World War I: Technology Changes in War

Resource Based Learning Unit
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OVERALL INTENT OF THE UNIT

This unit focuses on the role of technology as one of the major factors which defined World War I. Key content and knowledge objectives for students include coming to understand that WWI was the first "total war" because it established the idea of unrestricted warfare. Students will come to know that military and technological innovations made the mobilization of millions possible and that war occurred on a global scale. Massive casualties and mass destruction occurred on an unprecedented scale due to the power of modern military technology, something not fully anticipated or comprehended by national or military leaders. Students will also come to understand that like all technology, the technology of war undergoes an evolutionary process.

Source: Sask. Education (1994). _History 20: World Issues: A Curriculum Guide_, pp. 132-134.

A key goal of this unit is that students will develop and refine research skills through researching the new technologies and key battles of World War I.

PLANNING GUIDE AND RECORD OF UNIT STUDY

Subject and Grade Level: History 20
Duration of Unit: 3 weeks
Number of Library Periods: 12
Number of Classes: 15

TOPIC: World War I : Technology Changes in War

SUBTOPICS:

    Artillery:
-     Field Guns
-     Machine Guns

    Tanks

    Trench Warfare

    Battleships:
-     Battle Cruisers
-     Destroyers

Photo courtesy of www.schoolshistory.org.uk

    Submarines:
-     U-Boats

    Fighter Planes

    Battles:
-     Mons
-     Ypres
-     Verdun
-     Somme
-     Vimy Ridge
-     Passchendaele
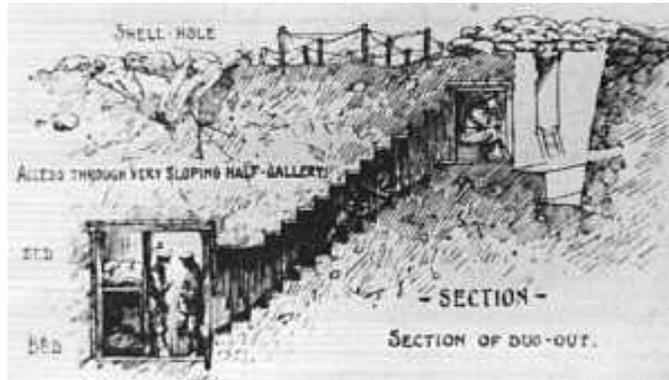-   Cambrai
-     "Michael" Offensive
-     Marne
-     Amiens

Vimy Ridge – Naval 12 inch Howitzer in action.
Copyright/Permission from the Canadian Museum of
Civilization Corp. (see www.warmuseum.ca)

CONTENT:

European Battles and Battlefields:
- Mons
- Marne
- Ypres
- Verdun
- Somme
- Vimy Ridge
- Passchendaele
- Cambrai
- "Michael" Offensive

Advanced British Army tanks produced during the First World War (www.schoolshistory.org.uk)

Naval Battles:
- Coronel (Chile)
- Falklands
- Dogger Bank
- Dardanelles
- Sinking of Lusitania
- Jutland
- Zeebrugge

Air Battles:
- Zeppelin raids on Britain
- Gotha bomber raid on London
- RAF raids on German cities

Technology and Developments:
- Machine Guns
- Field Guns (75 mm, 77 mm and 18 pounder)
- Howitzers
- Tanks – Mark I, Mark IV
- Trench Warfare
- Battleships – "Dreadnought", "Michigan", "Pennsylvania", "Nassau", "Helgoland"
- Battle Cruisers
- Submarines – "U-Boats"
- Fighter Planes – "Vickers FB5 Gunbus", "Fokker"
- Flame Throwers
- Rifles/Artillery
- Poisonous Gas

ASSIGNMENTS

Groups are assigned research topic. Based on their topic, they will complete the following assignments:

a) Based on research of both technology and a World War I battle, students will create a video newscast of a battle. This could be a creative description of the battle, but it should be based on historical data.

b) Students will write and create a newspaper based on their research. This should contain news stories (headlines, bi-lines, pictures scanned from books), editorial comments, advertisements, and a political cartoon.

c) Students will create a slide show depicting the evolution of their technology from its beginning in World War I, through World War II, and up to modern day.

http://www.oryansroughnecks.org/gasattack.html

NEWSPAPER EVALUATION

1. Headings and sub-headings completed   /10
2. Articles are easily understood   /10
3. Articles are related to topic (time, place, etc.)   /10
4. Editorials are author's own ideas and thoughts   /10
5. Factual information is accurate   /10
6. Newspaper is arranged in sequential order   /10
7. Margins, paragraphs, spelling, punctuation, grammar   /10
8. Visual components (pictures, cartoons, etc.) are well presented and neat /10
9. Advertisements are relevant and time context is historically accurate /10
10. Creativity   /10

NEWSPAPER EVALUATION RUBRIC

4	3	2	1
- vivid concrete vocabulary - varied sentence construction - coherent - highly original	- vivid vocabulary - varied sentence structure - coherent - flashes of originality	- adequate vocabulary - sometimes varied sentence structure - some coherence - limited originality	- colorless, vague vocabulary - lacks sentence structure - lacks coherency
- plenty of detail that more than adequately explains topic	- some specific detail that adequately explains topic, but some of the details may not really help explain	- used detail, but they may be wrong details or they may not help explain topic	- little or no detail to explain the topic well enough
- establishes and maintains a clear focus	- focused on the purpose	- an attempt to establish and maintain focus or purpose	- limited awareness of the focus or purpose
- clear sequence of events as introduced at the beginning	- clear sequence of events which were not introduced at the beginning	- sequence of events is adequate, but development marred by a few irrelevant descriptions or explanations	- poor sequence of events - poorly developed storyline with many irrelevant descriptions and explanations
- report has a strong introduction, excellent supporting information and strong conclusion	- report has a good introduction, supporting evidence and conclusion	- report has an introduction, supporting information and conclusion	- report has a poor introduction, supporting information and conclusion
- ideas are well developed, more than enough information to inform reader about topic - information is clearly presented, with much elaboration	- ideas are fairly well developed and have enough information to inform reader about topic - information is clearly presented with some elaboration	- ideas have little development, minimum amount of information - information does not clearly explain topic and some information may interfere with explanation	- ideas were based solely on a response to a prompted question - very little information or information is inaccurate or confusing

SLIDE PRESENTATION EVALUATION

	1	2	3	4	5
Clear beginning and ending					
Presentation stayed on task					
Information presented was accurate					
Presentation clearly illustrated the assignment objectives					
The information presented in a logical order					

ASSESSMENT

All three projects will be evaluated and weighted equally. The evaluation of the product for historical accuracy and information will be done by the history teacher.

The evaluation of the process/product as it relates to computer skills shall be evaluated by the computer teacher.

GROUPS

- **Machine Guns, Field Guns, Rifles, Artillery**
- **Tanks**
- **Trenches, Flame Throwers, Poisonous Gas**
- **Battleships, Cruisers, Submarines**
- **Fighter Planes, Dirigibles**

TEACHER STRATEGIES AND ACTIVITIES

Introductory Lesson/Motivational Set

When:

Where: **Classroom**

What:
- **Discuss technologies and warfare**
- **Ask students to watch movie and identify as many different military technologies (weapons, equipment, etc.) as they can.**
- **Show beach clip from movie *Saving Private Ryan*.**
- **Ask students to share their list of technologies.**

TEACHER STRATEGIES AND ACTIVITIES
Lesson Plans

Content Area: Knowledge X Skills X Attitude _____

Objective: Students will know:
1. the role of technology as one cause of World War I.
2. the technologies developed in WWI and their destructive power in this first "total war".
3. some major battles of World War I.

Activity:
1. Divide students into 5 groups. Assign each group one of the following categories:
   a) Machine Guns, Field Guns, Rifles and Artillery
   b) Tanks
   c) Trenches, Flame Throwers, Gas
   d) Battleships, Battle Cruisers, Submarine
   e) Fighter Planes, Dirigibles

2. Supply students with a list of major battles of World War I.
3. Explain to students that they will research a major battle of World War I, the events of the battle, and how new technologies of war were used or might have been used in the war (specific battle). Suggest to students that if it does not specifically state how the new technologies were used, they may create their own possible scenarios based on historical data covering both the events and the technology.
4. Explain to students that they will present their information in the following ways:
   a) A video newscast of a battle discussing how the technology influenced the events and results of the battle.
   b) A newspaper containing a news story(s) (headline, bi-lines, pictures scanned from books), editorial comments, advertisements and a political cartoon.
   c) A slide show depicting the evolution of their technology from its beginnings in World War I, through World War II and up to modern day.
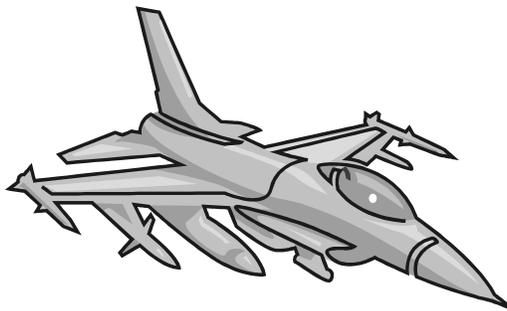
Content Area: Knowledge X Skills X Attitude ___X_____

Objective:
1. Students will understand the components of a newscast.
2. Students will identify the parts of a newspaper and components of each part.
3. Students will understand that like all technology, the technology of war undergoes an evolutionary process.

Activity:
1. Show students video clip of newscast and/or discuss expectations of newscast – should contain the "who", "what", "where", "why", and "how".
2. Show students examples of newspapers which include the following:
    a) Article(s) dealing with military battle (who, what, where, when, why, how)
    b) Advertisements (Students will be advertising their technological weapons as well as other articles that may appear in this time period.)
    c) Political cartoons (Students will create their own cartoon relevant to either the war or a battle or technology of the war.)
    d) Any other component of a newspaper they want to include which must be related to their topic.

3. Discuss concept that technology evolves and goes through transition. Explain to students that they are to pick one technology that they have researched and create a slide show depicting the evolution of that particular technological advancement from World War I, through World War II and up to present day. (e.g.: fighter planes to modern jet fighters)

Content Area: Knowledge X Skills X Attitude _____

Objective: Students will know the steps involved in the "resource-based learning model".

Activity: Review the following "12 Steps to Report Writing" model for the steps involved with the Teacher-Librarian.

12 Steps to Report Writing

Step 1:   Choose your topic from the list of suggestions.
Step 2:   Begin rough bibliography.
Step 3:   Get outline ready – materials or examples to be used.
Step 4:   Write outline. Ask some questions.
Step 5:   Write rough copy of outline.
Step 6:   Prepare note taking pages or data banks.
Step 7:   Read and take notes.
Step 8:   Check notes and outline.
Step 9:   Write rough copy of report.
Step 10:   Proofread.
Step 11:   Write final copy. Remember to give your report a title.
Step 12:   Success (at last!)

Content Area: Knowledge X Skills X Attitude ___X_____

Objective:
1. Students will develop their researching skills.
2. Students will acquire necessary information to complete their newscast, newspaper, and video presentation.

Activity: Research
- Using print materials (Resource Centre)
- Using Internet
- Using media information

Media Research and/or Study Skills:
- Researching skills
- Computer skills

RESOURCES

Dave Willenborg – evaluation of information of research assignment.
Computer teacher – evaluation of computer technology skills.
Gail Huber – evaluation of resource-based learning skills.

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URL: http://www.geocities.com/Pentagon/Quarters/1975/tankicon.htm*
URL: http://www.geocities.com/Pentagon/Quarters/1975/badbeast.htm*
URL: http://www.gwpda.org/imagarch.html
URL: http://www.oryansroughnecks.org/gasattack.html
URL: http://www.schoolshistory.org.uk/warlinks.htm
URL: http://www.wwiaviation.com/index.shtml
URL: http://www.warmuseum.ca
***Note:** the above URL's for Geocities.com will require registration before accessing.

Teacher Resource:
Sylvester, Doug. World War I – Canada and the "Great War", Rainbow Horizons
        Publishing.

Video:
Causes of World War I, "The Great War", Classroom Video.
In Flanders Fields, (Never Again!), Chadderton, Cliff, The War Amps.
If Ye Break Faith (Never Again!), Chadderton, Cliff, The War Amps.
No Man's Land, (Never Again!), Chadderton, Cliff, The War Amps.
Saving Private Ryan, DreamWorks, 1998.
World War One, (Modern History on Video), Films for the Humanities & Science, Inc.
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A Vimy Veteran Remembers, (Never Again!), Chadderton, Cliff, The War Amps.

Original British tank prototype "Little Willie"

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        Archive (www.gwpda.org/imagarch.html)