## WELCOME WORK

# In your ISN Welcome Work section:

- 3 things you learned this week (about industrial revolution)
- 2 things that you are confused about
- question you still have

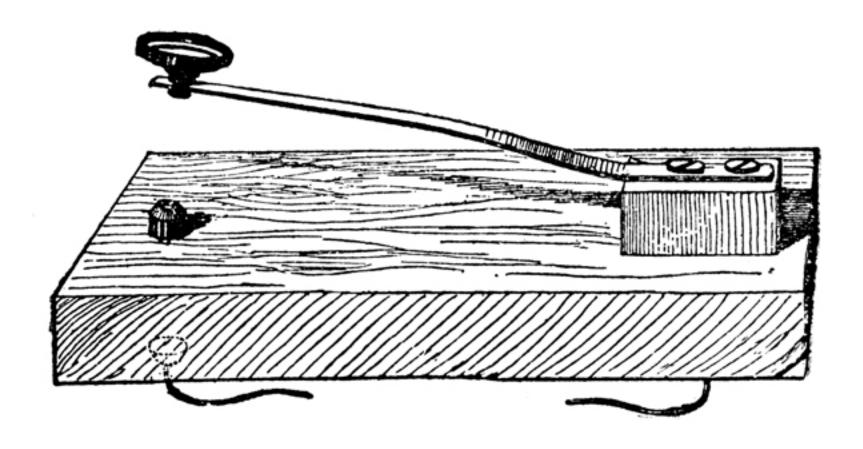


## ESSENTIAL?

How did inventions change the lives of people in the 19<sup>th</sup> century?

SS.8.A.4.7; SS.8.A.4.10

## The Telegraph



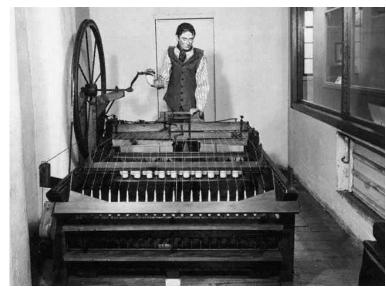


- Invented by Samuel Morse
- Allowed messages to be sent and received via long distances
- Connected the east to the expanding west
- Messages sent in "codes" known as Morse Code
- Leads to telephone, cell phone, computer, etc.



## The Spinning Jenny

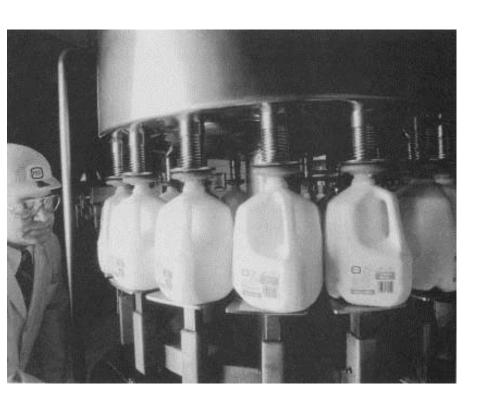


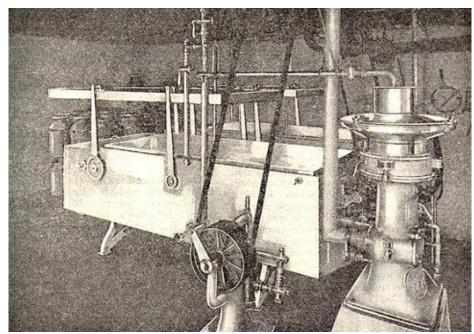


- Invented by James Hargreaves
- Spins 8 threads of cotton into one piece of yarn
- Greatly speeds up production of yarn, clothing, etc.
- Not everyone was liked the invention why?



#### **Pasteurization**

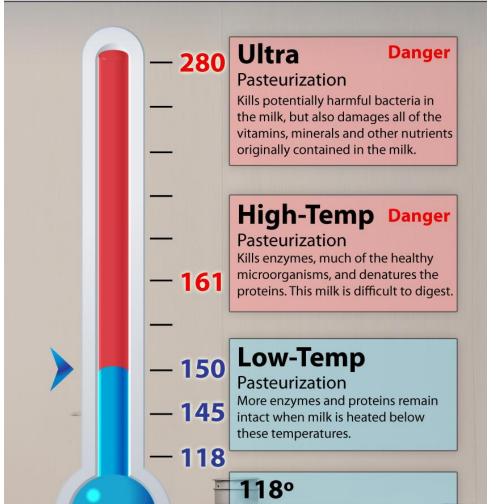




The process of heating a liquid to kill harmful bacteria

# Milk Pasteurization Explained

When milk is heated past 150 degrees, it becomes dangerous to your health. This chart shows the various pasteurization methods and how much the milk is damaged during the process.





- Invented by Louis Pasteur
- Was a scientist looking for way to keep beer from going sour
- Now, many liquid products are "pasteurized", such as milk, yogurt, or orange juice

#### Pasteurization Video



## **Food Canning**

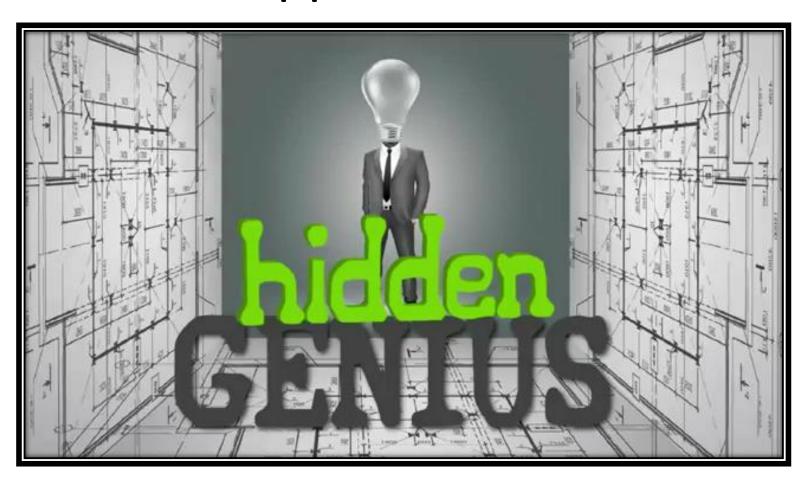




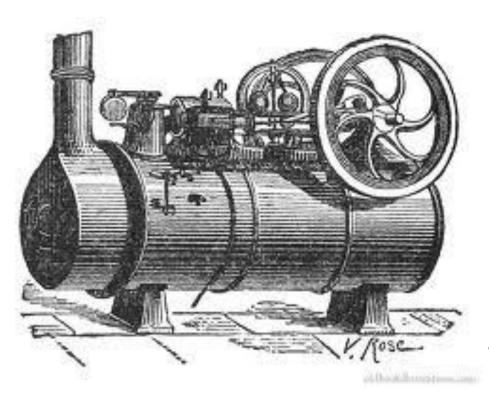
- Invented by Nicholas Appert
- Sought way to increase the shelf-life of fruits and vegetables WITHOUT decreasing flavor or quality
- Until now, food was preserved with salt or ice
- Starts to can foods, then boils to kill off bacteria
- Food can last for years that used to last one a few weeks!

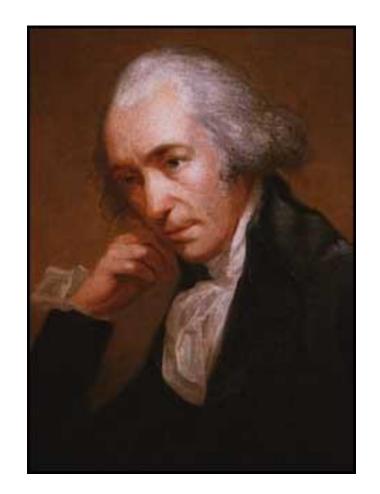


## Appert Video



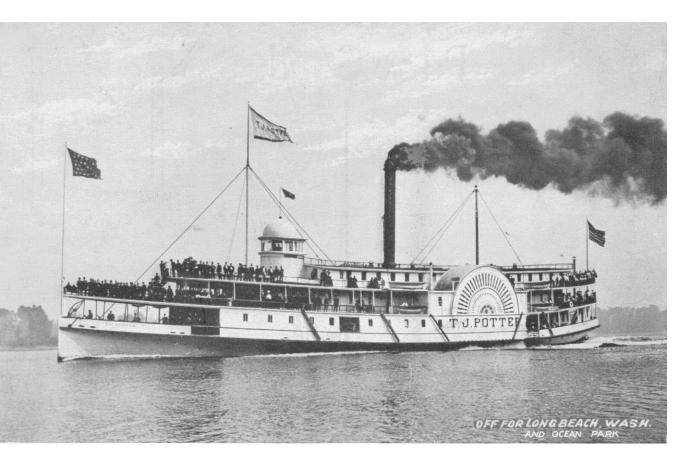
#### Steam Engine





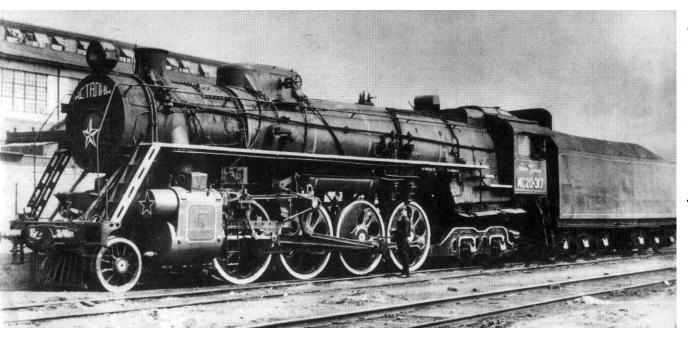
- Idea advanced by James Watt
- Water is heated (from coal burning), and the steam pressure creates power!

#### Steamboat



- Robert Fulton
   creates steamboat
   by using the engine
   to power it
- Greatly cuts
   down time travel
   across oceans /
   rivers
- Connected the east to the expanding west

#### Steam Locomotive



- Eventually, idea is added to the locomotive and railroads
- Allowed
   messages to be
   sent and received
   via long distances
- Connected the east to the expanding west

