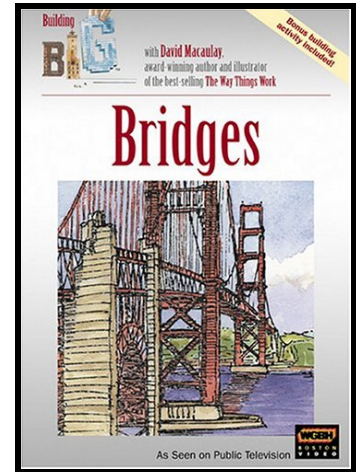


Building Big - Bridges¹

Instructions: As you are viewing the video, answer as many questions as you can. Review the questions first so you will recognize the facts as they appear. When the video is complete, you will type in your responses to a google doc that is the same as this sheet. Remember good notetaking is not about copying down every word, but you should have the main idea and enough information to complete the assignment in your own words.



1. As you view the video, what is the dominant shape, (geometric) which most bridges have? Why?
2. What type of bridge did the Romans build? (What Shape?)_____
3. What force is at work with that type of bridge?_____
4. What is the stone at the top of an arch called? What does it do?
5. Why does iron, when stretched, collapse?
6. How did Gustav Eiffel design his bridge to withstand gusty winds?
7. What configuration did Eiffel use?

¹ "Brian Darling." 2006. 24 Mar. 2015 <<http://www.bcsd.org/webpages/bdarling/index.cfm?subpage=20982>>

8. When a train crosses a truss bridge, what force is always on the bottom member? On the top member?
9. Why did Iron Bridges Fail?
10. Cantilever bridges are very strong, but expensive. What type of bridge is more efficient for a long span?
11. What type of bridge transforms tension in a cable to compression in a tower?
12. In 1883, what bridge was the longest suspension bridge in the world?
13. Who worked for the American Bridge Company and was one of the designers of the Golden Gate?
14. What 3 forces must the Gold Gate Bridge in San Francisco withstand?

15. What color is the Golden Gate Bridge? _____
16. What is the device used to burrow below the river bottom so that the towers of a suspension bridge sit on solid ground?_____
17. What caused the Tacoma Narrows Bridge to collapse? Explain not only the weather conditions, but the issues with the bridge itself?