



Grades 2-7

The Great Inventors

Learning Lapbook with Study Guide



A Journey Through Learning
www.ajourneythroughlearning.com

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**While you are there, sign up for our email newsletter and
receive a FREE Lapbook!
You'll also receive great discount codes, special offers, find out
what's new and what's to come!**

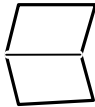
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Things to Know

Hamburger Fold-Fold horizontally



Hotdog Fold-Fold vertically



Folds-Labeled with a small line to show where the fold is and the words “hamburger fold” or “hotdog fold.”

Dotted Lines-These are the cutting lines

Accordion Fold-This fold is like making a paper fan. Fold on the first line so that title is on top. Turn over and fold on next line so that title is on top again. Turn over again and fold again on the next line so that title is on top. Continue until all folds are done.

Cover Labels-Most of the booklets that are folded look nicer with a label on top instead of just a blank space. They will be labeled “cover label.”

So where do the mini-booklets go?

A shape-coded and labeled KEY is included. This key shows you where all of the mini-booklets go in each folder. Keep this page handy! You will also see at the top of the mini-booklet pages another graphic that shows once again where to place the booklet in each folder. So there are TWO ways to see where to place the booklet. We made it easy! You won't get lost.

Lapbook Assembly Choices

(see photos on how to fold and glue your folders together)

We recommend using Zip Dry Glue.

Choice #1 -Do not glue your folders together until you have completely finished all three folders. It is easier to work with one folder instead of two or three glued together.

Choice #2 -Glue all of your folders together before beginning. Some children like to see the entire project as they work on it. It helps with keeping up with which folder you are supposed to be working in. The choices are completely up to you and your child!

How Long Does it Take to Complete the Lapbook?

Doing a study guide page and mini-booklet a day, a 3-folder lapbook takes about one month to complete. However, you can expand the study portion and make it last as long as you like! That's the beauty of homeschooling! Do it YOUR way!

How It All Goes Together

What you need to get started

- *A printed copy of the lapbook by A Journey Through Learning
- *colored file folders
- *Scissors
- *Glue (We recommend Zip Dry Glue)
- *Hole puncher
- *Brads
- *Stapler

To make the storage system (optional-see directions)

- *Duct tape
- One 3-ring binder

Study Choices

Choice #1- Read the first page of the study guide. Then use the internet and fun children's books to learn more about the topic that is covered in that study guide. For instance-our American Indians lapbook has a study guide page about Geronimo. Dig into Geronimo. There are probably lots of interesting things to learn about him that the study guide does not cover. Spend a day on Geronimo or spend a week! The pace you take for the lapbook is completely up to you. When your child has completed studying that particular topic, it will be time to do the mini-booklet for that topic. The mini-booklet patterns are found right after the study guide page that it goes with. Or, your child might want to do the mini-booklet before he/she delves deeper into the subject. Once again, the order is completely up to you and your child.

Choice #2- Read only the study guide page and do the mini-booklet that goes with it. The mini-booklet patterns are found right after the study guide page that it goes with. You may choose to do one study guide/mini-booklet per day, two per day, two per week, three per week, etc. It doesn't matter. The pace is completely up to you. At one per day, it will take about a month to complete a 3 folder lapbook.

Tips and tricks to go the extra mile! (optional)

Supplies Need:

½ inch three-ring binder

5 tabs (if you are using our copywork and/or notebooking pages, you will need to have 7 tabs. Label with copywork and notebooking)

Quart size baggies

Duct tape

Your study guide and mini-booklets pages and copies of the enrichment pages at the end

Office supplies-glue, scissors, brads, stapler, pencils, crayons, and ribbon (if needed)

1. Label your tabs: Study Guide/Mini Booklets, Book Log, NICK Notes(easier) or Outline Form (harder), Biography Reports, What I Learned Pages (Copywork and Notebooking, if using these).

2. You will find a master copy of all of these special pages at the back of the lapbook packet. Make copies of the NICK Notes or Outline Form, Biography Report (if included), and What I Learned Pages and put them behind the tabs. Make more copied of the Book Log if your child reads a lot and needs more room to log books. We will explain how your child can use all of these enrichment pages later.

3. Hole punch your study guide and mini-booklets sheets and place behind the Study Guide tab. You will read a page of a study guide. Behind the study guide is the booklet(s) that goes with that study guide.

4. Keeping your office supplies handy-Measure the bottom of a quart size zip-lock bag. Then measure out a strip of duct tape that length. Lay the zip-lock bag on the lower edge of the tape. Fold the other end of the tape down on the zip-lock bag. Your duct tape should be sticking out from the bag. Now, you can hole punch the duct tape strip. **DO NOT HOLE PUNCH INTO THE BAG!** Then put it into your 3-ring binder. Use this bag to store items you will be using for your lapbook. Glue, scissors, hole puncher, stapler and extra staples, crayons, pencils, brads, ribbon, and any unfinished work. Doing this one step keeps you from having to constantly gather supplies every time you want to work on your lapbook!

How to fold and connect the folders for your lapbook.



1. Gather the number of folders required for your particular lapbook.



2. Open up each folder and flatten it out.



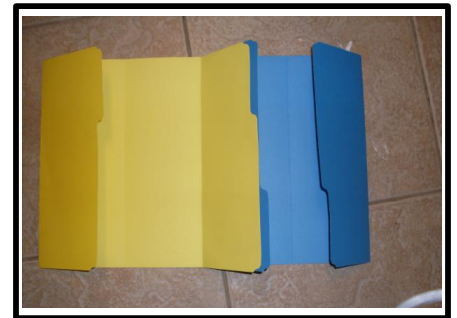
3. Take the right side and fold it all the way over until the tab is just before the middle crease in the folder. Do not overlap this crease with the tab.



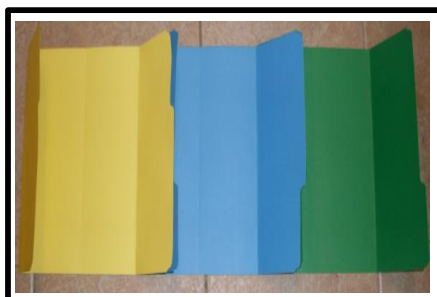
4. Fold the left hand-side over just to the crease but not overlapping it. Your folder now has two flaps. We like to run a ruler down each fold to make the fold neater and flatter. Do steps 3 and 4 to the remaining folders.



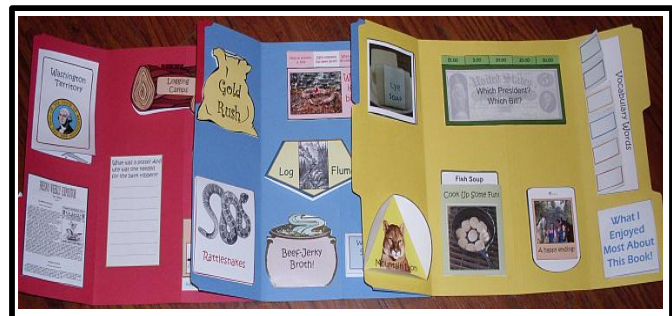
5. Take two of the folders and apply a generous amount of glue to their flaps. We recommend using Zip Dry Paper Glue.



6. Bring the flaps together and press so they stick together.



7. Do steps 5 and 6 to your remaining folders (if any).

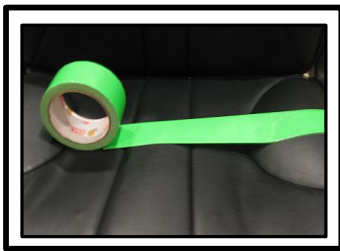


8. The patterns for all the mini-booklets are provided. Just cut out, construct, and glue them into your lapbook. Refer to the color-coded placement page or the actual mini-booklet page for placement of each mini-booklet.

Can I store all of my lapbooks in ONE location?

Yes! A Journey Through Learning has come up with a way that you can store all of your lapbooks from your books in ONE convenient location. A 3-ring binder serves as a great place to keep your lapbooks. This method of storage not only keeps your lapbooks from getting lost but also keeps them neat and readily available to show to dad, grandparents, friends, etc. When they are not being shown off, just place the binder on your bookshelf! Below, we have given you step-by-step directions (with pictures) of how to create a storage binder.

How to make a storage system for your lapbook(s)



Roll out enough duct tape to go across the folders lengthwise.



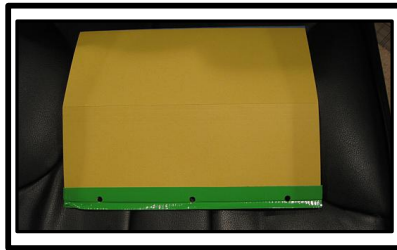
Put duct tape sticky side up. Place bonded edge of lapbook on the duct tape (no more than $\frac{1}{4}$ inch!).



Then stick duct tape to the other side again about $\frac{1}{4}$ inch. There will need to be enough tape to hole punch.



Stick duct tape into hole puncher but be careful not to punch holes in your folders.



It will look like this.



Store folders in 3-ring binder.

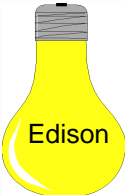
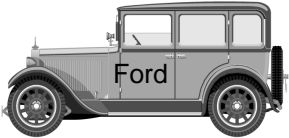
Folder 1

What is an Invention?	Ben Franklin	John Deere	Louis Braille
Johannes Gutenberg	Wilbur and Orville Wright		Invention idea

Folder 2

Eli Whitney	Eastman And Marconi	Galileo Galilei
Da vinci	Robert Fulton	Thomas Jefferson
		Favorite Inventor

Folder 3

George Stevenson	 Edison	GW Carver	Jonas Salk
	 Ford		
	Alexander Graham Bell		Favorite Invention

Complete the Scene

Cut off this piece and discard. Wally the weird scientist and super inventor (at least he thinks so) has just invented something spectacular and he is ready to start it up! Draw what you think it is! Use your imagination. It could be *anything*! Then glue onto cover of lapbook.

The Great Inventors



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What is an Invention?

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Benjamin Franklin

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Guglielmo Marconi

George Eastman

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Eli Whitney

Leonardo da Vinci

Robert Fulton

Thomas Jefferson

Galileo Galilei

George Stevenson

Thomas Edison

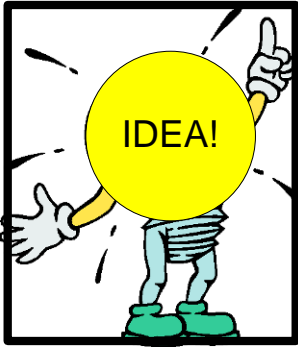
Jonas Salk

George Washington Carver

Henry Ford

Alexander Graham Bell

What is an Invention?



Have you ever stopped to wonder how that enormous airplane gets up in the sky or how we get light by screwing in a bulb? At one time, these things did not exist. Someone had to invent them.

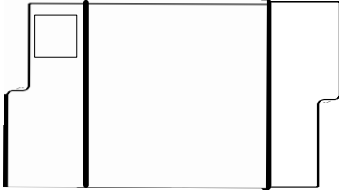
Webster's defines an **invention** as;

- the creation of something in the mind
- a creation (a new device or process) resulting from study and experimentation
- the act of inventing

An invention is any new thought or idea that someone puts to work. Anyone can be an inventor. Anyone can take their ideas and make them known. All it takes is an idea and hard work to see it become a reality. Everything around you started with an idea. Most of the time, an invention is started out of a need for something. Most inventions, once created, seem so simple. Think about the wheel. Imagine what your life would be like without the wheel. There would be no cars, trains, scooters, or roller skates. Have you ever stopped to think about all of the inventions that you use in a day? How your life would be different without them? In this study, we will learn about some of the people who had a simple idea. However, instead of just thinking about it, they acted on it. Because of their ideas, our lives today have become much easier.

Do you have an idea for something that has not been made before? If you have an original or unique idea, you could become an inventor, too!

Folder 1



Read **What is an Invention?**
Cut out and hotdog fold. Cut out cover label. Glue label on top of folded booklet. Glue booklet into lapbook.
Directions: Write about what is an invention.

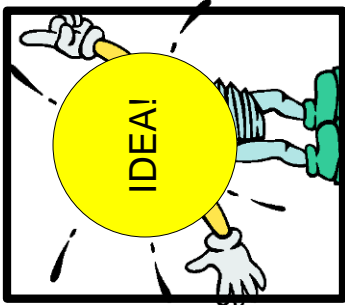
Hotdog fold

What is an Invention?

SAMPLE PAGE

Cover label

**What is
an Invention?**

A cartoon illustration of a hand holding a large yellow circle. Inside the circle, the word "IDEA!" is written in black capital letters. The hand is wearing a white glove and is pointing towards the circle. The background is white with some black lines suggesting motion or light.

Johannes Gutenberg

In 1436, Johannes Gutenberg began inventing his wooden printing press. Movable type is also called foundry type or hot type. In foundry type, each piece of type was cast into a precise size from metal. Many people had experimented with making a metal type with individual woodcut letters. It would become the first form of printing to use movable type. By 1462, his invention was accepted throughout Europe.

Early in his career, Gutenberg worked as a goldsmith, which enabled him to devise a metal type of block. He designed a typeface mold and used individual pieces of type, which he molded out of alloy that was soft enough to cast yet hard enough to use for printing. For his press, Gutenberg copied the process of making wine, cheese, and paper. An operator worked a lever to increase and decrease the pressure of the block against the paper. The invention was the printing press. Even though the press would eventually change life, as we know it today, Gutenberg was a poor businessman and made little money from his printing system.

Around 1450, Gutenberg began printing the Bible. That same year, he entered in to business with Johann Fust who invested money to help with the production of the Bible. Gutenberg is credited with printing the very first Bible with movable type. It is sometimes called the Gutenberg Bible. The Gutenberg Bible was written in Latin. It had colored initials and other illuminations that were hand drawn after the pages were printed. The pages of the book were folio- each page had two columns, and each column has 42 lines. The Gutenberg Bible lacked many print features that modern readers are accustomed to, such as pagination, word spacing, indentations, and paragraph breaks. The Bible had over 1280 pages. The German Gothic type style was modeled on manuscripts of the period. The columns of text were tightly justified right and left. The printed text was black with red and blue headers and initials being added later by an illuminator. The edition included both vellum and paper copies. In design and workmanship, the Gutenberg Bible holds its place as one of the finest of all printed books.

History of Typesetting

To create foundry type letters, each letter was casted from a precise piece of metal. Each mold, contained only one letter, number, or symbol. The mold of each letter was called the body. The top was called the face. We get our word "typeface" from the raised image that was inked for printing.

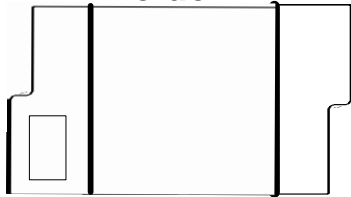
Each letter was stored in a compartment box. The letters were selected one at a time and lined up in what was called a composing stick. Then, by placing the blocks on a line with spaces between words, they were laid in lines until the sentence was the right length. The typesetter would place each letter down in a line one at a time in a special box called a housing tray.

The individual lines were laid out exactly as the page of the newspaper would look. When laid out, all of the words were placed backwards as if looking at it in a mirror. Finally, the type was set, inked, and copied by hand. When they were finished, they had to take everything apart, clean it, and then return to its correct case in the box. It was very time consuming.



Now, make your own case of face letters. Have your mom give you the egg cartons that she has been saving. Using a stapler, hook the cartons together, two on top and then two on the bottom. This will be your box. Next take an old mouse pad and with a permanent marker write the letters of the alphabet about 1 x 1 in size. Have your parent cut out the letters as close as possible with a sharp knife. Then using new, dry sponges, cut long strips 1 x 2 in size. Glue the letters on the strips. You have just created a typeset letter. Place the types in each of the pockets in the case. Now, choose your letters one by one to write out a sentence. Lay the sentence out backwards. After you have your sentence, dip each in black paint. Now, hold your sentence up to a mirror. You have written a sentence using typeset letters. Congratulations!

Folder 1

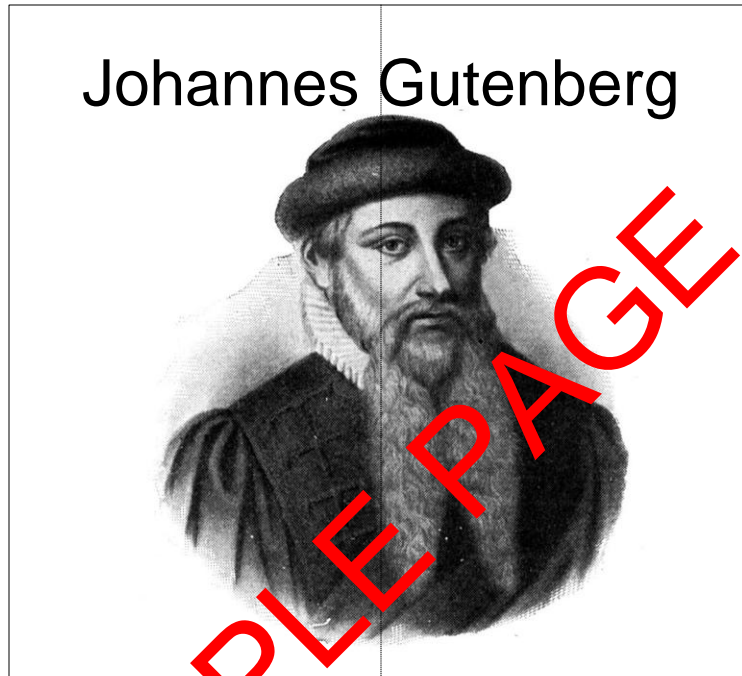


Read **Johannes Gutenberg**.

Cut out big booklet and fold sides inward. Cut out and glue cover label on top of closed booklet. Cut label down the middle so that booklet will open. Glue booklet into lapbook.

Directions: Answer questions inside.

Cover label



Fold in

Fold in

What is moveable type?	What was he famous for?	What did the first printed Bible look like?

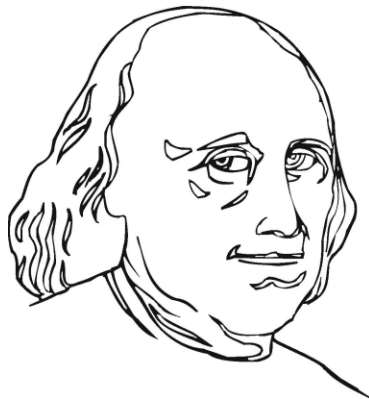
Benjamin Franklin

Benjamin Franklin was a man of many jobs and talents. During his life, he was a political leader, a scientist, a printer, a musician, an inventor and more. At the age of forty-two, Franklin decided to devote more of his time to inventing. He invented many things. Some of his inventions are swim fins, a glass harmonica, watertight bulkheads for ships, the lightning rod, and an odometer.

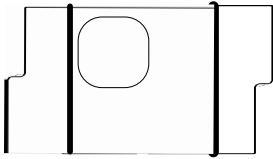
In colonial times, people warmed their homes by building a fire in a fireplace. Ben invented an iron furnace stove that allowed people to warm their homes more safely and with less wood. That invention still bears his name today- the "Franklin Stove." He also established the first fire department and the first fire insurance company.

Along with inventing, Franklin also enjoyed experimenting. One thing that always fascinated him was electricity. Franklin wanted to prove that lightning was a form of electricity.

One stormy night in 1752, he and his son, William, were experimenting with lightning. Knowing lightning was dangerous, Franklin needed something that could get close enough to it since he could not. He decided a kite could do just that! Franklin attached wire to the top of the kite and a metal key to the bottom of the string of the kite. Lightning struck the wire on the kite and traveled down the kite string to the key. When he touched the key with his knuckle, there was a spark! He was extremely lucky that he was not electrocuted (although he was knocked unconscious twice when experimenting with electricity, so do not try this at home!) He did prove that lightning was electricity! Afterwards, he invented the lightning rod to protect buildings and ships from lightning damage.



Folder 1



Read **Benjamin Franklin**.

Cut out the two squares on this page and the square on the next page. Stack with title page on top and staple together at the top. Glue into lap book.

Directions: Answer the questions.



How did he discover electricity?

List some of his inventions

SAMPLE PAGE