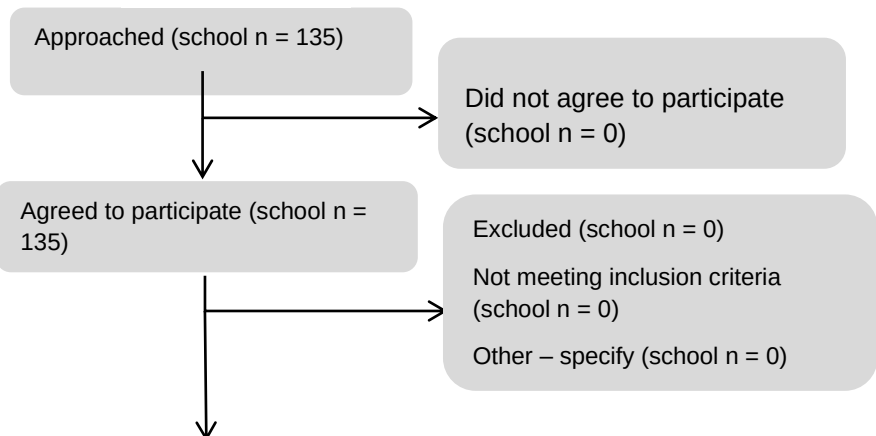
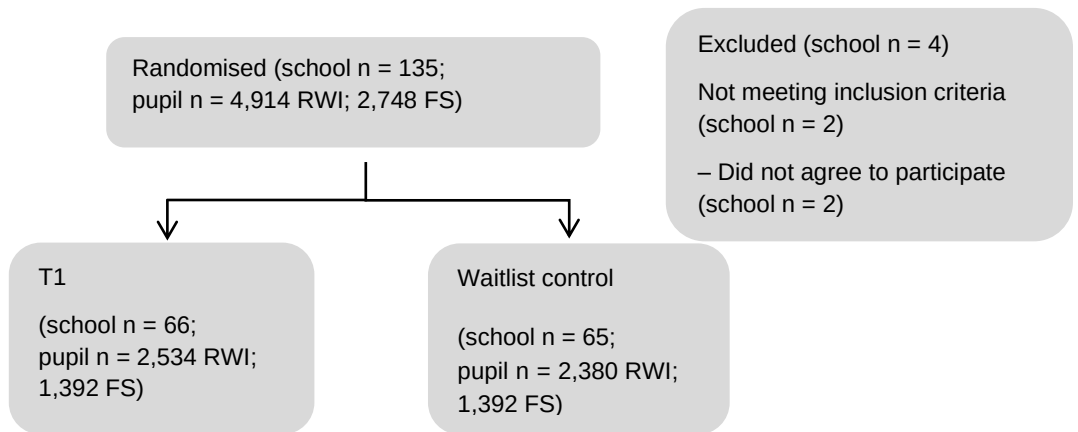


Participant flow diagram

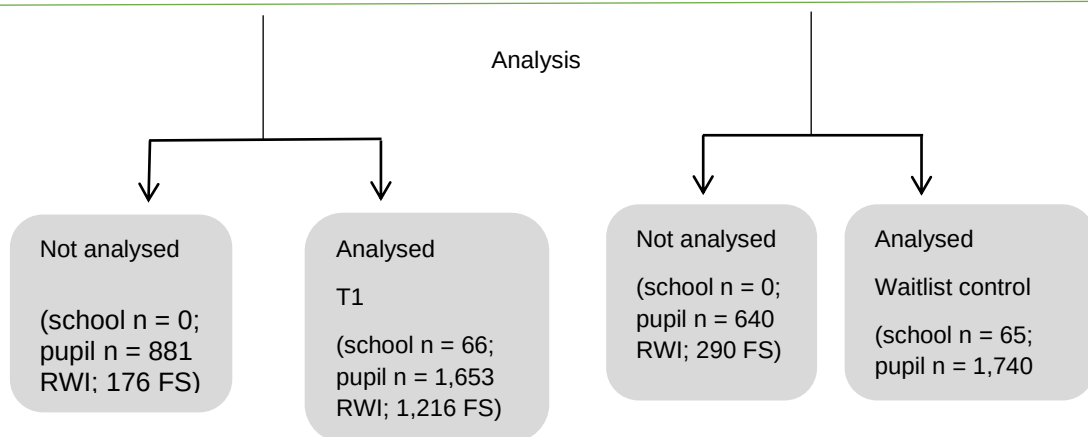
Recruitment



Allocation



Analysis



Baseline Characteristics

Table 1. Baseline school-level characteristics of groups as randomised

School-level (categorical)	National-level mean	Intervention group		Control group	
		n/N (missing)	Count (%)	n/N (missing)	Count (%)
Ofsted score					
1		<10/66 (0)	<10 (<15.15%)	14/67 (0)	14 (20.90%)
2		47/66 (0)	47 (71.21%)	43/67 (0)	43 (64.18%)
3		10/66 (0)	10 (15.15%)	<10/67 (0)	<10 (<15.15%)
4		<10/66 (0)	<10 (<15.15%)	<10/67 (0)	<10 (<15.15%)
KS1 quartile					
1		17/66 (0)	17 (25.876%)	14/67 (0)	14 (20.90%)
2		15/66 (0)	15 (22.73%)	16/67 (0)	16 (23.88%)
3		17/66 (0)	17 (25.76%)	16/67 (0)	16 (23.88%)
4		17/66 (0)	17 (25.76%)	21/67 (0)	21 (31.24%)
Urban/rural school type					
Urban		48/66 (0)	48 (72.73%)	48/67 (0)	48 (71.64%)
Rural		18/66 (0)	18 (27.27%)	19/67 (0)	19 (28.36%)
Percent of pupils FSM-eligible					
Low (less than 33%)		39/66 (0)	39 (59.09%)	43/67 (0)	43 (64.18%)
Medium (33% to 66%)		20/66 (0)	20 (30.30%)	20/67 (0)	20 (29.85%)
High (greater than 66%)		7/66 (0)	7 (10.61%)	4/67 (0)	4 (5.97%)
School-level (continuous)					

KS1 L2 reading	0.75	66/66 (0)	0.88 (0.10)	67/67 (0)	0.89 (0.08)
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Table 2. Baseline pupil-level characteristics of groups as randomised for RWI

Pupil-level (categorical)	Intervention group		Control group	
	n/N (missing)	Count (%)	n/N (missing)	Count (%)
Year group¹				
Year 1	1,732/6,703 (0)	1,732 (25.84%)	2,004/6,735 (0)	2,004(29.76%)
Year 2	2,534/6,703 (0)	2,534 (37.80%)	2,380/6,735 (0)	2,380 (35.34%)
Year 3	2,437/6,703 (0)	2,437 (36.36%)	2,351/6,735 (0)	2,351(34.91%)
Gender				
Female	2,473/6,703 (1,732)	2,473 (36.89%)	2,138/6,735 (2,061)	2,138 (31.74%)
Male	2,498/6,703 (1,732)	2,498 (37.27%)	2,536/6,735 (2,061)	2,536 (37.65%)
Ethnicity				
White British	3,310/6,703 (2,058)	3,310 (49.38%)	3,672/6,735 (2,604)	3,672 (54.52%)
Other White	339/6,703 (2,058)	339 (5.06%)	189/6,735 (2,604)	189 (2.81%)
Mixed	284/6,703 (2,058)	284 (4.24%)	179/6,735 (2,604)	179 (2.66%)
Other Asian	393/6,703 (2,058)	393 (5.86%)	205/6,735 (2,604)	205 (3.04%)
Black African	126/6,703 (2,058)	126 (1.88%)	111/6,735 (2,604)	111 (1.65%)
Black Caribbean	23/6,703 (2,058)	23 (0.34%)	27/6,735 (2,604)	27 (0.40%)
Other Black	38/6,703 (2,058)	28 (0.57%)	34/6,735 (2,604)	34 (0.50%)

¹ The year group refers to the year pupils were in at the end of the evaluation, in summer 2018. The RWI pupils referred to as the Year 1 cohort were in Year 1 when the evaluation ended but began receiving the intervention while in Reception and completed outcome testing in Year 1. The RWI pupils referred to as the Year 2 cohort were in Year 2 when the evaluation ended but began receiving the intervention while in Year 1 and completed outcome testing in both Year 1 and Year 2. The RWI pupils referred to as the Year 3 cohort were in Year 3 when the evaluation ended but received the intervention and completed outcome testing while in Year 2.

Bangladeshi	25/6,703 (2,058)	25 (0.37%)	32/6,735 (2,604)	32 (0.47%)
Chinese	20/6,703 (2,058)	20 (0.30%)	24/6,735 (2,604)	24 (0.36%)
Other Characteristics				
Other ethnicity	87/6,703 (2,058)	87 (1.30%)	57/6,735 (2,604)	57 (0.84%)
Ever FSM	1,563/6,703 (1,732)	1,563 (23.32%)	1,175/6,735 (2,059)	1,175 (23.58%)
EAL	894/6,703 (1,737)	894 (13.31%)	520/6,735 (2,070)	520 (7.72%)

Table 3. Baseline pupil-level characteristics of groups as randomised for FS

Pupil-level (categorical)	Intervention group		Control group	
	n/N (missing)	Count (%)	n/N (missing)	Count (%)
Year 6 ²	670/1,354 (0)	670 (49.48%)	638/1,277 (0)	638 (49.96%)
Year 7	684/1,354 (0)	684 (50.52%)	639/1,277 (0)	639 (50.04%)
Female	551/1,354 (0)	551 (40.69%)	525/1,277 (0)	525 (41.11%)
Male	803/1,354 (0)	803 (59.31%)	752/1,277 (0)	752 (58.89%)
Ethnicity				
White British	940/1,354 (65)	940 (69.42%)	1,047/1,277 (67)	1,047 (81.99%)
Other White	105/1,354 (65)	105 (7.75%)	42/1,277 (67)	42 (3.29%)
Mixed	44/1,354 (65)	44 (3.25%)	42/1,277 (67)	42 (3.29%)
Other Asian	104/1,354 (65)	104 (7.68%)	36/1,277 (67)	36 (2.82%)

² The FS pupils referred to as the 'Year 7 cohort' were in Year 7 when the evaluation ended but received the intervention and completed the outcome testing while in Year 6. The FS pupils referred to as the 'Year 6 cohort' were in Year 6 when the intervention ended. They began receiving the intervention while in Year 5 and completed outcome testing in Year 6.

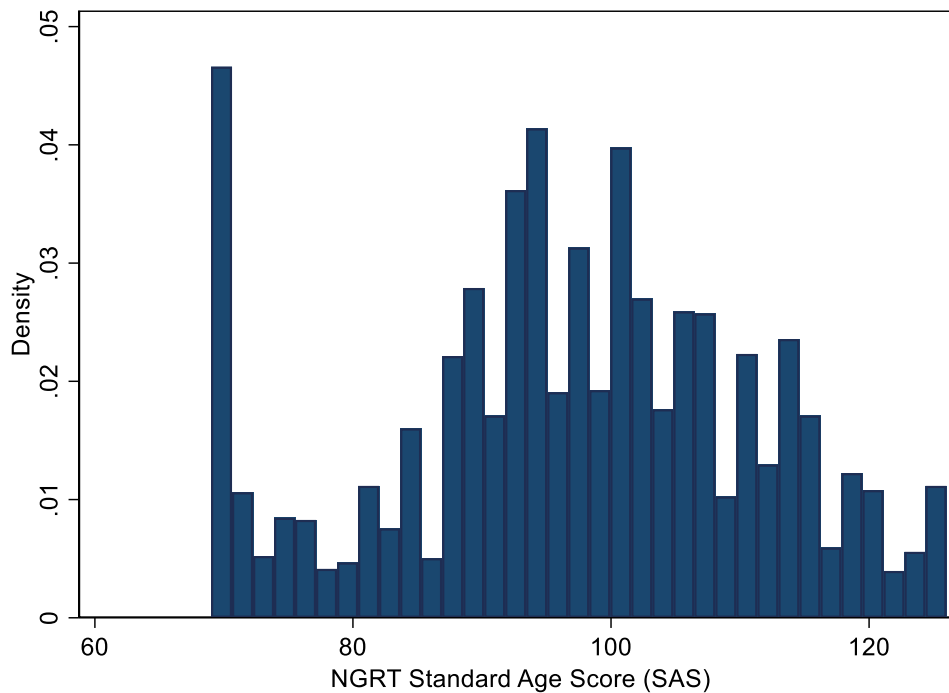
Black African	33/1,354 (65)	33 (2.44%)	14/1,277 (67)	14 (1.10%)
Black Caribbean	12/1,354 (65)	12 (0.89%)	–	–
Other Black	14/1,354 (65)	14 (1.03%)	–	–
Bangladeshi	10/1,354 (65)	10 (0.74%)	–	–
Other ethnicity	27/1,354 (0)	27 (1.98%)	29/1,277 (67)	29 (2.26%)
ever FSM	711/1,354 (0)	711 (52.51%)	630/1,277 (0)	630 (49.33%)
EAL	236/1,354 (0)	236 (17.43%)	105/1,277 (0)	105 (8.22%)
Pupil-level (continuous)	n/N (missing)	Mean (SD)	n/N (missing)	Mean (SD)
KS1 reading points	1,349/1,354 (5)	12.69 (3.65)	1,271/1,277 (6)	12.66 (3.51)
KS1 z-scores	1,349/1,354 (5)	–0.86 (0.93)	1,271/1,277 (6)	–0.87 (0.89)

Primary Results

Table 4. Primary analysis for RWI³

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n (intervention; control)	Hedges' g (95% CI)	p-value
NGRT – SAS	1,653 (881)	97.04 (96.33– 97.75)	1,740 (640)	96.84 (96.16– 97.51)	3,393 (1653; 1740)	0.05 (–0.02, 0.12)	0.528

Figure 2. Histogram of NGRT SAS



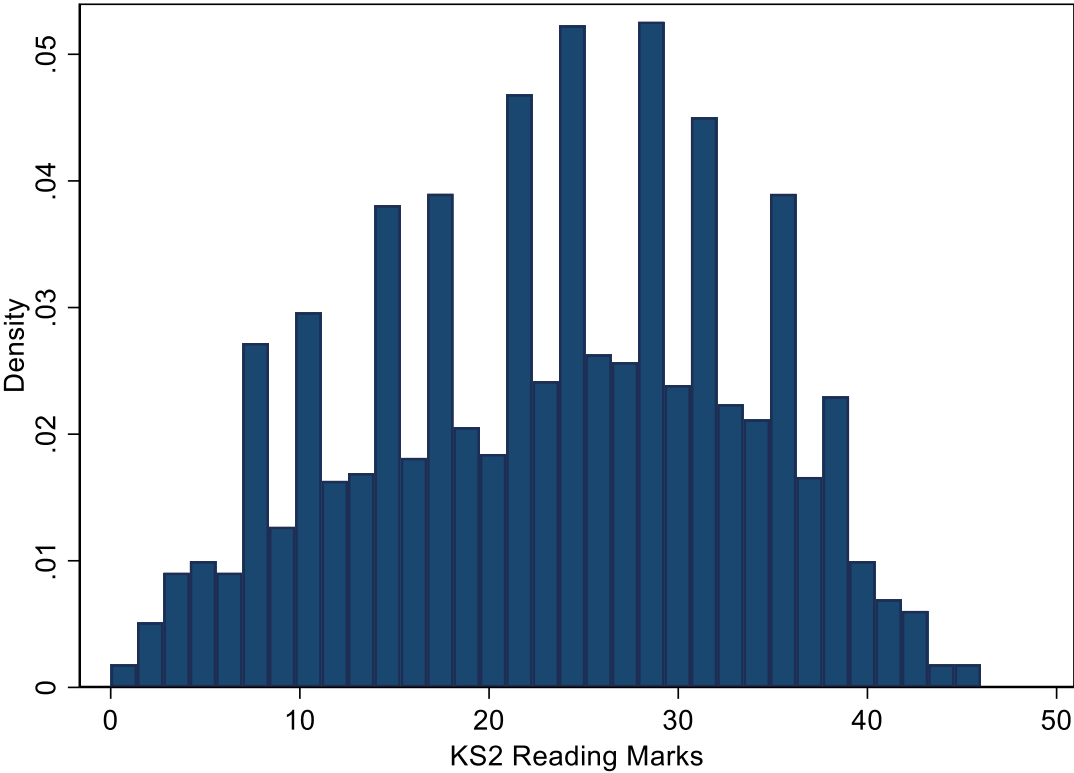
³ Given that pupils in the Year 2 cohort were in Reception at randomisation, it is possible there are pupils for whom we collected UPNs in Reception, since they were at the school at the time of trial randomisation, but who since transferred to a different school by Year 2 such that we do not have NGRT scores for them in our sample. These pupils may appear as missing in our data since they would have transferred schools, not received RWI, and not have sat the NGRT but the randomisation for the trial was at the school level rather than the pupil. In other words, pupils who moved before Year 1 should not count against missing values but may have in this case. However, there is only a discrepancy of 21 pupils for which this error may have been made such that we are not concerned with it biasing our results.

Table 5. Primary analysis for FS

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n (intervention; control)	Hedges' g (95% CI)	p-value
KS2 reading marks – Year 7 ⁴	637 (47)	20.24 (19.62– 21.06)	561 (54)	23.02 (22.26– 23.77)	1,198 (637; 561)	–0.22 (–0.33, –0.11)	0.015
KS2 reading marks – Year 6	579 (91)	24.74 (23.91– 25.58)	541 (63)	25.55 (24.73– 26.38)	1,120 (579; 541)	–0.03 (–0.15, 0.09)	0.699
KS2 reading marks – combined	1,216 (138)	22.44 (21.87– 23.00)	1,102 (117)	24.26 (23.70– 24.83)	2,318 (1,216; 1,102)	–0.13 (–0.21, –0.05)	0.041

⁴ The FS pupils referred to as the 'Year 7 cohort' were in Year 7 when the evaluation ended but received the intervention and completed the outcome testing while in Year 6. The FS pupils referred to as the 'Year 6 cohort' were in Year 6 when the intervention ended. They began receiving the intervention while in Year 5 and completed outcome testing in Year 6.

Figure 3. Histogram of KS2 reading marks – combined



Secondary Results

Table 6. Secondary analysis for RWI

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n (intervention; control)	Hedges' g (95% CI)	p-value
KS1 writing passed – Year 3 ⁵	2,403 (34)	0.63 (0.61– 0.65)	2,320 (31)	0.66 (0.64– 0.68)	4,723 (2,403; 2,320)	−0.06 (−0.12, −0.01)	0.254
KS1 writing passed – Year 2	2,496 (38)	0.67 (0.65– 0.69)	2,343 (37)	0.70 (0.68– 0.72)	4,839 (2,496; 2,343)	−0.04 (−0.10, 0.01)	0.265
KS1 writing passed – combined	4,899 (72)	0.65 (0.63– 0.66)	4,663 (68)	0.68 (0.67– 0.69)	9,562 (4,899; 4,663)	−0.04 (−0.08, −0.002)	0.231
Phonics screening score – Year 2	2,492 (42)	33.38 (33.04– 33.73)	2,355 (25)	33.39 (33.04– 33.74)	4,847 (2,492; 2,355)	0.01 (−0.04, 0.07)	0.745
Phonics screening score – Year 1	1,710 (22)	35.16 (34.83– 35.49)	1,989 (0)	33.89 (33.52– 34.26)	3,699 (1,710; 1,989)	0.18 (0.11, 0.24)	0.002
Phonics screening score – combined	4,202 (64)	34.11 (33.86– 34.35)	4,344 (25)	33.62 (33.36– 33.87)	8,546 (4,202; 4,344)	0.08 (0.04, 0.12)	0.085
Passed phonics – Year 2	2,492 (42)	0.82 (0.80– 0.83)	2,355 (25)	0.82 (0.80– 0.83)	4,847 (2,492; 2,355)	0.00 (−0.06, 0.06)	0.783

⁵ The year group refers to the year pupils were in at the end of the evaluation, in summer 2018. The RWI pupils referred to as the Year 1 cohort were in Year 1 when the evaluation ended but began receiving the intervention while in Reception and completed outcome testing in Year 1. The RWI pupils referred to as the Year 2 cohort were in Year 2 when the evaluation ended, but began receiving the intervention while in Year 1 and completed outcome testing in both Year 1 and Year 2. The RWI pupils referred to as the Year 3 cohort were in Year 3 when the evaluation ended but received the intervention and completed outcome testing while in Year 2.

Passed phonics – Year 1	1,710 (22)	0.89 (0.88–0.91)	1,989 (0)	0.85 (0.83–0.87)	3,699 (1,710; 1,989)	0.15 (0.08, 0.21)	0.006
Passed phonics – combined	4,202 (64)	0.85 (0.84–0.86)	4,344 (25)	0.83 (0.82–0.84)	8,546 (4,202; 4,344)	0.05 (0.01, 0.10)	0.146

Table 7. Secondary analysis for FS

	Unadjusted means				Effect size		
	Intervention group		Control group				
Outcome	n (missing)	Mean (95% CI)	n (missing)	Mean (95% CI)	Total n (intervention; control)	Hedges' g (95% CI)	p-value
KS2 writing score – combined	1,324 (30)	94.19 (93.68– 94.70)	1,188 (31)	94.18 (93.65– 94.70)	2,512 (1,324; 1,188)	0.02 (–0.06, 0.10)	0.815