



Careers in Initial Teacher Education

Training #2 – Careers in Primary

February 2020

Delivered by

North East
Local Enterprise Partnership



Northumbria
University
NEWCASTLE

nustem

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THE **CAREERS &**
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COMPANY

Introductions

- Dr Carol Davenport – Director, NUSTEM
- Thank you to Holystone Primary for hosting

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What is CITE?

- Feasibility study
- Can training on ‘how to embed careers related learning in classroom teaching’ be incorporated into Initial Teacher Education?
- Ideally would be a three year programme working with BEd students each year.
- At the end of the year will have a ‘training package’ that will be suitable either for ITE and/or for qualified teachers.

Timeline of Activity

DECEMBER

CPD 1
Careers Education and
Unconscious Bias

FEBRUARY

CPD 2
Primary Careers Tool

MAY

CPD 3
STEM Attributes and STEM
Person of the Week

JULY

Celebration and
Evaluation Event

ITE Students Feedback and
Outcomes

Follow up Activity
Gender Content Analysis of Book
Classroom Interactions Analysis
Reflective Activity
Confidence in challenging biases

Follow up Activity
Use the Primary Careers Tool in Classroom
Reflective Activity
Confidence using resources questions

Follow up Activity
Use STEM Person of the Week in the
Classroom
Reflective Activity
Confidence using resources question

Feedback
Guided Reflexive Conversations with ITE
students and mentors

Unconscious Bias

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?

Unconscious Bias: a 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

What can we do about this?

- Be consciously aware of the problem
- 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 we make regarding classroom management

Tool 1: Classroom Interactions Analysis Tool

Tool 2: Literature Analysis Tool

Tool 3: Display Content Analysis Tool

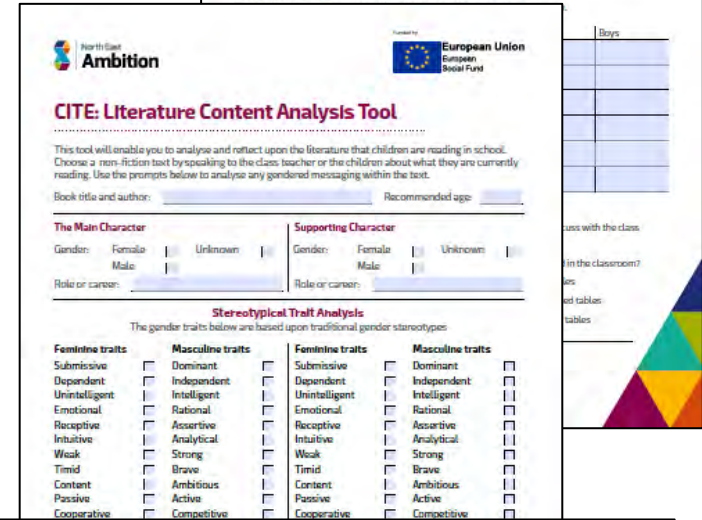


CITE: Classroom Interactions Analysis Tool

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.

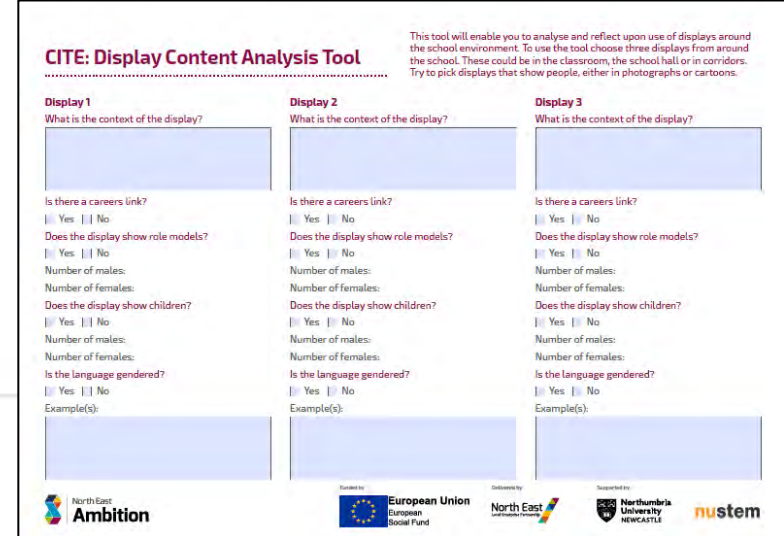
Book title and author: _____ Recommended age: _____

The Main Character		Supporting Character	
Gender: Female <input type="checkbox"/>	Unknown <input type="checkbox"/>	Gender: Female <input type="checkbox"/>	Unknown <input type="checkbox"/>
Male <input type="checkbox"/>		Male <input type="checkbox"/>	
Role or career: _____		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): _____

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What did you aspire to be when you were young?

Think back to your childhood and when you first thought about what you wanted to be when you grew up.

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What do children aspire to be?

NUSTEM collected careers-related aspirations from children in Years 3-6 from 4 primary schools in the North East.

300 children answered the question:

“What would you like to be when you grow up?”

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Footballer	Armed Forces	Teacher	Vet
Hair / Beauty	Doctor	Youtuber / Streamer	Firefighter
Scientist	Artist	Youtuber / Streamer	Driver
Sport (other)	Police	Police	Construction
Teacher	Musician / Singer	Sport (other)	Nurse

Sort the careers aspirations into three groups:
Boys', Girls' and Shared aspirations

Boys' Aspirations

Shared Aspirations

Girls' Aspirations

Boys' Aspirations

Footballer

Armed Forces

Scientist

Firefighter

Driver

Construction

Shared Aspirations

Teacher

Youtuber / Streamer

Police

Sport (other)

Girls' Aspirations

Vet

Doctor

Nurse

Artist

Hair / Beauty

Musician / Singer

Predicting gendered aspirations

Now take your lists and try to predict the ranking of the top ten careers aspirations for boys and girls.

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Local Enterprise Partnership

The logo for the North East Local Enterprise Partnership, featuring a stylized 'A' made of colorful geometric shapes (blue, green, yellow, red).The logo for Northumbria University Newcastle, featuring a shield with a cross and four smaller shields.

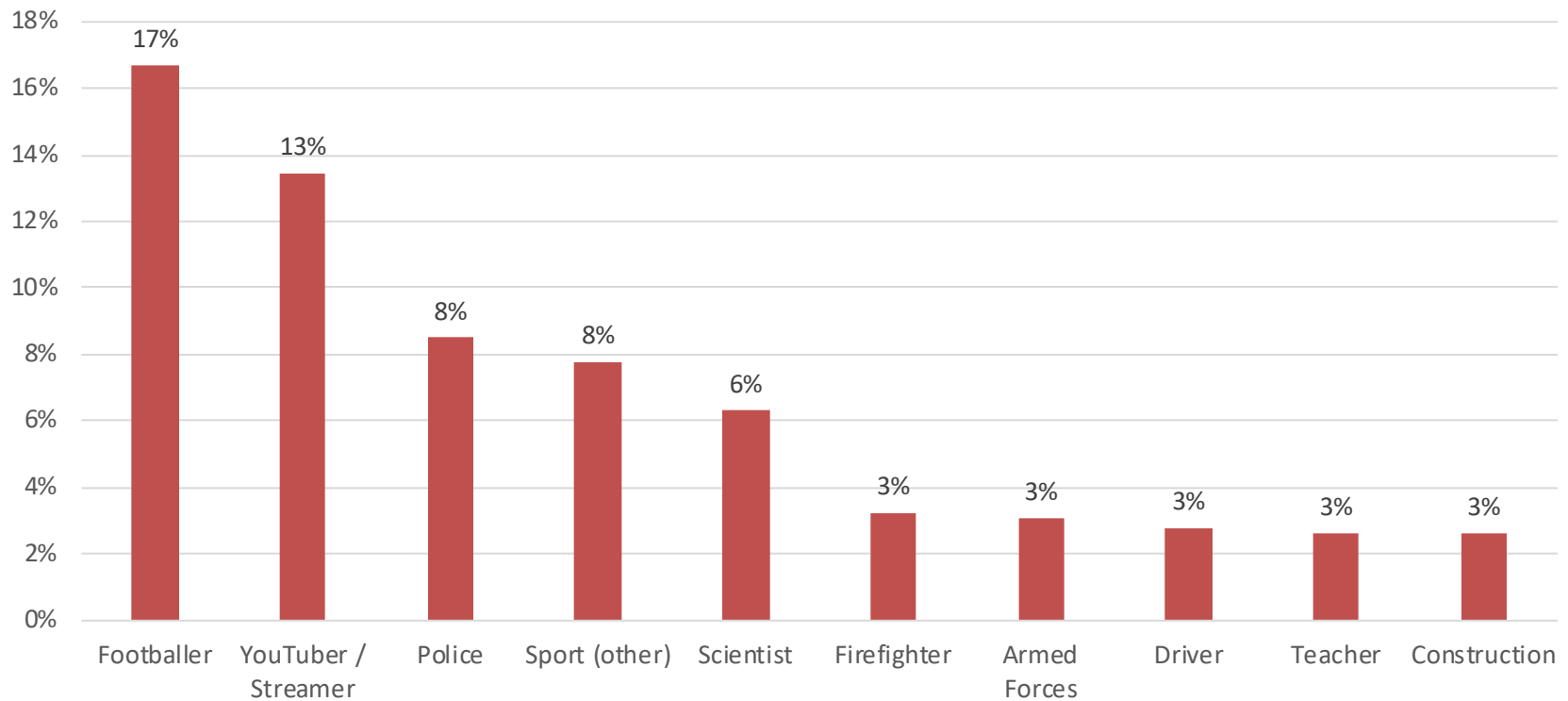
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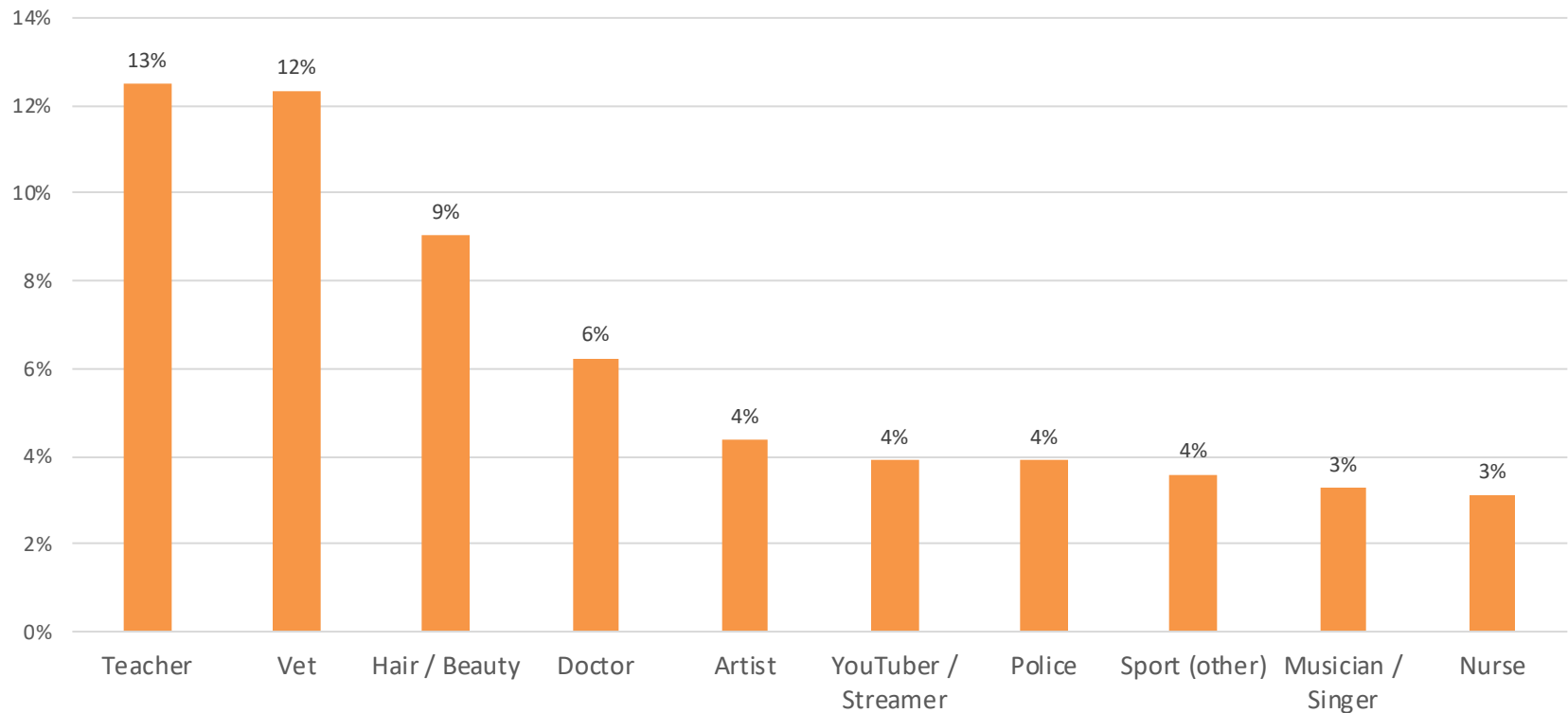
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Top ten careers aspirations for boys aged 8-11

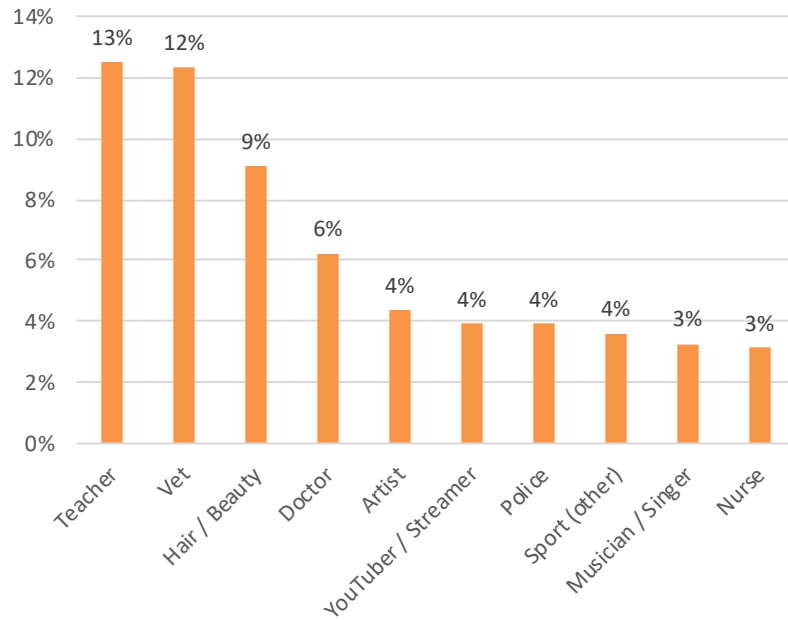


The top ten careers aspirations for girls aged 8-11

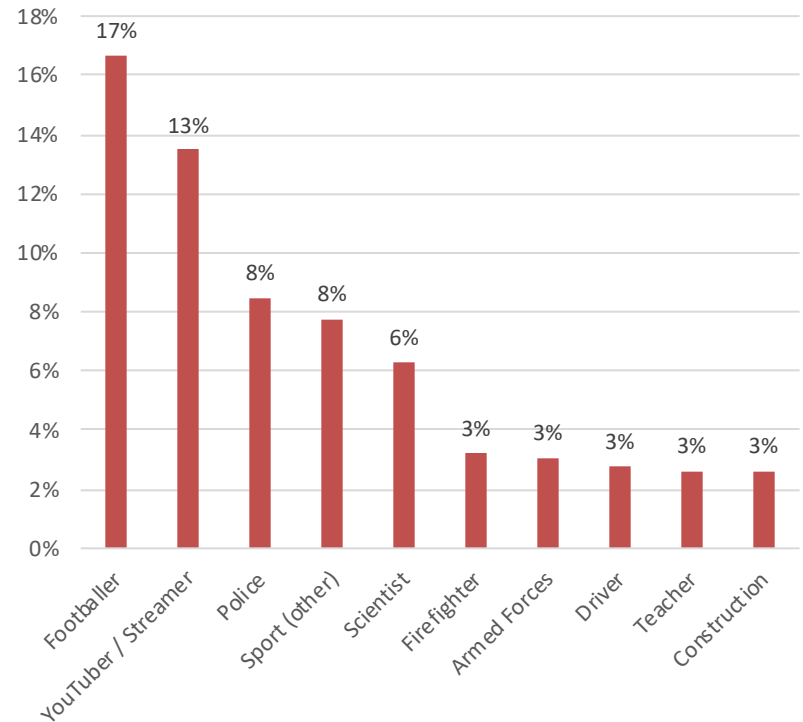


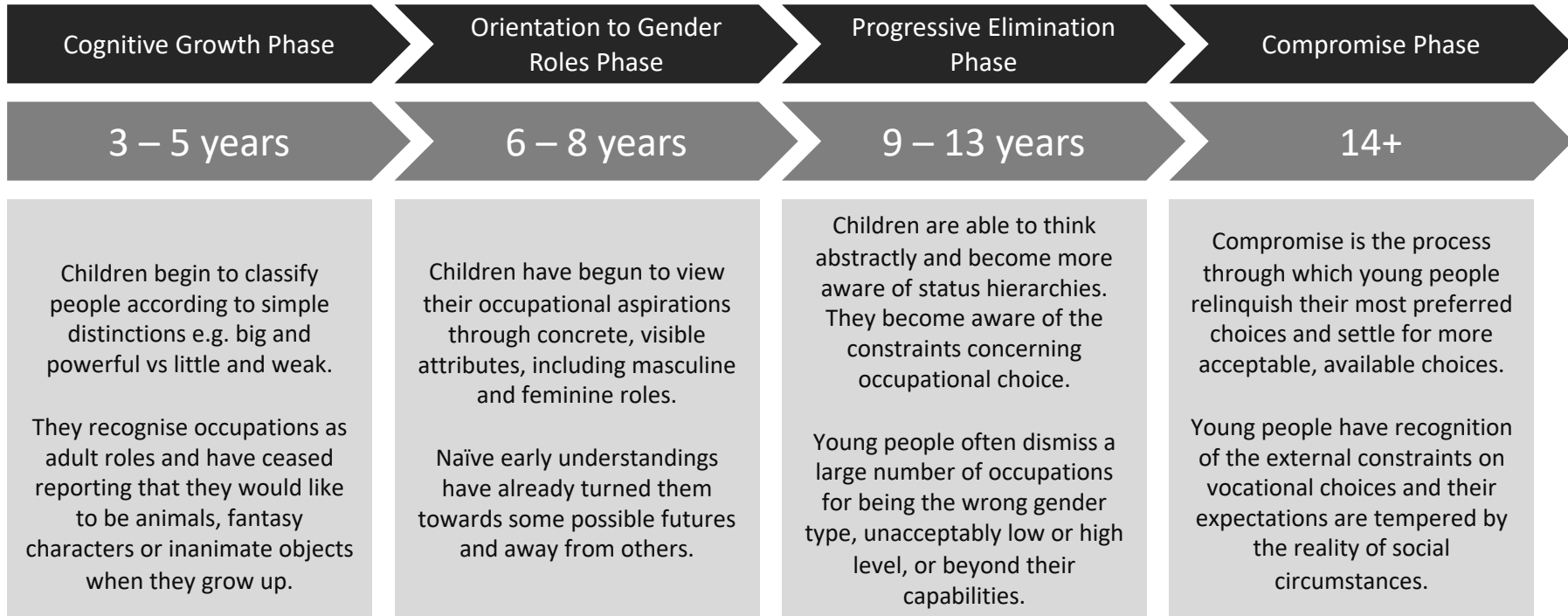
Rank	Aspiration (all)	%	Aspiration (male)	%	Aspiration (female)	%
1	Footballer	9%	Footballer	17%	Teacher	13%
2	YouTuber / Streamer	9%	YouTuber / Streamer	13%	Vet	12%
3	Teacher	7%	Police	8%	Hair / Beauty	9%
4	Vet	7%	Sport (other)	8%	Doctor	6%
5	Police	6%	Scientist	6%	Artist	4%
6	Sport (other)	6%	Firefighter	3%	YouTuber / Streamer	4%
7	Hair / Beauty	5%	Armed Forces	3%	Police	4%
8	Scientist	4%	Driver	3%	Sport (other)	4%
9	Doctor	4%	Teacher	3%	Musician / Singer	3%
10	Artist	3%	Construction	3%	Nurse	3%

The top ten careers aspirations for girls aged 8-11



Top ten careers aspirations for boys aged 8-11





From Gutman and Akerman (2008) Determinants of Aspirations

The influences of aspiration

Children gave a variety of reasons for choosing aspirations.

The most popular were:

- enjoying an aspect of it (35%)
- help others (21%)
- achieving a goal (15%)
- job looks good (14%)
- success in it (10%)
- inspired by (4%)

Findings

- Careers aspirations were generally limited to a small range of options
 - 81 different ‘types’ of role
 - Top 20 jobs accounted for 75% of those roles.
- Careers aspirations are gendered – aspirations fall into gender stereotypical roles.
- Boys gave a broader range of STEM aspirations than girls (28 vs 17)

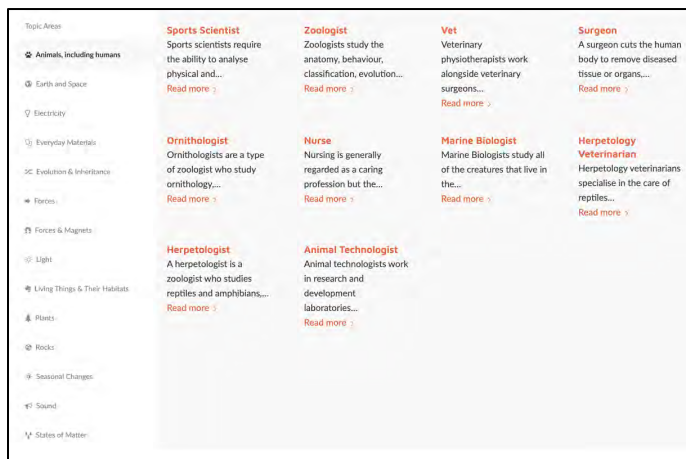
Careers Education in Primary Schools

“This is not about providing “careers advice” in primary schools but breaking down barriers, broadening horizons and raising aspirations, giving children a wide range of experiences of the world including the world of work. It is about opening doors, showing children the vast range of possibilities open to them and helping to keep their options open for as long as possible.”

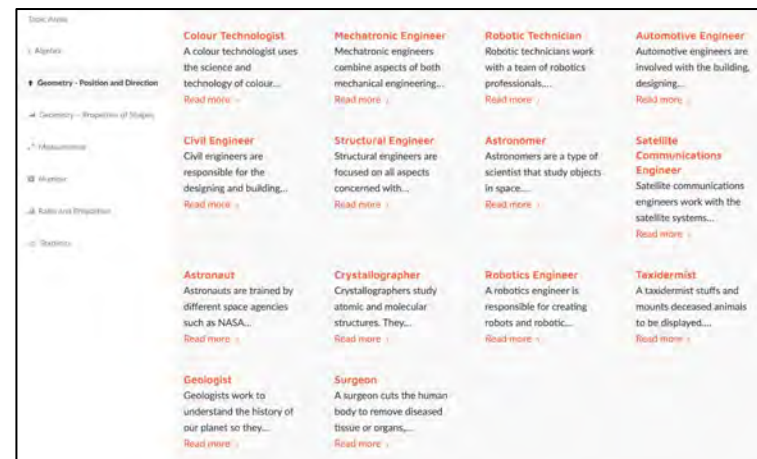
“We need to stop children ruling out options because they believe, implicitly or explicitly, that their future career choices are limited by their gender, ethnicity or socio-economic background.”

Education and Employers, 2020

Embedding Careers into Primary Teaching: The Primary Careers Tool




<https://nustem.uk/primarycareers>



<https://nustem.uk/primarycareersmaths>


Topic Areas

 **Animals, including humans**


 Earth and Space

 Electricity


 Everyday Materials

 Evolution & Inheritance

 Forces

 Forces & Magnets

 Light

 Living Things & Their Habitats

 Plants

 Rocks

 Seasonal Changes

 Sound

 States of Matter

Sports Scientist

Sports scientists require the ability to analyse physical and...

[Read more >](#)

Zoologist

Zoologists study the anatomy, behaviour, classification, evolution...

[Read more >](#)

Vet

Veterinary physiotherapists work alongside veterinary surgeons...

[Read more >](#)

Surgeon

A surgeon cuts the human body to remove diseased tissue or organs,...

[Read more >](#)

Ornithologist

Ornithologists are a type of zoologist who study ornithology,...

[Read more >](#)

Nurse

Nursing is generally regarded as a caring profession but the...

[Read more >](#)

Marine Biologist

Marine Biologists study all of the creatures that live in the...

[Read more >](#)

Herpetology

Veterinarian

Herpetology veterinarians specialise in the care of reptiles...

[Read more >](#)

Herpetologist

A herpetologist is a zoologist who studies reptiles and amphibians,...

[Read more >](#)

Animal Technologist

Animal technologists work in research and development laboratories...

[Read more >](#)

A typical careers page

Structural Engineer

0 Comments / Categories: committed, observant, tenacious; Primary, Year 1, Year 2, Year 3, Year 4, Year 5, Year 6; Maths (Primary), Science (Primary); Forces, Maths - Algebra, Maths - Geometry - Position and Direction, Maths - Geometry - Properties of Shapes, Maths - Number; Addition and subtraction, Algebra, Forces, Fractions; Geometry, Multiplication and division, Number, Number and place value, Position and direction, Primary, Properties of shapes, Science;

Upper Key Stage 2 level careers description

Structural engineers are focused on all aspects concerned with buildings and built structures, such as houses, hospitals, office blocks, bridges, oil rigs, ships and aircraft. They work to understand, predict and measure aspects such as the strength, stability and how rigid buildings are. They also work to develop new designs or modify the designs of buildings or structures which are to be constructed and are responsible for choosing the appropriate materials, such as concrete, steel, timber and masonry, to meet design specification.

Three attributes

Attributes: observant, committed, tenacious

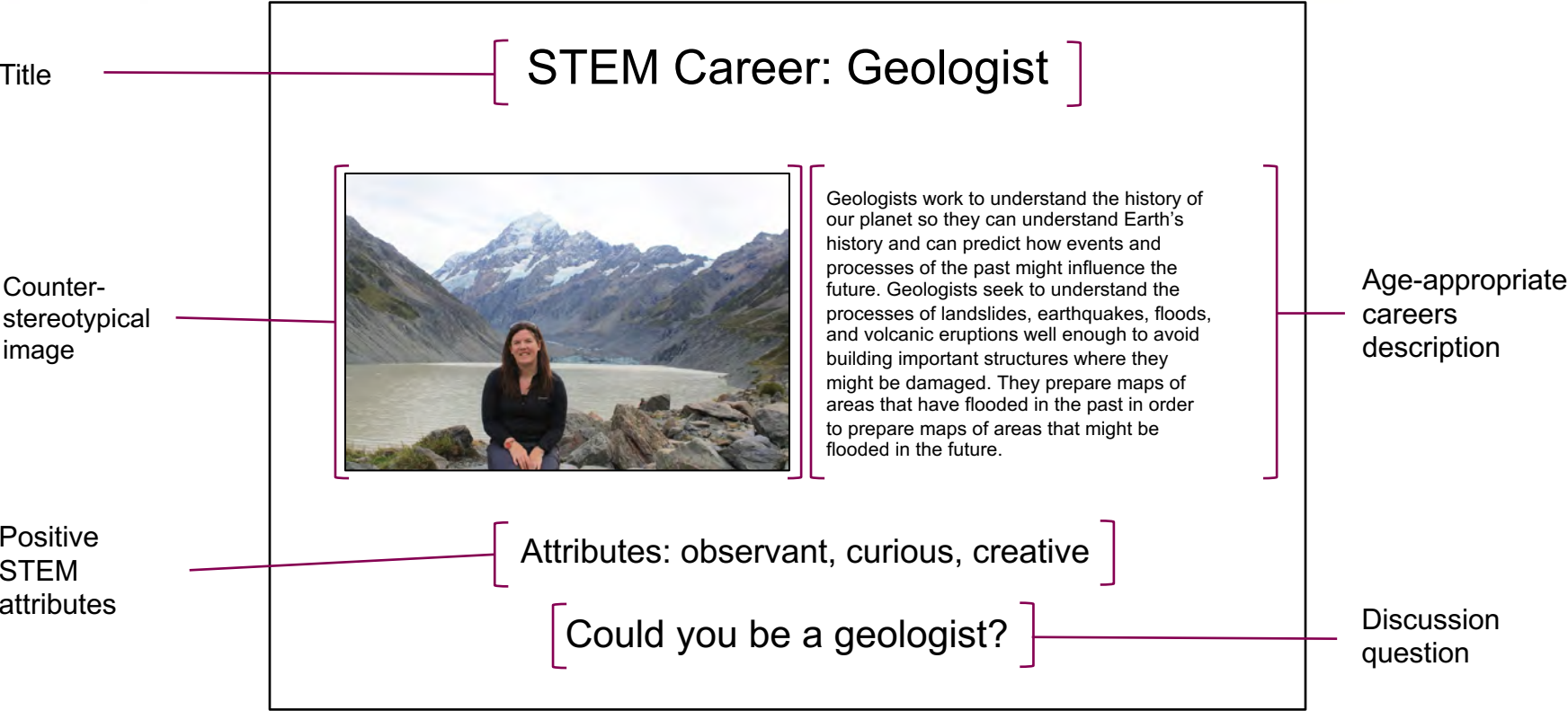
Image search link

- [Google Image Search link](#)

Image usage and e-safety

- Each career contains a link to an image search
- The link is for a counter-stereotypical image search
e.g “structural engineer AND female”, “nurse AND male”.
- Always follow good e-safety practices: you should never do a live image search in front of a class as you have no control over the results that could be displayed

Creating a presentation slide



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The benefits of contextualisation

“The term contextualisation describes the process of drawing specific connections between content knowledge being taught and an authentic environment in which the content can be relevantly applied or illustrated.”

“Contextualised learning helps students to develop deeper understanding that positions them to better comprehend abstract ideas, and see how they manifest in actual contexts.”

Giamellaro, 2014

Planning for use

- Think about a lesson you have seen or taught recently, how would a careers context have fitted?
- Think carefully about your teaching over the next month, do you know what topics you are teaching in maths or science? Find careers that would fit with your teaching plan

Next steps

- We'll email electronic versions of the tools and this presentation
- Use the Primary Careers Tool in at least one of your science or maths lessons during the next four weeks and complete the analysis form by **Friday 27th March**.
- Email a copy of your completed analysis to nustem@northumbria.ac.uk
- We'll be in touch early in March to confirm the dates of the next CPD training.

Resources

- Science Primary Careers Tool - <https://nustem.uk/primarycareers/>
- Maths Primary Careers Tool - <https://nustem.uk/primarycareersmaths/>
- Template Presentation - <https://nustem.uk/wp/wp-content/uploads/2020/02/CITE-PCT-Presentation-Template.pptx>
- Analysis Tool - <https://nustem.uk/wp/wp-content/uploads/2020/02/Primary-Careers-Tool-Analysis-Tool.pdf>

Contact us

nustem@northumbria.ac.uk

