

**Georgia Performance Standards and Standards of Excellence:  
2019-2020 STEAM Elementary Tour and Workshop  
Grades K-5**

**Essential Questions-**

How is an artist similar to a designer, explorer, or scientist?

How are artists, scientists, and designers collaborative problem solvers?

**Kindergarten**

***Math***

MGSEK.CC.4	Understand the relationship between numbers and quantities; connect counting to cardinality.
MGSEK.CC.5	Count to answer ‘how many?’ questions
MGSEK.CC.6	Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.
MGSEK.CC.7	Compare two numbers between 1 and 10 presented as written numerals
MGSEK.MD.1	Describe several measurable attributes of an object, such as length or weight. For example, a student may describe a shoe as, ‘‘This shoe is heavy! It is also really long!’’
MGSEK.MD.2	Directly compare two objects with a measurable attribute in common, to see which object has ‘‘more of’’ or ‘‘less of’’ the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
MGSEK.MD.3	Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. (Limit category counts to be less than or equal to 10.)
MGSEK.G.1	Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
MGSEK.G.2	Correctly name shapes regardless of their orientations or overall size.
MGSEK.G.3	Identify shapes as two-dimensional (lying in a plane, ‘‘flat’’) or three dimensional (‘‘solid’’)
MGSEK.G.4	Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/‘‘corners’’) and other attributes (e.g., having sides of equal length).
MGSEK.G.5	Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
MGSEK.G.6	Compose simple shapes to form larger shapes. For example, ‘‘Can you join these two triangles with full sides touching to make a rectangle?’’

***Science***

SKP1.	Obtain, evaluate, and communicate information to describe objects in terms of the materials they are made of and their physical attributes.
SKP2.	Obtain, evaluate, and communicate information to compare and describe different types of motion.

***Art***

VAK.CR.1	Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning
VAK.CR.2	Create works of art based on selected themes.
VAK.CR.3	Understand and apply media, techniques, and processes of two-dimensional art.
VAK.RE.1	Discuss personal works of art and the artwork of others to enhance visual literacy.
VAK.CN.1	Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.
VAK.CN.2	Integrate information from other disciplines to enhance the understanding and production of works of art.
VAK.CN.3	Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

## **Grade 1**

### ***Math***

MGSE1.G.1

Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size) ; build and draw shapes to possess defining attributes.

MGSE1.G.3

Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

### ***Science***

S1P1.

Obtain, evaluate, and communicate information to investigate light and sound.

### ***Art***

VA1.CR.1

Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

VA1.CR.2

Create works of art based on selected themes.

VA1.CR.3

Understand and apply media, techniques, and processes of two-dimensional art.

VA1.RE.1

Discuss personal works of art and the artwork of others to enhance visual literacy.

VA1.CN.1

Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.

VA1.CN.2

Integrate information from other disciplines to enhance the understanding and production of works of art.

VA1.CN.3

Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

## **Grade 2**

### ***Math***

MGSE2.G.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes

### ***Science***

S2P1.

Obtain, evaluate, and communicate information about the properties of matter and changes that occur in objects

### ***Art***

VA2.CR.1

Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

VA2.CR.2

Create works of art based on selected themes.

VA2.CR.3

Understand and apply media, techniques, and processes of two-dimensional art.

VA2.RE.1

Discuss personal works of art and the artwork of others to enhance visual literacy.

VA2.CN.1

Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.

VA2.CN.2

Integrate information from other disciplines to engage in the understanding and production of works of art.

VA2.CN.3

Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

## **Grade 3**

### ***Math***

- MGSE3.OA.1 Interpret products of whole numbers, e.g., interpret  $5 \times 7$  as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as  $5 \times 7$ .
- MGSE3.OA.8 Solve two-step word problems using the four operations. 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.
- MGSE3.G.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.

### ***Science***

- S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment.

### ***Art***

- VA3.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning
- VA3.CR.2 Create works of art based on selected themes.
- VA3.CR.3 Understand and apply media, techniques, processes, and concepts of two-dimensional art.
- VA3.RE.1 Use a variety of approaches for art criticism and to critique personal works of art and the artwork of others to enhance visual literacy.
- VA3.CN.1 Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.
- VA3.CN.2 Integrate information from other disciplines to enhance the understanding and production of works of art.
- VA3.CN.3 Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

## **Grade 4**

### ***Math***

- MGSE4.OA.3 Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- MGSE4.MD.5 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
- MGSE4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- MGSE4.G.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line symmetric figures and draw lines of symmetry.

### ***Science***

- S4P3. Obtain, evaluate, and communicate information about the relationship between balanced and unbalanced forces.

### ***Art***

- VA4.CR.1 Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.
- VA4.CR.2 Create works of art based on selected themes.
- VA4.CR.3 Understand and apply media, techniques, processes, and concepts of two-dimensional art.
- VA4.RE.1 Use a variety of approaches for art criticism and to critique personal works of art and the artwork of others to enhance visual literacy.
- VA4.CN.1 Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.

VA4.CN.2  
VA4.CN.3

Integrate information from other disciplines to enhance the understanding and production of works of art.  
Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).

## **Grade 5**

### ***Math***

MGSE5.OA.2

Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

MGSE5.NF.5  
MGSE5.MD.1

Interpret multiplication as scaling (resizing).

Convert among different-sized standard measurement units (mass, weight, length, time, etc.) within a given measurement system (customary and metric) (e.g., convert 5cm to 0.05m), and use these conversions in solving multi-step, real world problems.

MGSE5.G.3

Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.

MGSE5.G.4

Classify two-dimensional figures in a hierarchy based on properties (polygons, triangles, and quadrilaterals).

### ***Science***

S5E1.

Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

S5P1.

Obtain, evaluate, and communicate information to explain the differences between a physical change and a chemical change.

### ***Art***

VA5.CR.1

Engage in the creative process to generate and visualize ideas by using subject matter and symbols to communicate meaning.

VA5.CR.2

Create works of art based on selected themes.

VA5.CR.3

Understand and apply media, techniques, processes, and concepts of two-dimensional art.

VA5.RE.1

Use a variety of approaches for art criticism and to critique personal works of art and the artwork of others to enhance visual literacy.

VA5CN.1

Investigate and discover the personal relationships of artists to community, culture, and the world through making and studying art.

VA5.CN.2

Integrate information from other disciplines to enhance the understanding and production of works of art.

VA5.CN.3

Develop life skills through the study and production of art (e.g. collaboration, creativity, critical thinking, communication).