

The SEEN Curriculum Content

During the 2021 pilot project with Oxford University, two Expert Advisory Groups from the academic and education fields were established to help guide the development of the curriculum materials. Please see below for the full list of experts within our advisory groups.

The curriculum content is currently delivered through 3 core science lessons. The curriculum includes the following content (*extension content is written in italics*):

1. The brain is made up of billions of interconnected neurons.
2. Genetics and environment both have a role to play in brain development; *epigenetics means that even the genes aren't fixed.*
3. New experiences can lead to new neural circuits being formed.
4. Circuits can be strengthened and weakened by individual experiences.
5. The ability of the brain to change throughout a person's life is called neuroplasticity.
6. The brain is particularly plastic, and therefore sensitive to experiences, in the early years (0-5) and adolescence (11-25).
7. Essential neural pathways are developed in the uterus and throughout the early years.
8. Babies are able to perceive and discriminate environmental stimuli in the uterus and throughout the early years.
9. Caregivers can improve long-term health outcomes by supporting brain development in the early years through:
 - Responsive, reciprocal caregiver-child interactions (Serve and Return)
 - Baby talk ('Parentese' or child directed speech)
 - Playful learning
 - *Developing executive function skills*
10. The early years are a foundation for long term physical and mental
11. What happens in the early years is not deterministic.
12. Resilience is dependent on supportive relationships and developing skills.

Academic Expert Advisory Group	Education Expert Advisory Group.
Prof Peter Fonagy – Head of Psychology and Language Sciences, UCL; Chief Executive of the Anna Freud National Centre for Children and Families, London.	Thandiwe Banda – Faculty Leader for Science, The Beacon School
Laura Henry-Allain MBE – Leading, award-winning expert in Early Years education and children's media.	John Blake - Head of Public Affairs and Engagement, Ark
Prof Eamon McCrory – Developmental Neuroscience and Psychopathology, UCL; Co-Director of the UK Trauma Council.	Adam Boxer – Head of Science, The Totteridge Academy. Author of 'Teaching Secondary Science: A Complete Guide' and CogSciSci member.
Dr Michelle Fernandes – NIHR Biomedical Research Centre Career Track Fellow in Paediatrics, University of Southampton and Honorary Research Fellow, Nuffield Department of Women's & Reproductive Health, University of Oxford.	Julian Clarke – Head of Curriculum – Science, AQA
Dr David Whitebread – Developmental Psychologist and Early Childhood Education Expert, University of Cambridge. Sadly, David died in April 2021; we are honoured that he was part of this project and grateful for his expertise and invaluable, thoughtful contributions.	Dame Kate Dethridge - Regional Schools Commissioner, North-West London and South Central England, Department for Education
Prof Elizabeth Meins – Professor of Developmental Psychology, University of York.	Maggie Farrar – Lead Associate, Schools Partnership Programme
Prof Alan Stein – Consultant Child and Adolescent Psychiatrist, University of Oxford.	Ben Littlewood – Director of Science, United Learning
	Dr Oliver Wimborne – Head of Curriculum Centre, Future Academies



SEEN
Secondary
Education
around
Early
Neurodevelopment



Kindred²