



Careers in Initial Teacher Education (CITE)

Training #1 – Unconscious Bias

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Introductions

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What is CITE?

- Training package to support trainee teachers to include careers related learning in their teaching from the very beginning.
- Three CPD sessions about different aspects of careers with associated 'gap tasks'.

Timeline of Activity

OCTOBER (HT2)

CPD 1

Careers Education and
Unconscious Bias

FEBRUARY (HT3)

CPD 2

Primary Careers Tool

MAY (HT5)

CPD 3

STEM Attributes and STEM
Person of the Week

ITE Student activity

Follow up Activity

Exploring unconscious bias in school
Reflective Activity: Confidence in challenging biases

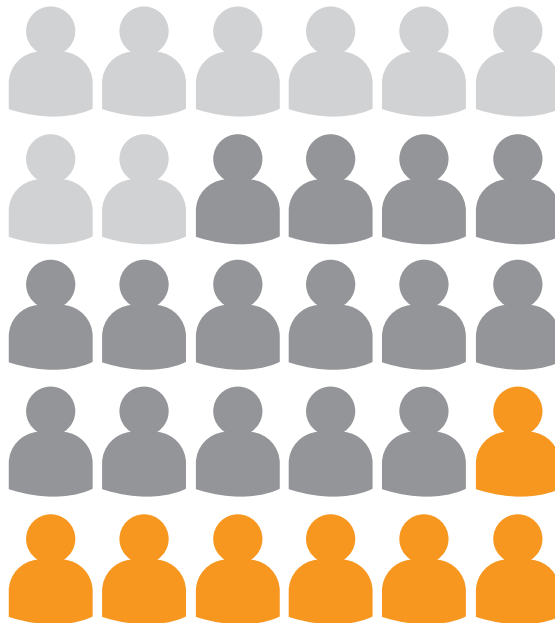
Follow up Activity

Use the Primary Careers Tool in Classroom
Reflective Activity: Confidence using resources

Follow up Activity

Use STEM Person of the Week in the Classroom
Reflective Activity: Confidence using resources

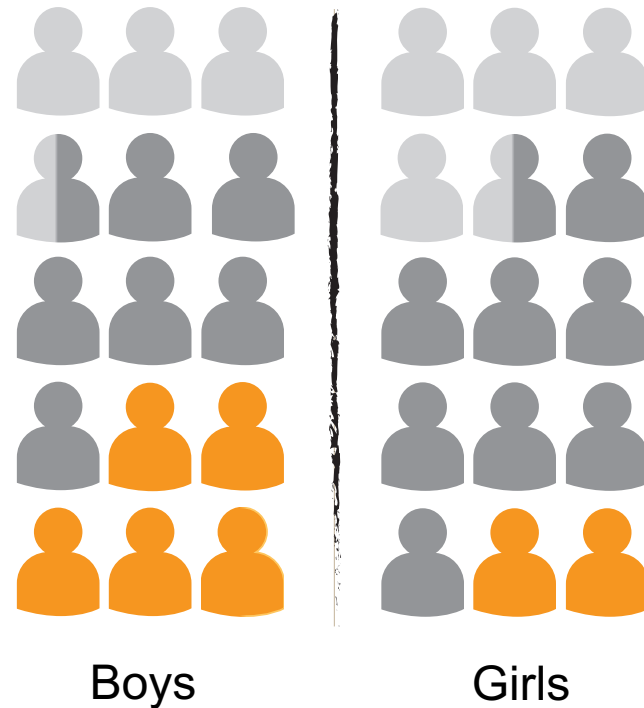
A class of 30 children in employment



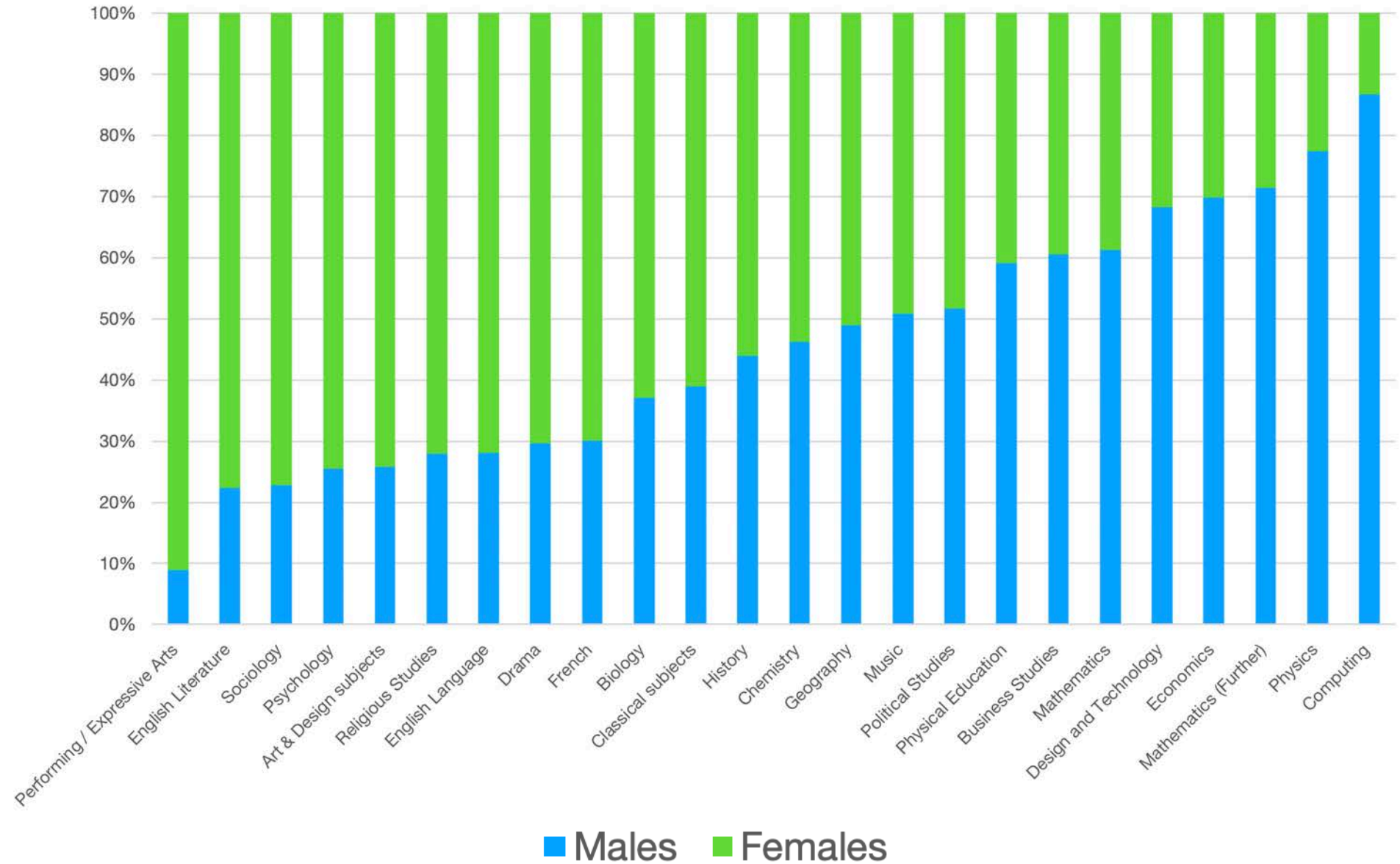
-  Not in employment
-  Employed in non-STEM fields
-  Employed in STEM fields

30 children in employment (by gender)

-  Not in employment
-  Employed in non-STEM fields
-  Employed in STEM fields



A-Level Exam Entries 2019 by gender



Why careers in primary?

- NUSTEM career aspirations research with 450 children in 6 North East primary schools
- Children given a list of 30 jobs to sort
 1. Jobs I know / Jobs I don't know
 2. Would like to do / would not like to do / not sure

Findings

- Boys tend to report that they know many more jobs than girls
- As children get older they know about more jobs
- Year 5 pupils tend to want to do fewer jobs than year 3 pupils
- By age 8 children are already making gendered job choices

Top 10 jobs for girls		Top 10 jobs for boys	
Teacher	71%	Game tester	75%
Hairdresser	67%	Athlete	51%
Actor/Actress	60%	Detective	49%
Vet	60%	Soldier	45%
Athlete	48%	Tennis Player	43%
Shopkeeper	47%	Mechanic	43%
Nurse	46%	Pilot	41%
Doctor	42%	Astronaut	40%
Game tester	40%	Engineer	38%
Author	38%	Estate Agent	34%

Top 10 jobs for girls		salary range	Top 10 jobs for boys		salary range
Teacher	71%	£24k - £63k	Game tester	75%	£15k - £40k
Hairdresser	67%	£14k - £30k	Athlete	51%	variable
Actor/Actress	60%	variable	Detective	49%	£21k - £59k
Vet	60%	£30k - £50k	Soldier	45%	£15k - £35k
Athlete	48%	variable	Tennis Player	43%	variable
Shopkeeper	47%	£11k - £25k	Mechanic	43%	£18k - £35k
Nurse	46%	£24k - £37k	Pilot	41%	£20k - £140k
Doctor	42%	£37k - £105k	Astronaut	40%	£40k - £80k
Game tester	40%	£15k - £40k	Engineer	38%	£18k - £80k
Author	38%	variable	Estate Agent	34%	£15k - £40k

Average £35k

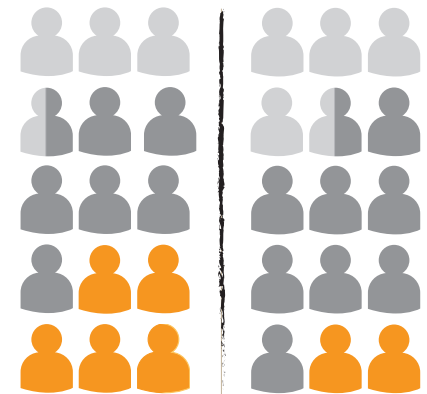
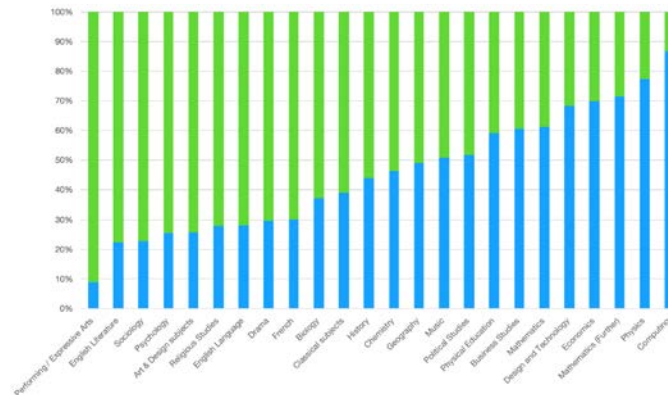
Average £44k

Science for ‘people like me’

- More likely to aspire to a career if it matches your self-concept.
- Science is often seen as something that is done by ‘clever people’
- NUSTEM research shows that girls are less likely to self-identify as clever, so this will affect their future science participation.

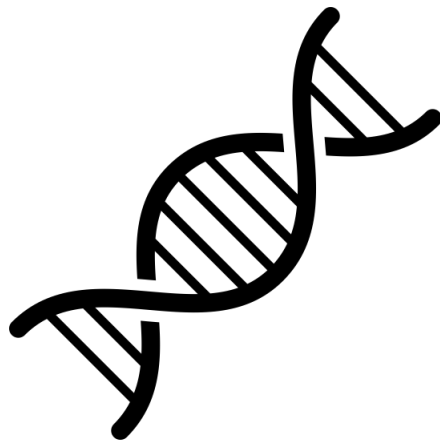
There is a disparity in career aspirations in primary school, in the A-Level Exam entries, and subsequently the careers pathways of males and females.

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What might explain this disparity?

1. There are fundamental differences between girls and boys and the career/subject choices they make that are set at the genetic level.
2. There are personality differences between people that are set at the genetic level.



Nature

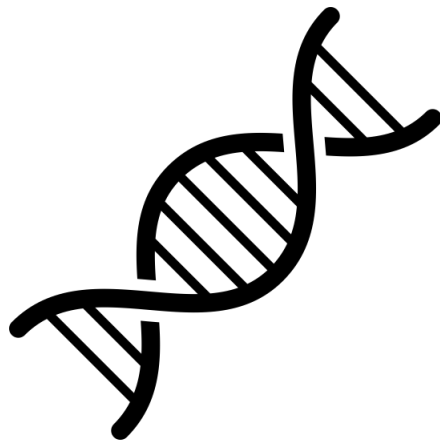
vs



Nurture

3. Boys' and girls' attitudes and beliefs are shaped by the society they grow up in.

- ~~1. There are fundamental differences between girls and boys and the career/subject choices they make that are set at the genetic level.~~
2. There are personality differences between people that are set at the genetic level.



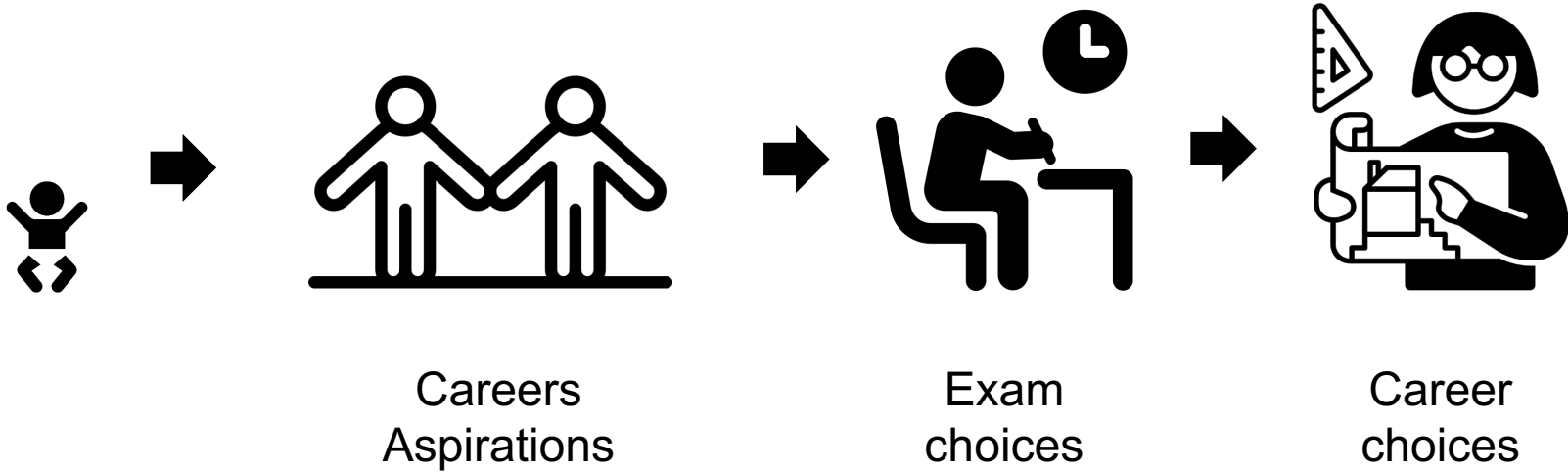
Nature

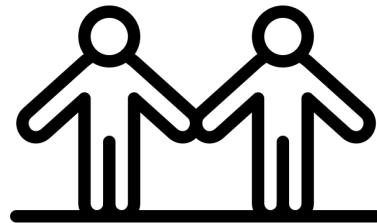
3. Boys' and girls' attitudes and beliefs are shaped by the society they grow up in.



AND

Nurture





Who and what are the main influencers of children?

Role Models

News

Celebrities

Schools

Disney

Media

Parents

Musicians

Teachers

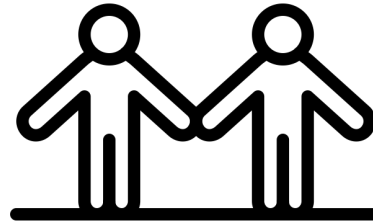
TV

Family

Magazines

Sport figures

Books



Uniform groups

Religion

Classmates

Friends

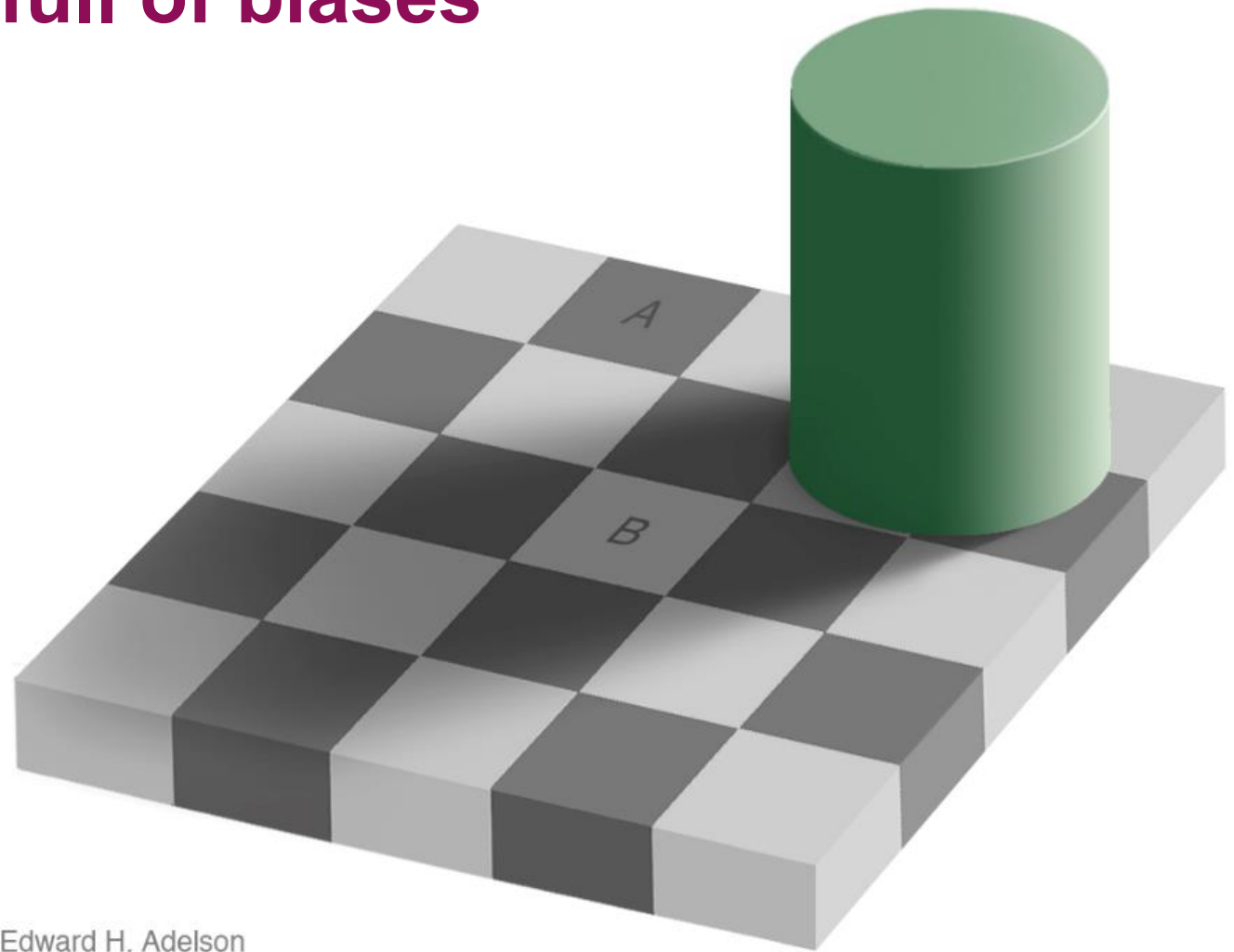
YouTube

Who and what are the main influencers of children?

A teacher's contribution

- We have all grown up within a gendered society
- There are stereotypical roles for males and females and we have integrated these stereotypes into our understanding of the world.
- We all have biases (conscious and unconscious) that contribute to these stereotypes

We are all full of biases



Edward H. Adelson

A father and his son are in an accident. Badly injured they are rushed to the hospital. In the operating room, the surgeon looks at the boy and says, "I can't operate on this boy, he is my son."

How is this possible?

Surgeon = Male

Automatic mental associations
may have caused you to think
“male” on reading “surgeon”

What other careers-related stereotypes are you aware of?

In schools

- On average, teachers give boys more time than girls to answer questions in class.
- Boys are more likely than girls to raise their hands in class than girls.
- White males tend to get more attention from the teacher than other groups.
- When teachers are asked to remember their ‘best’ students, the answers are overwhelmingly males.

Sadker & Sadker, 2009

Male and female teachers both interact more with boys than girls, but the difference is greater for male teachers.

All interactions	Lessons with male teacher (%)	Lessons with female teacher (%)	Science interactions	Lessons with male teacher (%)	Lessons with female teacher (%)
Whole class	67	64	Whole class	51	43
Teacher to boys	21	21	Teacher to boys	32	32
Teacher to girls	12	15	Teacher to girls	18	25

Eliasson et al., 2016

Bias in Primary Education

The pattern of classroom interactions can unintentionally reinforce messages of expected and accepted behaviours.

Many fictional texts uphold traditional stereotypes.

Teaching materials and displays can reinforce gender stereotypes.

Ideas about what children are 'good' at, and subsequently what paths are open to them are embedded at an early age.

There is a surprising amount of sexist language and behaviour used in society and this could be picked up and imitated by young children.

Language in the classroom

“He writes like a typical boy.”

“What a pretty dress you’re wearing today Sophie.”

“I need two strong lads to help me carry these books.”


“OK guys, pens down.”

“You’re being very kind there Emily.”

“Don’t be such a girl Josh.”

What can we do about this?

- Be consciously aware of the issue
- Think carefully about the messages in lesson materials, literature, displays, etc.
- Think about our choice of language and the underlying messages it sends
- Be aware of choices you make regarding classroom management



**IMPROVING
GENDER
BALANCE
SCOTLAND**

An action guide for
primary schools

Children receive and absorb gender stereotyped messages about what they can and cannot do as a girl or as a boy from a very early age. For example, toy manufacturers often market more aggressive toys to boys and more passive toys to girls, construction activities to boys and creative ones to girls. In early reading books, female characters are often portrayed as performing more domestic tasks while male characters are largely under-represented as parents. These stereotypes are unhelpful both for boys and for girls.

When children begin primary school at the age of four or five, many will already be self-selecting activities, books, toys and friends influenced by gender-based beliefs. Many children will have expectations that girls are inherently quiet, compliant and nurturing, while boys are bold, curious, confident and should avoid anything traditionally considered feminine. At around five to six years old, children tend to identify strongly with expectations of their own gender and are likely to actively conform to stereotypes.

These stereotypical views shape their attitudes to relationships and participation in the world of work, and affect wellbeing. A narrowing of opportunities at this age too often evolves into a narrowing of opportunity later in life. For example, by secondary school, boys tend to lag behind girls in literacy and language skills while girls are under-represented in areas such as computing, engineering and physics.

Although the problem is multifaceted, teachers have an important role to play in challenging these views before they become too ingrained. Learners need to be exposed to multiple and ongoing opportunities to explore and learn about gender diversity and how they affect choices. It is crucial that children are given the opportunity and encouragement to access all areas of the curriculum from an early age so they have equal opportunities in the future, irrespective of gender. This action guide provides some ideas for where to start.

A Tackling your own unconscious bias – self-reflective actions

We all have unconscious biases and it is important to be aware of these in our interactions with children. They invariably affect the way we interact differently with girls and boys, the assumptions we make and the advice and directions we give them. Although admitting and dealing with your own biases can be challenging, it is essential to identify, reflect on, and discuss them openly with colleagues.

Having an unconscious gender bias does not automatically make a person sexist – everyone has biases as a result of years of exposure to gendered patterns. Once you become aware of our biases you can do something about them. By shifting thinking gradually over time, a person can adopt new habits and perspectives to help counteract any bias below.



Are you aware of your own unconscious biases? Take the [New and Implicit Association test](#) to discover your unconscious preferences here: [GO TO THE TEST](#)

Summary

- Gendered careers choices can be explained due to societal (nurture) influences
- Schools and teachers are an example of a societal influence
- We are all biased in some form e.g. stereotypes
- These unconscious biases affect our teaching practice ...
- ... which may influence the career choices made by children
- There are strategies/structures we can use to lessen the effect of bias

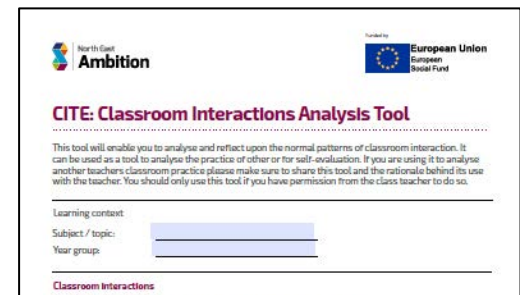
The CITE Tools

- Created to help you deepen your understanding of bias in primary education and careers further during your placements.
- Linked to Teaching Standards in order to support your placement.

Tool 1: Classroom Interactions Analysis Tool

Tool 2: Literature Analysis Tool

Tool 3: Display Content Analysis Tool

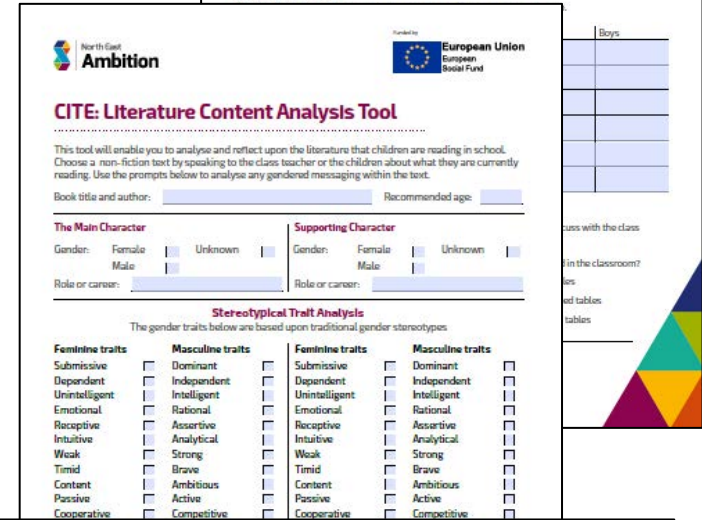


CITE: Classroom Interactions Analysis Tool

This tool will enable you to analyse and reflect upon the normal patterns of classroom interaction. It can be used as a tool to analyse the practice of other or for self-evaluation. If you are using it to analyse another teachers classroom practice please make sure to share this tool and the rationale behind its use with the teacher. You should only use this tool if you have permission from the class teacher to do so.

Learning context:
 Subject / topic: _____
 Year group: _____

Classroom Interactions



CITE: Literature Content Analysis Tool

This tool will enable you to analyse and reflect upon the literature that children are reading in school. Choose a non-fiction text by speaking to the class teacher or the children about what they are currently reading. Use the prompts below to analyse any gendered messaging within the text.

Book title and author: _____ Recommended age: _____

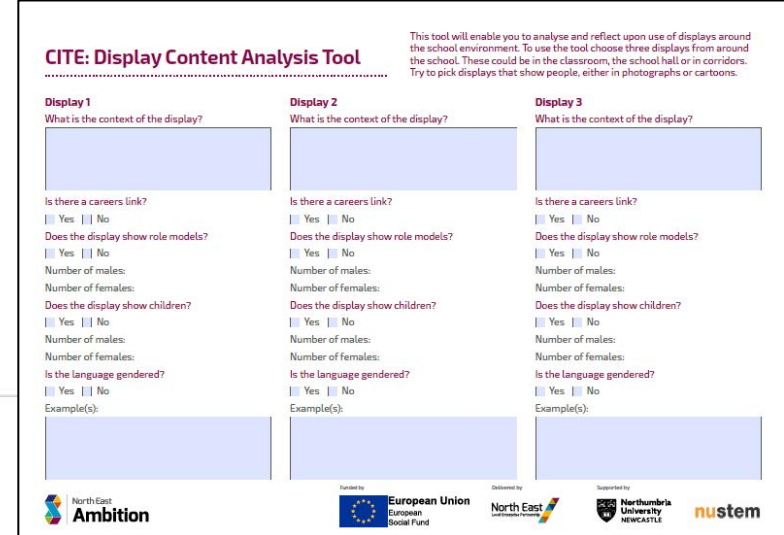
The Main Character
 Gender: Female Unknown
 Male

Supporting Character
 Gender: Female Unknown
 Male

Role or career: _____

Stereotypical Trait Analysis
 The gender traits below are based upon traditional gender stereotypes

Feminine traits	Masculine traits	Feminine traits	Masculine traits
Submissive <input type="checkbox"/>	Dominant <input type="checkbox"/>	Submissive <input type="checkbox"/>	Dominant <input type="checkbox"/>
Dependent <input type="checkbox"/>	Independent <input type="checkbox"/>	Dependent <input type="checkbox"/>	Independent <input type="checkbox"/>
Unintelligent <input type="checkbox"/>	Intelligent <input type="checkbox"/>	Unintelligent <input type="checkbox"/>	Intelligent <input type="checkbox"/>
Emotional <input type="checkbox"/>	Rational <input type="checkbox"/>	Emotional <input type="checkbox"/>	Rational <input type="checkbox"/>
Receptive <input type="checkbox"/>	Assertive <input type="checkbox"/>	Receptive <input type="checkbox"/>	Assertive <input type="checkbox"/>
Intuitive <input type="checkbox"/>	Analytical <input type="checkbox"/>	Intuitive <input type="checkbox"/>	Analytical <input type="checkbox"/>
Weak <input type="checkbox"/>	Strong <input type="checkbox"/>	Weak <input type="checkbox"/>	Strong <input type="checkbox"/>
Timid <input type="checkbox"/>	Brave <input type="checkbox"/>	Timid <input type="checkbox"/>	Brave <input type="checkbox"/>
Content <input type="checkbox"/>	Ambitious <input type="checkbox"/>	Content <input type="checkbox"/>	Ambitious <input type="checkbox"/>
Passive <input type="checkbox"/>	Active <input type="checkbox"/>	Passive <input type="checkbox"/>	Active <input type="checkbox"/>
Cooperative <input type="checkbox"/>	Competitive <input type="checkbox"/>	Cooperative <input type="checkbox"/>	Competitive <input type="checkbox"/>



CITE: Display Content Analysis Tool

This tool will enable you to analyse and reflect upon use of displays around the school environment. To use the tool choose three displays from around the school. These could be in the classroom, the school hall or in corridors. Try to pick displays that show people, either in photographs or cartoons.

Display 1	Display 2	Display 3
What is the context of the display? _____	What is the context of the display? _____	What is the context of the display? _____
Is there a careers link? <input type="checkbox"/> Yes <input type="checkbox"/> No	Is there a careers link? <input type="checkbox"/> Yes <input type="checkbox"/> No	Is there a careers link? <input type="checkbox"/> Yes <input type="checkbox"/> No
Does the display show role models? <input type="checkbox"/> Yes <input type="checkbox"/> No	Does the display show role models? <input type="checkbox"/> Yes <input type="checkbox"/> No	Does the display show role models? <input type="checkbox"/> Yes <input type="checkbox"/> No
Number of males: Number of females:	Number of males: Number of females:	Number of males: Number of females:
Does the display show children? <input type="checkbox"/> Yes <input type="checkbox"/> No	Does the display show children? <input type="checkbox"/> Yes <input type="checkbox"/> No	Does the display show children? <input type="checkbox"/> Yes <input type="checkbox"/> No
Number of males: Number of females:	Number of males: Number of females:	Number of males: Number of females:
Is the language gendered? <input type="checkbox"/> Yes <input type="checkbox"/> No	Is the language gendered? <input type="checkbox"/> Yes <input type="checkbox"/> No	Is the language gendered? <input type="checkbox"/> Yes <input type="checkbox"/> No
Example(s): _____	Example(s): _____	Example(s): _____

Activity Reflection

- Analysis

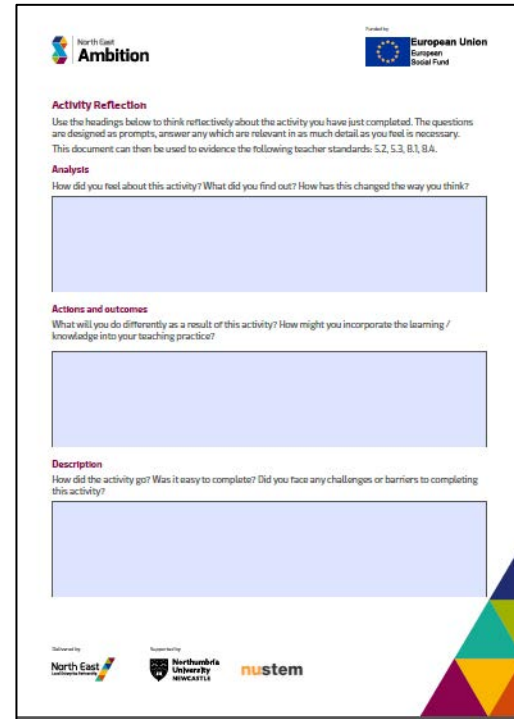
How did you feel about this activity? What did you find out? How has this changed the way you think?

- Actions and outcomes

What will you do differently as a result of this activity? How might you incorporate the learning / knowledge into your teaching practice?

- Description

How did the activity go? Was it easy to complete? Did you face any challenges or barriers to completing this activity?



The form is titled 'Activity Reflection' and is supported by the European Union European Social Fund. It contains three sections: 'Analysis', 'Actions and outcomes', and 'Description'. Each section has a light blue rectangular box for writing. The 'Analysis' section asks: 'How did you feel about this activity? What did you find out? How has this changed the way you think?'. The 'Actions and outcomes' section asks: 'What will you do differently as a result of this activity? How might you incorporate the learning / knowledge into your teaching practice?'. The 'Description' section asks: 'How did the activity go? Was it easy to complete? Did you face any challenges or barriers to completing this activity?'. Logos for North East Ambition, Northumbria University Newcastle, and nustem are at the bottom.

Next steps

- Planning for using the tools.
 - Which tool?
 - When?
- CPD #2

Contact us

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ENTERPRISE
COMPANY

References

Eliasson, N., Sorensen, H., Karlson, K.G., 2016. *Teacher-student interaction in contemporary science classrooms: is participation still a question of gender?* International Journal of Science Education, 38:10, 1655-1672.

Sadker, M. and Sadker, D., 2010. *Failing at fairness: How America's schools cheat girls.* Simon and Schuster.

Further reading

- Banaji, M.R. and Greenwald, A.G., 2016. *Blindspot: Hidden biases of good people*. Bantam.
- Dweck, C., 2012 Mindset. ISBN: 978-1780332000
- Fine, C., 2010. *Delusions of gender: How our minds, society, and neurosexism create difference*. WW Norton & Company.
- Maltby, J., Day, L., Macaskill, A., (2017) Personality, Individual Differences and Intelligence. 4th Ed. ISBN: 978-1292090511. Especially Chapters 7 and 8.
- Gina Rippon (2020) 'The Gendered Brain', ISBN: 978-1784706814
- https://www.iop.org/education/teacher/support/girls_physics/resources/file_72045.pdf
- https://www.iop.org/education/teacher/support/girls_physics/resources/file_69612.pdf
- <https://www.psychologistworld.com/personality/five-factor-model-big-five-personality>
- <https://www.nytimes.com/2018/12/03/opinion/male-female-brains-mosaic.html>