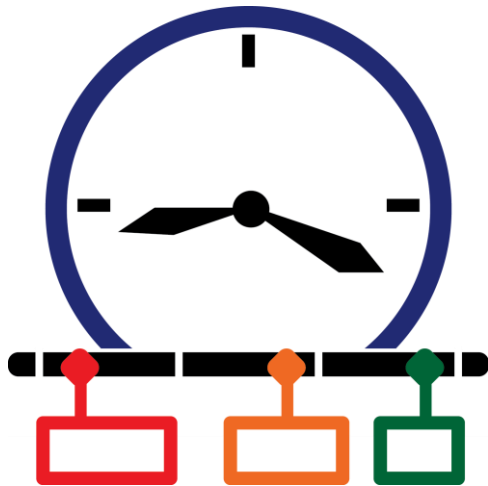# TECHNOTimeline

Teacher Guide

Lessons for Middle & High School Students: Grades 6 - 9

Technology Course using

Google Slides

Explain significance of events.

In this course, students create a timeline that summarizes significant events. The graphic organizer will consist of information organized in chronological order. Each event will be analyzed to gain an understanding of its historical importance to people and future events.

To start, students study sample timelines for inspiration. Next, they research a topic and record findings using an organizer. Once the important moments have been pinpointed, Google Slides is used to create a graphic display. Upon completion, the sequence of events is shared with others.

TECHNOKids

Table of Contents

Session 5 Gain Peer Feedback

Session 6 Discuss Historic Events

Appendices

Introduction

This section provides valuable information about teaching TechnoTimeline. It includes a description of the Teacher Guide, as well as an overview of the course. In addition, there are ideas for implementation and technology integration.

For additional guidance, open the course in TechnoHub and select Get Started to access preparatory steps, resource list, and scheduling timetable.

TechnoTimeline Overview

TechnoTimeline Course Outline

Technology Integration Ideas

TechnoTimeline Overview

In this course, students create a timeline that summarizes significant events. The graphic organizer will consist of information organized in chronological order. Each event will be analyzed to gain an understanding of its historical importance to people and future events. To start, students study sample timelines for inspiration. Next, they research a topic and record findings using an organizer. Once the important moments have been pinpointed, Google Slides is used to create a graphic display. Upon completion, the sequence of events is shared with others.
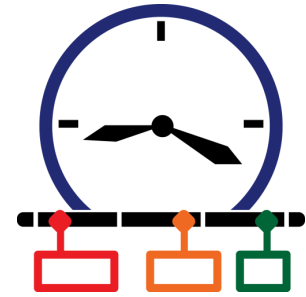
Students complete the following tasks:

➢ In Session 1, students step into the role of historians as they get ready to construct a timeline featuring significant events. To understand the creative possibilities, they study samples on a range of topics. These include a renowned inventor, a historic expedition, an About Me autobiography, and milestones in flight. Next, they select an idea for their own timeline. A list of suggestions aid students in identifying a personal area of interest.

➢ In Session 2, students research their topic to uncover key historical moments. These could be firsts, remarkable achievements, milestones, or events that acted as catalysts. They use an organizer to record pertinent information, including the date and a brief description of each event. An optional activity is available to assist students in determining significance.

➢ In Session 3, students construct a timeline using Google Slides. They start by customizing the slide size, allowing for a better display of a series of events. Next, they add a title and apply a background to the slide. Then, students use shapes with text to sequence dates and events on the timeline. To enhance the visual appeal, they experiment with layout and design tools. An optional activity introduces drawing tools.

➢ In Session 4, students explore how to format shapes and online pictures to emphasize information in their timeline. They experiment with fill, outline, and effects to create a unique design. An optional activity has students explore how to crop an image to highlight important moments.

➢ In Session 5, students collaborate to enhance their timeline. They begin by evaluating their own work in terms of design, layout, and content using a checklist. After this self-assessment, they partner with a peer, who reviews the timeline. The peer editor provides feedback by posting a comment describing what they like and offering a suggestion for improvement. Comment starters are provided to help students phrase their feedback. This feedback is then used to make revisions.

➢ In Session 6, students share their timeline with others. They can select from three options including a slideshow, posted link, or printed document. The assignment includes topics for discussion if students present their timeline to a small group.

TechnoTimeline Course Outline

Purpose: Create a timeline that forms connections between people and events.

Objectives: (see Appendix A: Skill Summary)

- understand the purpose of a timeline
- research important historical events
- analyze relative importance of key events
- organize events using a timeline
- explain the significance of events
- customize slide size and layout
- format slide background
- insert and format word art
- draw shapes and text boxes
- format fill and border of slide objects
- scale, move, align, and group slide objects
- copy and paste slide objects
- join shapes using connectors
- critically review a timeline to offer feedback
- post and read comments

Preparation:

- Sign up for a Google Account
- Share Timeline folder with students
- Download and print Flashcards and Tool Summary from TechnoHub (optional)

Materials:

- Sample Timelines:
  Biography, Expedition, Milestones
- Research Organizer Template (optional)
- Parent Letter and Certificate (optional)
- Assessment:
  o Timeline Checklist
  o Peer Review Checklist
  o Timeline Marking Sheet
  o Timeline Skill Summary
- Flashcards and Tool Summary (optional)

Summary of Activities:

- Gain an understanding of the purpose of a timeline. View samples.
- Review a list of timeline types. Select a topic.
- Research an important person or event in history. Summarize findings in an organizer.
- Use Google Slides to create a Timeline bar using shapes.
- Use Google Slides to add text boxes describing events. Join the events to the timeline.
- Review a timeline using a checklist. Make revisions.
- Peer edit a timeline and offer helpful comments.
- Share timeline as a presentation, link, or printed document.

Extension Activities:

- Consider what makes an event significant.
- Develop graphic skills in a Drawing Workshop.
- Explore picture cropping options to illustrate events.

Assessment:

- Self-Evaluation (Timeline Checklist – Assignment 7)
- Peer-Evaluation (Timeline Checklist and commenting activity – Assignment 8)
- Teacher Evaluation (Timeline Marking Sheet, Timeline Skill Summary)

Notes:

- If you are a classroom teacher have students build a timeline about a topic they are studying.
- If you are a computer teacher have students build a timeline about themselves, family, person they admire, or topic of personal interest.

Technology Integration Ideas

TechnoTimeline integrates into curriculum. This course can be used to identify significant events, develop an understanding of a historical period, study changes over time, or analyze causal relationships. Students can create a timeline on a wide range of topics. You may wish to include course activities as part of a history, social studies, or language arts unit. Below are some suggestions:

- *Autobiography Timeline:* Tell about yourself. What makes you special? Share milestones or achievements in your life. Explain why each event is important to who you are today. This timeline will span from birth to present day.

- *Family Timeline:* Record special memories. When did family members marry, have a baby, move, go to college, or get a job? Describe how this influences you today.

- *Biography Timeline*: Select a significant historical figure such as a politician, explorer, scientist, or humanitarian. What decisions or accomplishments were influential? Form connections between people and events. This timeline will span a lifetime.

- *Historical Period Timeline:* Select a historical period such as the age of imperialism, ancient civilizations, renaissance, or middle ages. What critical developments shaped the future? This timeline may span several decades or centuries.

- *Historical Event Timeline:* Select a historical event such as a war, revolution, or expedition. What challenges were overcome to produce a particular result? Pinpoint important events. This timeline may span several years or decades.

- *Historical Topic Timeline:* Select a topic such as flight, country, or scientific advances. What stands out as being important? Outline critical moments from the beginning to today to show changes over time. This timeline may span years, decades, or centuries.

- *Historical Moment Timeline:* Select a significant moment or situation such as an invention, discovery, human rights issue, vote, or disaster. What led to it? Analyze the cause and consequences of each event. This timeline may span several years or just one day.

- *Plot Summary Timeline:* Select a novel. What happened? Sequence the story events. This timeline will span from the beginning to the end of the book.

Understand the Big Picture

Not sure where to integrate TechnoTimeline? There are three samples provided for this course. These samples provide ideas on how you can include these activities in the curriculum.

✓ Biography - Alexander Graham Bell's contribution to technology

✓ Expedition – the challenges overcome by **Sir Ernest Shackleton's** crew during the Imperial Trans-Antarctic Expedition

✓ Milestones – significant events in the era of manned flight that show changes over time
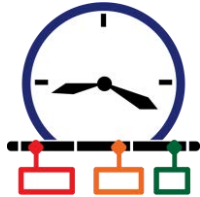
Session 1
What is a Timeline?

In this session, students step into the role of historians as they get ready to construct a timeline featuring significant events. To understand the creative possibilities, they study samples on a range of topics. These include a renowned inventor, a historic expedition, an About Me autobiography, and milestones in flight. Next, they select an idea for their own timeline. A list of suggestions aid students in identifying a personal area of interest.

Assignment 1: What Is a Timeline?

Assignment 2: Brainstorm a Topic

Assignment 1: What Is a Timeline?

In this course, you are going to organize a series of important events into a timeline using Google Slides.

To prepare for this activity, study sample timelines to gain ideas about how you can creatively sequence significant moments.
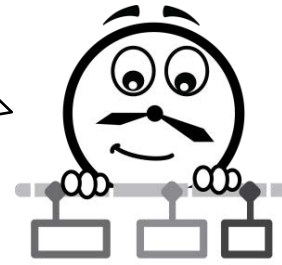
What Is a Timeline?

A timeline is a summary of events that happened in history. These events are sequenced in the order they occurred. Events are arranged chronologically along a line from earliest to latest. The passage of time illustrated may be a day, year, decade, or century. The timeline may include text, pictures, or both.

The line is shown as a long bar labelled with dates. Along the line are points in time that mark an important event. These are placed proportionally along the line to show the passage of time using a linear scale. The distance along the line equals a set amount of time.

Events marked along the timeline are *significant*. This means that they are worthy of attention. They may mark a milestone, outline an achievement or accomplishment, hold special meaning, or have influenced history.

Contributions of Alexander Graham Bell

1847		1872	1876		1881		1909		1922

Born in Edinburgh, Scotland
Alexander's family influenced his life. His mother was deaf. His father invented a system of symbols to help the deaf to speak.

Tests First Telephone
Alexander's patent for the Acoustic Telegraph was approved. The idea would later develop into the telephone. This device changed how people communicate.

First Passenger Flight in Canada
Alexander leads the Aerial Experiment Association. This research group produced several aircraft including the Silver Dart. It flew the first passenger flight in Canda. Today, people travel every day in commercial airplanes.

Opens a School for the Deaf
Alexander opened the School of Vocal Physiology and Mechanics of Speech in Boston improving on the system his father invented. He helped many children communicate including Helen Keller.

Invents Metal Detector
An assassination attempt on the American President left a bullet in his body. Alexander worked with Simon Newcomb to create a metal detector. Although it did not help the President, the idea would later help to develop future metal detector technology.

Dies in Nova Scotia, Canada
Alexander leaves a legacy of inventive genius: telephone, telegraph, phonograph, medical devices, aircraft design, alternative fuels research, and more.

Why Use a Timeline?

A timeline can be used to:

- highlight important achievements or milestones in a person's lifetime
- form connections between people and future events
- develop an understanding of a historical period
- study changes over time
- analyze the cause and consequences of events

Study Timelines

▷ Open the *Timeline* folder.

▷ View each sample and answer the questions.

Get ideas for making your own timeline. What designs do you like?
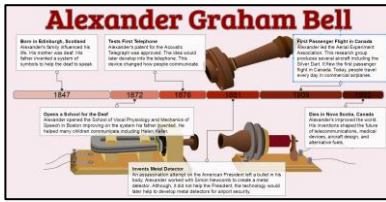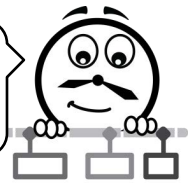
Biography

1. Why was the year 1876 chosen as an important event?

The telephone changed how people communicate.

2. Why was the fact about Bell's father included?

Bell's father helped the deaf, sparking his son's interest in helping and teaching deaf people.

Expedition

3. Why are the shapes representing 1915 and 1916 shorter than 1914 and 1917?

There are 3 important events in each year 1915 and 1916. They show a shorter time period.

4. Why are the months included as well as the years?

There is more than one event in the year. The month is needed to show when the event happened.
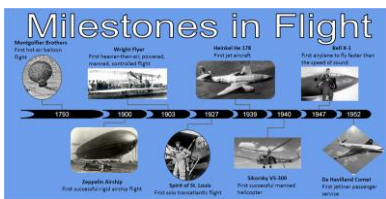
Milestones

5. Why was this timeline made over two slides?

There are a large number of important events in the topic.

6. What do you think the next milestone in flight in the future will be?

7. What are the benefits to using a timeline to learn about a topic?

This is a preview of the teacher guide.
Pages have been omitted.

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Session 3
Place Events in Chronological Order

In this session, students construct a timeline using Google Slides. They start by customizing the slide size, allowing for a better display of a series of events. Next, they add a title and apply a background to the slide. Then, students use shapes with text to sequence dates and events on the timeline. To enhance the visual appeal, they experiment with layout and design tools. An optional activity introduces the drawing tools.

Assignment 4: Create a Timeline

Assignment 5: List Events and Connect to the Timeline

Session 3 Extension Activity: Drawing Workshop

This is a preview of the teacher guide.
Pages have been omitted.

Assignment 5: List Events and Connect to the Timeline

In this assignment, you use your research from Assignment 3 to add events and connect them to the timeline. For each event describe what happened and why it is important. You will:

- ✓ describe an important event using a text box
- ✓ copy and paste the text box and edit the information
- ✓ connect each event box to the timeline using a connector line

Log Into Google Drive and Open the Timeline Presentation

Add an Event Text Box

▷ Click *Text box*. **T**T

▷ Click and drag to draw a text box on the slide.

▷ Type the *event description* into the text box.

▷ Format the font [Arial ▾], size **–** [29] **+**, and style **B** of the text.

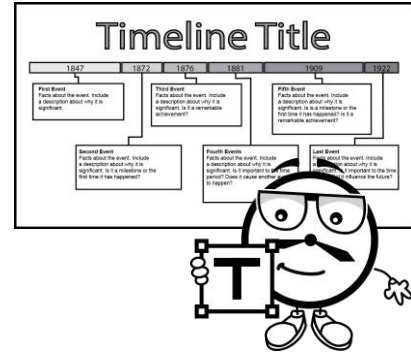> Name of event. Describe the significance. Is it a milestone or the first time it has happened? Is it a remarkable achievement? Is it important to this time period? Does it cause another event to happen?

▷ Use your skills to format the shape fill 🎨, border color ✏, and border weight. ≡

> TechnoChallenge: Create a see-through effect to show the background behind a text box. Click *Fill color*. Select *Custom*. Drag the transparency slider to the LEFT to increase transparency. Click *OK*.

Copy Text Box and Paste It to Add Remaining Events

▷ Click on the text box to select it.

▷ From the Edit menu, choose *Copy*. 🗗

▷ From the Edit menu, choose *Paste*. 📋

▷ Move the text box into the next position on the timeline.

▷ Replace the event description with the *second event*.

▷ Use your skills to add remaining events.
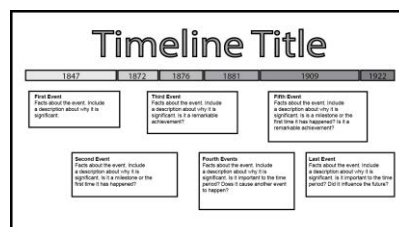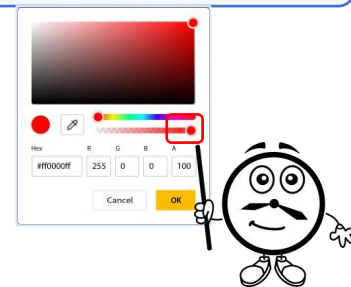
Draw Connectors to Join Each Event to a Date
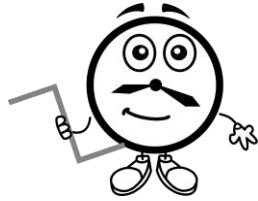
You need to join each event to the correct date. You will use an Elbow Connector to join a shape to a text box.

▷ Click the *Select* line arrow. Pick *Elbow Connector.*

- ↖ Line
- ↖ Arrow
- ⌐ Elbow Connector
- ⌐ Curved Connector
- ⧖ Curve
- Ⅽ Polyline
- ⅂ Scribble
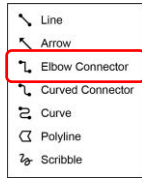
▷ Connect the date to the event:

   o Rest the crosshair over the first date on the timeline.

   o Click on the center handle to anchor the line to the date.

   o Click and drag the connector to the corresponding text box. Click on a handle to anchor the line to the event.

▷ Use your skills to connect the other dates to events.
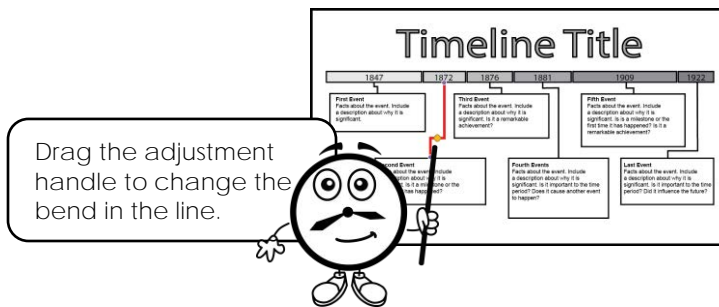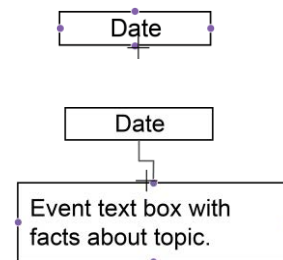
Drag the adjustment handle to change the bend in the line.

Format the Connectors

▷ Select a connector.

▷ Use your skills to format the *Line color* ✎ and *Line weight.* ☰

▷ Click *Line start.* ●— Choose an option.

▷ Click *Line end.* —● Choose an option.
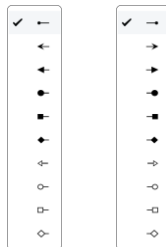
TechnoChallenge: Copy the formatting from one connector to another. Select a connector you like. Double click *Paint format.* 🖌 Click every other connector to make them all look the same. Click *Paint format* again to turn it off.

Log Out from Google Drive

Session 3 Extension Activity: Drawing Workshop

If you are new to Google Workspace, you may want to explore the drawing tools before you begin to make a timeline. Knowing what you can create and how to make it will help you to design a unique timeline that is clear and easy for viewers to understand.

1. Log into Google Drive. *Click* New ✚ and select Google Slides. 🟨

2. Click *Layout* and choose *Blank.*

3. Draw a shape:

   a. Click *Shape.*
   Pick a category and choose a shape.
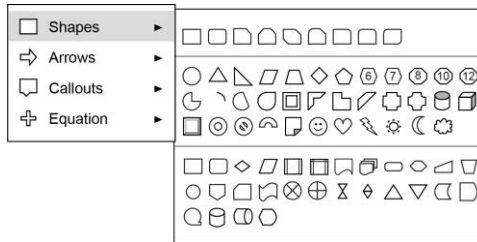
   b. Click and drag to draw a shape on the slide.

4. Explore how to size, move, rotate, and distort the shape:

   | Drag a corner handle to resize the shape. | Drag the shape to move it on the slide. | Drag the circle handle to rotate the shape. | Drag the diamond to bend a shape. |
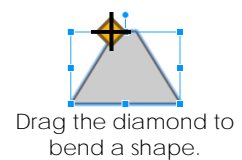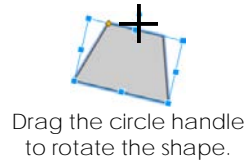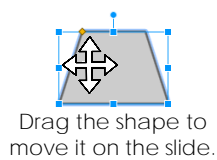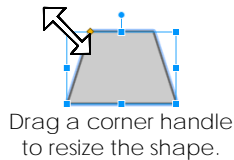
   Note: Not all shapes can be distorted.

5. Select the shape. Explore formatting tools to change the way the shape looks:

   | Click *Fill color.* Pick a color from the palette. | Click *Border color.* Pick a color from the palette. | Click *Border weight.* Pick a width from the list. | Click *Border dash.* Pick a style from the list. |
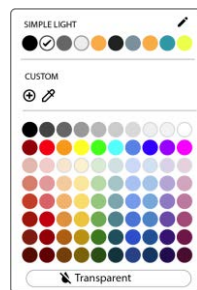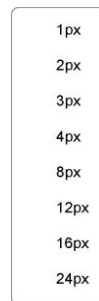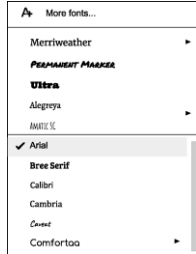
   > You can change the shape but keep the formatting.
   >
   > Right click on the shape and pick *Change shape.* Pick a new shape from the gallery.

6. Add text to a shape:

    a. Right click on the shape and select *Edit text.*

    b. Type the *year you were born.*

    c. Click and drag to select the text.

    d. Explore the tools to change the look of the text:
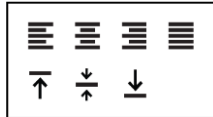
Click *Font.* Arial
Pick a typeface.

Click *Font size.* − 29 +
Pick an option, type a
number into the box,
click - to make the text
smaller, or click + to make
the text bigger

Click *Text color.*
Pick a color from the
palette.

Click *Align.*
Pick an alignmnent
option.

7. Arrange objects:

    a. Right click the shape and select *Copy.*

    b. Click anywhere on the slide, right click, and select *Paste.*

    c. Paste the object again to make three shapes. Edit the text in each shape.

    d. Drag the objects until red guidelines appear to align the shapes.

Note: If the guidelines do not appear, from the View menu select Snap to – Guides.

8. Distribute the shapes evenly and group objects:

    a. Click and drag around the shapes to select them all.

    b. From the Arrange menu, click *Distribute.* Select *Horizontally.*
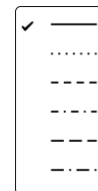
    c. With all the shapes selected from the Arrange menu, select *Group.*

    d. From the Arrange menu, click *Center on page.* Select *Horizontally.*

> Have fun with shapes!
>
> Can you draw a red heart with the word LOVE inside?
>
> Can you draw a yellow arrow with a blue outline?
>
> Can you draw a callout bubble?

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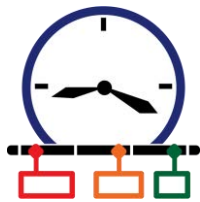
Session 5
Gain Peer Feedback

In this session, students collaborate to enhance their timeline. They begin by evaluating their own work in terms of design, layout, and content using a checklist. After this self-assessment, they partner with a peer, who reviews the timeline. The peer editor provides feedback by posting a comment describing what they like and offering a suggestion for improvement. Comment starters are provided to help students phrase their feedback. This feedback is then used to make revisions.

Assignment 7: Use a Checklist to Edit the Timeline

Assignment 8: Share Your Timeline to Get Feedback

Assignment 7: Use a Checklist to Edit the Timeline

Is the timeline finished? Use the checklist to review your work.

Timeline Checklist	✔
Background color or picture suits the topic.	
Title is created in Word art and has been formatted to be eye-catching.	
Timeline bar is labelled with dates and looks attractive.	
The size of each shape in the timeline bar varies to show the amount of time.	
There are a suitable number of timeline events.	
Events describe important facts about the topic.	
Event text boxes are formatted to look attractive, and text is easy to read.	
Connector lines link events to the correct dates in the timeline.	
Spelling and grammar are correct.	
All timeline objects have been arranged to create a balanced layout.	

This is a preview of the teacher guide.
Pages have been omitted.
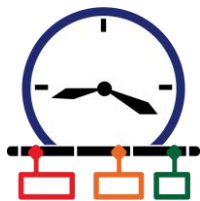
Appendices

Refer to the appendices for additional resources:

This is a preview of the teacher guide.
Pages have been omitted.

Appendix A: Assessment Tools

Timeline Marking Sheet

Background color or picture suits the topic.	/1
Title is created in Word Art and has been formatted to be eye-catching.	/1
Timeline bar is labelled with dates and looks attractive.	/2
The size of each shape in the timeline bar varies to show the amount of time.	/2
There are a suitable number of timeline events.	/2
Events describe important facts about the topic.	/10
Event text boxes are formatted to look attractive, and text is easy to read.	/3
Connector lines link events to the correct dates in the timeline.	/1
Spelling and grammar are correct.	/1
All timeline objects have been arranged to create a balanced layout.	/2

/25

RESOURCE

This course includes a sample of a completed project.
Teachers can use this resource for demonstration purposes
or as a source of inspiration.

Alexander Graham Bell

Born in Edinburgh, Scotland
Alexander's family influenced his life. His mother was deaf. His father invented a system of symbols to help the deaf to speak.

Tests First Telephone
Alexander's patent for the Acoustic Telegraph was approved. The idea would later develop into the telephone. This device changed how people communicate.

First Passenger Flight in Canada
Alexander led the Aerial Experiment Association. This research group produces several aircraft including the Silver Dart. It flew the first passenger flight in Canada. Today, people travel every day in commercial airplanes.

| 1847 | 1872 | 1876 | 1881 | 1909 | 1922 |

Opens a School for the Deaf
Alexander opened the School of Vocal Physiology and Mechanics of Speech in Boston improving on the system his father invented. He helped many children communicate including Helen Keller.

Dies in Nova Scotia, Canada
Alexander's improved the world. His inventions shaped the future of telecommunications, medical devices, aircraft design, and alternative fuels.

Invents Metal Detector
An assassination attempt on the American President left a bullet in his body. Alexander worked with Simon Newcomb to create a metal detector. Although, it did not help the President, the idea would later be improved upon to create modern detectors.
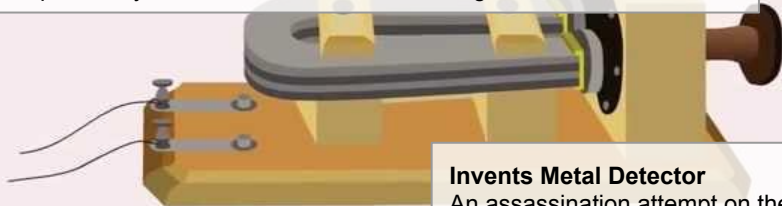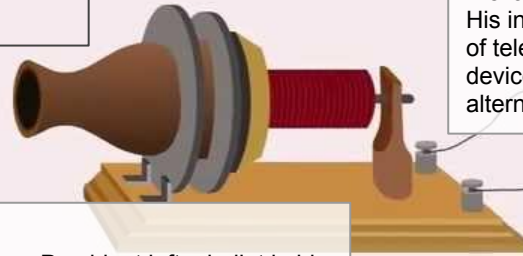
Sir Ernest Henry Shackleton's
Imperial Trans-Antarctic Expedition

Although the expedition fails it is a remarkable survival story!

August 1914	January 1915	May 1915	October 1915	April 1916	May 1916	August 1916	January 1917

Shackleton planned to be the first to walk across the Antarctic. The land was unexplored and he planned to study the area. His ship, the *Endurance* set sail.

Shackleton's ship becomes trapped in ice on the Weddell Sea. His men are stranded at sea. The pressure from the ice starts to crush the ship.

Shackleton abandons ship when the stern is crushed. The men take three boats and set up camp on an ice floe with limited supplies. They live in Ocean Camp for some time, but eventually, the ice starts to melt.

Shackleton goes in search of help! His crew sail their boats to Elephant Island. The island is remote and many men are ill. Shackleton decides to take a small team and sail to South Georgia where there is a whaling station.

Shackleton lands on the wrong side of the island. He takes two men and they walk for three days across miles of dangerous terrain to reach the whaling station.

Shackleton rescues his crew on Elephant Island. He had tried several times before and failed. However, he finally reaches them on the steamer Yelcho. The men had lived for months using two upturned boats for shelter. Shackleton heads towards New Zealand.

More misfortune! The supply ship, *Aurora* is adrift. Shackleton had planned to have a ship drop off supplies along his route. The Aurora crew had set up a base at Cape Evans. In May, a storm causes the ship to break loose from its moorings with men on board. This leaves the crew stranded at Cape Evans and the ship adrift. Without a way to contact Shackleton, they continue their mission. However, Shackleton never uses the supplies they drop off because his ship is stuck.

The *Aurora* is towed to New Zealand. After a year adrift at sea the small crew that was stranded on the ship is saved.

Shackleton rescues his crew from Cape Evans. Shackleton sails on the now repaired Aurora to pick up his men.

Milestones in Flight

Montgolfier Brothers
First hot air balloon flight

Wright Flyer
First heavier-than-air, powered, manned, controlled flight

Heinkel He 178
First jet aircraft

Bell X-1
First airplane to fly faster than the speed of sound

1783   1900   1903   1927   1939   1940   1947   1952
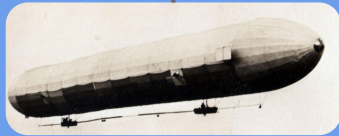
Zeppelin Airship
First successful rigid airship flight

Spirit of St. Louis
First solo transatlantic flight

Sikorsky VS-300
First successful manned helicopter

De Havilland Comet
First jetliner passenger service

Milestones in Flight

Yuri Gagarin
First man to journey into outer space and orbit earth

Viking Mars Lander
First landing on Mars

Voyager
First nonstop flight around the world without refueling

Unmanned Aerial Vehicles
US Federal Aviation Administration authorizes use of drones for search and rescue

1961   1969   1976   1981   1986   2000   2006   2021

Apollo 11
First man on the moon

Shuttle Columbia
First reusable spacecraft

International Space Station
First crew takes up residence

Space Tourism
SpaceShipTwo and New Shepard each take 4 passengers