|  |
| --- |
| **Quilts: Mathematics and History** |
| *These project activities can be completed individually or as a menu of choices to be completed over the course of a week or more. They incorporate learning opportunities from all content areas including: Mathematics, Social Studies, Language and Literacy, Visual and Performing Arts, Life and Career Ready, and World Language.* |
| **Introduction**  Over the years, quilting has gone from a necessity, a means of communication, to a work of art in craftsmanship. How does mathematics connect to quilt making? What historical connections are there to quilting? What set of knowledge and skills is needed to be a quilter?  Explore quilting through the various lens of mathematics, history, and careers! |
| **Grade level/span**  Middle school grades 6-8 |
| **Materials (depending on the type of quilt square you would like to make and the materials you have available, below is a list of possible materials to select to work with while creating your quilt square)**   * Paper (plain white or graph and/or a variety of color) * Pencil (regular and/or a variety of color) * Markers and/or paints and paintbrush(es) * Scissors * Glue and/or tape * Cloth/material (variety of color and/or pattern) * Thread and needle or sewing machine * Technology can be used to create the quilt square by using drawing programs, etc. * Internet to research connections of quilts to the Civil War |
| **Activities**  **Activity 1:** Create a quilt square (either 10 in x10 in or 8 in x 8 in)  Using paper or other materials, making sure to use a variety of colors and shapes, create a quilt square. Complete the following after the quilt square is made:   * Write 2 brief paragraphs that mathematically describes your quilt square. In one paragraph describe the quilt square using fractions, decimals, and percents. Consider the various colors that were used to create the quilt square. In the second paragraph describe the pattern of the quilt square using various types of shapes, identifying any types of symmetry or other geometric features of the quilt square. The goal is to be able to identify your quilt square based on the descriptive paragraphs you write. Be sure to use appropriate mathematical vocabulary in your descriptions. (Mathematics, Language and Literacy, Visual and Performing Arts) * Submit your quilt square and description. The teacher can organize all submitted quilt squares and descriptions as a card sort for you to match the quilt squares with the descriptions. (Mathematics, Language and Literacy) * A class quilt can be created by using all the quilt squares. (Mathematics, Visual and Performing Arts)   **Activity 2:** Quilting and the Civil War research   * You can research the various connections to quilt making during the Civil War. Questions to consider during your research: (Mathematics, Social Studies, Language and Literacy, Life and Career Ready)   + What mathematics were present in the quilts? (patterns, symmetry, shapes, etc.)   + What were the characteristics and purpose of the quilts made in the North?   + What were the characteristics and purpose of the quilts made in the South?   + Did some quilts provide maps for the Underground Railroad for slaves? * Write a brief paper that shares what you have learned from your research based upon the questions above. (Social Studies, Language and Literacy, Mathematics, Life and Career Ready)   **Activity 3:** Quilting as a Career   * Research the knowledge and skills required to pursue quilting as a career and share the information you found in the form of a job description that could be used to advertise an opening for hire. (Language and Literacy, Life and Career Ready)   **Note:** If you are in a foreign language class you may write your descriptions in that language. |
| **Additional Readings/Links** |
|  |
|  |