Aim #1a: How do we analyze and interpret different types of data?

NYS SS Framework: Historical Thinking

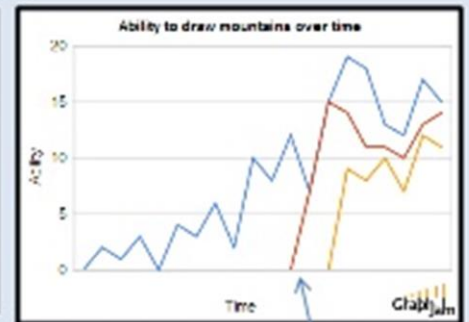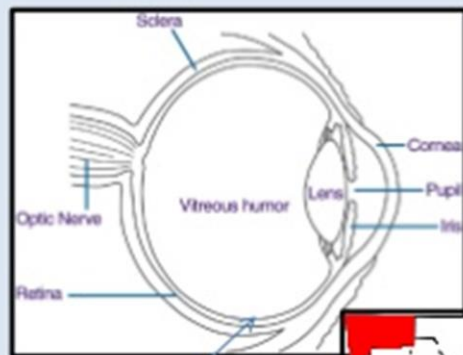*Understanding Diagrams/Graphic Organizers*

Mini Lecture
- Data (information) may appear in various forms such as a **map**, **graph**, **chart**, **table**, **timelines**, **political cartoons**, **visuals**, and reading passages
- Learning how to read and analyze information contained in any of the above diagrams will help one understand key information relating not only to history, but to many other important subjects as well.
- Each diagram has "keys" (i.e. Title, legend, scale, and symbols) that will help us in being able to read and understand the main idea/information.
- We can also learn how to take a lot of information and put together a diagram that will help us summarize that information and make it more visually appealing.

Resources/Documents:
- Map, Graphs, Chart, Table, Timeline, Political Cartoon, Image, Outline

MY NOTES

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Maps

- **What is a map?**
  - A diagram or representation of an area.
- **Keys to understanding a map:**
  - **Title** identifies the area shown & any special information the map contains
  - **Legend** tells us about the information on the map; it shows the symbols used & identifies what each one represents
  - **Direction indicator** (compass rose) is used to indicate the 4 basic directions & show directions on a map
  - **Scale** is used to show how much distances have been reduced from real-life size of an area. A line marked in miles or kilometers. It can be used to find the actual distance bet. any 2 points on a map

Population of South America

Density Population
Pop_sqmi
4 - 9   10 - 18   19 - 31   32 - 56   57 - 100

Source: ArcGIS Database
Projection: South America Lambert Conformal Conic

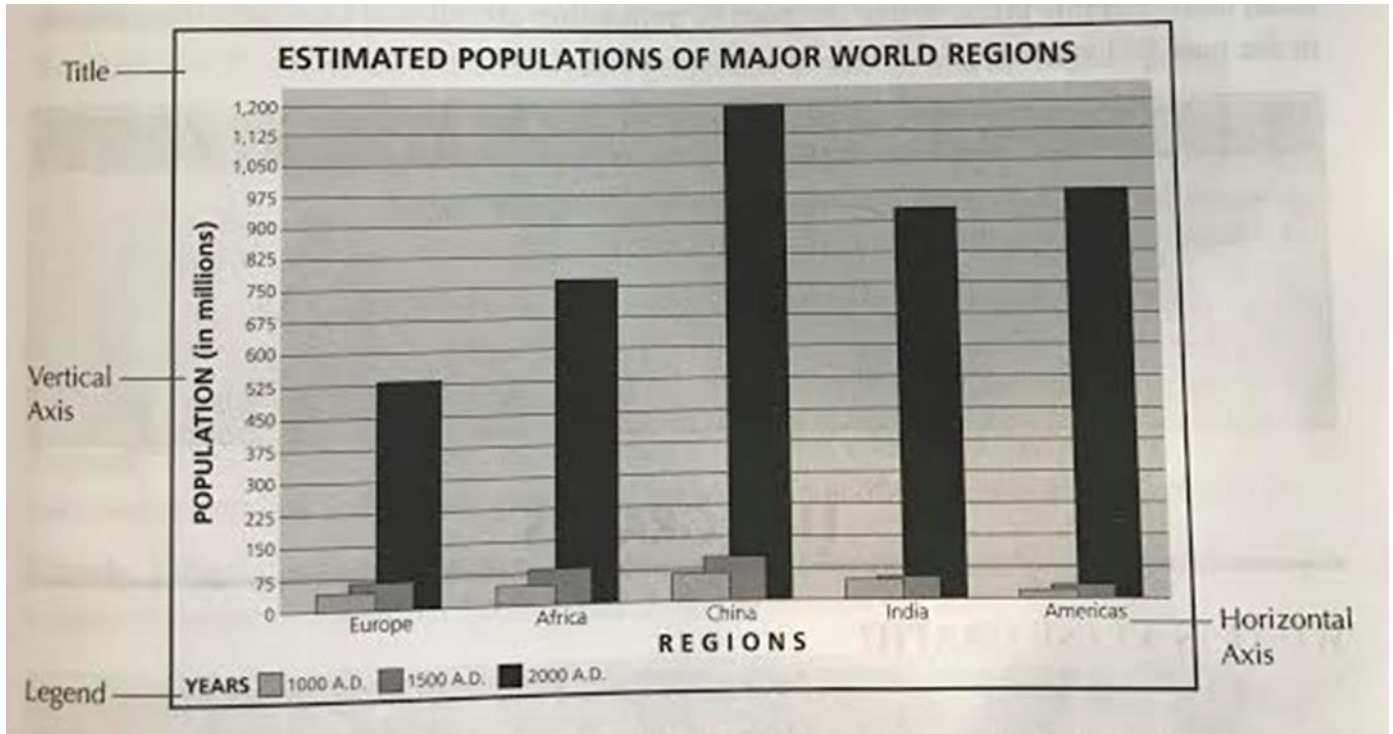0   700,000   1,400,000   2,800,000 Meters

✅ Checkpoint

Using the map:
1. Which country in South America has the highest population density?
2. What is the approximate length of South America from its northernmost to its southernmost point?

Bar Graphs

- **What is a bar graph?**
    - A chart made up of parallel bars w. diff. lengths used to compare 2 or more things. It may also show something has changed over time.
- **Keys to understanding a bar graph:**
    - **Title** identifies general topic of graph.
    - **Legend** shows what each bar represents
    - **Vertical axis** runs from bottom to top & allows reader to measure length of bars
    - **Horizontal axis** runs from left to right & identifies what each individual bars represents
    - Sometimes a bar graph will reveal a **trend**- a general direction in which events are moving; we may identify a trend from the height of the bars
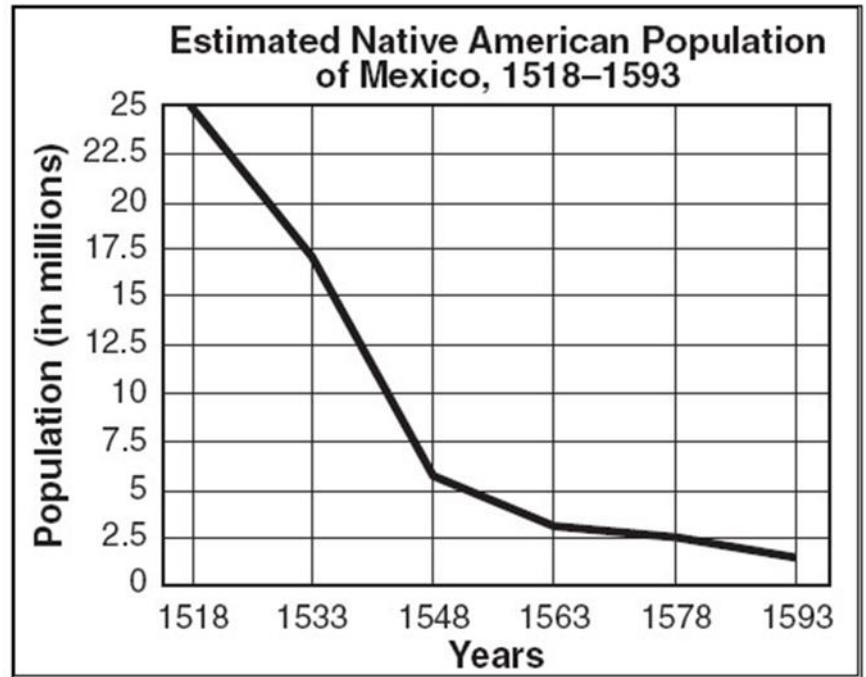

Checkpoint

Using the bar graph:
1. What was the population of Africa in 1500?
2. In which region will the population increase the most by the year 2000?
3. List one trend that you can conclude from this bar graph.

Line Graphs

- **What is a line graph?**
  - A chart composed of points connected in a line; used to show how something has changed over a period of time. Some have more than 1 line
- **Keys to understanding a line graph:**
  - **Title** identifies the topic
  - **Vertical axis** runs from bottom to top; usually measures the size of items
  - **Horizontal axis** runs from left to right; measures the passage of time
  - If graph has many lines, a **legend** explains what each line represents
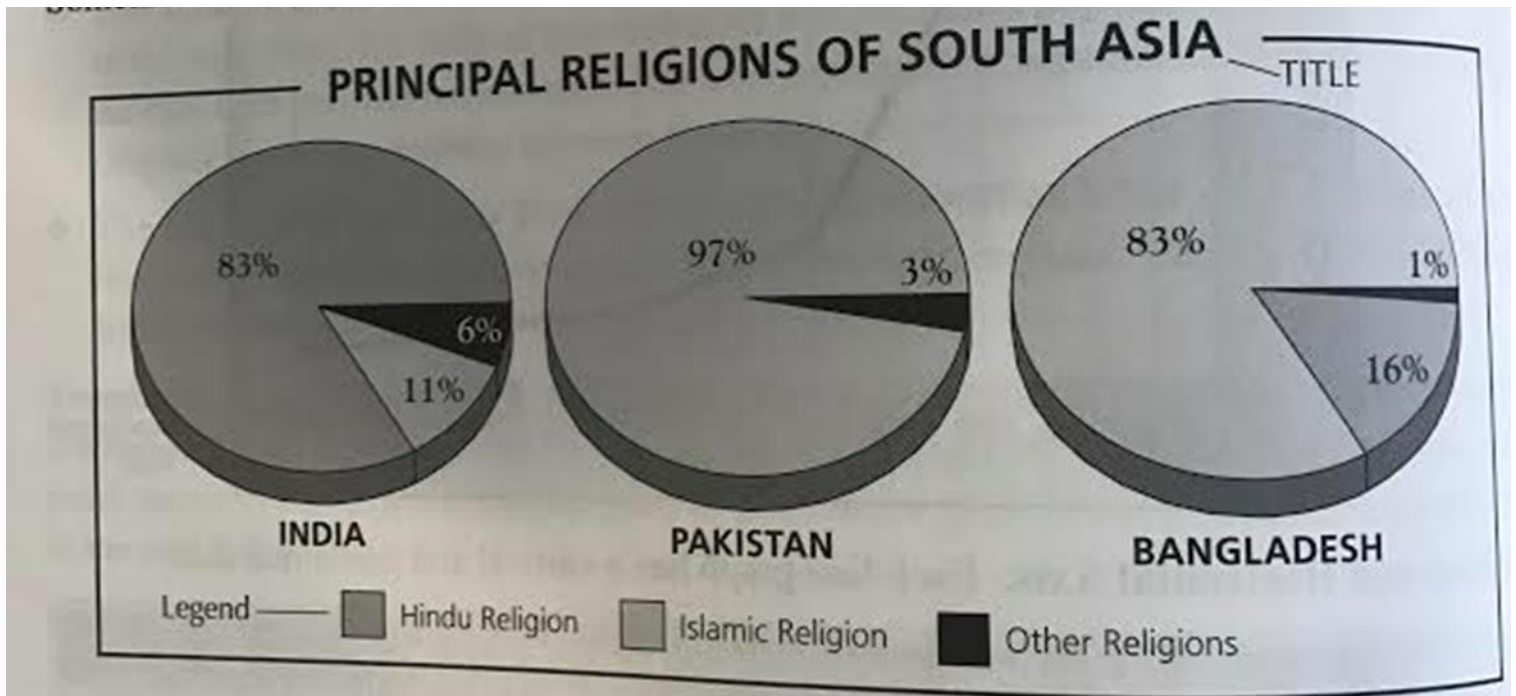 - Often line graph reveal a **trend**

Estimated Native American Population of Mexico, 1518–1593

Population (in millions) — vertical axis: 0, 2.5, 5, 7.5, 10, 12.5, 15, 17.5, 20, 22.5, 25

Years — horizontal axis: 1518, 1533, 1548, 1563, 1578, 1593

Source: James Killoran et al., *The Key to Understanding Global History*, Jarrett Publishing (adapted)

Checkpoint

1. What was Mexico's Native American population in 1533?
2. What does the vertical axis measure?
3. List one trend that you can conclude from this line graph.
4. What factor might explain the decline in Mexico's Native American population after 1518?

Pie Charts

- **What is a pie chart?**
  - Chart (circle graph) consists of a circle divided into sections of diff. sizes; often used to show the relationship bet. a whole & its parts
- **Keys to understanding a pie chart:**
  - **Title** identifies overall topic

    Slices of the pie: each slice of the pie shows the size of one of the parts compared to the whole pie; a pie is 100% of something, adding all slices must total 100%

PRINCIPAL RELIGIONS OF SOUTH ASIA

—TITLE

83%
6%
11%

INDIA

97%
3%

PAKISTAN

83%
1%
16%

BANGLADESH

Legend —— ☐ Hindu Religion ☐ Islamic Religion ■ Other Religions

Checkpoint
Using the pie chart:
1. What percentage of Bangladesh's population is Hindu?
2. Which of the three countries has the largest percentage of Muslims?

Tables

- **What is a table?**
  - An arrangement of information in columns and rows; used to organize data so that particular facts can easily be located & compared.
- **Keys to understanding a table:**
  - **Title** identifies the topic of the table
  - A table contains various **categories** of information, each column represents 1 category named in the heading at the top of the column. To find a particular piece of information, choose a category & look down that column of your interest
  - By examining a table, it is often possible to identify **trends & draw conclusions**

Title ——

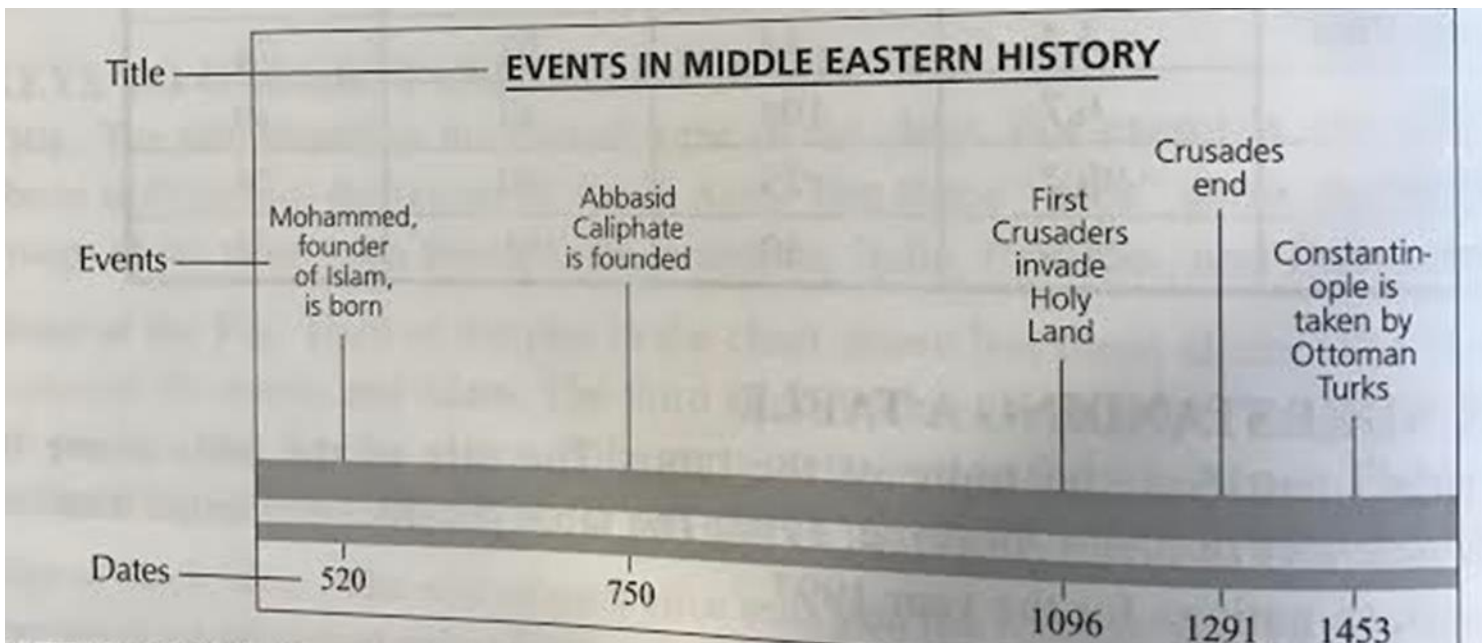| ECONOMIC CONDITIONS IN LATIN AMERICA, 1997				
Nation	Population (in millions)	Infant Mortality (per 1,000)	Literacy (percent)	Life Expectancy (in years)
Bolivia	7.1	68	80	60
Brazil	162.6	55	83	62
Costa Rica	3.4	14	95	76
Haiti	6.7	104	45	49
Mexico	95.7	25	90	74
Venezuela	21.9	30	91	72

Checkpoint

Using the table:
1. Which country in the table has the largest population?
2. Which country is poorest? Explain how you reached this conclusion.

Timelines

- **What is a timeline?**
  - Represents a series of events arranged along a line in chronological order, the sequence in which the events actually happened. Therefore, the event that occurred earliest is the first event on the timeline. The distances bet. events on a timeline are usually in proportion to the actual time that passed bet. the events they represent. A timeline can span anything from a short period of time to thousands of years. The purpose of a timeline is to show how events relate to one another.
- **Keys to understanding a timeline:**
  - **Title** identifies the general topic
  - All of the **events** on the timeline are related in some way to its title
  - **Dates** show when the events took place. Dates are divided into 2 groups, B.C. (B.C.E.) & A.D. (C.E.)
  - Special terms: **Decade**, **Century, Millennium**

Title ——————————— EVENTS IN MIDDLE EASTERN HISTORY

Events ——

				Crusades end	
Mohammed, founder of Islam, is born	Abbasid Caliphate is founded		First Crusaders invade Holy Land		Constantin-ople is taken by Ottoman Turks

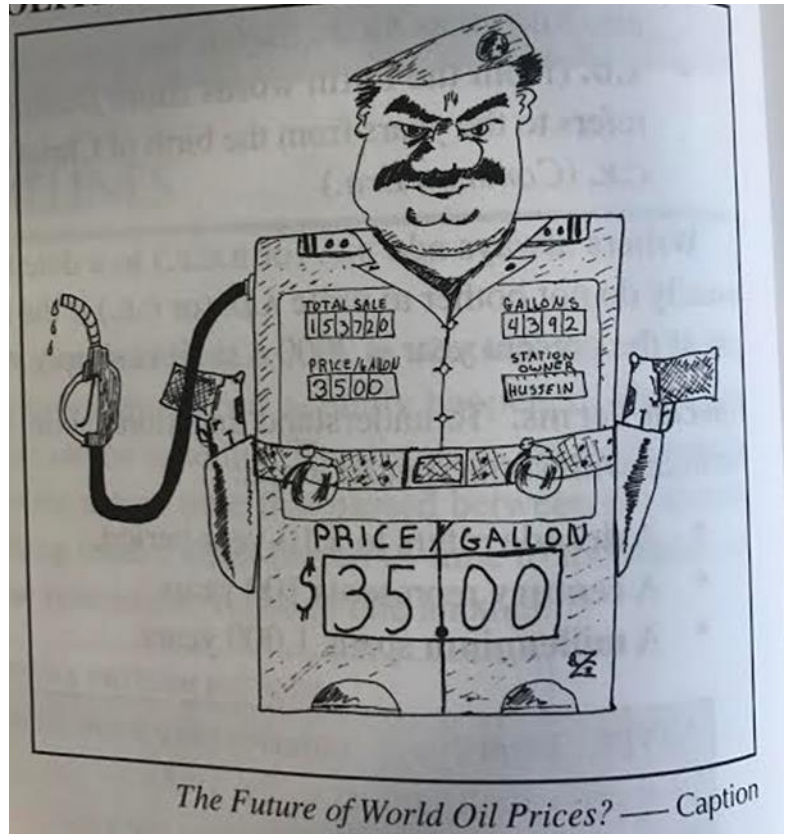Dates —— 520   750   1096   1291   1453

Checkpoint

1. How many years are covered by the timeline?
2. Which event happened first: the fall of Constantinople or the invasion of the Holy Land during the First Crusade?
3. Between which two events on the timeline would you place the destruction of Baghdad by the Mongols in 1258?

Political Cartoons

- **What is a political cartoon?**
  - A drawing that expresses an opinion about a topic or issue; many are humorous but make a serious point
- **Keys to understanding a political cartoon:**
  - Most have a **title or caption** that helps explain the message the cartoonist is trying to make
  - **Medium**: Cartoonists want to persuade readers to adopt their point of view. They will use the size of objects, facial expressions, exaggerations, or words spoke by characters to satirize (poke fun at) some positions and to support others
  - **Symbols** are often used. They are any object that represents or stands for something else
  - **People**: A cartoonist may want to draw attention to a particular issue by portraying a famous person closely associated with it
  - A **caricature** is a drawing in which a person's features are exaggerated for comic effect

The Future of World Oil Prices? —— Caption

Checkpoint

Using the cartoon:
1. What objects, people, or symbols are used by the cartoonist?
2. Which elements has the cartoonist exaggerated?
3. What is the main idea of the cartoon?

Visuals

Russian women harvesting hay

- **What is a visual?**
  - Photographs, drawings, & paintings are especially useful for understanding the past. They show how people once looked, dressed, & lived. A photograph lets us get a feeling for an earlier time or a diff. place. Since photography was only invented in mid-1800s, we often rely on drawings & paintings to see what life was like before that time.
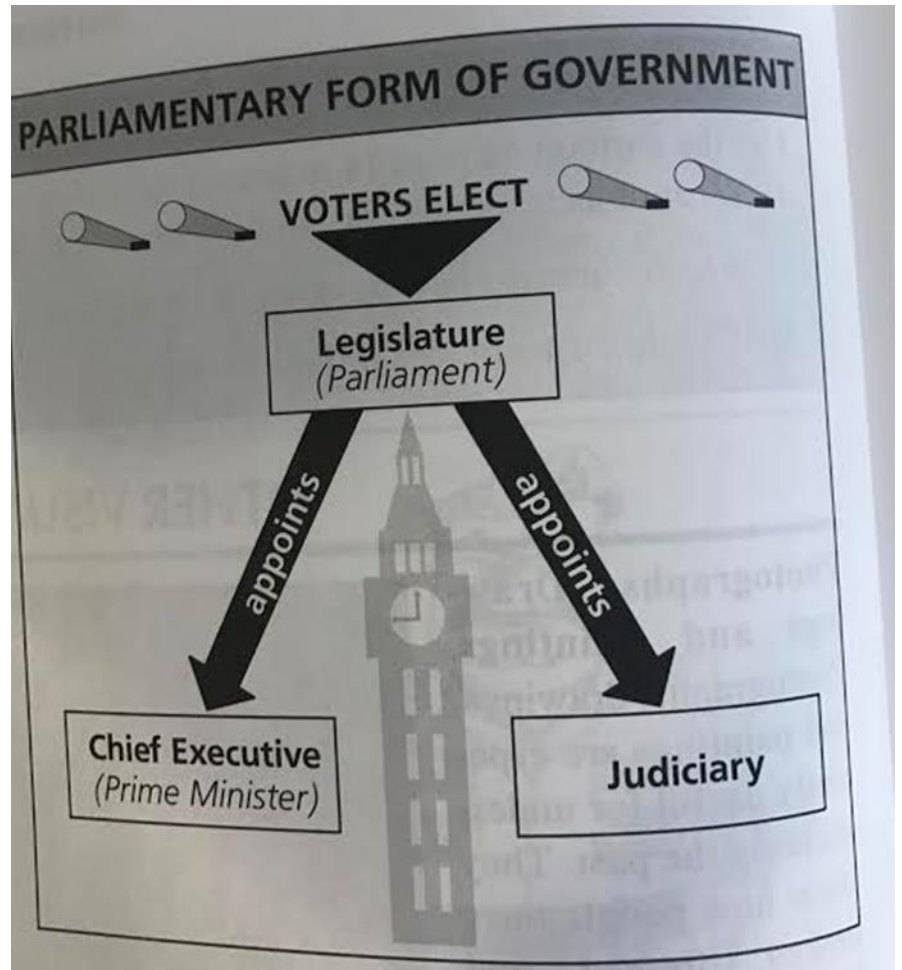
Checkpoint

1. What conclusions can you draw from the women's clothes?
2. What conclusions can draw about farming methods in 19th century Russia from this picture?

Diagrams

- **What is a diagram?**
  - A symbolic drawing that shows how something is organized or how a process works.

PARLIAMENTARY FORM OF GOVERNMENT

VOTERS ELECT

Legislature
(Parliament)

appoints

appoints

Chief Executive
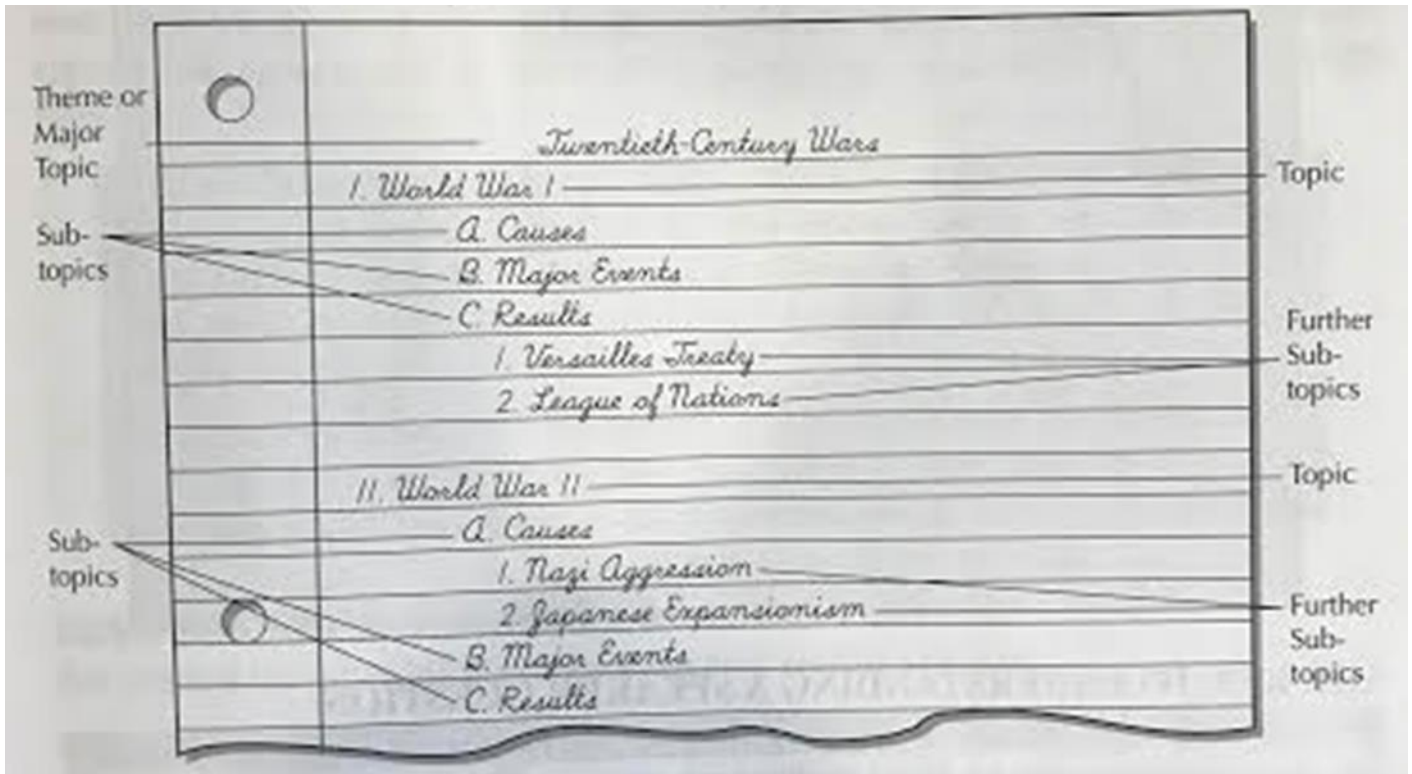(Prime Minister)

Judiciary

Checkpoint

1. Who elects the members of Parliament?
2. Who chooses the chief executive (Prime Minister)?
3. How is this form of government structured differently than that of the U.S.?

Outlines

- **What is an outline?**
  - A brief plan or summary breaking up a topic into smaller units; used to reveal the logical relationships bet. the main topic and its smaller units. This breakdown helps us to grasp & remember what is important in a body of knowledge.
- **Keys to understanding an outline:**
  - **Title** identifies the general theme of the outline
  - Most outlines follow a common **format** that allows you to understand easily how the main theme is divided into topic & sub-topics
    - ✓ The first major divisions of the theme (major topic) are given in **Roman numerals** (I,II, III, etc.)
    - ✓ If the topic covered by a Roman numeral needs to be furthered divided, its sub-topics are listed by **capital letters** (A,B, C, etc.)
    - ✓ If these sub-topics are divided still further, they are given **Arabic numerals** (1,2,3)

Checkpoint

Using the outline:
1. What are the main units that make up the theme *Twentieth-Century Wars*?
2. What parts make up the topic *World War II*?
3. If you were to add details about the *Results of World War II*, which would you use: Roman numeral, letters, or Arabic numerals?

Reading Passages

- **What is a reading passage?**
  - A written text about a topic. In a passage, the writer represents a series od related statements that tell facts or express ideas about the topic. The passage states a main idea, which is supported by facts, examples, & details. Often, these passages present someone's particular point of view.
- **Keys to understanding a reading passage:**
  - Ask yourself the following questions about each reading selection:
    - ✓ When was the passage written?
    - ✓ Who was its author?
    - ✓ What term, concept, or situation is discussed by the writer?
    - ✓ What is the main idea of the passage? What point is the writer trying to make?
    - ✓ What facts & details does the writer present to support main idea?
    - ✓ What is the writer's point of view?
    - ✓ What do you know about the writer? Is there anything in the writer's background that explains the point of view?

"No one in France… doubts the benefits of colonization and the advantages it offers both to the mother country and to those who are colonized. Everyone agrees that colonies offer raw materials and products that the mother country lacks, and that they open markets to the commerce and industries of the old country by the wants and needs of the people od the colony…

- Paul Leroy Beaulieu, *The Ideology of French Imperialism*, 1871-1881

Checkpoint

1. Who wrote the passage?
2. When was it written?
3. What concept is discussed by the writer?
4. What is the main idea of the passage?
5. What facts, examples, and details does the writer use to support the main idea in the passage?
6. What is the author's point of view? How does he feel about the concept he is discussing?
7. What do you know about the writer's background? (i.e. what country is he from) How might this influence his views?