

Army Museum: Frontier Army Museum

Contact Info:

usarmy.leavenworth.tradoc.mbx.frontier-army-museum@mail.mil

(913) 684-3186

Lesson Title: Early Military Flight: Balloons, Dirigibles, and the Airplane

Discipline: Technology, Science, Engineering, History

Lesson Overview: This lesson covers the Army's efforts in early flight. It stems from a program that will be presented at a local inventor's day event that highlights drones. This topic coordinates with the event in that it involves the history of the Army's first drones to include balloons, dirigibles, and airplanes. The history and significance of each type of early flying apparatus will be discussed and how each were used. Differences in engineering and technology will be explored in this lesson. The use of air, gas, various engines, and materials are covered in the course.

Learning Goal: The students will be able to identify the chronology of early flight in the Army along with the different types of flying apparatuses and what they each did/how they differ. Students will also be able to discuss why the Army experimented with flight and why it was needed. At the end of the course students will be able to determine the different types of engineering and technology behind the various forms of early flight. The program will introduce students to early 20th century technology. Students will also see how the Army worked with civilians to engineer and create early flying apparatuses.

Materials: Pen/pencil, paper, computer, internet

Procedure: This lesson can be done with or without teacher/parent instruction, it is a self-paced, independent program. If a teacher/parent would like to conduct the lesson they simply need to introduce each page at a pace of their choosing. The parent/teacher may choose to have further discussion with the students after each page/section.

Assessment: Completion of the learning goals will be measured by the student's answers/responses to each activity within the lesson and any discussion the teacher/parent may require.

Bibliography:

<https://history.nebraska.gov/sites/history.nebraska.gov/files/doc/publications/NH1988BalloonSchool.pdf> - balloon history

<https://www.mccneb.edu/About-MCC-Nebraska/About-MCC/History-of-MCC/Fort-Omaha-Campus-History/Fort-Omaha-Walking-Tour/Historical-Account-Dirigible.aspx> - dirigibles at Omaha

<https://www.youtube.com/watch?v=DcEuVUrGjaQ> – Thaddeus Lowe video

<http://emergingcivilwar.com/2017/03/21/union-balloon-corps-part-3/> - balloon corps info

<https://text-message.blogs.archives.gov/2019/03/19/the-united-states-army-buys-its-first-aeroplane-1909/> - US Army Aeroplane Number 1 info

http://www.wright-brothers.org/Information_Desk/Just_the_Facts/Airplanes/Military_Flyer.htm - military flyer info and images

https://history.army.mil/books/30-17/S_4.htm -wireless telegraphy

Additional Resources:

Tierney, Richard. "The Army Aviation Story." Colonial Press, AL. 1963.

Glines, C.V. COL. "From the Wright Brothers to the Astronauts: The memoirs of Major General Benjamin D. Foulois." McGraw-Hill Book Company, 1968.