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| **INDUSTRY’S GOLDEN AGE – 14.1**  |

1. **The Second Industrial Revolution**
	* Factors Encouraging Industrial Growth
	* Effects of War
	* Constitution & Governmental Policies
	* Growing Population (Immigration)
	* Natural Resources
	* New Sources of Power
	* Introduction of Machinery
	* American Inventors & Inventions
	* Improved Means of Transportation & Communication
2. **Second Industrial Revolution**
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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	* By mid-1890’s the U.S. would become the world’s industrial leader
3. **Effects of War**
	* Government needed war materials
	* Farmers & city workers had more money to spend – consumer goods were in greater demand
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. **Effects of Civil War**
	* Spurred industrial growth
	* Secession of South left the federal government in hands of Republican Party – favored business
	* Congress provided:
		+ Land & loans for transcontinental railroads
		+ Established national banking system
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. **Constitution**
	* Coining money- made possible a stable currency for business transactions
	* Regulating interstate commerce – made possible nationwide laws to regulate industry & transportation
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_– made possible protections against foreign competition
	* System of patents – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* Ensures nationwide “common market” without man-made barriers to movement of goods
6. **Patent**
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. **Growing Population**
	* American population in the 19th century almost doubled every 25 years
		+ 5 million in 1800 to 76 million in 1900
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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8. **Natural Resources**
	* Abundance of raw materials
		+ Coal
		+ Iron
		+ Lumber
	* Fertile soil for raising foodstuffs, cotton, & tobacco
	* Swift-running streams for waterpower
9. **New Sources of Power**
	* Electricity – communication, lighting, & driving motors
	* Petroleum – 1859 – Edwin Drake drilled oil in PA
		+ First used for lubrication & lighting
		+ Late 19th century – gasoline & diesel oil used in internal combustion engines
10. **Contributions of Steel**
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		+ Used for heavy machinery
		+ Rails for trains
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. **Bessemer Process**
	* New method of producing steel - Henry Bessemer
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		+ Annual steel production grew from 15 thousand tons to 28 million tons by 1910
		+ Price of steel?
12. **Cheaper Steel = Railroads**
	* Cheaper steel encouraged railroads to lay thousands of miles of new tracks across the Great Plains to the Pacific Coast
		+ Railroad companies are major employer in country
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. **Significance of Railroad Building**
	* Spurred industrialization of the post-Civil War years
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* Created enormous domestic market for U.S. raw materials & manufactured goods
	* Paved way for incredible growth of Great West
		+ Mining, agriculture, & ranching
	* Great citywide movement
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. **Significance of Railroads**
	* Facilitated large influx of immigrants
	* Spurred investment from abroad
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* Maker of new railroad aristocracy
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. **Contributions of Communications**
	* Samuel F.B. Morse’s telegraph (1832) began to be used by businesses to send business orders to distant locations
16. **Contributions of Communications**
	* Alexander Graham Bell telephone in 1876
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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17. **Contributions of energy**
	* Innovations require new forms of energy: oil and electricity
	* Benjamin Sillman uses kerosene for cooking, heating and lighting
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
18. **Energy, continued**
	* Edwin Drake pumped crude oil from the ground - see handout with uses of oil
19. **Electricity’s Potential**
	* Thomas Alva Edison invented the 1st incandescent lightbulb in Menlo Park, NJ in 1879, which ran on electricity
20. **Travel**
	* Automobile - invented in1885 by Carl Benz
	* Airplane - Orville and Wilbur Wright made the first flight December 17, 1903 in Kitty Hawk, NC
21. **Results of Industrial Growth**
	* New industrial products and services
		+ Machine – and factory – made products
		+ Investors financed new industries to satisfy demand
		+ Railroad transportation
		+ Telegraph & telephone communication
		+ Steel
		+ Oil
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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22. **Results of Industrial Growth**
	* Great fortunes
		+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		+ Exercised tremendous economic power
		+ Exerted considerable influence upon gov’t
		+ Finance philanthropies
	* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	* Increased world trade & imperialism
	* Serious economic problems – preventing monopolies, protecting consumers, improving standards for workers, banking system, levying fair taxes, leveling out the business cycle