Women can be scientists too

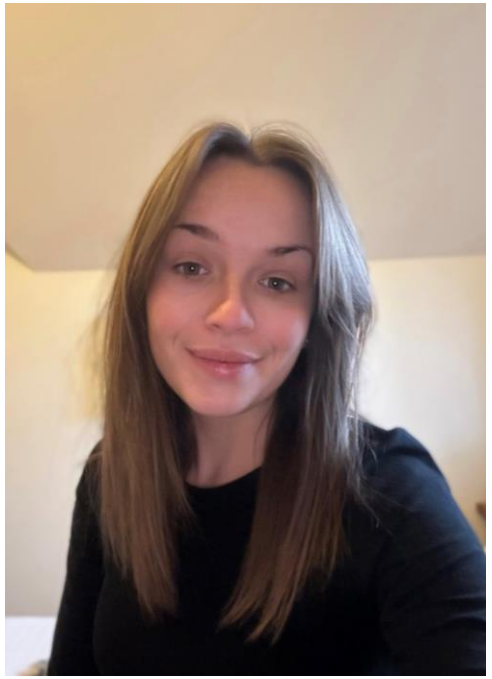
Megan Button and Helen Tiplady

University of Northampton
Faculty of Health, Education and Society

AGENDA

- Welcome and Introductions
- Background to the research
- Research outcomes and impact
- Reflection and take-aways

Your presenters at today's session



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Senior Lecturer at UON

University of Northampton
Faculty of Health, Education and Society

Year 3 in BA Primary Education – Module ITT3061 Enhancing the Expert Primary School Teacher

University of Northampton
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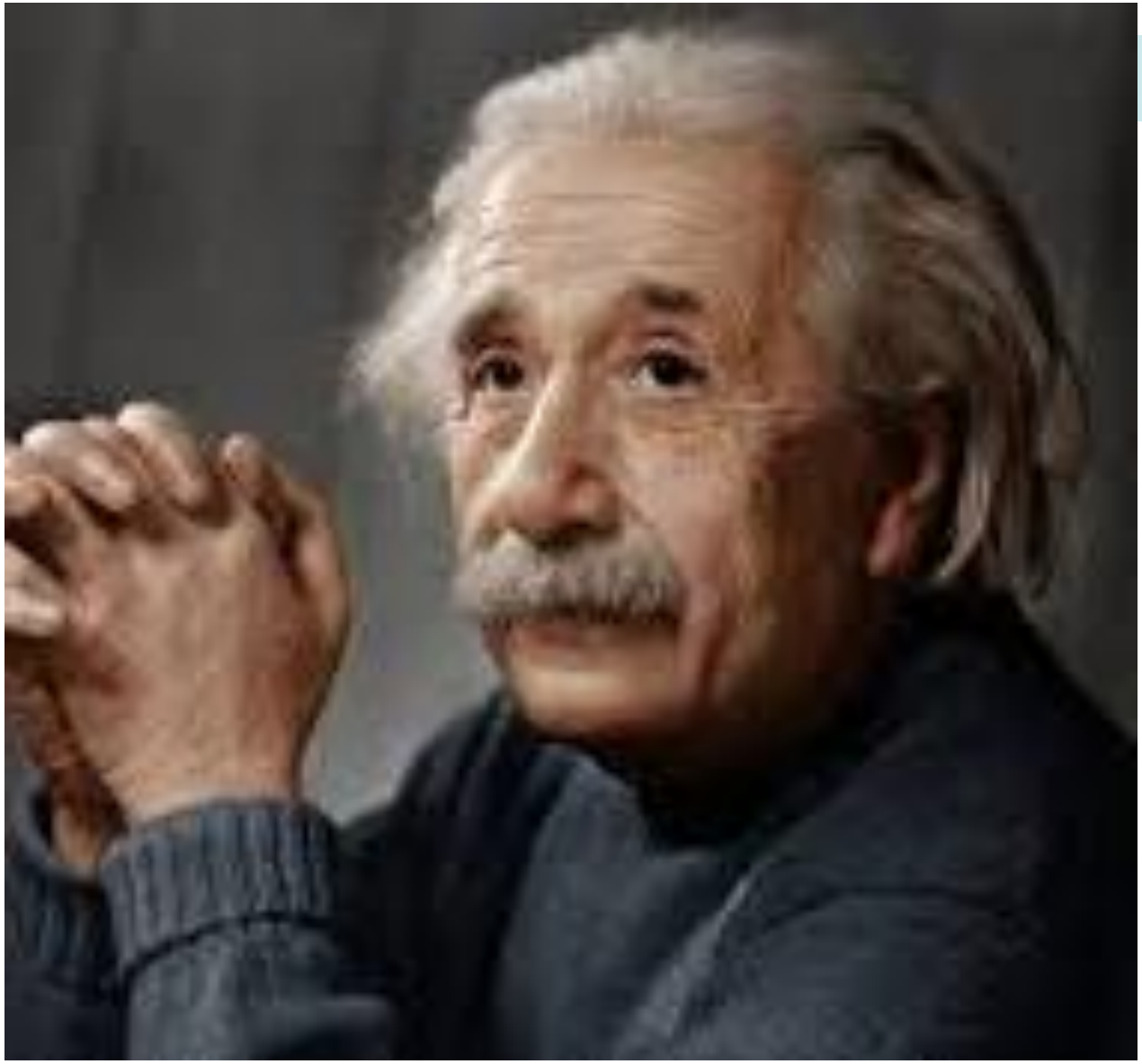
“The important thing is not to stop questioning. Curiosity has its own reason for existing.”

Albert Einstein



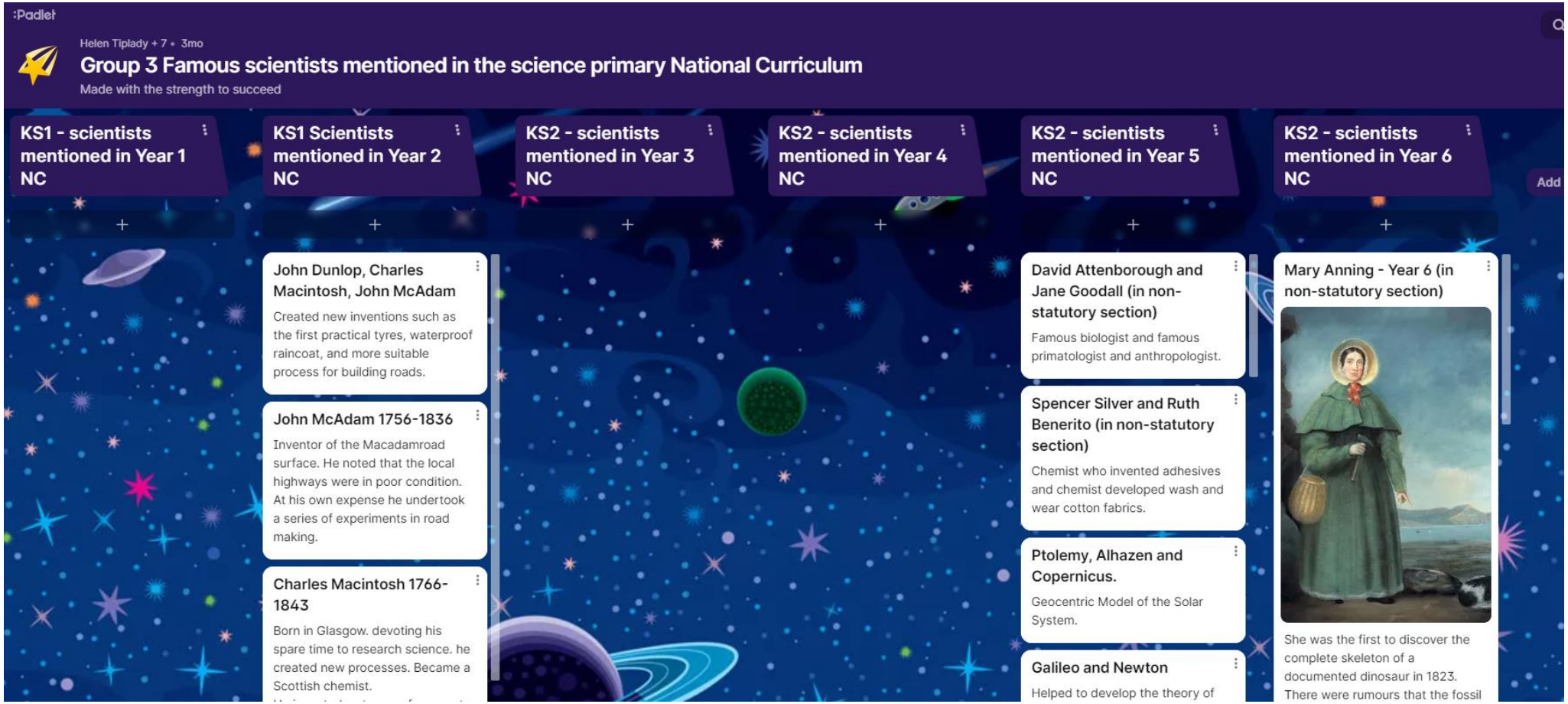
Ruth Benerito

Jane Goodall

Mary Anning

Ichthyosaur fossil

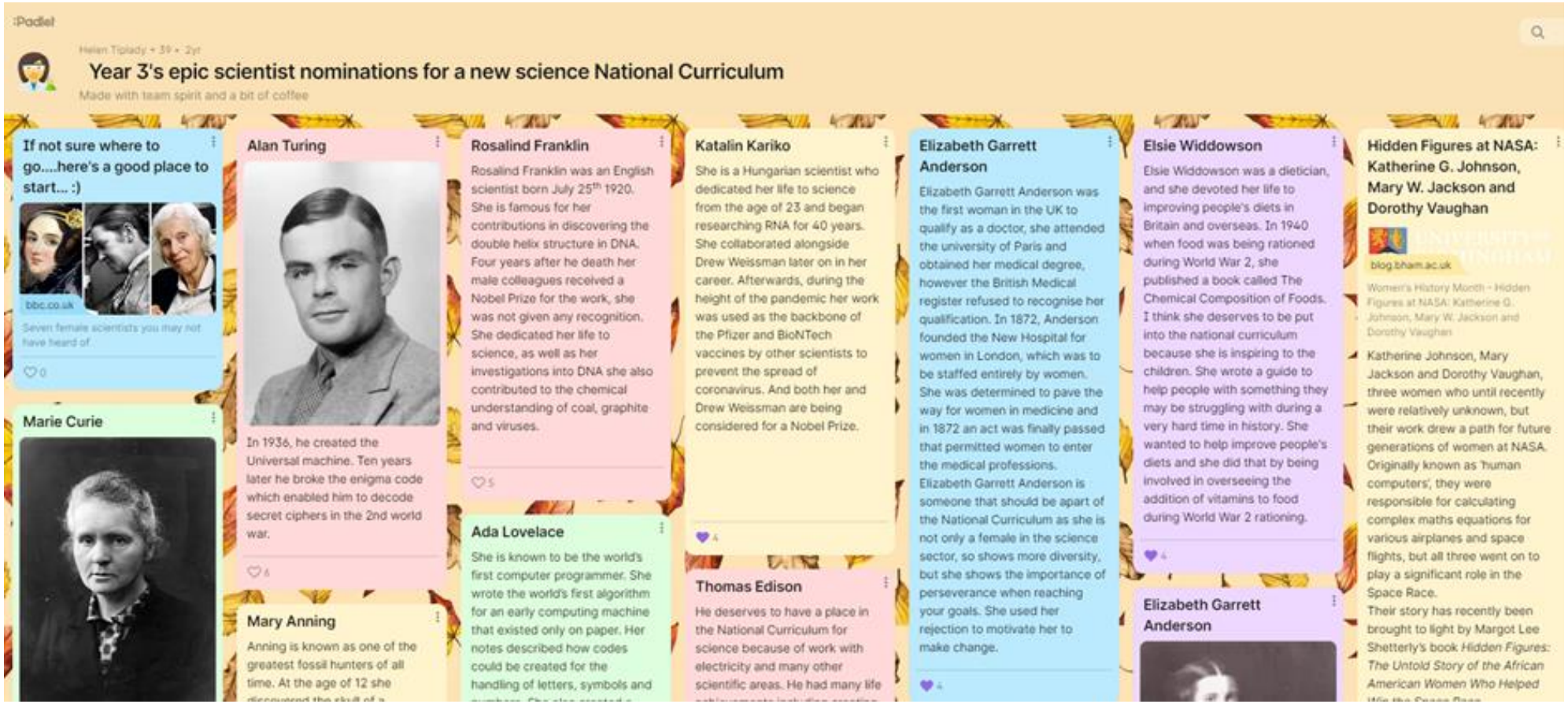
Famous scientists mentioned in the Primary Science National Curriculum



Ada Lovelace

Paula Hammond

https://www.bbc.co.uk/news/uk-51399835



Recommendations for a future national curriculum

https://uon1.padlet.org/helentiplady1/uon-yr3-ase-2024-scientist-nominations-for-a-new-science-nat-5t5jopypvbt2x3id

"Scientists can be women" – A case study on perceptions of gender in science at a rural primary school in England

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Sarah Cave – Senior Lecturer in Education, University of Northampton
Helen Tiplady – Senior Lecturer in Education, University of Northampton

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https://www.bcu.ac.uk/education-and-social-work/partnerships-and-collaborations/education-journal-magazine

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Methodology

Aim

To examine perceptions of gender in science from the viewpoint of the children and teachers.

Ethics

UON ethics approval obtained.

BERA compliant.

Consent forms from all participants and parents/guardians.

Methods

Small-scale Case Study using a mixed methods approach.

Interviews & questionnaires.

Timeline

Research took place in Spring 2020.

For purpose of Dissertation Module in Year 3.

Analysis tool

Open coding used to create tables of qualitative data.

Qualitative DAST results were converted to quantitative data.

Main findings

Key Finding 1

- Gender stereotypes of scientists are considerably less prominent in comparison to ideologies presented in previous research.
- Children mostly drew their representation of a scientist as their own gender.
- Stereotypical interpretations of scientists remained prevalent.

Key Finding 2

- Interviews found that *"most children are highly engaged"* and that despite having such a high number of girls in the class, engagement is good and they *"have a positive attitude"*.
- This was reinforced by the interviewee explaining that the school had a visit from a female scientist and "*the children didn't make any comment that it was a woman in any surprise*".

Key Finding 3

- The most consistent finding from the interviews was the promotion of ensuring learning is specifically tailored to the children.
- Teaching should begin with "*where their interests...confidence...ability is and develop these*" and learning should be given a context to "*make children conscious of the world around them*".

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From theory to practice...

Key question 1:
Do children perceive scientists and predominantly male or female?

Key question 2:
Do teachers perceive gender stereotypes in science to be a prevailing issue in modern day primary schools?

Key question 3:
What strategies do modern day primary schools use to overcome gender stereotypes in the teaching of science?

PSQM
Primary Science Quality Mark

Woodford Halse
C.E. Primary Academy
Ready, Resilient, Respectful and Reflective

Let's help every child
thrive

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From theory to practice...

'Same-gender role models are significant in impacting attitudes, achievements and interest' (Button *et al.*, 2021, p.34)

- Textbooks
- Story books
- Famous scientists
- Resources
- Visitors

'Ensuring learning is specifically tailored to the children' (Button *et al.*, 2021, p.35)

- Developing interest in the world around them
- Children's own interests
- Practical based
- Mixed-age groupings
- Mixed gender groupings
- Discussion based with opportunities to talk

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THANK YOU

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