**Arch Research Worksheet**

1. Find the name of a type of arch that the Romans used in building, and draw a sketch of it below. If you can, find out **why** the arch you chose has that specific shape. Often, the shape enabled it to support more material or was for aesthetic purposes. (There are many types of Roman arches, so pick the one you find the most interesting. Wikipedia, howstuffworks.com, and history.com are useful websites for this question).

TeachEngineering.org – Free STEM Curriculum for K-12

1. Find the name of the device that the Romans used to ensure a steady slope of the aqueducts and describe how it was used. Is there any device used today that incorporates a similar method of measurement? If so, name it and describe how it is used. (If you have trouble, try looking up tools specifically used for Roman aqueducts.)
2. Do some **research on Roman aqueducts**, such as the Pont du Gard, Aqua Claudia, etc., for the next 15 minutes. Collect information on how they were built and find the formulas that the Romans used to calculate the details of the architecture of the aqueducts. Also look for information on the materials and tools used, what type of human power it took to build these water channels, and any other information you find relevant. Take notes in the space below and be prepared to share what you learn with the class.

**Reminder:** You are looking for information on **how aqueducts were engineered, not their history**, so avoid dates and people’s names.

Example questions to answer: *What materials did the Romans use? What was different about how the Romans held their materials together? How many types of arch designs were you able to find? How did the Romans go through mountains at a constant slope? What sort of formulas did the Romans use in their engineering? How do you apply these formulas? What sorts of other tools did the Romans use? How long would it take to build one of these arches?*