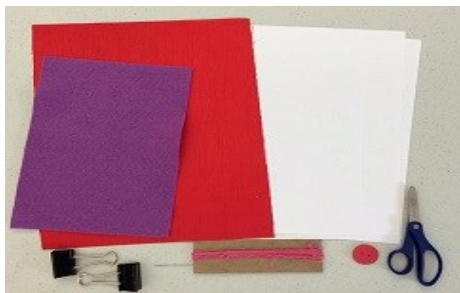


1. Sew a Scientific Journal

Sew your very own scientific journal to record your experiments!

MATERIALS



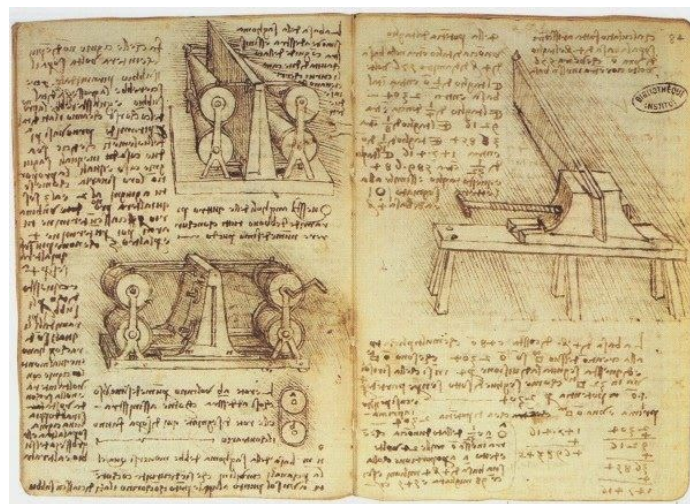
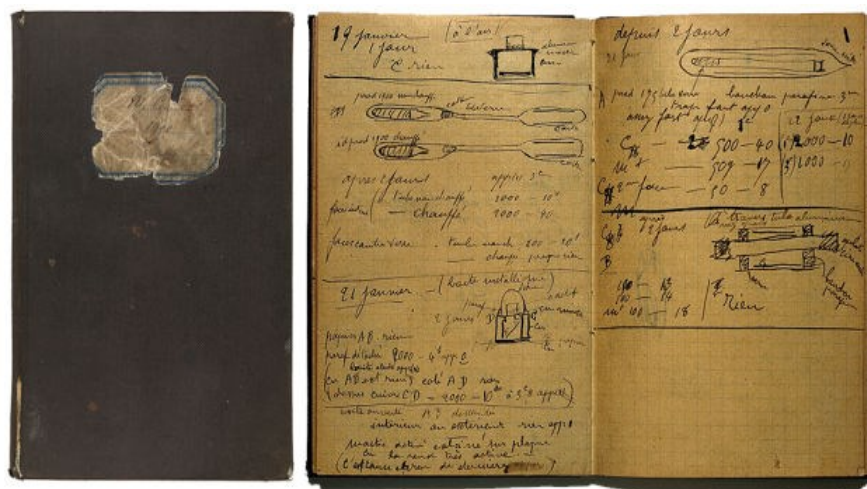
- ❖ Card Stock
- ❖ Printer Paper
- ❖ Tapestry Needle
- ❖ Yarn
- ❖ Sewing Needle
- ❖ Thread
- ❖ Hammer
- ❖ Nail
- ❖ Buttons
- ❖ Binder Clips (2)
- ❖ Felt Sheets
- ❖ Scissors
- ❖ Duck Tape
- ❖ Washi Tape
- ❖ Stickers

Do the Experiment!

1. To start, you'll need 15 sheets of printer paper and 2 sheets of card stock. The printer paper is the pages of your journal and the card stock is the front and back covers.
2. Line up your card stock and printer paper. Hold them together with a binder clip. Where you place the binder clips depends on how you want your journal to open—from the top, bottom, left or right.
3. You'll need a hammer, nail, and 1 pad for this next step. Place your journal on the pad. At the top of your journal, carefully hammer a nail through all the pages of the journal. Continue making holes that are not too far apart from each other, all the way down. Make at least 10 holes.
4. Select a needle and a length of yarn. If you know how to thread your needle and sew, begin to sew together your journal. If you don't, a teacher or counselor will show you the basics.
5. Once you have your journal sewn together, you can select some felt and buttons, and decorate the front and back covers. You can use the hammer, nails and foam if you want to create designs on your covers that you can embroider with yarn or thread. Please leave the inner pages free of decoration. Use your small needle and thread to sew the buttons.
6. Have fun and be creative!

DID YOU KNOW...

Scientific journals have been used hundreds of years. Some of the greatest journals kept were written by Leonardo DaVinci, Galileo Galilei, Sir Isaac Newton, Marie Curie, Nikola Tesla and Albert Einstein. Scientific journals are primarily used to record notes, ideas and diagrams but they can also be used to organize and connect observations made during the day. Looking back on these observations, scientists can connect the new things they are trying to understand to their daily lives. That very often leads to BIG discoveries. One thought you might have already had is what does making a scientific journal have to do with botany, the study of plants. Think about how we use plants every day of our lives—we eat them, we use them to make our clothes, they might be part of our furniture and the structure of our house. What plant products did you use while making this journal?



CHALLENGE

1. Sew a new journal when you get home. Can you make a different needle and yarn pattern?
2. What are scientific journals used to record?
3. Fill your scientific journal with as many of your observations as you can throughout the year!

STEAM Challenge: Let's say it takes 18 inches of yarn to sew one journal. Count the number of people in your after school program—How many total inches of yarn would it take if each person made a journal?