

## **Module: Islamic Geometric Designs**

### **2<sup>nd</sup> Grade National Common Core Standards:**

CCSS.MATH.CONTENT.2.MD.A.1

Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

CCSS.MATH.CONTENT.2.G.A.1

Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.<sup>1</sup> Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

### **2<sup>nd</sup> Grade National Art Standards:**

VA:Cr1.1.2

Brainstorm collaboratively multiple approaches to an art or design problem.

### **3<sup>rd</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.3.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 3 topics and texts*, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.3.2

Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-LITERACY.SL.3.3

Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.

CCSS.MATH.CONTENT.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.

### **3<sup>rd</sup> Grade National Art Standards:**

VA:Cr1.1.3

Elaborate on an imaginative idea.

VA:Cr2.1.3

Create personally satisfying artwork using a variety of artistic processes and materials.

VA:Cr3.1.3

Elaborate visual information by adding details in an artwork to enhance emerging meaning.

VA:Re7.1.3

Speculate about processes an artist uses to create a work of art.

VA:Re7.2.3

Determine messages communicated by an image.

### **4<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.4.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-

led) with diverse partners on *grade 4 topics and texts*, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.4.1.C

Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

CCSS.ELA-LITERACY.SL.4.2

Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-LITERACY.SL.4.3

Identify the reasons and evidence a speaker provides to support particular points.

CCSS.MATH.CONTENT.4.MD.C.5.A

An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through  $1/360$  of a circle is called a "one-degree angle," and can be used to measure angles.

CCSS.MATH.CONTENT.4.MD.C.6

Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

CCSS.MATH.CONTENT.4.G.A.1

Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

CCSS.MATH.CONTENT.4.G.A.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.

#### **4<sup>th</sup> Grade National Art Standards:**

VA:Cr1.1.4

Brainstorm multiple approaches to a creative art or design problem.

VA:Cn11.1.4

Through observation, infer information about time, place, and culture in which a work of art was created.

VA:Re7.2.4

Analyze components in visual imagery that convey messages.

#### **5<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.5.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.5.1.C

Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.

CCSS.ELA-LITERACY.SL.5.1.D

Review the key ideas expressed and draw conclusions in light of information and knowledge gained from the discussions.

#### **5<sup>th</sup> Grade National Art Standards:**

VA:Cr1.1.5

Combine ideas to generate an innovative idea for art-making.

VA:Cr2.1.5

Experiment and develop skills in multiple art-making techniques and approaches through practice.

VA:Cn11.1.5

Identify how art is used to inform or change beliefs, values, or behaviors of an individual or society.

VA:Re7.2.5

Identify and analyze cultural associations suggested by visual imagery.

### **6<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.6.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.6.1.C

Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.

CCSS.ELA-LITERACY.SL.6.1.D

Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

CCSS.ELA-LITERACY.SL.6.2

Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.

### **6<sup>th</sup> Grade National Art Standards:**

VA:Cr2.1.6

Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.

### **7<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.7.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.MATH.CONTENT.7.G.A.2

Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.

### **7<sup>th</sup> Grade National Art Standards:**

VA:Cr1.2.7

Develop criteria to guide making a work of art or design to meet an identified goal.

VA:Cr2.1.7

Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.

### **8<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.8.1

Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.MATH.CONTENT.8.G.A.1

Verify experimentally the properties of rotations, reflections, and translations:

CCSS.MATH.CONTENT.8.G.A.1.A

Lines are taken to lines, and line segments to line segments of the same length.

CCSS.MATH.CONTENT.8.G.A.1.B

Angles are taken to angles of the same measure.

CCSS.MATH.CONTENT.8.G.A.1.C

Parallel lines are taken to parallel lines.

CCSS.MATH.CONTENT.8.G.A.2

Understand that a two-dimensional figure is congruent to another if the second can be obtained from the first by a sequence of rotations, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them.

CCSS.MATH.CONTENT.8.G.A.3

Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

CCSS.MATH.CONTENT.8.G.A.4

Understand that a two-dimensional figure is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.

### **8<sup>th</sup> Grade National Art Standards:**

VA:Cr2.1.8

Demonstrate willingness to experiment, innovate, and take risks to pursue ideas, forms, and meanings that emerge in the process of art-making or designing.

### **9<sup>th</sup>-10<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.9-10.1

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

### **11<sup>th</sup>-12<sup>th</sup> Grade National Common Core Standards:**

CCSS.ELA-LITERACY.SL.11-12.1

Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.