

Details:

Class: 6th Grade Team Taught Lesson

Time Frame: Four Days

Questions:

- Who was Paul R. Williams?
- What is architecture?
- How does architecture change over time?
- Why was Paul R. Williams revolutionary?
- What is a primary source document?
- How does one plan and build a structure?

Performance Objectives:

Learners will:

- Complete guided reading activity about Paul R. Williams.
- Create or review a student written article about Paul Revere Williams.
- Use blueprints to estimate the square footage of a structure.
- Create or evaluate blueprints.
- Create or evaluate major works, identity collage, and biopoem about Paul R. Williams.

Introduction to Team Learning:

Team teaching is not a new concept, but it is one often overlooked. This lesson is designed to be taught by a team of middle school teachers. Approaching this lesson from a team perspective saves times and ultimately reinforces student learning. Students will all complete each lesson or a version of each lesson, but they will complete these lessons in a different order.

Activities:

Anticipatory Set:

In homeroom, students will be asked to make a quick sketch of the front of their school. Have students include entrances, driveways, and major landmarks in front of the school. Students will place these sketches in their binders until they reach Social Studies that day.

Procedure for Teaching:

Day 1

English/Language Arts

Opening (10 min)

Bell Ringer:

Place these questions on the board and have students complete as a short write: Do you have any major goals or dreams in your life? What kinds obstacles will you have to overcome to achieve these goals?

As a class, hold a quick discussion about the goals and obstacles that face students. Connect their goals and obstacles to Paul R. Williams' biography and transition into the guided reading. Something like, "I know someone else who set high goals and faced significant obstacles..."

Activity (30 min)

Guided Reading

Have students quickly skim the attached paragraph for words they do not know. Ask them to underline these words. First read the paragraph to the class. Make sure to model fluency. Have students choral read the passage. You may have to teach them how to choral read. Basically, they follow along and read out loud as a group. The goal is for them to sound like a chorus instead of 25-30 individuals. If students are able to do this quickly, then no further intervention is needed. Have them complete the guided reading exercise. If this is difficult for students, continue to practice choral reading until they master the words and paragraph. You may have to walk them through the vocabulary.

Close (10 min)

Brainstorm

Have students brainstorm words that describe Paul Revere Williams. Invite students who finish brainstorming to draw a portrait of what they think he looks like. Many students will not have seen a picture of him at this point, but it is still interesting to see how they personify him. Will they draw him 8 feet tall?

Social Studies

Opening (10 min)

Have students retrieve their sketches from homeroom. Ask students how much thought they think went into the design of our school? Is it an inviting building? What is their favorite feature of the school? Are they proud of the building?

Transition into the activity by asking students if they know what the term architect means. Collect their suggestions on the whiteboard and see if you can piece together a group definition. If you cannot, explain that they are professionals who plan buildings and create blueprints. Either way brings you to the film.

Activity (25 min)

View the YouTube film [Paul Revere Williams – A Legend in Architecture](http://www.youtube.com/watch?v=N-EMQdkRD7o) produced by California State University, Long Beach - Advanced Media Production (AMP) Center at <http://www.youtube.com/watch?v=N-EMQdkRD7o>

Close (20 min)

Debrief Question Answer Relationship (QAR)

How this part of the lesson goes forward depends on if your students have already been taught QAR strategy.

If they are new to QAR: If students are new to QAR you might be as well. Basically it is a strategy that helps students with literacy while reading or viewing a video. It helps students understand how to address and achieve the correct answers for types of questions. It is very similar to leveled questions if you have used those before. The main difference is that you actually teach students about QAR, and ultimately you want them to be able to use QAR independently to answer and to author questions. In QAR there are four levels of questions. The first level of question is “Right There.” A “right there” question is one that you can put your finger on in the book. It is basic memorization. The second level of question is “Think and Search.” These are the same as “right there questions” except that they are in two places rather than one. You can’t just put your finger on it. Now for the higher order questions—level three is “Author and Me.” In these, students have to use something they know, and something they learned from the author. The last level is “On My Own.” We often think of these as the easiest to answer, but students get hung up on them. This will be a question that relates to the material, but that a student can answer without any exposure to the film or written work. Below, I will list four QAR questions to get you started. Ultimately, you should be able to write your own and students should be able to identify where to look for the answers. In a dream situation, students should be able to write questions for each level.

Tell students that you are going to ask them a few questions from the film, but before you have them answer the questions, you are going to discuss where to find answers for questions like these.

1. Right There Question: What did Paul Revere Williams do for a living? (He was an architect) If your students know QAR, ask the question, have them tell you what level it is and then answer it. If they are new to QAR, explain what a “Right There Question” is and see if they can tell you the answer. Follow the same procedure for the last three questions.
2. Think and Search: Can you name two buildings that Paul R. Williams designed?
3. Author and Me: What do you think it was like to design homes in neighborhoods in which you were banned from living?
4. On My Own: If you could design a house, what rooms would you include?

If your students are new to QAR, have them write one “Right There Question” as a ticket out the door. You could also write four new questions from these levels and see if students could identify the levels of the new questions. If they have done this before, have them choose a level of question—write them on the board because they forget—and write one for that level.

Science:

Opening (10 min)

Students are going to begin the vocabulary necessary to complete projects. Write the following vocabulary and definitions on the board. Have students read the definitions and retell in their own words what each means.

Activity (30 min)

Students will create Freyer-Four-Squares. In the event that students have never created a four square, the teacher will have to model one on the board. See attached Freyer-Four-Square handout and the paragraph below.

Built Environment - Man-made surroundings built for human activities; includes large cities and parks, as well as small personal homes

Architecture - The planning and design of buildings and other parts of the built environment

Blueprints - Big sheets of blue paper used for architectural drawings and plans

Scale Model - A small model of a building, a room, or a landscape area

For teachers: A Freyer-Four-Square is a vocabulary acquisition strategy. It is a way to extend the meaning of a definition and connect meanings to the different types of learners. It is basically a square divided into four. On the attached worksheet, you will find that four terms have been placed on a single sheet, each with its own square. Each square has directions, and sometimes it is best to vary what is asked based on the type of term being explored. You should choose one of the terms below and model filling in the four-square for students.

Close (15 min)

Pictionary! Allow students to come to the board and draw an example the word of their choice. Let other students raise their hands to identify the word being drawn. The student who gets the word correct will be the next artist.

Math:

Opening (15 min)

Place the definition of symmetry and polygons on the board. Have students brainstorm some common polygons and draw them on the whiteboard.

Students will watch an introductory video clip about symmetry.

http://www.linkslearning.org/Kids/1_Math/2_Illustrated_Lessons/4_Line_Symmetry/index.html

Activity (25 min)

Students will look at the attached (Symmetry and Polygons) architectural drawing of the Parthenon. In groups of four, students should locate the “fold line” of symmetry and highlight every polygon that they can find.

Close (5 min)

Have students share their polygon count with others as groups. Each group should select one member to hold onto the handout.

DAY 2

English Language Arts

Opening (10 min)

Ask students to retrieve their brainstorming and review it. Now that they have learned more about architecture and Paul Revere Williams, allow them to add to their previous brainstorm.

Activity (35 min)

Students will complete a biopoem about Paul Revere Williams. A biopoem is a simple format poem where students follow a structure and add details about a person. A biopoem form and draft biopoem attached.

Close (10 min)

If there is time, allow students to trade biopoems and edit/improve upon them.

Social Studies

Opening (10 minutes)

Teacher should introduce the idea of primary and secondary source documents. In real life, we create and use these documents everyday. An example of a primary source document is a diary, a letter or email with a first person account. “I went to the parade and saw floats.” A secondary source document is a book or essay about parades based on eyewitness reports in a diary and other first person accounts.

Activity (35 minutes)

Students will group into fours. Have students create a list of questions they would like to ask Paul R. Williams if he were alive. Groups should compose 10-20 questions. Ask the groups to exchange papers with one another. Now have the new group do their best to write answers for the questions that were posed. Allow one member of each group to access the Internet to answer tougher questions—such as names of buildings or other biographical information. Return the questions to the original groups and have a group member save these for tomorrow.

Close (5 min)

Short write: What was it like to speak for Paul Revere Williams? Do you better understand the challenges of his life?

Science

Opening (5 min)

Have students answer the question: Is being an architect easy?

Activity (40 min)

Distribute the attached handout entitled, “So You Want to Be An Architect.” Have students complete the activity in pairs.

Close (5 min)

Have students retrieve the opening question. Ask them to describe some of the challenges that architects face.

Math

Opening (5 min)

Students will take graph paper and draw a rectangle, a square, a circle, a triangle, a parallelogram, and a trapezoid of any size on the graph paper.

Activity (40 min)

The teacher and students will work on finding the area according to the formulas for each of the polygons. The teacher will use overhead graph paper to demonstrate each shape and the formula for finding the area. Students will count the graph paper squares to figure the length of the sides of the shapes. Individually, they will apply the formulas to their own polygons. When finished, they will pair with a neighbor and check one another's work.

Formulas:

Rectangle= base x height

Square= base x height

Circle= πr^2

Triangle= $\frac{1}{2}$ base x height

Parallelogram= base x height

Trapezoid = $h(a + b)$ a and b being the two parallel side's length

Close (10 min)

The math teacher will close the lesson by describing the projects each subject area will complete. Students should think about which project they would like to complete and note their first and second choices on the attached form.

Projects:

English/Language Arts—biopoems and a portrait of Paul R. Williams or a collage of his work.

Social Studies—newspaper article about Paul R. Williams and a snapshot of a building

Science—create a house floor plan using blueprint symbols

Math—use room floor plans to create an interactive bulletin board teaching area of polygons

DAY 3

Project Day

Students will be divided according to their first and second choice slip into the different rooms. As a team, teachers will keep their students to complete projects throughout the day. Students will attend their exploratory, specials, or elective class, but teachers will keep the same set of students throughout the day.

Supplies:

English

- Printer ink—black and color
- Cardstock
- Printer paper
- Colored pencils
- Markers

Social Studies

- Printer ink—black and color
- Cardstock
- Printer paper
- Colored Pencils
- Markers
- Web camera
- Laptop

Science

- Printer ink—black and color
- Cardstock
- Printer paper
- Colored pencils
- Markers
- Graph paper
- Rulers
- Compasses

Math

- Printer ink—black and color
- Cardstock
- Printer Paper
- Pencils
- Compasses
- Rulers
- Markers
- Colored pencils
- Graph paper

English Language Arts Project

This is probably the simplest project of all, and it is very easy to differentiate. Students will take the biopoem rough draft that they have already composed and polish it into a more refined product. These will be typed in the same font and displayed on the board. If you have a student who can type, allow that student to help type all of the poems. Make sure that the poems are complete and revised before submitted for typing. Use the cardstock to mount the very best poems on your bulletin board. For students who finish quickly, allow them to either draw Paul Revere Williams in a portrait, one of his buildings, or create a collage of his works. Use these to make your bulletin board more interesting. You can compose your own title, or use the title “Building a Life: Biographies of an African American Architect.” Mount the title in the center of your

board. Print the attached project rubric and abstract. Mount these to the right or left hand side of your board. Print all of your poems (even those that are on the board). Place these between two pieces of cardstock and punch three holes down the left side. Use yarn or ribbon to bind the book of poems. Your display should be ready for visitors.

Social Studies Project

Students completing a social studies project will use the information they have gathered to create a reader's theater piece and accompanying newspaper articles. Students should look at the questions they wrote the previous day. As a class, they should select the best sets of questions and answers. Narrow those questions down to 20 and help students put those into a meaningful, logical order. Allow a group of four to shape the questions into a script. Select students to be Paul Revere Williams and the interviewer. Get creative. Rearrange chairs and objects in the room to create an interview space. Film the interview and save it for your display. Meanwhile, other students should be working on creating newspaper articles from the information that has been presented. They may need to use the Internet to find information and illustrations of his work. Each article should focus on some aspect of his life, work or legacy. Students should be allowed to work on these in pairs or alone. Ultimately you want 10 good articles and illustrations to use on your bulletin board surrounding the computer display with the title "In the News: Life and Legacy of Paul Revere Williams." Mount the title, articles and illustrations (every good article has a "picture" that accompanies it) on your bulletin board. Print out the attached rubric and abstract and post on your board. Set up the laptop to loop the interview and staple the script like a booklet.

Science Project

The science project will be creating a floor plan using the attached architectural blueprint (or drafting) symbols. Students will create a blueprint of their dream house on graph paper. Students should use the colored pencils and markers to attractively finish their drawings. Along with their blueprints, students should compose a paragraph describing the important features of their dream house. Print out the attached abstract and rubric for a display entitled "Designing a Dream." Mount everything on cardstock.

Math Project

For the math project, students will create an interactive bulletin board describing the steps to find the area of polygons. As a class, students will create a poster board size map of the classroom. Students should find a way to incorporate every shape studied in the previous lesson. Divide the class into groups of four or five. Each group is responsible for creating the display that explains one of the polygons' area formulas. Place the blueprint in the middle of the bulletin board. Make a copy of the attached architectural blueprint symbols and mount it beneath on cardstock. Designate a space for each group to create their formula display and steps guideline. Connect this space to the shape on the blueprint. Allow students to write out the steps then proofread them for errors. Allow them to type the steps and post them on the board with a clipart shape representing the shape on the blueprint. When students have completed creating the display, have them take computer paper, fold it in half and create trivia flips for the bottom border of the bulletin board. Possible questions include: What is the area of all of the squares or triangles on the board? How much area is available on the floor of the

plan? Entitle the display “Finding Footprints: Calculating Area in Blueprints” and print out the attached abstract and rubric. Mount everything with cardstock. It would be nice to include pictures of the students creating the various pieces.

Standards:

Math Standard 2: Numbers and Operations:

- GLE 0606.4.1 Understand and use basic properties of triangles, quadrilaterals, and other polygons.
- GLE 0606.4.2 Use the concepts of translation, rotation, reflection, and symmetry to understand congruence in the plane.
- GLE 0606.4.3 Develop and use formulas to determine the circumference and area of circles, and the area of trapezoids, and develop strategies to find the area of composite shapes.

English Language Arts Standard 1: Language

- GLE 0601.1.2 Employ a variety of strategies and resources to determine the definition, pronunciation, and usage of words and phrases.

English Language Arts Standard 3: Writing

- GLE 0601.3.1 Write in a variety of modes for different audiences and purposes.
- GLE 0601.3.2 Employ various prewriting strategies.

Science Standard 2 Embedded Technology and Engineering:

- GLE 0607.T/E.2 Know that the engineering design process involves an ongoing series of events that incorporate design constraints, model building, testing, evaluating, modifying and retesting.

Social Studies:

- 6.5.8 Draw conclusions about world history events using primary and secondary sources.
- 6.5.3 Identify types of artifacts using pictorial representation (Greek).