

FLOAT YOUR BOAT

BLENDED LEARNING LESSON: FROM CAMEROON CANOE MODEL TO
CARDBOARD BOAT MODEL
ART, TECHNOLOGY AND HISTORY
GRADES: 6-8

BASED ON



Cameroon

Model Racing Canoe, 19th Century

Wood, Pigment

Museum Purchase: Steckelmann Collection, gift by special subscription, 1890.1561

OBJECTIVES

- Students will use a *Zoomify* feature on the Cincinnati Art Museum's website to carefully observe and draw a 19th century *Cameroon Canoe Model*.
- Students will use online and digital media, including websites, blog posts, Edpuzzle videos and FlipGrid responses to learn, respond and share their understanding of this artifact from the Duala people in Cameroon.
- Students will contribute their ideas to a class discussion to establish criteria for a cardboard boat model.
- Students will design and construct their own boat models using cardboard and tape or other class approved recycled materials.

CONCEPT

In this blended learning lesson, students will use a learning management system (LMS) such as Google Classroom or Schoology to access activities about a 19th century artifact, the *Model Racing Canoe* from Cameroon, which is currently displayed at the Cincinnati Art Museum. Students will complete a digital checklist that includes observing and collaborating via digital and online media, answering questions about what they have learned about the object and making a detailed drawing of the artifact. Finally, they will design and build a cardboard boat model using criteria established by fellow students.

MATERIALS

Electronic Device (chromebook,iPad,laptop)

Wi-Fi or Internet Connection

Earbuds

Pencil and Paper

Colored Pencils

Cardboard

Tape (Masking, Duck and/or Packing)

Paint

VOCABULARY

Blended Learning – student-paced learning which incorporates digital and online media as well as pre-planning and guidance by the teacher.

Artifact- a human made object of cultural or historical interest.

Museum Conservator- a person who restores or repairs cultural artifacts or works of art.

Cameroon– a country located in the west-central region of Africa, officially known as the Republic of Cameroon. Once a German territory, Cameroon split into two separate territories after WWI; British and French, but reunited in 1961.

Duala– (also Douala) are an ethnic group of Cameroon. Coastal peoples who mainly inhabit the littoral region to the coast.

Buoyancy- the ability or tendency to float in water.

PROCEDURE

1. Students will JOIN a class in Google Classroom, Schoology or other learning management system to access a series of online and digital media activities prepared by the teacher. (If students do not have access to a LMS, they may access the information by following the provided Canoe Model checklist)

2. Students will click on a link to the Cincinnati Art Museum's *Model Racing Canoe* from Cameroon. They will use the *Zoomify* feature to OBSERVE the details of the object and then POST their ANSWERS to 10 questions about the object on a Google form.
 - *Where do you think this canoe model was made?* (Cameroon in Africa)
 - *How old do you think it is? Why do think this?* (created in the 19th century)
 - *How many rows of people do you see?* (2)
 - *What is the total number of people in the boat?* (28)
 - *What are they wearing on their heads?* (painted black hats or skullcaps)
 - *What are they holding?* (wooden oars)
 - *What animal do you see in the front of the canoe?* (answers will vary)
 - *What material is this boat?* (wood)
 - *Do you think this model would float? Why or why not?* (Yes, it is made of wood and the center has been hollowed. The teacher can refer to the sites provided for more information about buoyancy.)
 - *Why do you think this artifact was created?* Explain your answer. (Water and water activities are important to the Duala people. They use canoes like this in important ceremonies, including canoe races. The canoe model was probably used in religious ceremonies to show respect for ancestors.)

3. Students will go to their Google Classroom. They will watch an Edpuzzle video of the traditional river festival in Duala called the Ngondo Water Festival. They will answer 2 questions about the video:
 - What did you observe about the boats in the race?
 - What else did you notice happening in the video?

4. Students will go to their Google Classroom. They will play the Cameroon/ Duala Quizizz to learn about the country of Cameroon, the Duala people and the importance of the "river" to the culture. The Quizizz will include the following information from the kit, *Behind the Glass: Cincinnati Art Museum*.

CLASS EXPERIENCE

- Duala is located on the Wuri River, the largest city in southern Cameroon.
 - The people of Duala are fishermen, river traders and canoe builders.
 - The Wuri River plays an important role in their rituals and ceremonies.
 - The ritual and sacred objects are an expression of their past experiences and commonly feature water (river/ocean) themes.
 - African ceremonial creations are used to celebrate important events such as a plentiful harvest and rites of passage such as birth, death and the cycles of life.
 - Cameroon is located in west-central Africa, east of Nigeria.
 - Cameroon includes a rainforest in the southeast, the Sahara in the north and a volcanic mountain range along the western edge.
 - After World War I, the part of Cameroon near Nigeria became British territory while the rest of the country was French.
 - The country gained independence in 1960, but the northern part of Cameroon joined with Nigeria and the southern portion joined with the French.
5. Students will use a pencil to DRAW a detailed rendering of the artifact, attempting to recreate the shape of the boat, the animal figure on the bow and two rows of figures seated in the canoe. They will then use colored pencils to recreate the value and texture of the wooden vessel and figures.
 6. Students will READ a blog post submitted by a conservator at the Cincinnati Art Museum entitled *Behind the Scenes in Conservation: African Art Gallery*. They will EXPLAIN 2 ways the *Model Racing Canoe* has been restored by conservators at the museum.
 7. Students will share what they have learned about the artifact by RECORDING their comments on a FlipGrid. Afterwards, they will be able to view and hear the reflections of all students who have talked about this artifact for this assignment.
 8. While on FlipGrid, students can also SHARE their personal responses to an Edpuzzle video about a contemporary local river or water event. (As a teacher, you can find a video from your own region that will ignite an interesting discussion about how boats float or what makes a great boat design) Sample FlipGrid Questions: Watch this video from New Richmond, Ohio's annual cardboard boat race. Have you or your family ever attended or participated in this event? WHAT do you think makes a winning cardboard boat design?
 9. (Optional) Students will go to Nova's *Buoyancy Brainteaser* by Rick Groleau at <http://www.pbs.org/wgbh/nova/lasalle/buoyancy.html>. They will CLICK on Buoyancy Question and select the correct answer. They will CLICK on the Boat-in-Pool Puzzler and select the correct answer. Finally, they will READ Buoyancy Basics.
 10. In class, the teacher will facilitate a DISCUSSION about what makes a boat buoyant and what makes a great boat design. Students will develop the criteria for a cardboard boat model based on suggestions by all students.
 11. Each student will make a cardboard boat model that meets the requirements established by the class.
 12. Students will assess their cardboard boat models using the criteria established in the classroom discussion.

13. Students use a digital camera on their chromebook or other device to post photos of their pencil drawings and cardboard boat models.

ASSESSMENT

Students will complete all assignments on the checklist by dates established by the teacher. They will participate in a class discussion to develop criteria for a cardboard boat model. Students will use these requirements to assess their cardboard boat model. If buoyancy is a requirement, students can test and record data about their boats as the vessels float in a mini pool. Students will use a digital camera to photograph images of their drawings and cardboard boat model, then post them for other students to view.

NATIONAL STANDARDS

Visual Art

Standard 4 Understands the visual arts in relation to history and cultures.

Level III (Grade 5-8) Benchmark 2 Understands the historical and cultural contexts in relation to a variety of objects.

History

Standard 2 Understands the historical perspective.

Level III (Grade 7-8) Benchmark 6 Knows different types of primary and secondary sources and the motives, interests and bias expressed in them (artifacts).

Technology

Standard 1 Knows the characteristics and uses of computer hardware and operating systems.

Level III (Grade 6-8) Benchmark 3 Connects via modem to other computer users via the internet, an online service or bulletin board system.

CURRICULUM CONNECTIONS

Geography Students can use Google Earth to explore the rivers and land formations of Cameroon. They can learn more about the people and culture of Cameroon by visiting the website - *Our Africa- Cameroon*. (see resources)

Science Middle school students can use the volume displacement method to find the volume of an object. Advanced students can use engineering formulas to calculate the principles needed to build a buoyant boat. (the total buoyant force is equal to the weight of the water displaced by the object.) (see resources)

RESOURCES

Technology for Blended Learning

Flip Grid- Use questions, images or videos to ignite student discussion and engagement

<https://flipgrid.com>

EdPuzzle- Capture and edit videos to present to your class

<https://edpuzzle.com>

Quizizz- Classroom review and testing tool that connects to Google Classroom

<https://quizizz.com>

Google Earth- Visit locations around the world via satellite

<https://www.google.com/earth/>

Canoe Model

Behind the Glass: Cincinnati Art Museum (kit). Cincinnati, OH. WCET, 2000.

Behind the Scenes in Conservation: African Art Gallery- Blog Post, 7/14/2016

<http://www.cincinnatiartmuseum.org/about/blog/behind-the-scenes-in-conservation-african-art-gallery/>

Digital Image of Canoe Model with Zoomify Capability

<http://www.cincinnatiartmuseum.org/art/explore-the-collection?id=19726488>

Cameroon Culture

Brief History of Cameroon- for Younger Students

<http://www.ducksters.com/geography/country.php?country=Cameroon>

Ngondo Water Festival- Video with Racing Boats

https://www.youtube.com/watch?v=wF_rPHZ48k

Our Africa- Cameroon

<http://www.our-africa.org/cameroon>

Trip Down Memory Lane- Photos from the Ngondo Water Festival

<https://kwekudee-tripdownmemorylane.blogspot.com/2013/12/ngondo-water-festival-of-sawa-people.html>

Boat Building and Science

Buoyancy Basics- NOVA

<http://www.pbs.org/wgbh/nova/lasalle/buoybasics.html>

Cardboard Boat Building- The Physics of Water Displacement (and Materials Needed)

<https://www.bing.com/videos/search?q=build+a+cardboard+boat+model&qpv=build+a+cardboard+boat+model&view=detail&mid=F16EFEC4F0BEAA6B589DF16EFEC4F0BEAA6B589D&vsmid=CAA8BF6F1E8F9507188ECA8BF6F1E8F9507188E&FORM=VDQVAP>

Cardboard Boat Building Tips

<https://www.washcoll.edu/centers/ces/chestertown-riverfest/cardboard-boat-building-tips.php>

Displacement Method- (Middle School)

<http://www.middleschoolchemistry.com/lessonplans/chapter3/lesson2>

Hot Chalk Lesson Plans- Will it Sink or Float (Grade 4)

<http://lessonplanspage.com/sciencewilltheboatsinkorfloat4.htm/>



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EXAMPLES OF STUDENT WORK

