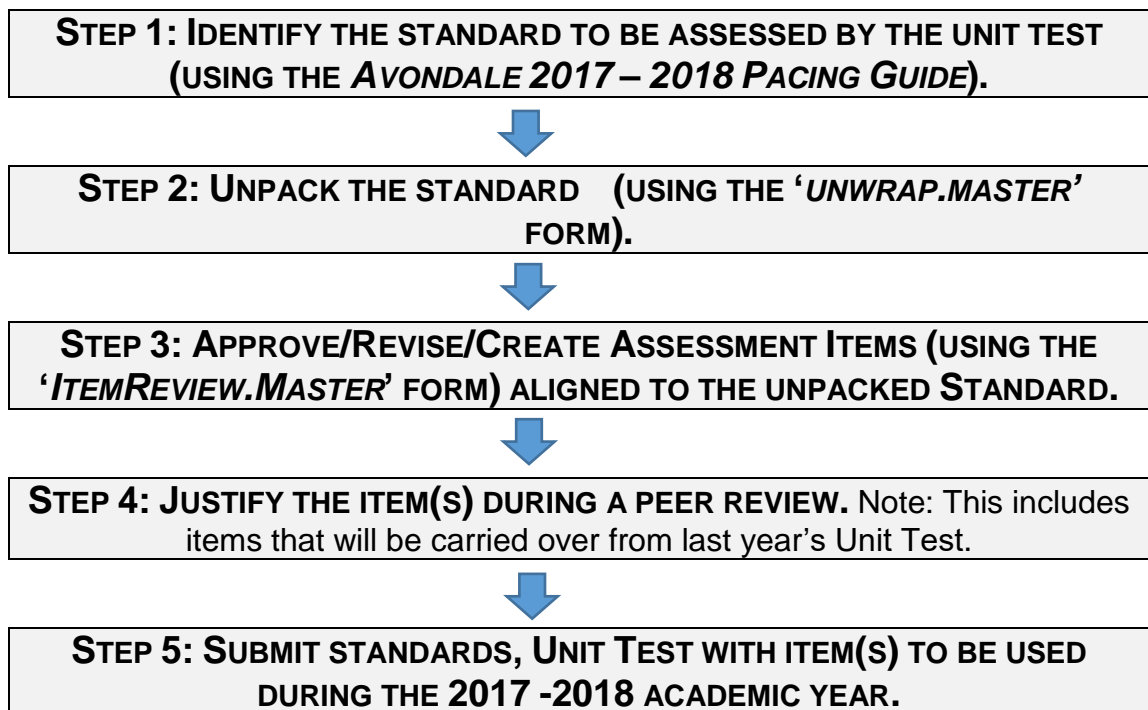
BENEFITS OF UNPACKING STANDARDS:

- Provides clarity on which skills and concepts should be taught and assessed
- Improves common pacing, curriculum alignment, and common assessments
- Provides teams with a baseline or starting point for lesson planning
- Provides opportunities for differentiated instruction
- Allows teams to determine what matters most

TOOLS NECESSARY FOR THE TASK:

- A copy of the appropriate Avondale Curriculum Guide
- A copy of the Arizona: Standards, College and Career Ready Standards, Performance Level Descriptors
- Access to the Avondale Unit Assessments
- Access to the Arizona AzMERIT Sample Items

PROCESS:



AVONDALE ELEMENTARY SCHOOL DISTRICT

Ensuring each student is as a thinker, problem solver, and communicator

STEPS 1 & 2: **UNWRAP A STANDARD:** *WHAT DO STUDENTS HAVE TO KNOW AND BE ABLE TO DO?*

COPY/PASTE THE STANDARD AND THE AZMERIT PERFORMANCE LEVEL DESCRIPTOR FOR PROFICIENCY

- Underline the nouns.
- *Circle or italicize* the verbs.

ESSENTIAL KNOWLEDGE/CONCEPTS

What Do Students Need to Know/Understand?

List the underlined nouns

ESSENTIAL SKILLS

What Do Students Need to Be Able to Do?

List the circled (or *italicized*) verbs

DEPTH OF KNOWLEDGE

Highlight the DOK level of the standard (*see resource*)

- **DOK 1 – Recall/Reproduction:** Recall a fact, information, or procedure. Process information on a low level.
- **DOK 2 – Skill/Concept:** Use information or conceptual knowledge, two or more steps.
- **DOK 3 – Strategic Thinking:** Requires reasoning, developing a plan or a sequence of steps, some complexity.
- **DOK 4 – Extended Thinking:** Requires an investigation, time to think and process multiple conditions of the problem. Most on-demand assessments will NOT include level 4 activities.

ESSENTIAL VOCABULARY

What Do Students Need to Comprehend?

List all key vocabulary

LEARNING OBJECTIVES ALIGNED TO THE STANDARD

What 'I can' statement(s) will clarify the objective for students?

EVIDENCE OF STUDENT MASTERY?

How will we know when they know it?

STEP 3: CREATE ASSESSMENT OF MASTERY: *HOW WILL WE KNOW WHEN THEY KNOW IT?*

AESD ASSESSMENT ITEM ALIGNMENT TO STANDARDS REVIEW/REVISION PROCESS	ITEM REVIEW MEMBERS	GRADE: _____ QUARTER*: _____ UNIT TEST: _____ ITEM #: _____ **IF NEW ITEM, MARK 'NEW'
--	----------------------------	--

Standard *taken from PLD https://cms.azed.gov/home/GetDocumentFile?id=583ca210aadebe13d87d430f	
Unwrap standard and performance objective to develop item specifications. Specify the: content rigor vocabulary of the standard? <i>Explain.</i>	<i>What is the standard requiring students to know and be able to do? (summary from <u>unwrapping the standard</u>)</i>
Is there a released April 2017 AzMerit question that aligns with the standard? If yes, place a copy in the box to the right. What is the DOK level of the item?	<i>How will we know students have learned the standard?</i>
Is there currently an AESD assessment item ? If yes, place the item in the box to the right. What is the DOK level of the item?	<i>How will we know students have learned the standard?</i>
Does the current AESD item align with: content rigor vocabulary of the unpacked standard? Do we need an additional item? <i>Why?</i> Are there duplicate items? <i>Is there a reason?</i>	<i>What is the standard requiring students to know and be able to do?</i>
If there is no current item, the current item is not aligned, or an essential skill or concept is not assessed develop/ revise an assessment item <u>according to the targeted standard, level of difficulty (DOK) and/or vocabulary.</u>	

Please initial and write 'Approved' in the box to the right when the item has been approved through the peer review process.	
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**If the standard is learned/assessed after the AzMERIT, identify opportunities to seamlessly integrate the content/skill with an earlier standard (guaranteed and viable curriculum).*

ADDITIONAL RESOURCES



**TO SUPPORT THE PROCESS OF
UNPACKING STANDARDS
TO TARGET ASSESSMENT AND
LEARNING**

GRADE 3			GRADE 4		
Domain	Min.	Max.	Domain	Min.	Max.
Operations, Algebraic Thinking, Numbers in Base 10	49	53	Operations, Algebraic Thinking, Numbers in Base 10	46	54
Number and Operations – Fractions	18	22	Number and Operations – Fractions	29	33
Measurement, Data, Geometry	26	30	Measurement, Data, Geometry	15	19

GRADE 5			GRADE 6		
Domain	Min.	Max.	Domain	Min.	Max.
Operations, Algebraic Thinking, Numbers in Base Ten	38	42	Ratio and Proportional Relationships	19	23
Number and Operations – Fractions	31	35	The Number System	25	29
Measurement, Data, Geometry	24	28	Expressions and Equations	29	33
			Geometry, Statistics, and Probability	17	21

GRADE 7			GRADE 8		
Domain	Min.	Max.	Domain	Min.	Max.
Ratio and Proportional Relationships	19	23	Expressions and Equations	32	36
The Number System	19	23	Functions	21	25
Expressions and Equations	23	27	Geometry	23	27
Geometry, Statistics, and Probability	27	35	Statistics, Probability, and the Number System	15	19

ALGEBRA I			GEOMETRY		
Domain	Min.	Max.	Domain	Min.	Max.
Algebra	40	44	Congruence	23	27
Functions	36	40	Similarities, Right Triangles, and Trigonometry	27	31
Statistics	17	21	Circles, Geometric Measurement, and Geometric Properties with Equations	23	27
			Modeling with Geometry	17	21

PERCENTAGE OF POINTS BY DOK LEVEL			
Grade	DOK Level 1	DOK Level 2	DOK Level 3
3 – 8	10% - 20%	60% - 70%	12% - 30%

AZMERIT BLUEPRINTS AND DOK ALIGNMENT

READING EDITION

GRADE 3			GRADE 4		
Strands	Min.	Max.	Strands	Min.	Max.
Reading Standards for Literature	26	35	Reading Standards for Literature	26	35
Reading Standards for Informational Text	26	35	Reading Standards for Informational Text	26	35
Listening Comprehension (Informational)	0	13	Listening Comprehension (informational)	0	13
Language	13	19	Language	13	19
Writing	17	19	Writing	17	19

GRADE 5			GRADE 6		
Strands	Min.	Max.	Strands	Min.	Max.
Reading Standards for Literature	26	35	Reading Standards for Literature	24	31
Reading Standards for Informational Text	26	35	Reading Standards for Informational Text	30	38
Listening Comprehension (Informational)	0	13	Listening Comprehension (Informational)	0	13
Language	13	19	Language	13	19
Writing	17	19	Writing	17	19

GRADE 7			GRADE 8		
Strands	Min.	Max.	Strands	Min.	Max.
Reading Standards for Literature	24	31	Reading Standards for Literature	24	31
Reading Standards for Informational Text	30	38	Reading Standards for Informational Text	30	38
Listening Comprehension (Informational)	0	13	Listening Comprehension (Informational)	0	13
Language	13	19	Language	13	19
Writing	17	19	Writing	17	19

PERCENTAGE OF POINTS BY DOK LEVEL				
Grade	DOK Level 1	DOK Level 2	DOK Level 3	DOK 4 (writing)
3 – 11	10% - 20%	50% - 60%	15% - 25%	16% - 19%

UNPACKING THE ESSENTIAL SKILLS OF STANDARDS

PLANNING ASSESSMENT FOR LEARNING

LEVEL OF COMPLEXITY	KEY VERBS THAT MAY CLUE LEVEL		EVIDENCE OF DOK
<p>Level 1 Recall/Reproduction Recall a fact, information, or procedure. Process information on a low level.</p> <p>Bloom <i>Know/Remember</i> The recall of specifics and universals, involving little more than bringing to mind the appropriate material.</p> <p><i>Comprehend/Understand</i> Ability to process knowledge on a low level such that the knowledge can be reproduced or communicated without a verbatim repetition.</p>	Arrange Calculate Cite Define Describe Draw Explain Give examples Identify Illustrate Label Locate List Match	Measure Name Perform Quote Recall Recite Record Repeat Report Select State Summarize Tabulate	<ul style="list-style-type: none"> • Explain simple concepts or routine procedures • Recall elements and details • Recall a fact, item or property • Conduct basic calculations • Order rational numbers • Identify a scientific representation for simple phenomena • Label locations • Describe the features of a place or people • Identify figurative language in a reading passage
<p>Level 2 Skill/Concept Use information or conceptual knowledge, two or more steps</p> <p>Bloom <i>Apply</i> Uses information in another familiar situation. Executes – carries out a procedure in a familiar task Implements – uses a procedure in an unfamiliar task</p>	Apply Calculate Categorize Classify Compare Compute Construct Convert Describe Determine Distinguish Estimate Explain Extend Extrapolate Find Formulate	Generalize Graph Identify patterns Infer Interpolate Interpret Modify Observe Organize Predict Relate Represent Show Simplify Solve Sort Use	<ul style="list-style-type: none"> • Solve routine multiple-step problems • Describe non-trivial patterns • Interpret information from a simple graph • Sort objects • Show relationships • Apply a concept • Organize, represent and interpret data • Use context clues to identify the meaning of unfamiliar words • Describe the cause/effect of a particular event • Predict a logical outcome • Identify patterns in events or behavior

UNPACKING THE ESSENTIAL SKILLS OF STANDARDS

PLANNING ASSESSMENT FOR LEARNING

LEVEL OF COMPLEXITY	KEY VERBS THAT MAY CLUE LEVEL		EVIDENCE OF DOK
<p>Level 3 Strategic Thinking Requires reasoning, developing a plan or a sequence of steps, some complexity</p> <p>Bloom <i>Analyze</i> Breaking information into parts to explore understanding and relationships.</p> <p><i>Evaluate</i> Checks/Critiques – makes judgements based on criteria and standards</p>	Appraise Assess Cite evidence Check Compare Compile Conclude Contrast Critique Decide Defend Describe Develop Differentiate Distinguish	Examine Explain how Formulate Hypothesize Identify Infer Interpret Investigate Judge Justify Reorganize Solve Support	<ul style="list-style-type: none"> • Solve non-routine problems • Interpret information from a complex graph • Explain phenomena in terms of concepts • Support ideas with details and examples • Develop a scientific model for a complex situation • Formulate conclusions from experimental data • Compile information from multiple sources to address a specific topic • Develop a logical argument • Identify and then justify a solution • Identify the author’s purpose and explain how • Identify the author’s purpose and explain how it effects the interpretation of a reading selection
<p>Level 4 Extended Thinking Requires an investigation, time to think and process multiple conditions of the problem. Most on-demand assessments will not include Level 4 activities</p> <p>Bloom <i>Synthesize</i> Putting together elements and parts to form a whole</p> <p><i>Evaluation</i> Making value judgements about the method</p>	Appraise Connect Create Critique Design Judge Justify Prove Report Synthesize		<ul style="list-style-type: none"> • Design and conduct an experiment that requires specifying a problem, report results/solutions • Synthesize ideas into new concepts • Critique experimental designs • Design a mathematical model to inform and solve a practical or abstract situation • Connect common themes across texts from different cultures • Synthesize information from multiple sources

DOK SAMPLES BY CONTENT AREA - ELA

ELA - READING

DOK 1

- Support ideas by reference to verbatim or only slightly paraphrased details from the text.
- Use a dictionary to find the meanings of words.
- Recognize figurative language in a reading passage.

DOK 2

- Use context cues to identify the meaning of unfamiliar words, phrases, and expressions that could otherwise have multiple meanings.
- Predict a logical outcome based on information in a reading selection.
- Identify and summarize the major events in a narrative

DOK 3

- Explain or recognize how the author's purpose affects the interpretation of a reading selection.
- Summarize information from multiple sources to address a specific topic.
- Analyze and describe the characteristics of various types of literature.

DOK 4

- Analyze and synthesize information from multiple sources.
- Examine and explain alternative perspectives across a variety of sources.
- Describe and illustrate how common themes are found across texts from different cultures

ELA - WRITING

DOK 1

- Use punctuation marks correctly.
- Identify Standard English grammatical structures, including the correct use of verb tenses.

DOK 2

- Construct or edit compound or complex sentences, with attention to correct use of phrases and clauses.
- Use simple organizational strategies to structure written work.
- Write summaries that contain the main idea of the reading selection and pertinent details.

DOK 3

- Support ideas with details and examples.
- Use voice appropriate to the purpose and audience.
- Edit writing to produce a logical progression of ideas

DOK 4

- Write an analysis of two selections, identifying the common theme and generating a purpose that is appropriate for both.

DOK SAMPLES BY CONTENT AREA - MATH

DOK 1

- Recall or recognize a fact, definition, or term
- Apply a well-known algorithm
- Apply a formula
- Determine area or perimeter of rectangles or triangles given a drawing and labels
- Identify a plane or three-dimensional figure
- Measure a length
- Perform a specified or routine procedure
- Evaluate an expression
- Solve a one-step word problem
- Retrieve information from a table or graph
- Recall, identify, or make conversions between and among representations or numbers (fractions, decimals, and percents), or within and between customary and metric measures
- Locate numbers on a number line, or points on a coordinate grid
- Solves linear equations
- Represent math relationships in words, pictures, or symbols

DOK 3

- Interpret information from a complex graph
- Explain thinking when more than one response is possible
- Make and/or justify conjectures
- Develop logical arguments for a concept
- Use concepts to solve problems
- Perform procedure with multiple steps and multiple decision points
- Generalize a pattern
- Describe, compare, and contrast solution methods
- Formulate a mathematical model for a complex situation
- Provide mathematical justifications
- Solve a multiple- step problem, supported with a mathematical explanation that justifies the answer
- Formulate an original problem, given a situation

DOK 2

- Classify plane and three dimensional figures
- Interpret information from simple graph
- Use models to represent mathematical concepts
- Solve a routine problem requiring multiple steps, or the application of multiple concepts
- Compare figures or statements
- Compare and contrast figures
- Provide justifications for steps in a solution process
- Extend a pattern
- Retrieve information from a table, graph, or figure and use it solve a problem requiring multiple steps
- Translate between tables, graphs, words and symbolic notation
- Select a procedure according to criteria and perform it

DOK 4

- Relate mathematical concepts to other content areas
- Relate mathematical concepts to real-world applications in new situations
- Apply a mathematical model to illuminate a problem, situation
- Conduct a project that specifies a problem, identifies solution paths, solves the problem, and reports results
- Design a mathematical model to inform and solve a practical or abstract situations

NOTE: Level 4 requires applying one approach among many to solve problems. Involves complex restructuring of data, establishing and evaluating criteria to solve problems.

DOK SAMPLES BY CONTENT AREA – SCIENCE

DOK 1

- Recall or recognize a fact, term, definition, simple procedure (such as one step), or property
- Demonstrate a rote response
- Use a well-known formula
- Represent in words or diagrams a scientific concept or relationship
- Provide or recognize a standard scientific representation for simple phenomenon
- Perform a routine procedure, such as measuring length
- Perform a simple science process or a set procedure (like a recipe)
- Perform a clearly defined set of steps
- Identify, calculate, or measure

NOTE: If the knowledge necessary to answer an item automatically provides the answer, it is a Level 1

DOK 2

- Specify and explain the relationship between facts, terms, properties, or variables
- Describe and explain examples and nonexamples of science concepts
- Select a procedure according to specified criteria and perform it
- Formulate a routine problem given data and conditions
- Organize, represent, and compare data
- Make a decision as to how to approach the problem
- Classify, organize, or estimate
- Compare data
- Make observations
- Interpret information from a simple graph
- Collect and display data

NOTE: If the knowledge necessary to answer an item does not automatically provide the answer, then the item is at least a Level 2. Most actions imply more than one step. NOTE: Level 3 is complex and abstract. If more than one response is possible, it is at least a Level 3 and calls for use of reasoning, justification, evidence, as support for the response.

DOK 3

- Interpret information from a complex graph (such as determining features of the graph or aggregating data in the graph)
- Use reasoning, planning, and evidence
- Explain thinking (beyond a simple explanation or using only a word or two to respond)
- Justify a response
- Identify research questions and design investigations for a scientific problem
- Use concepts to solve non-routine problems/more than one possible answer
- Develop a scientific model for a complex situation
- Form conclusions from experimental or observational data
- Complete a multi-step problem that involves planning and reasoning
- Provide an explanation of a principle
- Justify a response when more than one answer is possible
- Cite evidence and develop a logical argument for concepts
- Conduct a designed investigation
- Research and explain a scientific concept
- Explain phenomena in terms of concepts.

DOK 4

- Select or devise an approach among many alternatives to solve problem
- Based on provided data from a complex experiment that is novel to the student, deduct the fundamental relationship between several controlled variables.
- Conduct an investigation, from specifying a problem to designing and carrying out an experiment, to analyzing its data and forming conclusions
- Relate ideas *within* the content area or *among* content areas
- Develop generalizations of the results obtained and the strategies used
- and apply them to new problem situations

NOTE: Level 4 activities often require an extended period of time for carrying out multiple steps; however, time alone is not a distinguishing factor if skills and concepts are simply repetitive over time.

DOK SAMPLES BY CONTENT AREA – HISTORY AND SOCIAL SCIENCE

<p>DOK 1</p> <ul style="list-style-type: none">• Recall or recognition of: fact, term, concept, trend, generalization, event, or document• Identify or describe features of places or people• Identify key figures in a particular context• Identify meaning of words• Describe or explain: who, what, where, when• Identify specific information contained in maps, charts, tables, graphs, or drawings	<p>DOK 2</p> <ul style="list-style-type: none">• Describe cause-effect of particular events• Describe or explain: how (relationships or results), why, points of view, processes, significance, or impact• Identify patterns in events or behavior• Categorize events or figures in history into meaningful groups• Identify and summarize the major events, problem, solution, conflicts• Distinguish between fact and opinion• Organize information to show relationships• Compare and contrast people, events, places, concepts• Give examples and non-examples to illustrate an idea/concept
<p>DOK 3</p> <ul style="list-style-type: none">• Explain, generalize, or connect ideas, using supporting evidence from a text/source• Apply a concept in other contexts• Make and support inferences about implied causes and effects• Draw conclusion or form alternative conclusions• Analyze how changes have affected people or places• Use concepts to solve problems• Analyze similarities and differences in issues or problems• Propose and evaluate solutions• Recognize and explain misconceptions related to concepts	<p>DOK 4</p> <ul style="list-style-type: none">• Analyze and explain multiple perspectives or issues within or across time periods, events, or cultures• Gather, analyze, organize, and synthesize information from multiple (print and non print) sources• Make predictions with evidence as support• Plan and develop solutions to problems• Given a situation/problem, research, define, and describe the situation/problem and provide alternative solutions• Describe, define, and illustrate common social, historical, economic, or geographical themes and how they interrelate

PRACTICING THE PROCESS



**OF
UNPACKING A STANDARD
TO TARGET ASSESSMENT AND
LEARNING**

MODELING THE PROCESS

STEP 1: CONSULT THE AVONDALE CURRICULUM GUIDE TO IDENTIFY A STANDARD TO BE ASSESSED

REASON WITH SHAPES AND THEIR ATTRIBUTES	3.G.A.1	Understand that <u>shapes</u> in different <u>categories</u> (e.g., rhombuses, rectangles, and others) may share <u>attributes</u> (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize <u>rhombuses</u> , <u>rectangles</u> , and <u>squares</u> as examples of <u>quadrilaterals</u> , and draw quadrilaterals that do not belong to any of the <u>subcategories</u> .
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STEP 2: CONSULT THE AZMERIT PERFORMANCE INDICATORS FOR THE STANDARD

3.G.A.1	EMERGING	DEVELOPING	PROFICIENT	DISTINGUISHED
3.G.A.1	I can identify examples of quadrilaterals, recognize that examples of quadrilaterals have shared attributes, and that the shared attributes can define a larger category.	I can understand the properties of quadrilaterals and the subcategories of quadrilaterals.	I can recognize and sort <u>examples of quadrilaterals</u> that have shared <u>attributes</u> and that the shared attributes can define a larger <u>category</u> .	I can recognize and sort <u>examples of quadrilaterals</u> that have shared <u>attributes</u> and that the shared attributes can define a larger <u>category</u> . I can draw <u>examples</u> and <u>non-examples</u> of <u>quadrilaterals</u> that are not <u>rhombuses</u> , <u>rectangles</u> , or <u>squares</u> .

STEP 3: UNPACK THE STANDARD

<p>ESSENTIAL KNOWLEDGE/CONCEPTS <i>What Do Students Need to Know/Understand?</i> List the underlined nouns</p> <p>SHAPES CATEGORIES ATTRIBUTES RHOMBUS RECTANGLE SQUARE QUADRILATERAL SUBCATEGORIES EXAMPLES NON-EXAMPLES</p>	<p>ESSENTIAL SKILLS <i>What Do Students Need to Be Able to Do?</i> List the circled (or <i>italicized</i>) verbs</p> <p>UNDERSTAND RECOGNIZE DEFINE DRAW SORT</p>
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STEP 4: IDENTIFY THE DOK LEVEL AND VOCABULARY OF THE STANDARD

<p>DEPTH OF KNOWLEDGE Highlight the DOK level of the standard (<i>see resource</i>)</p> <ul style="list-style-type: none"> ● DOK 1 – Recall/Reproduction: Recall a fact, information, or procedure. Process information on a low level. ● DOK 2 – Skill/Concept: Use information or conceptual knowledge, two or more steps. ● DOK 3 – Strategic Thinking: Requires reasoning, developing a plan or a sequence of steps, some complexity. ○ DOK 4 – Extended Thinking: Requires an investigation, time to think and process multiple conditions of the problem. Most on-demand assessments will NOT include level 4 activities 	<p>ESSENTIAL VOCABULARY <i>What Do Students Need to Comprehend?</i> List all key vocabulary</p> <table border="0"> <tr> <td>SHAPE</td> <td>CATEGORY</td> </tr> <tr> <td>ATTRIBUTES</td> <td>RHOMBUS</td> </tr> <tr> <td>RECTANGLE</td> <td>SQUARE</td> </tr> <tr> <td>QUADRILATERAL</td> <td>SUBCATEGORIES</td> </tr> <tr> <td>EXAMPLES</td> <td>NON-EXAMPLES</td> </tr> <tr> <td>CLOSED FIGURE</td> <td>ANGLE</td> </tr> <tr> <td>PLANE FIGURE</td> <td>RIGHT ANGLE</td> </tr> <tr> <td>SORT</td> <td>EXAMPLE</td> </tr> <tr> <td>NON-EXAMPLE</td> <td>COMPARE/CONTRAST</td> </tr> </table>	SHAPE	CATEGORY	ATTRIBUTES	RHOMBUS	RECTANGLE	SQUARE	QUADRILATERAL	SUBCATEGORIES	EXAMPLES	NON-EXAMPLES	CLOSED FIGURE	ANGLE	PLANE FIGURE	RIGHT ANGLE	SORT	EXAMPLE	NON-EXAMPLE	COMPARE/CONTRAST
SHAPE	CATEGORY																		
ATTRIBUTES	RHOMBUS																		
RECTANGLE	SQUARE																		
QUADRILATERAL	SUBCATEGORIES																		
EXAMPLES	NON-EXAMPLES																		
CLOSED FIGURE	ANGLE																		
PLANE FIGURE	RIGHT ANGLE																		
SORT	EXAMPLE																		
NON-EXAMPLE	COMPARE/CONTRAST																		

STEP 5: IDENTIFY THE LEARNING OBJECTIVES OF THE STANDARD

<p align="center">LEARNING OBJECTIVES ALIGNED TO THE STANDARD <i>What 'I can' statement(s) will clarify the objective for students?</i></p> <p align="center">I can identify and describe quadrilaterals. I can explain how shapes fit into different categories based on attributes. I can sort shapes into different categories based on sides and angles. I can draw shapes based on a list of attributes.</p>
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STEP 6: EVIDENCE OF STUDENT MASTERY? *SEE 'CREATE ASSESSMENT OF MASTERY' DOCUMENT

HOW WILL WE KNOW WHEN THEY KNOW IT?

- a) Is there a released April 2017 AzMERIT question that aligns with the standard? If yes, place a copy in the box to the right.

<p>Two statements that describe a shape are shown.</p> <ul style="list-style-type: none"> • All of the sides have the same length. • It is a quadrilateral. <p>Select all of the shapes for which both statements are always true.</p> <p><input type="checkbox"/> square</p> <p><input type="checkbox"/> hexagon</p> <p><input type="checkbox"/> rhombus</p> <p><input type="checkbox"/> rectangle</p> <p><input type="checkbox"/> equilateral triangle</p>	<p>AzMERIT Item Type: <u>Multi Select</u></p> <p><i>The AzMERIT item requires the student to use multiple attributes to select ALL (possible to have more than one solution) shapes that make the statement true.</i></p>
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What is the DOK level of the item?

DOK 2

b) Identify all Galileo Items that Assess this Standard.

3rd Grade Module 7 Table Specifications
AESD created on-line assessment

Content	Cognitive Level			
	DOK 1: Recall and Reproduction	DOK 2: Skills and Concepts	DOK 3: Strategic Thinking/ Reasoning	DOK 4: Extended Thinking
*3.OA.8 <u>Solve two-step word problems using the four operations.</u> Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (This standard is limited to problems posed with whole numbers and having whole-number answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order [Order of Operations].)			Solve two-step word problems using the four operations #1, #4	
* 3.MD.4 <u>Generate measurement data</u> by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by <u>making a line plot</u> , where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.		Generate measurement data Make a line plot #9		
3.MD.8 <u>Solve real world and mathematical problems involving perimeters</u> of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.		#3	Solve real world and mathematical problems involving perimeters #2, #5	
3.G.1 <u>Understand that shapes</u> in different categories (e.g., rhombuses, rectangles, and others) <u>may share attributes</u> (e.g., having four sides), and that the shared attributes <u>can define a larger category</u> (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and <u>draw examples</u> of quadrilaterals <u>that do not belong to any of these subcategories.</u>	Understand that shapes may share attributes, can define a larger category #6, #7, #8		Draw examples #10, 11, 12	

KEY QUESTIONS TO APPROVE:

KEY QUESTIONS TO SEIZE OPPORTUNITIES FOR CONTINUOUS IMPROVEMENT	Yes/No
• DO THE CURRENT AESD ITEMS REFLECT THE CONTENT, SKILLS, VOCABULARY OF THE UNPACKED STANDARD?	
• DO THE CURRENT AESD ITEMS MEASURE WHAT THEY REPORT (ALIGNED TO CORRECT STANDARD)?	
• DO THE CURRENT AESD ITEMS REFLECT THE FORMAT OF THE AzMERIT ITEM(S)?	
• ARE THERE ANY CURRENT ITEMS THAT PROVIDE THE SAME INFORMATION AS ANOTHER ITEM? CAN ONE ITEM BE ELIMINATED?	

AESD MATH END OF MODULE ASSESSMENT ITEMS (GALILEO 3.EMA.7)

AZ-3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. [From cluster: Reason with shapes and their attributes]

Katie drew a figure on the board. All of the sides are the same length. It has no right angles. There are 2 pairs of parallel sides.

6) What figure did she draw?

- A) trapezoid
- B) triangle
- C) square
- D) rhombus

DOK 1

AZ-3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. [From cluster: Reason with shapes and their attributes]

7) Which is NOT a parallelogram?

- A) trapezoid
- B) rhombus
- C) rectangle
- D) square

DOK 1

AZ-3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters. [From cluster: Represent and interpret data]

Mara put 4 shapes together on her desk. She put them in this order from top to bottom: trapezoid, rectangle, parallelogram, square.

8) Which diagram shows the order of Mara's shapes?



ALIGNMENT ? (REALIGN...)

AZ-3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. [From cluster: Reason with shapes and their attributes]

Whole class section. Teacher will enter in student scores.

10) Draw a shape with four right angles. Label the name of the shape

DOK 3

Whole class section. Teacher will enter in student scores.

11) Draw a quadrilateral with no right angles and no equal sides.

DOK 3

Whole class section. Teacher will enter student score.

12) Draw 3 examples of shapes that are NOT quadrilaterals. Label the names of the shapes.

DOK 3

STEP 7: POTENTIAL NEW ASSESSMENT ITEMS

If there is no current item, the current item is not aligned, or an essential skill or concept is not assessed develop/ revise an assessment item according to the targeted standard, level of difficulty (DOK) and/or vocabulary.

ITEM 1:

Two statements that define a shape are shown.

- Is a closed figure having four sides.
- Has two pairs of parallel sides.

Select all of the shapes for which both statements are always true.

- a. quadrilateral
- b. rectangle
- c. pentagon
- d. rhombus
- e. square

Notes to teacher:

- Type of item: 'Multi-select
- Solutions are: choices b, d, e
- If the student selects choice 'a': Consider spiraling the attributes of quadrilaterals and its subcategories.
- If the student selects choice 'c': Consider spiraling examples and non-examples of quadrilaterals.

ITEM 2:

Two statements that describe a shape are shown.

- All four sides of the closed figure have the same length.
- Opposite sides are parallel.

Use the table below to sort the following shapes into examples and non-examples that make both statements always true.

square hexagon rhombus rectangle equilateral triangle

Examples	Non-Examples

Notes to teacher:

- Type of Item: 'Drag and Drop'
- Solution:

Examples	Non-Examples
Square	Hexagon
Rhombus	Equilateral Triangle
Rectangle	

COLLABORATIVE PAIRS PRACTICE:

STEP 1: CONSULT THE AVONDALE CURRICULUM GUIDE TO IDENTIFY A STANDARD TO BE ASSESSED

<p>Understand decimal notation for fractions, and compare decimal fractions.</p>	<p>4.NF.C.7</p>	<p>Compare two decimals to hundredths by reasoning about their size. Understand that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$.</p>
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STEP 2: CONSULT THE AZMERIT PERFORMANCE INDICATORS FOR THE STANDARD

	EMERGING	DEVELOPING	PROFICIENT	DISTINGUISHED
<p>4.NF.C.7</p>	<p>Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100 by using a model. Uses decimal notation for fractions with a denominator of 10, with supports. Compares two decimals with the same number of places (tenths or hundredths) using supports.</p>	<p>Adds two fractions with respective denominators 10 and 100 by first finding equivalent fractions with like denominators by using a model. Uses decimal notation for fractions with denominators of 10 or 100, with supports. Compares two decimals to the hundredth by reasoning about their size using models.</p>	<p>Adds two fractions with respective denominators 10 and 100 by first finding equivalent fractions with like denominators. Uses decimal notation for fractions with denominators of 10 or 100. Compares two decimals in the tenths and the hundredths (using $<$, $>$, and $=$) by reasoning about their size and records the result of the comparison using the correct symbols.</p>	<p>Solves missing addend problems with respective denominators 10 and 100 by first finding equivalent fractions with like denominators. Demonstrates knowledge of decimal notation for fractions with denominators of 10 or 100 by converting a number with decimal notation to a decimal fraction. Orders decimal set composed of tenths and hundredths by reasoning about their size. Recognizes that the decimals must refer to the same whole.</p>

STEP 3: UNPACK THE STANDARD

<p>ESSENTIAL KNOWLEDGE/CONCEPTS <i>What Do Students Need to Know/Understand?</i> List the underlined nouns</p>	<p>ESSENTIAL SKILLS <i>What Do Students Need to Be Able to Do?</i> List the circled (or <i>italicized</i>) verbs</p>
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STEP 4: IDENTIFY THE DOK LEVEL AND VOCABULARY OF THE STANDARD

<p>DEPTH OF KNOWLEDGE Highlight the DOK level of the standard (<i>see resource</i>)</p> <ul style="list-style-type: none">○ DOK 1 – Recall/Reproduction: Recall a fact, information, or procedure. Process information on a low level.○ DOK 2 – Skill/Concept: Use information or conceptual knowledge, two or more steps.○ DOK 3 – Strategic Thinking: Requires reasoning, developing a plan or a sequence of steps, some complexity.○ DOK 4 – Extended Thinking: Requires an investigation, time to think and process multiple conditions of the problem. Most on-demand assessments will NOT include level 4 activities	<p>ESSENTIAL VOCABULARY <i>What Do Students Need to Comprehend?</i> List all key vocabulary</p>
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STEP 5: IDENTIFY THE LEARNING OBJECTIVES OF THE STANDARD

<p style="text-align: center;">LEARNING OBJECTIVES ALIGNED TO THE STANDARD <i>What 'I can' statement(s) will clarify the objective for students?</i></p>

STEP 6: EVIDENCE OF STUDENT MASTERY? *SEE 'CREATE ASSESSMENT OF MASTERY' DOCUMENT

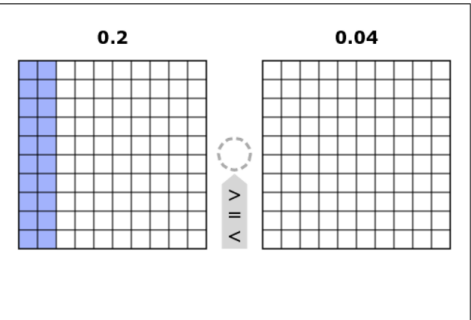
HOW WILL WE KNOW WHEN THEY KNOW IT?

- a) Is there a released April 2017 AzMERIT question that aligns with the standard? If yes, place a copy in the box to the right.

A decimal model is shown.

A. Click on the grid on the right to create a decimal model that shows 0.04.

B. Click on the correct symbol to compare the two decimals.



The image shows a digital interface for comparing decimals. On the left, a 10x10 grid is labeled "0.2" and has the first two columns shaded blue. On the right, another 10x10 grid is labeled "0.04" and is currently empty. Between the two grids is a vertical menu with three options: a dashed circle containing a less-than sign (<), an equals sign (=), and a greater-than sign (>). The less-than sign option is currently selected.

What is the DOK level of the item? DOK

a) Identify all Galileo Items that Assess this Standard.

ADDITIONAL GEARS RESOURCES



LESSON DEVELOPMENT FORMAT (2016 -2017)

LESSON PLAN FRAMEWORK

Grade Level:	
Subject:	

Standard(s) What is it we want the students to know and be able to do?

DOK Level of Standard(s):	
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Essential Vocabulary

Background Vocabulary – these are words we will use to explain the new concepts –check for understanding	New Vocabulary – these are terms essential to understanding the new concepts

Assessment: What will students do to provide evidence of their level of proficiency in owning the essential understandings at the stated DOK level? How will we know when they have learned it?

FRAMEWORK FOR LEARNING

Essential Question(s) (this is the driving question to frame the learning process)

How will we respond if our students already know it?

What will students do to remain actively engaged with this content?

How will we check for and build students' background knowledge?

What will students do to connect new learning to prior knowledge?

What will we do to assist student's as they acquire understanding?

What will students do to provide evidence of understanding?

What will we do to facilitate students as they explain their understanding and extend their thinking?

How will students summarize and apply knowledge?

What will we do if our students have not learned it?

How will students develop mastery?

VERBS AND PRODUCTS BY QUADRANT (DOK) OF THE LEARNING FRAMEWORK

C (DOK 3) STUDENT THINKS		D (DOK 4) STUDENT THINKS AND WORKS	
VERBS Analyze Compare Examine Contrast Differentiate Explain Dissect Categorize Classify Diagram Discriminate	PRODUCTS Essay Abstract Blueprint Inventory Report Plan Chart Investigation Questionnaire Classification	VERBS Evaluate Formulate Justify Rate Recommend Infer Prioritize Revise Predict Argue Conclude	PRODUCTS Evaluation Newspaper Estimation Trial Editorial Radio Program Play Collage Machine Adaptation Poem Debate New Game Invention
A (DOK 1) TEACHER WORKS		B (DOK 2) STUDENT WORKS	
VERBS Name Label Define Select Identify List Recite Locate Record Memorize	PRODUCTS Definition Worksheet List Quiz Test Workbook True-False Reproduction Recitation	VERBS Apply Sequence Demonstrate Interview Construct Solve Calculate Dramatize Interpret Illustrate	PRODUCTS Scrapbook Summary Interpretation Collection Annotation Explanation Solution Demonstration Outline

VERBS AND PRODUCTS BY QUADRANT (DOK)

Ask questions to summarize, analyze, organize, or evaluate:

- How are these similar/different?
- How is this like ___?
- What's another way we could say/explain/express that?
- What do you think are some reasons/causes that ___?
- Why did ___ changes occur?
- How can you distinguish between ___?
- What is a better solution to ___?
- How would you defend your position about ___?
- What changes to ___ would you recommend?
- What evidence can you offer?
- How do you know?
- Which ones do you think belong together?
- What things/events lead up to ___?
- What is the author's purpose?

C D

Ask questions to predict, design, or create:

- How would you design a ___ to ___?
- How would you compose a song about ___?
- How would you rewrite the ending to the story?
- What would be different today, if that event occurred as ___?
- Can you see a possible solution to ___?
- How could you teach that to others?
- If you had access to all the resources, how would you deal with ___?
- How would you devise your own to deal with ___?
- What new and unusual uses would you create for ___?
- Can you develop a proposal that would ___?
- How would you have handled ___?
- How would you do it differently?

A B

Ask questions to recall facts, make observations, or demonstrate understanding:

- What is/are ___?
- How many ___?
- How do/does ___?
- What did you observe ___?
- What else can you tell me about ___?
- What does it mean ___?
- What can you recall ___?
- Where did you find that ___?
- Who is/was ___?
- In what ways ___?
- How would you define that in your own terms?
- What do/did you notice about this ___?
- What do/did you feel/see/hear/smell ___?
- What do/did you remember about ___?
- What did you find out about ___?

Ask questions to apply or relate:

- How would you do that?
- Where will you use that knowledge?
- How does that relate to your experience?
- How can you demonstrate that?
- What observations relate to ___?
- Where would you locate that information?
- Calculate that for ___?
- How would you illustrate that?
- How would you interpret that?
- Who could you interview?
- How could you collect the data?
- How do you know it works?
- Can you show me?
- Can you apply what you know to this real-world problem?
- How do you make sure it is done correctly?