**What did the Ancient do for us?**

**Episode eight: *The Greeks***

*On the shores of the* [*Aegean Sea*](http://en.wikipedia.org/wiki/Aegean_Sea) *three-and-a-half-thousand years ago a new civilisation emerged, one that more than any other laid the foundations of our own society. When you think of the ancient Greeks you think of democracy, theatre, music,* [*mathematics*](http://en.wikipedia.org/wiki/Mathematics)*, but what appeals to me is their sheer ingenuity.*

—Adam Hart-Davies

This episode features reports from [Greece](http://en.wikipedia.org/wiki/Greece) and [Italy](http://en.wikipedia.org/wiki/Italy) elaborated by demonstrations from the presenters Mary Jopson and Hermione Cockburn, and expert guests that examine the ideas and inventions that emerged from [Ancient Greece](http://en.wikipedia.org/wiki/Ancient_Greece).

* [Geometry](http://en.wikipedia.org/wiki/Geometry) allowed for advances in engineering such as the [Tunnel of Eupalinos](http://en.wikipedia.org/wiki/Tunnel_of_Eupalinos) visited by Hermione on [Samos](http://en.wikipedia.org/wiki/Samos).
* [Musical scales](http://en.wikipedia.org/wiki/Musical_scales) were invented by [Pythagoras](http://en.wikipedia.org/wiki/Pythagoras) in a process explained by Adam that he applied to the universe.
* The [water organ](http://en.wikipedia.org/wiki/Water_organ) was invented by [Ctesibius of Alexandria](http://en.wikipedia.org/wiki/Ctesibius_of_Alexandria) using a devise reconstructed by Marty that was the first to use [compressed air](http://en.wikipedia.org/wiki/Compressed_air).
* [Mirrors](http://en.wikipedia.org/wiki/Mirror) were used by [Archimedes](http://en.wikipedia.org/wiki/Archimedes) in a process demonstrated by Marty to set fire to enemy ship at [Syracuse](http://en.wikipedia.org/wiki/Syracuse,_Italy).
* [Belly bow](http://en.wikipedia.org/wiki/Belly_bow), demonstrated to Adam, was the first mechanical weapon and more powerful than a standard bow.
* Communication devices, such as those reconstructed by Jopsom, allowed the [secure transmission](http://en.wikipedia.org/wiki/Secure_transmission) of messages.
* Democracy was originally developed in the city of [Athens](http://en.wikipedia.org/wiki/Athens) visited by Hermione.
* The [Kleroterion](http://en.wikipedia.org/wiki/Kleroterion), reconstructed by Jopsom, secured the fair and democratic selection of juries.
* The high-tech stagecraft of [Heron of Alexandria](http://en.wikipedia.org/wiki/Heron_of_Alexandria), reconstructed by Marty, included the first [robot](http://en.wikipedia.org/wiki/Robot), [steam engine](http://en.wikipedia.org/wiki/Steam_engine) and automatic doors.
* [Ethylene](http://en.wikipedia.org/wiki/Ethylene) was inhaled by the [Oracle at Delphi](http://en.wikipedia.org/wiki/Oracle_at_Delphi), visited by Hermione, prior to her predictions.
* Advanced [astronomical theories](http://en.wikipedia.org/wiki/Astronomy), explained by Adam, were put forward by [Pythagoras](http://en.wikipedia.org/wiki/Pythagoras), [Aristarchus of Samos](http://en.wikipedia.org/wiki/Aristarchus_of_Samos) and [Eratosthenes](http://en.wikipedia.org/wiki/Eratosthenes).
* [Antikythera mechanism](http://en.wikipedia.org/wiki/Antikythera_mechanism), demonstrated to Adam, was the world’s first computer.

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| Idea or Invention  Description / Diagram | Legacy / Impact on Modern Society |
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