



The Frontinus Project

Vision:

A fresh approach to sparking discussion of one of the biggest issues of the modern day through exploring untapped accounts of ancient innovation.

Applied

- “Water has to be treated as a scarce resource” – UN Water
- “When examining audience’s reactions towards advertisements that focus on human suffering, there is a ‘two-sided effect’ with one being “distantiation” – LSE Department of Media and Communications
- “I can discuss the sustainability of key natural resources and analyse the possible implications for human activity.”- SOC 4-08 Education Scotland Benchmarks for Social Studies

Classics

- 1.4% of the country take Latin at GCSE. Ancient History, Classical Civilisation and Ancient Greek don’t even make up 1% - Carroll & Gill 2017
- “Even a brief encounter with the ancient world fires the imagination of the young” – Classics for All
- “It hones analytical and critical skills, trains minds in the comparative use of different types of evidence... and develops identities founded in citizenship on the national, European and cosmopolitan, global level.”

– Advocating Classics Education



The Five Tenets



Storytelling

Ancient narratives have power;
that makes them useful.

Interconnectivity

One approach is fragile; many,
interconnected, are strong.

Outcome

Goals mean little without the
structure to achieve them.

Visibility

Where modern symbols of
Classics resonate with our
project, harness them.

Outreach

Everyone can gain from
Classics; everyone deserves
the opportunity.



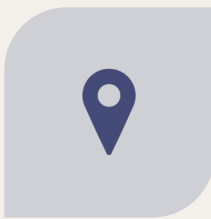
Channels – Avoid “emotional fatigue”



SCHOOLS



MUSEUMS



SITES OF
HISTORICAL
INTEREST



INTERNET

+ Schools

- + Inter-disciplinary e.g., combine with geography
- + Lowest common denominator
- + Aim at ‘benchmarks’ for Scotland/syllabus for England

+ Museums

- + Consilience e.g., engineering
- + Active outreach
- + Target audience

+ Sites of historical interest

- + Local history
- + Contemporary issues e.g., dredging of harbours in East Neuk

+ Internet

- + Blog
- + Web game
- + Feedback

General Approach



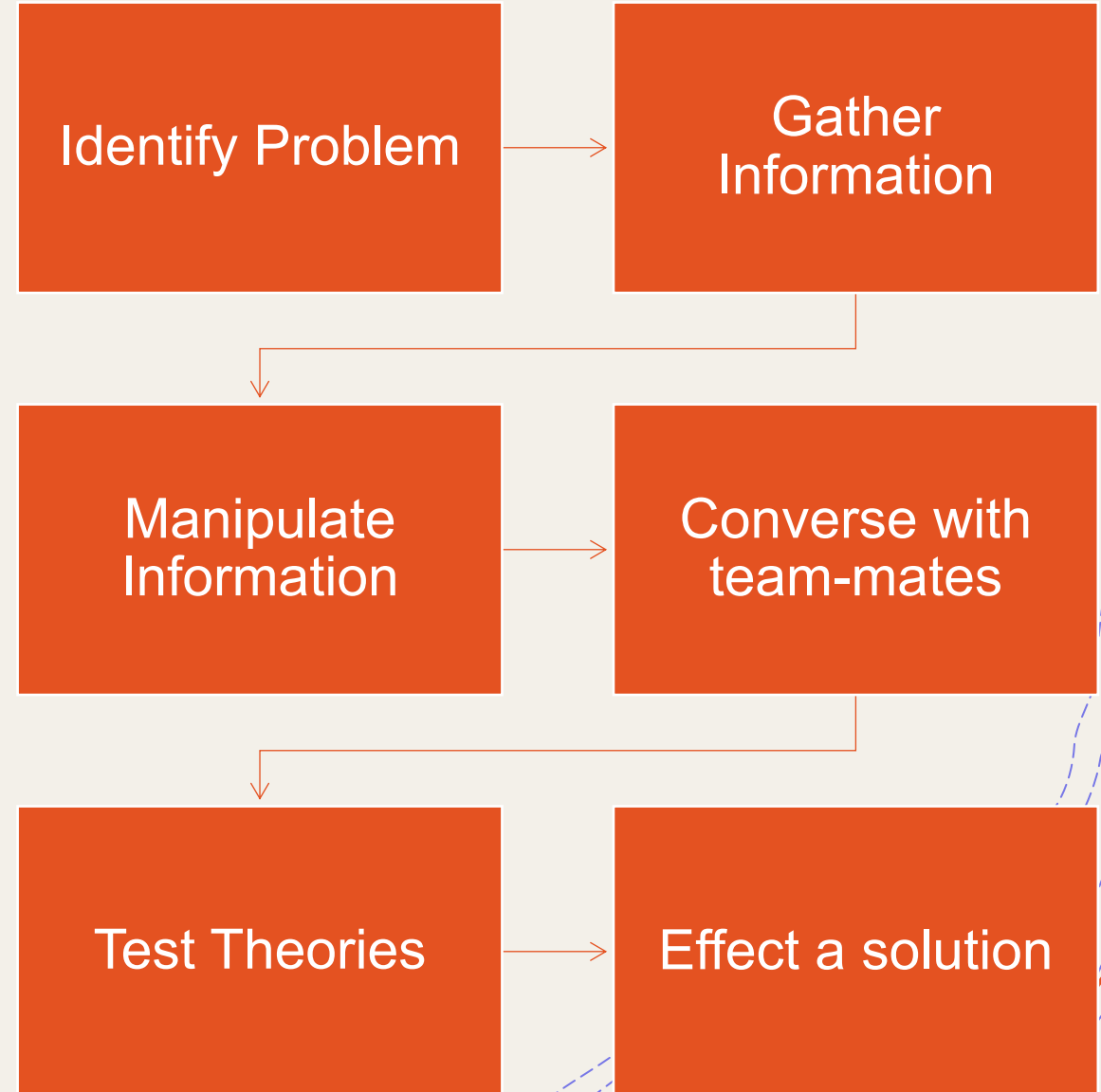
NARRATIVE-DRIVEN
LEARNING THROUGH
INTERACTIVE CASE-
STUDIES.



PROBLEM-SOLVING
FORMULATIONS
ENSURE
PARTICIPANTS
ACTIVELY ENGAGE
WITH THE SOURCE
MATERIAL.



PROBLEM-SOLVING IN
ACTUALITY AMPLIFIES
THE BITRATE OF
LEARNING.



Meet the Diluvial Thinkers



- Frontinus (c.AD 35-103/4), *de aquis urbis Romae*
 - Appointed *curator aquarum* by Nerva in 97AD.
 - Wrote two books on the history and the description of the water-supply of Rome, as well as a record of the laws concerning its use and maintenance.
- Pliny the Younger (c.AD 61-c.112), *Epistulae*
 - Imperial governor of Bithynia et Pontus.
 - Wrote letters to the Emperor Trajan concerning issues of water supply and aqueduct building.
- Livy (59 BC-AD 17), (59 BC-AD 17), *Ab urbe condita libri*
 - Historian who writes from the foundation of Rome to contemporary time.
 - Records the development of the *Cloaca Maxima*.



Activities - Applied Material



Aqueduct
Laws

Cloaca
Maxima

Aqueducts
of Rome

‘Plumb for
Pliny’

Patronage
Game

Pont du
Gard

Aqueduct Laws



*Senatus consultum
de aquaeductibus*

Present the original law
and ask groups to
consider why it might
be problematic



Group Discussion



Lex Quinctia



Group Discussion



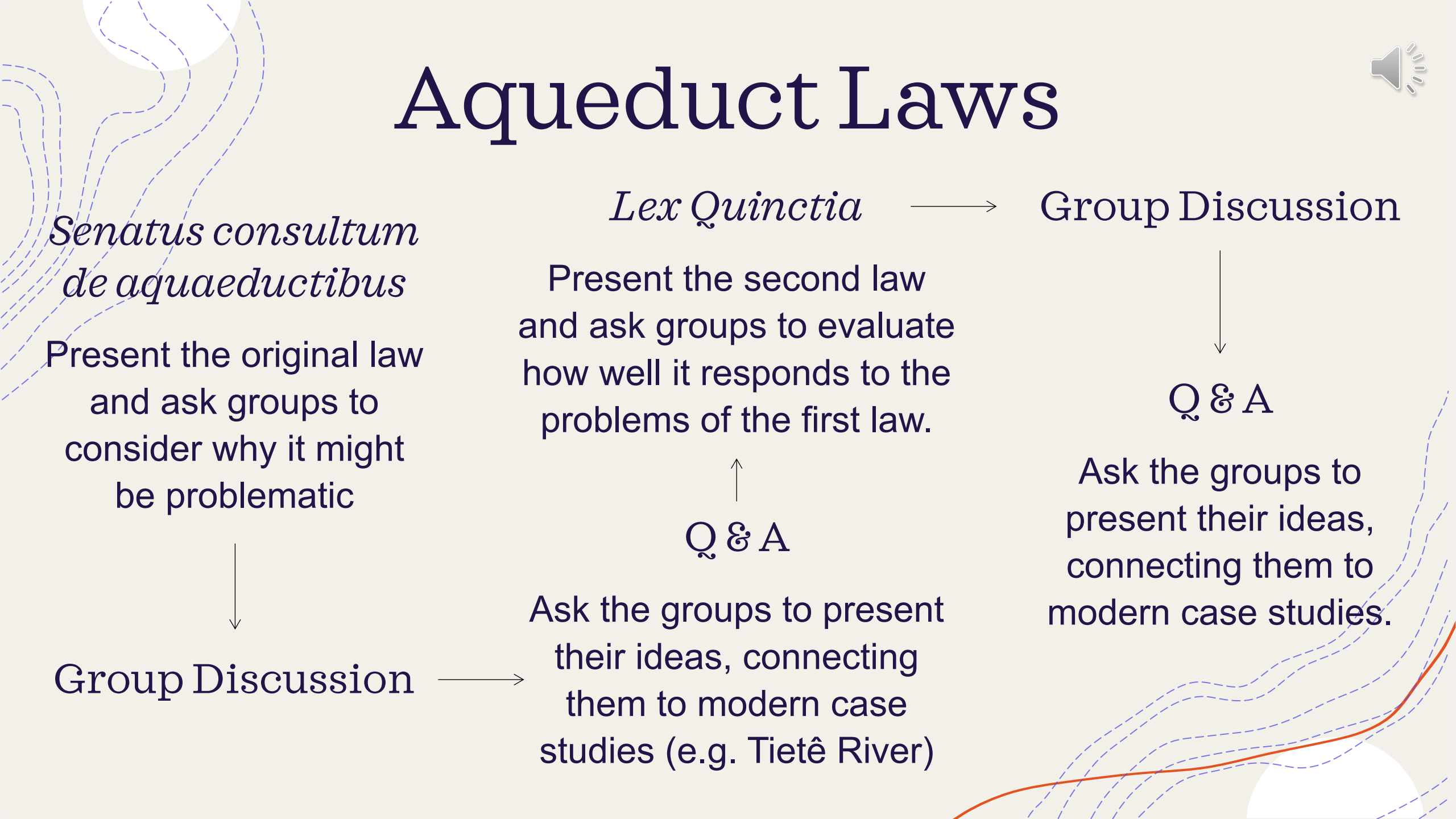
Q & A

Ask the groups to
present their ideas,
connecting them to
modern case studies.



Q & A

Ask the groups to present
their ideas, connecting
them to modern case
studies (e.g. Tietê River)





Cloaca Maxima



A pan-historical simulation game grounded in Livy's historical account of the Great Sewer.

Various problems will be analysed along the sewer's c.2,500-year-old history.

Teams will be tasked with providing solutions to these issues in outcomes-focussed discussions.

Construction c.600 BC

- Context: fast-growing metropolis whose main market and temple area is not only marshy but flooded each year due to being 20 feet below sea level.
- Problem: draining a low-lying, marshy and flood prone valley at a confluence of three rivers.
- Roman solution: Fill in the basin with rocks, soil and debris and then pave it over. Before constructing a drainage canal to deal with the excess water.

Covering of channel c.2nd/3rd century

- Context: As Rome's population increases so does human waste.
- Problem: local people begin to use drainage channel as an open sewer and odour becomes unbearable.
- Roman solution: Cover drainage system to form a sewer and seal smell off from the surface.

Cleaning of the sewer 1st century AD

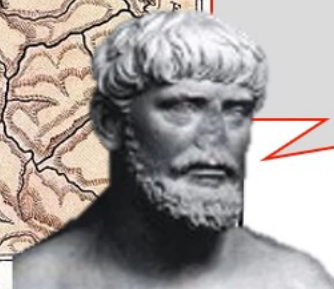
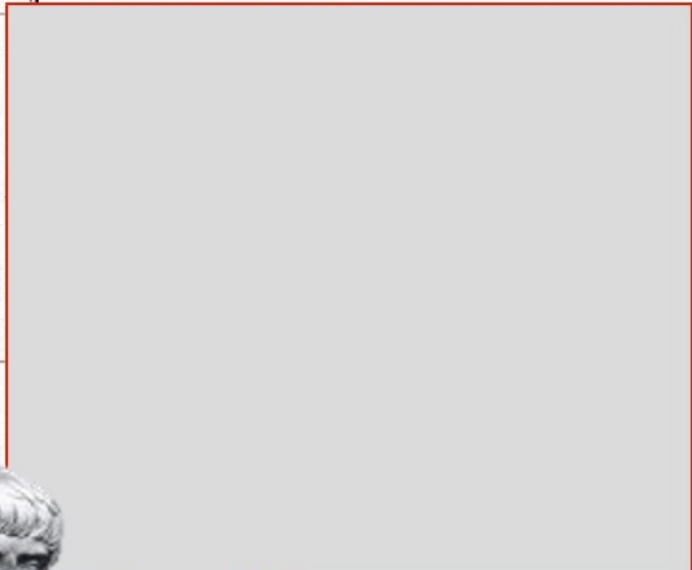
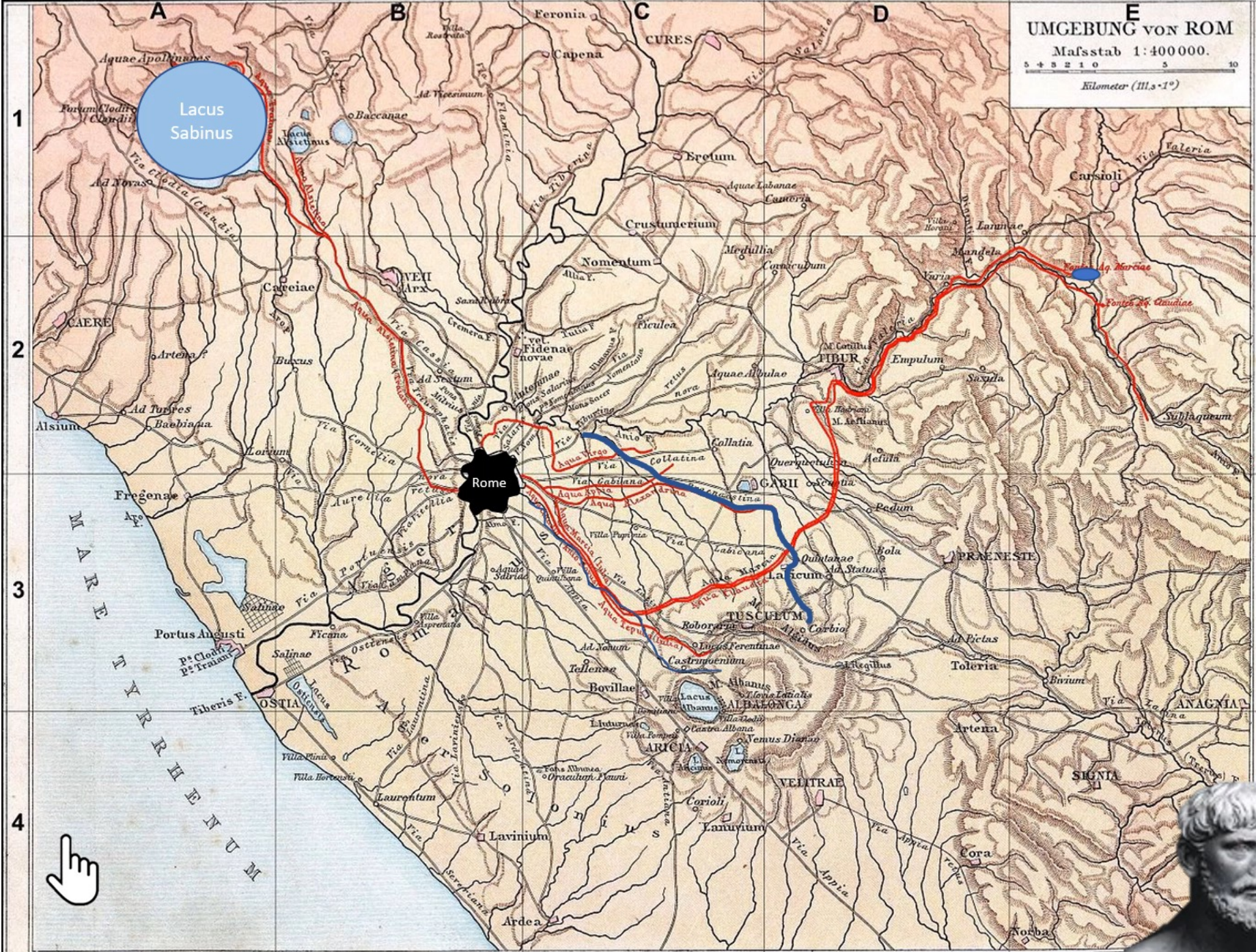
- Problem: despite the covering of the sewer there is still a foul stench due to blockages and stagnant water.
- Solution: Use overflow from city's aqueduct delivery tanks to flush through the sewers.
- N.B. Frontinus, 111, which complains of people drawing 'lapsed' water from the delivery-tanks.

21st Century Rome

- Context: Cloaca Maxima is beginning to crack and threatening to collapse buildings above.
- Problem: You don't know where the weak points are and some areas are too cramped for human exploration and there is the possibility of noxious gases.
- Solution: Remotely Controlled 'archo-robot' to create a detailed map of the waterways and gather samples safely.



The Aqueducts of Rome web-game



The Frontinus Project

About

News

Read Me

Get involved

Innovation from the past

Water for the Future

Learn More

A fresh approach to the water debate using the untapped well of ancient innovation

One of the greatest looming crises of the 21st century is the future of water provision and management worldwide. Too often the issue is approached through the lens of doom and gloom, causing emotional fatigue and detachment. The Frontinus Project seeks to tell the story of how we overcame similar problems



Accessible via: <https://frontinus.squarespace.com/>
Password: Frontinus



The Three-Stage Plan



Stage I

We alone are the project; the hope of anything more ambitious must be identified and refined.

Stage II

Success provides grounds for expansion, incorporating the lessons of Stage I.

Stage III

Expansion gives way to institutionalisation; the project grows beyond our own necessity.



Outcomes

- An alternative introduction to Classics
- Inviting people of all ages to the water discussion
- Inspiring them to seek solutions for the modern day
- Providing a platform and establishing a community dedicated to highlighting and discussing these issues



Aqueduct Laws		Not at all		Very!	
...fun?		1	2	3	4 5 6 7
To what degree did you find the Aqueduct Laws activity... ...interesting?		1	2	3	4 5 6 7
...easy to understand?		1	2	3	4 5 6 7
Would you want to learn more about the topic covered in this activity? If so, what?					
Would you want to change anything about this activity? If so, what?					

Cloaca Maxima		Not at all		Very!	
...fun?		1	2	3	4 5 6 7
To what degree did you find the Cloaca Maxima activity... ...interesting?		1	2	3	4 5 6 7
...easy to understand?		1	2	3	4 5 6 7
Would you want to learn more about the topic covered in this activity? If so, what?					
Would you want to change anything about this activity? If so, what?					

'Plumb for Pliny'		Not at all		Very!	
...fun?		1	2	3	4 5 6 7
To what degree did you find the 'Plumb for Pliny' activity... ...interesting?		1	2	3	4 5 6 7
...easy to understand?		1	2	3	4 5 6 7
Would you want to learn more about the topic covered in this activity? If so, what?					
Would you want to change anything about this activity? If so, what?					

Frontinus Project		Not at all		Very!	
Of the following run by the Frontinus Project, how likely are you to... ...visit an exhibition?		1	2	3	4 5 6 7
...play the web game?		1	2	3	4 5 6 7
...read our blog?		1	2	3	4 5 6 7
Would you be interested in the Frontinus Project running any new events? If so, what?					
Are you likely to talk about the Frontinus Project with... ...a friend?		1	2	3	4 5 6 7
...a parent/guardian?		1	2	3	4 5 6 7
...another relative?		1	2	3	4 5 6 7

Ideas and Improvements
Do you have any other thoughts about we could improve our workshop?

Learning
What are the most important things you've learned from this workshop?
Will you do anything differently as a result of what you've learned in this workshop?

Thank you!



Metrics

Qualitative..

- Student/visitor feedback forms
- Online comments

..and Quantitative

- Exhibition visitor numbers
- Website/game metrics (visitor numbers, total time spent, 'bounce rate')
- Social media analysis



Credits

Dr Alice König

Drs Andrea Brock and Ruben Post of the Centre for Ancient Environmental
Studies

Miss Clare Owens, Head of Classics at Manchester Grammar School

Mr Jon Mutton, Former Head of Classics at Ampleforth College

Mr J W Barber, Head of Classics at Hampton School

Mr Andrew Lang and Ms Becca Masson, St Leonard's School

NMT Automatics

Bibliography

Vision

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Meet the Diluvial Thinkers

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Activities – Applied Material

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Cloaca Maxima

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Livy, *History* 1.38

The Aqueducts of Rome web-game

Frontinus, *Aqueducts of Rome*, 1.7

A photograph of the Roman Aqueduct of Segovia at dusk. The structure is a two-story stone archway with 16 arches on the lower level and 16 on the upper level. The sky is a deep blue, and the ground is wet and reflective. The text "Any Questions?" is overlaid in white, serif font in the center-right of the image.

Any Questions?

(On Thursday, at least!)