

Stop and Think: Learning Counterintuitive Concepts

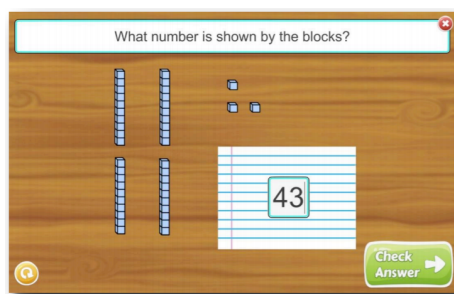
This study is a collaboration between the Education Endowment Foundation (EEF), the Behavioural Insights Team (BIT), the National Centre for Social Research (NatCen) and the Centre for Educational Neuroscience at Birkbeck, University of London.

Summary

- We invite state primary schools to take part in a project testing a computer-assisted learning programme, *Stop and Think*, which teaches children counterintuitive concepts in maths & science.
- The programme has shown positive results in a previous study: improvements in science (+2 months of progress), and in maths (+1 month of progress).
- Stop and Think consists of 30 sessions lasting 15 minutes each over 10 weeks and can be easily integrated into regular maths and science teaching.
- This study will run from Autumn 2022 to Summer 2023 and will involve years 3 and 5.
- All schools in the study will receive the software, training for teachers on how to use it and technical assistance for free.

What?

- A software programme developed by neuroscientists at Birkbeck University which uses quizzes and games to help pupils learn counterintuitive concepts in science and maths. For example, making the mistake of thinking that -5 is larger than -1 .
- 30 sessions lasting 15 minutes each over the course of 10 weeks (three times a week). Sessions should be integrated into the start of regular maths and science lessons. Participating schools will need a projector/interactive whiteboard.
- In a previous EEF study, pupils who received the programme had higher scores in science (+2 months progress) and in maths (+ 1 months progress).



Screenshots from the programme.

How?

In this study, we will test the impact of Stop and Think on maths and science attainment in years 3 and 5 using a randomised controlled trial. This means that either year 3 or year 5 at your school will be randomly selected to receive the programme. The other year group will be taught as normal. Randomised controlled trials are considered the strongest type of evaluation to work out if a programme is having an impact.

When?

September 2022 to July 2023. The number of school places is limited so **sign up today!**

What will it cost my school?

Participation is **free**. All costs will be covered by the research team.

How much time will be required?

Teachers should use the software in maths and science lessons 3 times a week (15 mins per lesson) over a 10 week period from January 2023 to May 2023. BIT will provide teacher training on how to use the software from October 2022 to January 2023.

How will the programme be evaluated?

Pupils taking part in the study will do a short, age-appropriate assessment (in science and maths) at the end of the programme (Summer 2023). External researchers will visit schools to deliver these assessments. We will also gather feedback from teachers (via a survey and online/telephone interviews), and from students (via in-person focus groups after lesson observations) - these will only take place in a small number of schools.

How will data sharing work?

- Participating schools will:
 - Send an information sheet and withdrawal form to parents in September 2022.
 - Provide pupil data (e.g. pupil names, dates of birth, free school meal status), so that we can access their previous results on the National Pupil Database.
- All pupil information collected as part of the study will be treated with the strictest confidence by the project team in line with the requirements of the GDPR and the Data Protection Act 2018. You can find further information in this NatCen [Privacy Notice](#).
- Test results will be linked with information about the pupils from the National Pupil Database (NPD). At the end of the evaluation, the data will be shared with Birkbeck University, the Department for Education, FFT Education (EEF's data processor for their archive), and the Office for National Statistics. Data may also be shared in an anonymised form with other research terms in the future. All EEF trial data is stored in the EEF data archive. The archive does not contain direct identifiers like pupil name, contact details and date of birth, but does hold a Pupil Matching Reference (PMR). The PMR is used for further matching to the NPD and other administrative datasets that may be required as part of subsequent research. We will not use pupil names or school names in any report arising from this research.

Project team

This is a major study and several different organisations are collaborating on it. They are:

- **The Behavioural Insights Team ([BIT](#))** - ***The main organisation your school will have contact with during this study.*** BIT is a social purpose company that applies insights from behavioural science to improve public policy.
- **The National Centre for Social Research ([NatCen](#))** - ***Responsible for evaluating the programme and will run the assessments at the end.*** NatCen is Britain's largest and oldest social research organisation. They have delivered several school-based studies for charities and the government about what works in education, and are experts at research that involves pupils, young people and teachers.

- **Centre for Educational Neuroscience (CEN)** - *Originally developed the programme.* CEN is a research centre at two world leading universities: Birkbeck and University College London. Academics from CEN originally developed the Stop and Think programme.
- **Education Endowment Foundation (EEF)** - *Funding the study.* The EEF is an independent charity dedicated to breaking the link between family income and educational achievement. They run projects to test the effectiveness of education programmes to improve outcomes for children across the UK.

Key dates/timeline

Month	Activity
Oct 2021 - July 2022	Schools sign up to the project (first come, first served!)
Sept 2022	Schools send the information sheet to parents and submit pupil data to NatCen
Oct 2022	NatCen inform schools which year group (year 3 <u>or</u> year 5) will receive the programme
Oct 2022 - Jan 2023	Schools host a researcher for a short visit to install the software and train teachers in how to use it
Jan 2023 - May 2023	Schools use the software in maths and science lessons
	Lesson observations and focus groups with pupils, and online/telephone interviews with teachers (only in a small number of schools)
May - July 2023	Teachers complete survey
	Researchers visit school to carry out final assessments
Spring 2024	Study results published

Next steps

We have limited spots for this project. If you are interested in participating or finding out more, please email: stopandthink@bi.team. We look forward to hearing from you soon!