

2015 AFRICAN AMERICAN HISTORY CALENDAR LESSON PLAN

Month/Honoree(s): July/Dr. David E. Rivers

Lesson Title: Building a Community

Grade Level: K - 2

Subject: STEM – possible integration of math and social studies

SC Academic Standards and Skills Addressed: These are from the 2014 SC Science Standards. The standards listed here are consistent throughout the grade levels.

- Standard S.1: The student will use the science and engineering practices, including the processes and skills of scientific inquiry, to develop understandings of science content.
- S.1A. Conceptual Understanding: The practices of science and engineering support the development of science concepts, develop the habits of mind that are necessary for scientific thinking, and allow students to engage in science in ways that are similar to those used by scientists and engineers.

- Math Standards that can be included:
 - K.G. Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).
 - 5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.
 - 1.G. 2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.
 - 2.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.

- Social Studies Standards that can be included:
 - K-1.2 Illustrate the features of his or her home, school, and neighborhood by creating maps, models, and drawings.
 - 1-4.1 Illustrate different elements of community life, including typical jobs; the interdependence of family, school, and the community; and the common methods of transportation and communication.
 - Standard 2-1: The student will demonstrate an understanding of the local community as well as the fact that geography influences not only the development of communities but also the interactions between people and the environment.

Introductory Statement/Lesson Overview: In this lesson, students will discuss the necessary parts of a community, decide on the buildings that are needed, and then build a class community out of 3 dimensional shapes.

Goals/Lesson Objectives:

1. Students will research and learn about the different community helpers that are necessary. Then they will decide what kind of buildings those community helpers need to work in.
2. Students will learn 3-dimensional shapes (content appropriate for the grade level being taught).
3. The class will design a community and groups of students will build the buildings necessary for the community using 3-dimensional shapes.

Lesson Progression and Time Frame:

Activity 1: Learn about community helpers. Use lessons that you already have for this part as well as suggested resources below. Be sure to tailor these lessons to your specific grade level standards. End with a list of community helpers that are in your community.

Activity 2: Learn about 3-D shapes. See resources below and be sure to allow students to touch and hold 3-D shapes. Be sure to pay attention to your grade level standards as far as 3-D shapes are concerned.

Activity 3: Brainstorm as a class a list of buildings that community workers need to work in. You might also add in other buildings that are needed in the community. Then take a look at photos of buildings. Have students start to try and pick out the 3-D shapes that make up these buildings. See some suggested books for helping kids see this below. Once you have your list ready, break the students into groups and have each group build one of the buildings that your community needs. Suggested building materials are wooden or plastic blocks, Legos OR recycled items.

Activity 4: Have students draw the building they built and label the different 3-D shapes they used to build it. For a writing extension, have the students write about how they designed the building and how the community helpers will use it.

Extensions/Differentiation:

- Use a large sheet of bulletin board paper and put the community together – include roads, sidewalks, etc.
- Consider using all recycled materials and add items for the students to decorate the buildings – paints, markers, buttons, pasta, etc.
- For older students – include creating budgets for building the buildings.

- For older students – add a debate element that focuses on which buildings the community will need to build first.

Assessment Ideas:

- Quiz students on 3-D shapes.
- Quiz students on community helpers, the buildings they work in, and the jobs they do for the community.
- Grade student drawings of buildings using a rubric – do they have the correct labels? Are the shapes drawn with the correct number of sides? etc.
- Use a rubric to score the student writing about the building they designed and why it would be good for the community helper who works there.

Suggested Resources:

- Community Helpers
 - <http://www.brainpopjr.com/socialstudies/communities/communityhelpers/preview.weml>
 - https://www.youtube.com/watch?v=e_tgro0oFLo
 - <http://www.goodreads.com/shelf/show/community-helpers>
- 3-D shapes
 - <https://www.youtube.com/watch?v=2cg-Uc556-Q>
- Building with 3-D shapes
 - *Block City* by Robert Louis Stevenson and Daniel Kirk
 - *When I Build With Blocks* by Niki Alling
 - *Finding 3-d Shapes in New York City* by Julia Wall
 - *Shapes in Buildings* by Rebecca Rissman
 - *Iggy Peck, Architect* by Andrea Beatty and David Roberts

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