

FURTHER RESOURCES:

Introduction to Islamic Art:

- Metropolitan Museum Timeline of Art History: “Geometric Patterns in Islamic Art”
https://www.metmuseum.org/toah/hd/geom/hd_geom.htm; “The Nature of Islamic Art”
https://www.metmuseum.org/toah/hd/orna/hd_orna.htm
 - Short essays that provide an introduction to Islamic art and decoration, referencing examples of decorative art and architecture in the MET collection.
- Metropolitan Museum of Art “Islamic Art and Geometric Design: Activities for Learning” handout: https://www.metmuseum.org/-/media/files/learn/for-educators/publications-for-educators/islamic_art_and_geometric_design.pdf
 - Printable pamphlet that includes an introduction to geometric design in Islamic art, referencing examples of decorative art and architecture in the MET collection. Also includes several pattern-making activities for students, using only a straightedge and compass to create traditional Islamic circle and star designs.
- Islamic Museum of Australia website: <https://www.islamicmuseum.org.au/>
 - Includes a wide variety of resources and activities about Islamic Art.
- Khan Academy “The Spread of Islam” video and lesson:
<https://www.khanacademy.org/humanities/world-history/medieval-times/spread-of-islam/v/spread-of-islam>
 - Reviews the historical origins and spread of the Islamic Empire.
- TED-Ed “The Complex Geometry of Islamic Art” video by Eric Broug:
<https://youtu.be/pg1NpMmPv48>
 - Useful introduction to the principles of geometry at work in Islamic art.

Introduction to Tessellations:

- Idaho Public Broadcasting “Tessellations: What is a Tessellation?” video:
<https://idahoptv.pbslearningmedia.org/resource/tessellations/what-is-a-tessellation/>
 - Brief video introduction to tessellations in which the presenter shows examples of tessellations from everyday life, and explains in mathematical terms why some shapes fit together into tessellations and others do not.

Online Tessellation Tools:

- GeoGebra “Islamic Tessellations” class: <https://www.geogebra.org/m/wh3gyeEN>
 - GeoGebra is a free online math tool for graphing and geometry. In the “Islamic Tessellations” class, students can click on various tessellations created by users to see animations on how the tessellation is *formed* and can be *changed*.
- National Council of Teachers of Mathematics online tessellation creator:
<https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Tessellation-Creator/>

- Students can drag and drop shapes to see how they fit together to form tessellations in this interactive tessellation creator.

Tessellation Activities:

- Supercoloring.com coloring sheets: <http://www.supercoloring.com/coloring-pages/arts-culture/tessellations>
 - M.C. Escher-inspired tessellation coloring sheets, among others.
- Frugalfunforboys.com “Tessellation Puzzles”: <https://frugalfun4boys.com/print-color-tessellation-puzzles-for-kids/>; simple tessellation shapes printable sheet <https://frugalfun4boys.com/app/uploads/2015/06/Tessellation-Shapes.pdf>; M.C. Escher printable lizard tessellation shape [http://www.seanmichaelragan.com/html/\[2008-04-18\]_MC_Escher_lizard_vector_art.shtml](http://www.seanmichaelragan.com/html/[2008-04-18]_MC_Escher_lizard_vector_art.shtml)
 - Instructions and advice for making a tessellation puzzle, including the printable tessellation shapes for students to cut out and color.
- Tessellations.org “Dodecahedron Tessellation Clown Ball”: <http://www.tessellations.org/real-materials-tessellations-15.shtml>
 - Instructions and printable template for making a 3D Dodecahedron tessellation
- Arts and Craft. 3rd ESO “Tessellation” video resources: <http://artsandcrafts3eso.weebly.com/tessellation.html>
 - Compiles links to several videos that demonstrate how translation and rotation tessellations are made, as well as many examples of tessellation art.

M.C. Escher (1898-1972)

- British Broadcasting Corporation “The Mathematical Art of M.C. Escher” video: <https://youtu.be/Kcc56fRtrKU>
 - Short video essay on the groundbreaking mathematical aspects of M.C. Escher’s work, in particular his tessellations.
- M.C. Escher.com: <https://mcescher.com/>; “Symmetry Series, 1937-1967” <https://mcescher.com/gallery/symmetry/>
 - Learn more about this famous tessellation artist, including his early inspiration from Islamic tile work. Explore in depth particular art works.
- National Gallery of Art “M.C. Escher—Life and Work” slideshow: https://www.nga.gov/features/slideshows/mc-escher-life-and-work.html#slide_1
 - A brief visual overview of M.C. Escher’s work, including a biography of the artist and textual commentary on each piece that is shown.