University of Southampton

Remembering Titanic Project

Teacher Workshop 1

22 February 2023
3.00 – 5.30 pm
SeaCity Museum



REC

Workshop will be recorded for the project team.
It will not be shared with anyone or publicly.

Project team



Wonyong Park



Neta Shaby



Rachele Newman



Tilly Scotthorne

Introductions

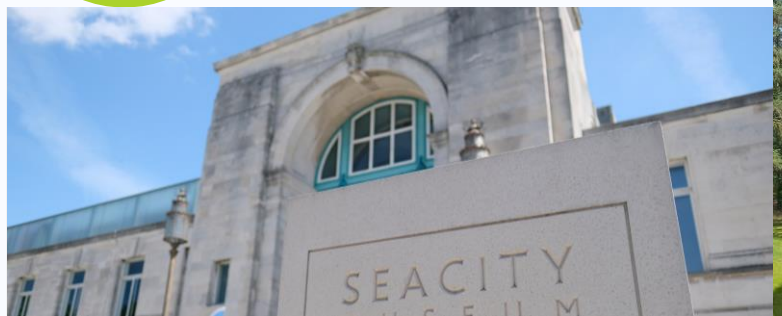
- What motivated you to join this project?
- What do you expect to get from the project?



Project timeline

Workshop 1

22 Feb 2023
SeaCity Museum



Workshop 2

25 Apr 2023
(Boldrewood Campus)



Workshop 3

29 Jun 2023
Avenue Campus



Project website

https://www.remembertitanic.com/

Titanic videos











Learning about local history can be beneficial to future citizens, by stimulating place attachment and civic engagement, and providing authentic experience of doing history. At the same time, awareness of the importance of integrating informal and outdoors learning environments into the curriculum have been on the rise. Focusing on the integration of formal and informal education in the context of teaching local history of RMS Titanic, this project aims to work with history and science teachers, pupils (Key Stage 3; age 11-14) and museum educators to develop and pilot a curriculum unit focused on the history of Titanic and Southampton. Historical records and artefacts from the Titanic Inquiry Project (https://www.titanicinquiry.org/) will be used to explore the Titanic disaster from scientific and historical perspectives.









Why Titanic?




SOUTHAMPTON
SOUTHAMPTON & DORCHESTER
L. & S.W.R.
ALL SAINTS
POLYGON
Southampton West Station
Corporation Baths


IN MEMORY
OF THE
HEROIC MUSICIANS
OF THE S.S "TITANIC"
LOST ON HER MAIDEN VOYAGE FROM SOUTHAMPTON TO NEW YORK
W. HARTLEY
C. KRINS.
R. BRICOUX
W.T. BRAILEY
J. WOODWARD
P.C. TAYLOR
THEY DIED AT THEIR POSTS LIKE MEN
ERECTED BY THE MEMBERS AND FRIENDS OF THE AMALGAMATED MUSICIANS UNION SOUTHAMPTON BRANCH
UNVEILED BY HIS WORSHIP THE MAYOR
APRIL 16


QUEEN MARY
LIVERPOOL

Our approach



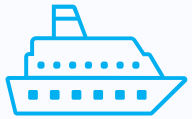
Integrating school subjects (Science & History)



Integrating school-based and out-of-school learning



Place-based learning



Disasters and tragedies

Project goals

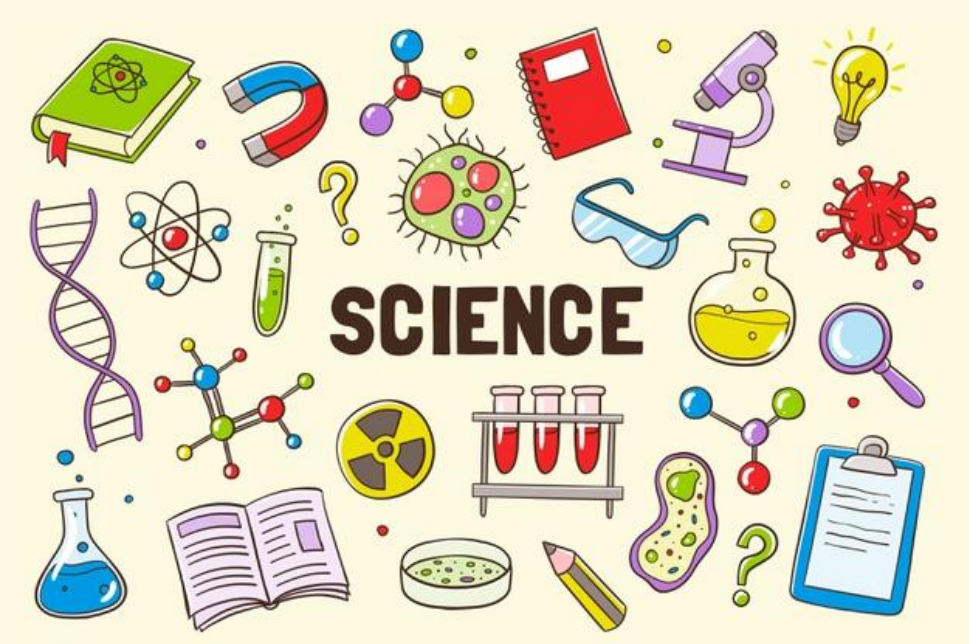
University researchers, museum educators, and teachers will **co-construct knowledge about:**

- How school subjects can be integrated (Science & History)
- How informal learning environments can be incorporated for meaningful learning
- How we can teach about tragic events in the history of the local community

Why do we want to integrate school subjects?



- The problems we face in the world are complex and require the integration of multiple disciplines, concepts, and skills to solve them (Beane, 1995).
- **Formal schooling:** disciplinary structure, subjects taught in siloes
- **Real-world problems:** multidisciplinary in nature (Czerniak, Weber, Sandmann, & Ahern, 1999; Jacobs, 1989)


SCIENCE


BC
Middle Ages
century
Ancient Greece
ROME
XIX
HISTORY
WORLD WAR
Herodotus
XX
Periods

Purpose of study

A high-quality science education provides the foundations for understanding the world through the specific disciplines of biology, chemistry and physics. Science has changed our lives and is vital to the world's future prosperity, and all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of rational explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes.

Purpose of study

A high-quality history education will help pupils gain a coherent knowledge and understanding of Britain's past and that of the wider world. It should inspire pupils' curiosity to know more about the past. Teaching should equip pupils to ask perceptive questions, think critically, weigh evidence, sift arguments, and develop perspective and judgement. History helps pupils to understand the complexity of people's lives, the process of change, the diversity of societies and relationships between different groups, as well as their own identity and the challenges of their time.

Source: Key Stage 3 National Curriculum

- understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review

- understand the methods of historical enquiry, including how evidence is used rigorously to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed

Source: Key Stage 3 National Curriculum

Historical methods & scientific methods

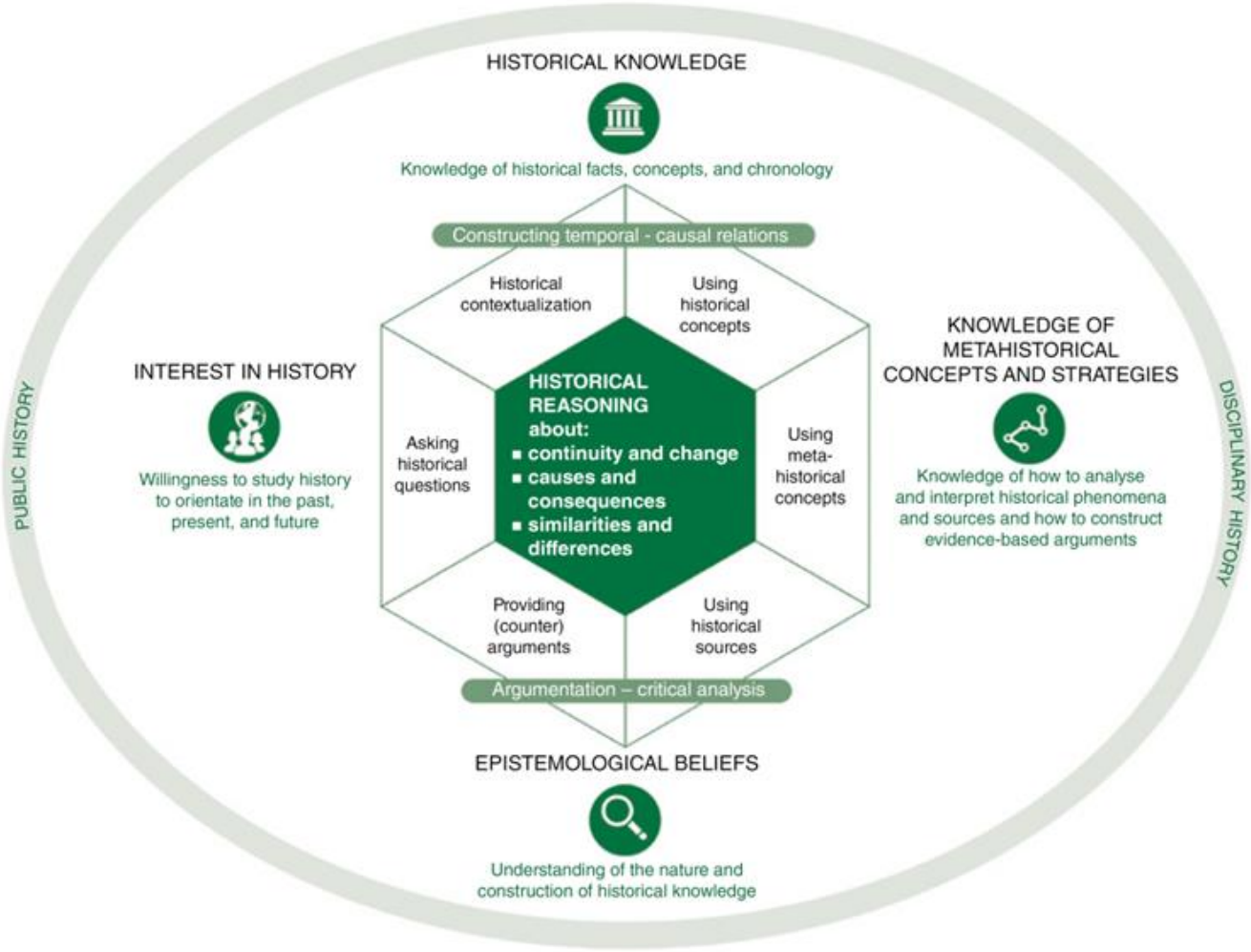


Figure 6.1 Types and components of historical reasoning and individual and sociocultural resources for historical reasoning.

Van Drie, J. & Van Boxtel, C. (2008)

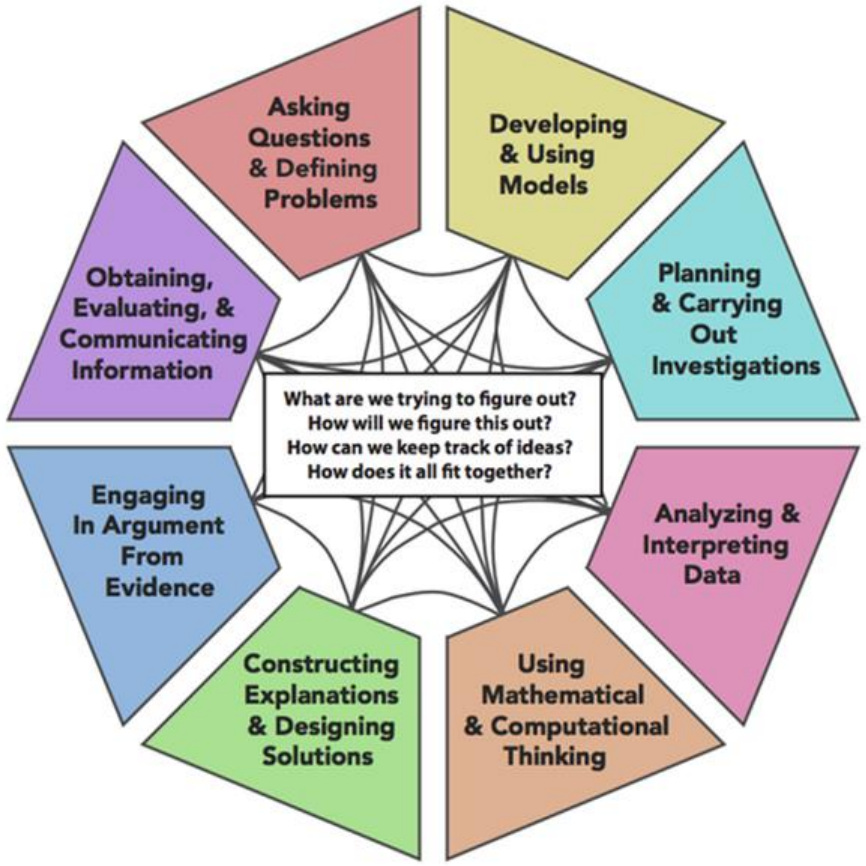


Diagram from page 14 in this chapter of this book:
Schwarz, C. V., Passmore, C. M., & Reiser, B. J. (2017). Moving beyond "knowing" science to making sense of the world. In C. V. Schwarz, C. M. Passmore & B. J. Reiser (Eds.), *Helping students make sense of the world through next generation science and engineering practices* (pp. 3-21). Arlington, VA: NSTA Press.

'Hybrids' of history and science

Historical sciences

- Geology
- Astronomy
- Paleoclimatology







13,446,548 views | David Christian • TED2011

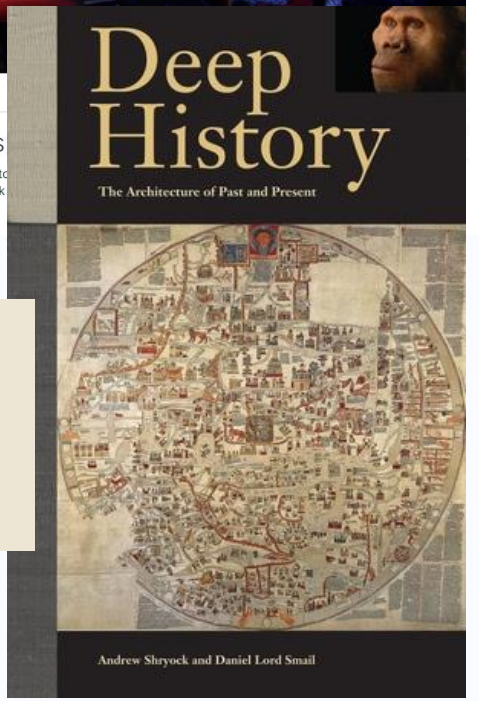
The history of our world in 18 minutes

Backed by stunning illustrations, David Christian narrates a complete histo
riveting 18 minutes. This is "Big History": an enlightening, wide-angle look
share of the cosmic timeline.

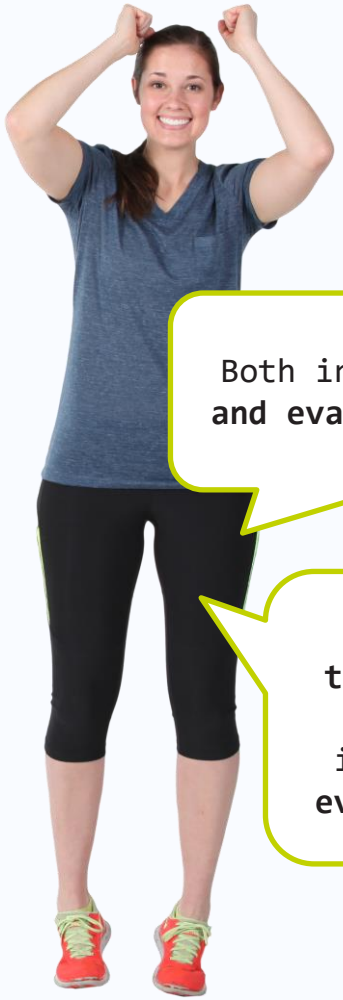
Scientific history



"Combining cutting-edge social and evolutionary theory with the latest discoveries about human genes, brains, and material culture, *Deep History* invites scholars and general readers alike to explore the dynamic of connectedness that spans all of human history."



Your survey responses



They are similar as in both, **data analysis** is essential.

Both involve **gathering and evaluating evidence**

Both can follow **an enquiry approach** to learning having a **hypothesis** and then working towards finding an answer.

I often talk to students about **theory and evidence,** and having to have **proof** to back up historical ideas like a Scientist would need **evidence** to back up their **theories.**

Different amount of lessons for each - more content can be covered in Science; History is an option at GCSE

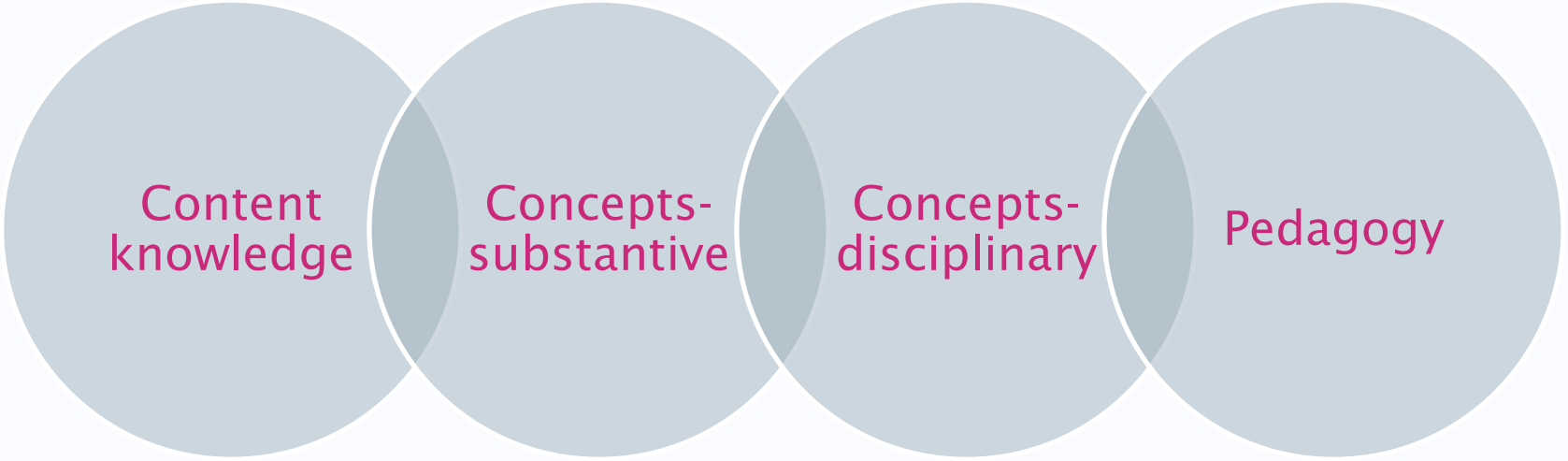
Science is more focused on **the present and future,** how it may change and progress whereas history is focused on retelling **the past.**

They are different as often in History there are **many interpretations of events** etc whereas Science, **there is often a correct answer.**

Methods of enquiry are different - in history you can't run **an experiment to test an argument.**



Commonalities between Science and History at KS3?



How might these relate to Titanic?

- Awareness of the importance of integrating informal learning environments into the curriculum has been on the rise.

  (Dierking & Falk, 2003; Rennie & Johnston, 2007)
- Science centers and museums are important resources for science learning since schools cannot act alone.

  (DeWitt & Osborne, 2007)
- Museums are designed informal learning environments. Can reach a wide range of populations with varying levels of interest and knowledge.

  (NRC, 2009)

International Journal of Science Education
Vol. 32, No. 5, 15 March 2010, pp. 669–685

Routledge
Taylor & Francis Group

RESEARCH REPORT

Eyeballs in the Fridge: Sources of early interest in science

Adam V. Maltese[a]* and Robert H. Tai[b]
[a]*Indiana University, USA;* [b]*University of Virginia, USA*

- The learning environment
- The pedagogy

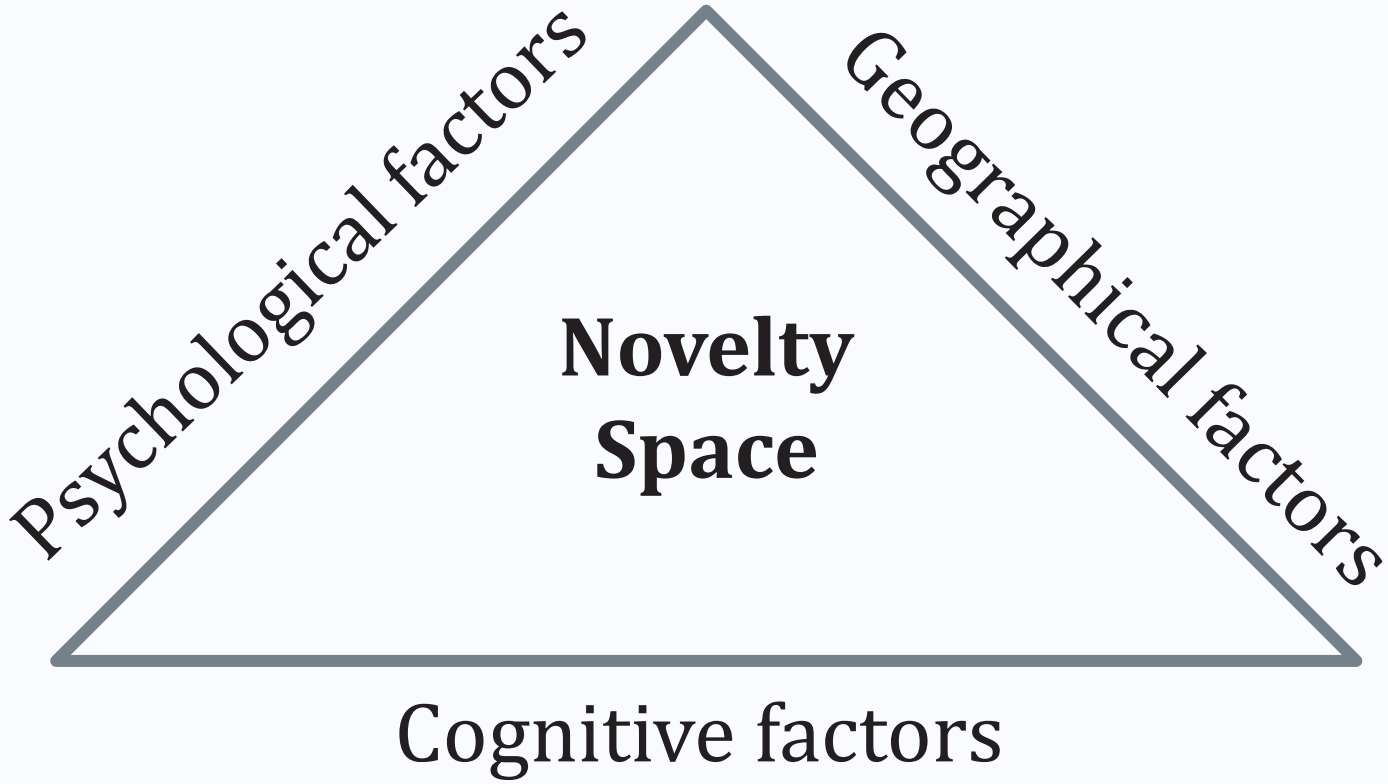
Formal
Usually at school
May be repressive
Structured
Usually prearranged
Motivation is typically more extrinsic
Compulsory
Teacher-led
Learning is evaluated
Sequential

Non-formal
At institution out of school
Usually supportive
Structured
Usually prearranged
Motivation may be extrinsic but it is typically more intrinsic
Usually voluntary
May be guide or teacher-led
Learning is usually not evaluated
Typically non-sequential

Informal
Everywhere
Supportive
Unstructured
Spontaneous
Motivation is mainly intrinsic
Voluntary
Usually learner-led
Learning is not evaluated
Non-sequential

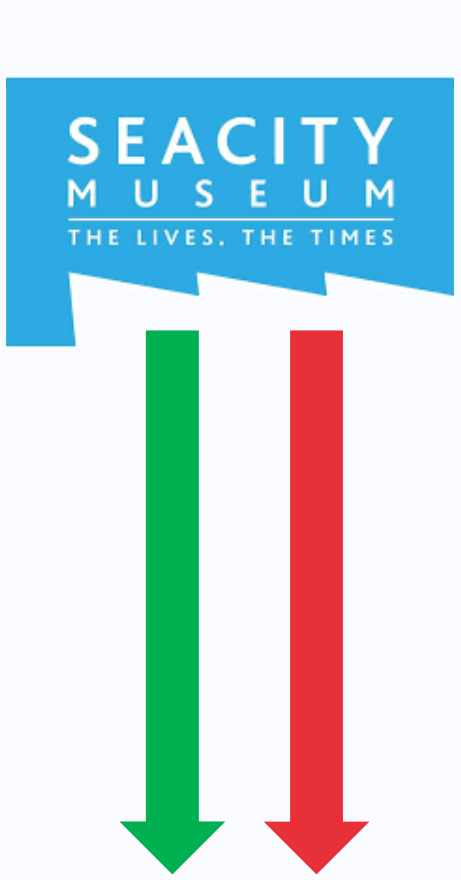
Bridging the gap between formal and informal

- Preparation (novelty space)
- Learning goals/objectives
- Summary
- Using concrete experiences from the museum at school

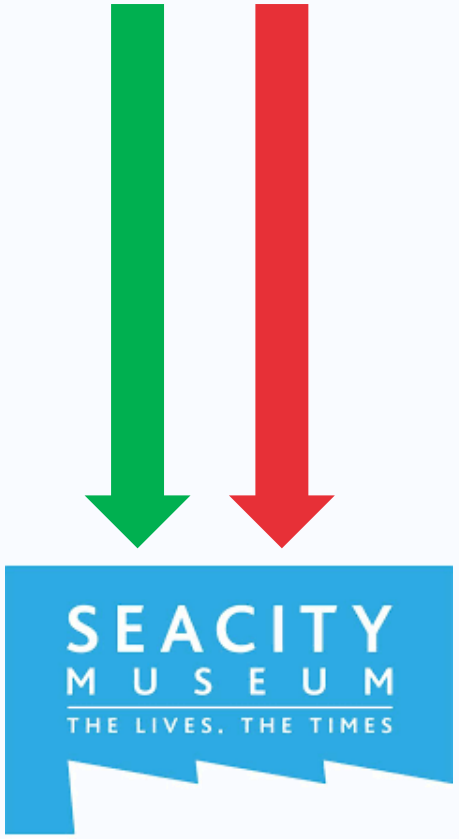


Orion, N. (1993). A Model for the Development and Implementation of Field Trips as an Integral Part of the Science Curriculum. *School Science and Mathematics, 93,* 6, 325-31.

How to integrate the curriculum unit?









The project

Develop a short unit of work centered around Titanic

6 lessons- enquiry?	Utilises informal learning opportunities- SeaCity Museum	Meets requirements of aspects of Science + History N/C

What could the focus of your unit of work be? How might the museum content support this?

Which exhibits/resources appeal from both a Science and History point of view?

How might the museum exhibits/resources could be used in your unit of work?


Initial thoughts....