

# Hand-On Ferris Wheel Project For Upper Elementary Through High School.

George Ferris debuted the Ferris wheel on February 14th, so it's a perfect activity for those that aren't head over heels about 'mushy, gushy' Valentine activities but still want a fun activity.

Get ready to have fun learning about the history of the Ferris wheel and the man behind this fun amusement park ride. Before you are finished, you will even have fun having a go at building a Ferris wheel on your own or with a few friends.

#### A Biography & STEM Lesson

This STEM lesson with additional information from the Hello February! Famous People & Fun Activities download is perfect for an alternative Valentine's Day project for those not interested in the typical 'mushy, gushy' or lovey-dovey' Valentine activities.

#### In This STEM Min-Lesson Pack You Will:

- Learn about George Ferris.
- Learn about engineering design.
- Learn about motion, load, and construction.
- Have fun building on your own or as part of a team.



#### Instructions:

- 1. You can use this famous person notebooking page and book report templates to capture what you are learning every step of the way.
- 2. There will be other materials needed for STEM projects. Those are referenced in the individual project pages.

Part 1: Who was George Ferris? - Short Biography of George Ferris & His Wheel

Imagine if you were given the same opportunity Daniel Burnham gave George Washington Gale Ferris in 1890. Burham, the architect charged with creating the world-dazzling Columbian Exposition in Chicago, IL, told a group of engineers to create 'something novel, original, daring and unique'.

While many others before Ferris had imagined such a wheel, it was Ferris who rose to the challenge, by putting up \$25,000 of his own money to ensure the safe creation of the Ferris wheel. On February 14, it was finally finished. The Ferris wheel launched in June of 1893 as a glorious 20-minute ride with an aerial, panoramic view of Chicago.

Unfortunately, Ferris became ill and died of Typhoid in 1896 at just 37 years of age. But, his engineering marvel became an iconic past-time of amusement park rides all over the world.

- Start off by learning a bit more about George Washington Gale Ferris, Jr. He invented his famous wheel in 1859.
- Now, learn more about the Ferris Wheels.

Part 2: Explore Famous Big Wheels

Free Ferris Wheel STEM Project Resources

Learning about the Ferris wheel is so much fun! Understanding how it is built (and even building your own) is an exciting STEM and physics project many



elementary and middle school homeschoolers will enjoy. Learn about the history of the Ferris wheel and use these resources for a fun alternative Valentine's Day Activity.

- The London Eye Take a look at the structure. Now, enjoy the view from the top.
- The Bellevue Ferris Wheel in Germany This is a classic version that is often seen at county fairs and European Christmas Markets.
- Singapore Flyer A similar version to the London Eye.

#### Part 3: Books To Read

A fun read-aloud and biography is the perfect way to learn about Science, Technology, Engineering, and Math (STEM) as you layer the learning with hands-on projects. Grab a few engineering books at your local library for engaging science reading.

Grab the books from the original post or from your local library.

 George Ferris, What a Wheel! - Here are the book report templates you can use.

Incorporate videos and/or audiobooks by combining the following for independent learning.

Video read aloud – Read aloud: Mr. Ferris & His Wheel.

#### Part 4: Build A Big Wheel – STEM Activity

#### Ferris Wheel STEM Resources

Now, on to the resources for a fun STEM lesson! Get ready to explore the creative inspiration behind the wheel, and learn about the process of making one. Using primary resources such as photographs, posters, and telegrams, your can



explore all aspects of creating a Ferris wheel. Everything you need is in the link below.

#### **Build Your Own Wheel**

Get ready to learn how these big wheels have been designed throughout history, and then develop a design for your own Ferris wheel made with pasta. Work individually or as a team to plan your wheel, execute construction, troubleshoot, evaluate your work, and present your project.

Download the entire Build a Big Wheel project (complete lesson plan) and have fun learning about the history & architecture of the Ferris Wheel.

Ok, so maybe you aren't into pasta and glue anymore. That's OK because these Ferris wheel STEM projects are awesome. The Ferris Wheel K'nex and Ferris Wheel Lego are definitely big hits with older students. If you don't have these kits, head back to the original blog post to grab them.

#### **Explore More!**

Use this free resource to add even more learning opportunities to your Ferris Wheel STEM Lesson:

- Invent It! An introduction to George Ferris and his invention from the Chicago History Museum (complete lesson plan from Chicagohistory.org)
- Ferris Wheel Fun! Using copies of original telegrams, have fun analyzing written communications and writing telegrams. (from Chicagohistory.org)

#### Part 5: Big Wheel Writing Prompts

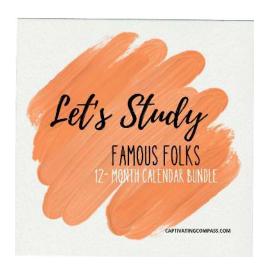
When you are finished, you can have fun with writing prompts about {crazy} inventions. Or you can write an essay or a paragraph about the engineering challenges faced during the construction of either the London Eye or the



Singapore Flyer. Compare your challenges with creating your wheel with those of the London Eye or Singapore Flyer.

### Celebrate February with George Ferris & Other Famous Folks

For more fun STEM activities your upper elementary, middle school and even high school students will enjoy the <u>Hello February! Calendar of Famous People & Fun Activities</u>. There is a fun learning activity for every day of the month.



Ready for 365 days of 'Edventure' with Famous Folks?

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Ensure your child is making all the connections about the importance of learning about famous people in history.

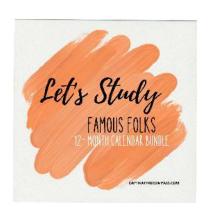




Daily 'ed-venture' awaits with the...

## Let's Study Famous Folks 12-Month Calendar Bundle.

Study 'em all.



## Here's What's Included Let's Study Famous Folks 12-Month Calendar Bundle.

- Writers/Poets/Artists/Musicians
- Scientists/Explorers/Inventors
- Historical Leaders, Heroes & "Baddies" & Other Famous Folks

365 Days To Celebrate Famous People In The Month They Were Born.

The Let's Study Famous Folks Calendar Bundle Is 365 Days Of Fun Learning Opportunities to help you stay connected with your tweens and teens, by learning about discussing famous people.

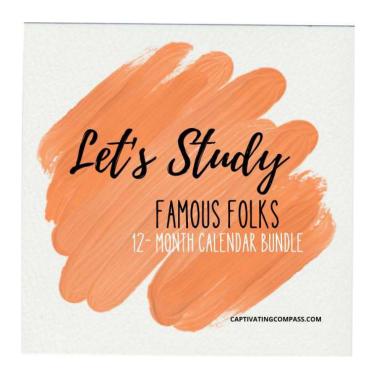
Whether you are studying ancient history or modern (or something in between) there are so many people you can find in each month's birthday list that will inspire your kids to learn just a bit more about something that piques their historical curiosity. Music & Literature are covered too, with reading suggestions and resources to get the most out of the day's activity.



With your Let's Study Famous Folks 12-Month Calendar Bundle, you can inspire your middle and high school students and nourish their curiosity each day of the month. You'll find several samples by clicking on the product image area.

#### **BONUS**

Included are also notebooking pages for gathering detailed information about your famous folks, favorite quotes, and even famous places.



Hand it over!

Stay Captivated! Use the world as your classroom with <a href="Captivating Compass">Captivating Compass</a>.

Virtual and travel-based learning for today's homeschool family. Literature, science, & history online and downloadable unit studies & printables for upper elementary through high school students.



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