**These data were analysed and submitted for publication to PLOS ONE in the manuscript:**

Brookman-Byrne, A., Mareschal, D., Tolmie, A.K., Dumontheil, I. Inhibitory control and counterintuitive science and maths reasoning in adolescence.

Detail regarding the experimental tasks and participant exclusions are provided in the manuscript.

**Participant information**

PP – participant number

Year\_group – school year group from year 7 to year 10

Age\_months – age in months

Gender – girl / boy

WASI\_vocab\_raw – raw score of the Vocabulary subtest of the WASI-II

WASI\_matrix\_raw – raw score of the Matrix Reasoning subtest of the WASI-II

**Excluded participants**

GONOGO\_simple\_exclude – 1 indicates those who were excluded from Simple Go/No-Go analyses

GONOGO\_complex\_exclude – 1 indicates those who were excluded from Complex Go/No-Go analyses

STROOP\_exclude – 1 indicates those who were excluded from Stroop analyses

SCIMATH\_exclude – 1 indicates those who were excluded from Science and Maths Misconceptions analyses

All\_exclude – 1 indicates those who were excluded from any task (used for regression analyses)

**Go/No-Go inhibitory control task**

***Accuracy rate for each trial type***

GONOGO\_acc\_simple\_go

GONOGO\_acc\_simple\_nogo

GONOGO\_acc\_complex\_go

GONOGO\_acc\_complex\_nogo

***RT (ms) for each trial type***

***NB1: means RT are calculated from correctly answered trials only***

***NB2: there is no RT for No-Go trials are participants are asked not to respond***

GONOGO\_corr\_meanRT\_simple

GONOGO\_corr\_meanRT\_complex

**Numerical Stroop inhibitory control task**

***Accuracy rate for each trial type***

STROOP\_acc\_cong\_test

STROOP\_acc\_incong\_test

STROOP\_acc\_cost – difference in accuracy between congruent and incongruent trials – a high value corresponds to a greater influence of conflicting information

***RT (ms) for each trial type***

***NB: means RT are calculated from correctly answered trials only***

STROOP\_corr\_meanRT\_cong\_test

STROOP\_corr\_meanRT\_incong\_test

STROOP\_meanRT\_cost – difference in RT between incongruent and congruent trials – a high value corresponds to a greater influence of conflicting information

**Science and maths misconceptions task**

***control = cont = control trials (similar science or maths topic, with no misconception)***

***misc = misconception trials***

***true = problem presented as a true statement***

***false = problem presented as a false statement***

***means RT are calculated across all trials (both correctly and incorrectly answered)***

***Accuracy rate per trial type, combining science and maths problems***

SCIMATH\_acc\_control

SCIMATH\_acc\_misc

SCIMATH\_acc\_cont\_true

SCIMATH\_acc\_cont\_false

SCIMATH\_acc\_misc\_true

SCIMATH\_acc\_misc\_false

***RT (ms) per trial type, combining science and maths problems***

SCIMATH\_meanRT\_control

SCIMATH\_meanRT\_misc

SCIMATH\_meanRT\_cont\_true

SCIMATH\_meanRT\_cont\_false

SCIMATH\_meanRT\_misc\_true

SCIMATH\_meanRT\_misc\_false

***Science accuracy rate per trial type***

SCI\_acc\_control

SCI\_acc\_misc

SCI\_acc\_cont\_true

SCI\_acc\_cont\_false

SCI\_acc\_misc\_true

SCI\_acc\_misc\_false

***Science RT (ms) per trial type***

SCI\_meanRT\_control

SCI\_meanRT\_misc

SCI\_meanRT\_cont\_true

SCI\_meanRT\_cont\_false

SCI\_meanRT\_misc\_true

SCI\_meanRT\_misc\_false

***Maths accuracy rate per trial type***

MATH\_acc\_control

MATH\_acc\_misc

MATH\_acc\_cont\_true

MATH\_acc\_cont\_false

MATH\_acc\_misc\_true

MATH\_acc\_misc\_false

***Maths RT (ms) per trial type***

MATH\_meanRT\_control

MATH\_meanRT\_misc

MATH\_meanRT\_cont\_true

MATH\_meanRT\_cont\_false

MATH\_meanRT\_misc\_true

MATH\_meanRT\_misc\_false