**Memorable Memes**

**Wright Brothers National Memorial**

**Overview**

**Location:** In-classroom or Virtual

**Grade:** 8th grade

**Subject:** Social Studies / Theater Arts

**Duration:** 2-3 60-minute classes

**Key Vocabulary:** ingenuity, perseverance, puns, irony

**North Carolina State Standards:**

**8.G.1.1** Understand the geographic factors that influenced NC and the US.

**8.H.3.2** Explain how changes brought about by technology and other innovations affected individuals and groups in NC and the US.

**8.TA.C.1.3** Create original works that communicate ideas and feelings.

**Objectives:** Students will be able to a) understand the geographic factors that influenced Wilbur and Orville’s decision to come to North Carolina, b) explain the changes brought about by the Wright brothers’ invention, and c) create an original work to communicate ideas and feelings.

**Essential Questions:** What impact did geography have on the Wright brothers’ early experiments in flight? How has the technology created by Wilbur and Orville Wright impacted individuals and groups in North Carolina and the US?

**Method:** Students will research different elements of the Wright brothers’ story and will then use that knowledge to create an original meme either digitally or by hand.

**Materials Needed:** Computers, Pencils, Paper. *Gallery Walk Worksheet* and *Research Page*. Optional: *Wind and Sand Program Worksheet*.

**Background:**  Wind, sand, and a dream of flight brought Wilbur and Orville Wright to Kitty Hawk, North Carolina from 1900-1903. Kitty Hawk’s average wind speed was 15 to 20 mph, ideal for the Wrights’ experiments. The Kill Devil Hills, located four miles south of town, provided massive dunes from which to glide, and an abundance of sand to act as a cushion for crash landings. After four years of scientific experimentation, they made the first successful flight in history of a self-propelled, heavier-than-air-aircraft on December 17th, 1903. The first flight, piloted by Orville, lasted only 12 seconds and 120 feet. Wilbur piloted the fourth and final flight of the day for 59 seconds and 852 feet.

**Suggested Procedure**

1. **Watch “Wind and Sand” recorded ranger program (36 min.) found on nps.gov/wrbr to learn why Wilbur and Orville choose Kitty Hawk, North Carolina as the location to test their gliders and flyer.** Optional: have students complete *Wind and Sand Program Worksheet* while watching the video.
	1. **Wind and Sand Program:** <https://go.usa.gov/xGM3j>
2. **Assign students an area of focus (either individually or in small groups) and give them the opportunity to research ideas for their memes using the assigned questions to guide them (45-60 min).**

Areas of focus: (See student handout for clarifying questions)

1. Pre-Kitty Hawk
2. Kitty Hawk Events
3. Post-Kitty Hawk
4. Geography
5. Important People
6. **Ask students to create memes either digitally or by hand using the rubric. They should include a short paragraph explaining the historical relevance (30 min).**

The following digital resources can be used to create digital memes:

* **Life Wire:** <https://www.lifewire.com/popular-meme-generator-tools-3486457>
* **Canva:** <https://www.canva.com/create/memes/>
1. **Once students have submitted their memes do a Gallery Walk either in the classroom or virtually (30 min).**
	1. Display memes with paragraph explanations virtually or around the room and allow students to look at the “gallery” of memes. Students should fill out the gallery walk handout while looking at the memes.
2. **Have a follow-up discussion about what they learned from the experience (5-10 min).**

**Evaluation Rubric**

Students will be evaluated using the rubric provided on their **Gallery Walk Activity Sheet.**

**Extensions**

* **Live Ranger Q&A**
	+ Reach out to park staff to schedule an up-to 30-minute video chat with a ranger. Email WRBR\_Education@nps.gov to request a time slot.
	+ Ask students to be prepared with questions they might ask the ranger.
	+ Optional: Prior to talking with a ranger, vote on the class’ top 5 favorite memes that were made by students. Be prepared to share those memes with the ranger and ask creators of the memes to be prepared to explain what they created and why.
* **Create Twitter posts of the Wrights brothers first flight using 280 characters or less.**
* **Combine memes to form a quilt/mosaic titled “First Flight Fun”**

**Additional Resources**

**Websites:**

* Wright Brothers National Memorial
	+ [www.nps.gov/wrbr](http://www.nps.gov/wrbr)
		- Subsite: https://www.nps.gov/wrbr/learn/historyculture/index.htm
* Dayton Aviation National Historical Park
	+ [www.nps.gov/daav](http://www.nps.gov/daav)
		- Subsite: https://www.nps.gov/daav/learn/historyculture/index.htm
* National Air and Space Museum: The Wright Brothers
	+ <https://airandspace.si.edu/learn/highlighted-topics/wright-brothers>

**Digital Image Archives**

* Wright State University: The Wright Brothers Collection
	+ <https://www.libraries.wright.edu/special/wrightbrothers/>
* Library of Congress: Wright Brothers Negatives
	+ <http://www.loc.gov/pictures/search/?st=grid&co=wri>

**Research Page**

Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_

Circle your assigned topic. Use the questions to guide your research. You will create a meme related to your topic then write a short paragraph explaining the historical significance. Document at least three of your sources.

1. **Pre-Kitty Hawk:**
	1. What inspired Wilbur and Orville to learn how to fly?
	2. What technologies were available at the time to assist them with flight that hadn’t been available before 1900?
2. **Kitty Hawk Events:**
	1. What challenges did Wilbur and Orville face with their experiments during their time at Kitty Hawk, North Carolina?
	2. Were all their attempts successful? If not, how did these failures help them in achieving first flight?
3. **Post-Kitty Hawk:**
	1. How long did it take for the world to recognize what Wilbur and Orville achieved?
	2. How did the world receive the technology Wilbur and Orville created?
	3. How did the success of their technology impact Wilbur and Orville’s lives?
4. **Geography:**
	1. What opportunities did Kitty Hawk’s environment provide that Wilbur and Orville couldn’t find in Dayton? What problems did they face because of the environment?
	2. How did they know to go to Kitty Hawk?
5. **Important People:**
6. How did Wilbur and Orville’s family and friends support them in their experiments?
7. Who did Wilbur and Orville keep in touch with while experimenting in Kitty Hawk? How did they contact them?
8. How did the locals in Kitty Hawk help Wilbur and Orville with their experiments?

**Sources:**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
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**Rubric** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_

**Create meme based on your assigned topic.**

1. Research page with At least 3 sources \_\_\_\_ / 10 points
2. Paragraph explaining historical significance of meme \_\_\_\_ / 20 points
3. A related picture or diagram for your meme \_\_\_\_ / 10 points
4. Wording related to assigned topic \_\_\_\_ / 10 points
5. Overall appearance (photo appropriate size, font easy to read, etc.) \_\_\_\_ / 10 points
6. Gallery walk / post questions \_\_\_\_ / 40 points

**Total \_\_\_\_\_\_\_\_\_ / 100 points**

**Insert meme and write paragraph here:**

**Gallery Walk** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_

Look through all the memes created by your classmates and read the background information about each meme. List three things you learned from each category of memes. You can also write down thoughts, ideas, or questions sparked by the memes.

1. **Pre-Kitty Hawk:**
2. **Geography:**
3. **Kitty Hawk Events:**
4. **Important People:**
5. **Post Kitty Hawk:**

**Post Questions**

1. Which was your favorite meme created by another student and why?
2. How does the technology Wilbur and Orville created impact you today?
3. What is something you learned about Wilbur and Orville while doing your research that interested you?

**Wind and Sand Program**

 **Upper Middle School Worksheet (Grades 6-8)**

**Instructions:** Fill out this worksheet while following along with the “Wind and Sand” video.

1. What did Wilbur believe? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What did Wilbur and Orville’s dad give them? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Who was Otto Lilienthal? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What four things do you need to figure out in order to fly?
5. \_\_\_\_\_\_\_\_\_\_
6. \_\_\_\_\_\_\_\_\_\_
7. \_\_\_\_\_\_\_\_\_\_
8. Thrust
9. What three things did the Wright brothers need in a good location?
10. \_\_\_\_\_\_\_
11. \_\_\_\_\_\_\_
12. Isolation (not as many people)
13. What do you notice about the area?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What was the closest town when the Wright brothers were there? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How did they find out about the town of Kitty Hawk?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What do you find interesting about the first glider (1900)?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What was the problem with the second glider (1901)?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How were Wilbur and Orville feeling after the 1901 trip?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Who encouraged Wilbur and Orville? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What did Wilbur realize when he was at the conference?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What did Wilbur and Orville do after the conference?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What did they add to the 1902 glider? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How were Wilbur and Orville feeling after the 1902 trip? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What two things did they have to add to the glider design in order to make a powered flyer?
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Who helped with their engine? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. When did they tell their family they would be home? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. Who won the coin toss and tried to fly on Dec 14th? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. How did they signal to their friends that they needed help with the flyer?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. How far was the fourth flight? \_\_\_\_\_\_\_\_\_\_\_\_
2. What job was John Daniels assigned that day? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What do you think is the most interesting thing about the first flight photo?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is one connection you made to the Wright brothers’ story?

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