

## Appendix 2 Comparability of trend variables

In this appendix, a series of tables is presented showing how responses to particular questions in the student questionnaires have changed over time. Questions were selected because it was thought likely that responses to them might be associated with attainment. These, along with other background variables, have been discussed in Chapters 6 to 10 of the report. The tables presented here show the distribution of responses to each question in two or more cycles of TIMSS, and also indicate whether any changes are statistically significant (to the 5 per cent level). The points of comparison were determined according to the similarity of the question at the relevant time points: the wording of some questions has changed over time, and it is only possible to make a valid comparison of responses when the questions are sufficiently similar to each other. The international questionnaires can be accessed via the international TIMSS website ([www.timss.bc.edu](http://www.timss.bc.edu)).

The questions analysed are as shown in Exhibit A2.1 below.

**Exhibit A2.1** Variables compared

<b>Grade 4 variable</b>	<b>2007 Q no.</b>	<b>Compared with</b>
EAL (English as another language)	Q3	2003, 1995
Enjoyment and confidence	Q6, Q8	2003, 1995
Frequency of doing various classroom tasks	Q7, Q9	2003
Computer use	Q10 AB	2003
Computer games	Q13B	2003 [1995]
Parents born in UK	Q16 AB	2003 [1995]
<b>Grade 8 variable</b>	<b>2007 Q no.</b>	<b>Compared with</b>
EAL (English as another language)	Q3	2003, 1999, 1995
Enjoyment and boredom	Q8, Q11	2003 [1999, 1995]
Value measures (destinations and future plans etc.)	Q9, Q12	2003 [1999, 1995]
Frequency of doing various classroom tasks	Q10, Q13	2003
Computer use	Q14 AB	2003
Parents born in UK	Q16 AB	2003 [1999, 1995]
Computer games	Q17B	2003 [1999, 1995]

Dates in brackets indicate that the question in this year varied from its 2007 counterpart and so any comparison must be made with caution.

## A2.1 Grade 4 variables

### Q3 How often do you speak English at home?

	Always/ almost always	Sometimes	Never	Valid N	Significant
2007	93.0	6.4	0.6	4290	-
2003	94.6	4.6	0.9	3473	*
1995	93.0	6.2	0.9	2810	NS

\* indicates a significant difference from 2007

### Q6A I usually do well in maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	41.3	48.7	7.2	2.8	4274	-
2003	39.7	49.6	6.5	4.2	3461	*
1995	32.9	56.6	7.5	3.0	2992	*

\* indicates a significant difference from 2007

### Q6B I would like to do more maths at school

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	27.2	25.5	21.5	25.8	4239	-
2003	26.5	20.0	20.6	32.8	3431	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

### Q6C Maths is harder for me than for many of my classmates

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	12.3	24.8	27.6	35.2	4229	-
2003	14.7	26.8	27.2	31.3	3414	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

### Q6D I enjoy learning maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	46.4	30.0	12.5	11.0	4224	-
2003	43.0	27.2	14.7	15.1	3420	*
1995	53.2	30.9	10.3	5.6	2901	*

\* indicates a significant difference from 2007

**Q6E** I am just not good at maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	9.3	13.8	24.8	52.2	4217	-
2003	10.1	18.2	24.1	47.7	3423	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q6F** I learn things quickly in maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	30.8	45.3	16.0	7.8	4230	-
2003	31.7	42.5	16.1	9.7	3439	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q6G** Maths is boring

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	16.1	19.3	22.0	42.6	4248	-
2003	-	-	-	-	-	-
1995	14.0	10.2	25.5	50.4	2776	*

\* indicates a significant difference from 2007

**7** How often do you do these things in your maths lessons?

**Q7A** I practise adding, subtracting, multiplying, and dividing without using a calculator

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	42.4	22.5	31.9	3.1	4266	-
2003	41.5	21.0	33.3	4.2	3456	*

\* indicates a significant difference from 2007

**Q7B** I work on fractions and decimals

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	15.6	29.6	52.7	2.0	4242	-
2003	17.0	25.3	54.9	2.8	3443	*

\* indicates a significant difference from 2007

**Q7C** I measure things in the classroom and around the school

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	3.5	6.0	64.7	25.8	4220	-
2003	4.2	7.9	65.2	22.7	3425	*

\* indicates a significant difference from 2007

**Q7D** I make tables, charts, or graphs

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	12.1	25.6	58.7	3.5	4224	-
2003	11.3	24.3	60.9	3.4	3418	NS

**Q7E** I learn about shapes like circles, triangles, rectangles and cubes

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	12.1	22.4	63.0	2.5	4251	-
2003	12.6	20.8	63.0	3.7	3440	*

\* indicates a significant difference from 2007

**Q7G** I work with other children in small groups or pairs

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	27.8	26.0	41.1	5.0	4237	-
2003	26.3	25.7	42.6	5.4	3433	NS

**Q7H** I explain my answers

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	30.1	31.3	34.5	4.2	4225	-
2003	27.5	27.1	37.9	7.4	3406	*

\* indicates a significant difference from 2007

**Q7I** I work by myself to answer questions

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	39.6	28.9	28.9	2.6	4224	-
2003	45.9	29.1	22.1	2.9	3416	*

\* indicates a significant difference from 2007

**Q7J** I use a calculator

	Every/almost every lesson	About half the lessons	Some lessons	Never	Valid N	Significant
2007	3.3	9.9	70.3	16.4	4254	-
2003	4.8	12.2	67.3	15.7	3430	*

\* indicates a significant difference from 2007

**Q8A** I usually do well in science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	28.7	51.0	14.4	5.8	4285	-
2003	29.3	51.3	13.3	6.1	3461	NS
1995	21.2	61.3	12.8	4.7	2922	*

\* indicates a significant difference from 2007

**Q8B** I would like to do more science at school

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	26.2	25.5	25.2	23.2	4266	-
2003	24.7	24.1	21.1	30.1	3445	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q8C** Science is harder for me than for many of my classmates

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	11.5	26.3	30.8	31.4	4248	-
2003	14.3	26.6	29.9	29.2	3440	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q8D** I enjoy learning science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	40.2	30.3	15.4	14.0	4244	-
2003	39.3	28.5	15.0	17.1	3416	*
1995	40.6	38.7	11.2	9.5	2819	*

\* indicates a significant difference from 2007

**Q8E** I am just not good at science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	9.9	18.0	30.3	41.8	4238	-
2003	11.8	18.4	28.2	41.7	3424	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q8F** I learn things quickly in science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	27.7	39.5	22.8	10.0	4244	-
2003	29.9	39.7	19.0	11.3	3457	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q8G** Science is boring

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	15.5	19.7	23.0	41.8	4261	-
2003	-	-	-	-	-	-
1995	12.6	11.4	33.6	42.5	2728	*

\* indicates a significant difference from 2007

**9** In school, how often do you do these things? [science activities]**Q9A** I look at something like the weather or a plant growing and write down what I see

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	16.2	29.3	37.5	17.0	4265	-
2003	26.2	38.4	24.7	10.7	3419	*

\* indicates a significant difference from 2007

**Q9B** I watch the teacher do a science experiment

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	32.4	40.9	19.1	7.6	4256	-
2003	41.1	36.7	16.6	5.6	3451	*

\* indicates a significant difference from 2007

**Q9C** I design or plan a science experiment or investigation

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	29.3	41.4	20.8	8.5	4227	-
2003	30.6	42.2	19.0	8.2	3416	NS

**Q9D** I do a science experiment or investigation

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	31.0	44.8	18.8	5.4	4225	-
2003	35.1	43.4	16.5	5.0	3395	*

\* indicates a significant difference from 2007

**Q9E** I work with other children in a small group or pair on a science experiment or investigation

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	37.6	42.5	15.8	4.2	4257	-
2003	43.6	39.0	12.5	4.9	3439	*

\* indicates a significant difference from 2007

**Q9H** I write or give an explanation for something I am studying in science

	At least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	38.3	38.5	16.8	6.5	4242	-
2003	51.3	33.1	10.6	5.1	3425	*

\* indicates a significant difference from 2007

**Q9I** I work by myself to answer questions

	least once a week	Once or twice a month	A few times a year	Never	Valid N	Significant
2007	49.1	34.1	12.0	4.8	4255	-
2003	60.8	27.8	6.7	4.8	3443	*

\* indicates a significant difference from 2007

**Q10A** Do you ever use a computer? (Do not include PlayStation™, GameCube™, XBox™, or other TV/video game computers.)

	Yes	No	Valid N	Significant
2007	99.4	0.6	4293	-
2003	98.9	1.1	3483	*

\* indicates a significant difference from 2007

**Q10B** Where do you use a computer?**a) At home**

	Yes	No	Valid N	Significant
2007	91.7	7.6	4271	-
2003	87.3	11.7	3467	*

\* indicates a significant difference from 2007

**b) At school**

	Yes	No	Valid N	Significant
2007	85.3	14.1	4264	-
2003	90.9	8.1	3469	*

\* indicates a significant difference from 2007

**Q13B** On a normal school day, how much time do you spend before or after school doing each of these things?**b) I play computer games**

	No time	Less than 1 hour	1-2 hours	2-4 / 3-4 hours	4 hours +	Valid N	Significant
2007	18.2	35.7	24.3	10.3	11.5	4233	-
2003	16.2	34.6	24.0	10.2	15.0	3417	*
1995	18.6	38.8	18.1	10.2	14.4	2678	*

\* indicates a significant difference from 2007

*Note: wording of question was different in 1995*

**16A** Was your mother (or stepmother or female carer) born in the United Kingdom?

	Yes	No	Valid N	Significant
2007	83.4	16.6	4235	-
2003	85.0	15.0	3410	NS
1995	85.2	14.8	2725	*

\* indicates a significant difference from 2007

*Note: wording of question was slightly different in 2003 and more so in 1995*

**16B** Was your father (or stepfather or male carer) born in the United Kingdom?

	Yes	No	Valid N	Significant
2007	81.0	19.0	4193	-
2003	83.7	16.3	3398	*
1995	82.5	17.5	2644	NS

\* indicates a significant difference from 2007

*Note: wording of question was slightly different in 2003 and more so in 1995*

## A2.2 Grade 8 variables

**Q3** How often do you speak English at home?

	Always/ almost always	Sometimes	Never	Valid N	Significant
2007	97.1	2.4	0.5	3968	-
2003	97.0	2.4	0.6	2685	NS
1999	95.0	4.8	0.2	2752	*
1995	96.4	3.4	0.2	1665	*

\* indicates a significant difference from 2007

**Q8A** I usually do well in maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	34.6	53.4	9.1	2.9	3956	-
2003	31.6	54.4	10.4	3.7	2679	*
1999	28.1	64.2	7.2	0.5	2827	*
1995	23.6	69.1	6.2	1.2	1739	*

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999 and 1995*

**Q8B** I would like to spend more time studying maths at school

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	8.2	30.1	40.5	21.1	3944	-
2003	6.7	26.8	38.4	28.1	2676	*
1999	-	-	-	-	-	-
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999 and 1995*

**Q8C** Maths is more difficult for me than for many of my classmates

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	7.8	24.0	39.4	28.9	3942	-
2003	9.4	27.6	36.5	26.4	2658	*
1999	8.9	19.7	54.9	16.5	2784	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999 and 1995*

**Q8D** I enjoy learning maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	15.7	44.3	25.2	14.7	3930	-
2003	13.6	39.5	26.5	20.4	2830	*
1999	25.0	54.2	17.7	3.1	2805	*
1995	21.7	58.5	16.6	3.1	1705	*

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q8E** Maths is not one of my strengths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	19.3	22.8	30.3	27.6	3933	-
2003	25.0	25.5	26.8	22.7	2670	*
1999	13.1	27.9	39.8	19.1	2788	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q8F** I learn things quickly in maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	19.9	46.4	25.4	8.3	3939	-
2003	17.2	46.2	26.6	10.0	2668	*
1999	-	-	-	-	-	-
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q8G** Maths is boring

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	22.3	31.8	31.8	14.0	3944	-
2003	-	-	-	-	-	-
1999	7.4	23.7	49.2	19.7	2789	*
1995	7.4	20.1	51.1	21.3	1682	*

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q8H** I like maths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	16.2	41.5	23.8	18.4	3952	-
2003	-	-	-	-	-	-
1999	23.4	54.4	16.5	5.7	2824	*
1995	5.4	14.6	55.6	24.3	1736	*

\* indicates a significant difference from 2007

**Note:** wording of question and/or response options was different in 1999 and 1995

**Q9A** I think learning maths will help me in my daily life

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	52.4	38.1	7.9	1.7	3957	-
2003	50.7	39.3	7.4	2.6	2676	*

\* indicates a significant difference from 2007

**Q9B** I need maths to learn other school subjects

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	28.6	49.5	17.5	4.4	3957	-
2003	25.1	50.5	19.1	5.4	2672	*

\* indicates a significant difference from 2007

**Q9C** I need to do well in maths to get into the college or university of my choice

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	49.9	35.7	11.0	3.3	3943	-
2003	45.3	35.7	13.5	5.6	2659	*
1999	42.7	42.2	13.0	2.1	2797	*
1995	40.9	45.3	10.8	3.0	1709	*

\* indicates a significant difference from 2007

**Note:** wording of question was slightly different in 1999 and 1995

**Q9D** I need to do well in maths to get the job I want

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	39.6	37.0	17.2	6.2	3939	-
2003	25.3	36.0	24.8	13.8	2662	*
1999	36.1	41.2	20.1	2.6	2799	*
1995	37.1	42.7	17.2	3.0	1723	*

\* indicates a significant difference from 2007

**Note:** wording of question was slightly different in 1999 and 1995

**10** How often do you do these things in your maths lessons?**Q10A** We practice adding, subtracting, multiplying and dividing without using a calculator

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	23.7	22.3	48.5	5.5	3953	-
2003	20.7	21.8	50.2	7.3	2669	*

\* indicates a significant difference from 2007

**Q10B** We work on fractions and decimals

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	9.2	27.0	62.9	0.9	3945	-
2003	6.7	24.1	67.7	1.5	2667	*

\* indicates a significant difference from 2007

**Q10D** We interpret data in tables, charts, or graphs

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	6.9	23.5	65.5	4.1	3936	-
2003	7.9	25.0	63.9	3.2	2657	NS

**Q10E** We write equations and functions to represent relationships

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	10.1	27.2	53.2	9.4	3933	-
2003	10.7	27.6	53.9	7.8	2658	NS

**Q10G** We explain our answers

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	44.4	22.7	26.0	6.9	3932	-
2003	44.0	25.5	25.2	5.3	2653	*

\* indicates a significant difference from 2007

**Q10H** We relate what we are learning in maths to our daily lives

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	11.7	22.1	41.4	24.7	3923	-
2003	7.8	19.0	45.4	27.8	2652	*

\* indicates a significant difference from 2007

Note: wording of question was slightly different in 2003

**Q10I** We decide on our own procedures for solving complex problems

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	11.2	23.8	49.1	15.8	3916	-
2003	12.9	29.0	43.9	14.2	2631	*

\* indicates a significant difference from 2007

**Q10J** We check our homework

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	22.8	23.0	33.4	20.7	3920	-
2003	24.9	24.0	31.4	19.6	2651	NS

**Q10K** We listen while the teacher teaches the whole class about something

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	54.2	22.5	19.6	3.7	3939	-
2003	56.0	20.7	18.2	5.2	2656	*

\* indicates a significant difference from 2007

**Q10L** We work on problems on our own

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	32.9	35.4	28.0	3.7	3940	-
2003	31.1	34.0	30.0	5.0	2641	*

\* indicates a significant difference from 2007

**Q10N** We are allowed to start our homework in class

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	5.3	8.6	39.7	46.4	3931	-
2003	7.2	10.2	44.8	37.9	2654	*

\* indicates a significant difference from 2007

**Q10O** We have a test

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	6.4	16.8	71.1	5.7	3940	-
2003	6.4	15.2	72.1	6.3	2657	NS

**Q10P** We use calculators

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	14.6	34.5	47.9	3.0	3942	-
2003	14.6	33.7	49.2	2.5	2659	NS

**Q11A** I usually do well in science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	33.4	50.0	12.9	3.7	3962	-
2003	32.5	50.7	11.9	4.9	2675	NS
1999	23.6	67.6	8.3	0.5	2823	*
1995	21.3	66.7	10.2	1.8	1732	*

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q11B** I would like to spend more time studying science in school

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	16.6	34.0	33.4	16.1	3954	-
2003	17.6	34.7	29.3	18.4	2671	*
1999	-	-	-	-	-	-
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q11C** Science is more difficult for me than for many of my classmates

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	7.9	24.0	39.6	28.5	3946	-
2003	7.5	24.5	39.5	28.5	2659	NS
1999	5.1	20.1	57.7	17.1	2794	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999

**Q11D** I enjoy learning science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	28.0	41.2	19.9	10.8	3933	-
2003	27.8	40.5	19.6	12.1	2830	NS
1999	29.3	55.9	12.5	2.3	2788	*
1995	26.5	55.0	14.2	4.2	1715	*

\* indicates a significant difference from 2007

Note: wording of question and/or response options was different in 1999 and 1995

**Q11E** Science is not one of my strengths

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	13.7	24.4	34.0	27.8	3941	-
2003	14.2	25.2	31.5	29.0	2658	NS
1999	6.2	29.5	46.4	17.9	2786	*
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999*

**Q11F** I learn things quickly in science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	23.5	41.9	27.8	6.7	3943	-
2003	22.5	46.3	23.9	7.4	2663	*
1999	-	-	-	-	-	-
1995	-	-	-	-	-	-

\* indicates a significant difference from 2007

**Q11G** Science is boring

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	14.8	24.2	36.7	24.3	3943	-
2003	-	-	-	-	-	-
1999	5.1	16.2	55.0	23.6	2773	*
1995	6.0	17.7	51.8	24.4	1696	*

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999 and 1995*

**Q11H** I like science

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	28.3	40.8	17.8	13.1	3960	-
2003	-	-	-	-	-	-
1999	27.6	55.8	13.4	3.2	2817	*
1995	6.1	15.8	51.7	26.5	1736	*

\* indicates a significant difference from 2007

*Note: wording of question and/or response options was different in 1999 and 1995*

**Q12A** I think learning science will help me in my daily life

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	27.7	46.9	19.7	5.6	3950	-
2003	25.7	46.4	21.1	6.8	2667	NS

**Q12B** I need science to learn other school subjects

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	17.5	41.4	32.5	8.6	3947	-
2003	15.3	42.1	31.5	11.1	2662	*

\* indicates a significant difference from 2007

**Q12C** I need to do well in science to get into the college or university of my choice

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	36.8	35.9	20.1	7.2	3943	-
2003	33.2	34.3	22.2	10.3	2655	*
1999	37.1	38.2	20.1	4.6	2765	*
1995	32.3	42.8	18.9	6.1	1704	*

\* indicates a significant difference from 2007

*Note: wording of question was slightly different in 1999 and 1995*

**Q12D** I need to do well in science to get the job I want

	Agree a lot	Agree a little	Disagree a little	Disagree a lot	Valid N	Significant
2007	30.8	28.9	26.7	13.6	3946	-
2003	26.6	25.0	26.4	22.0	2665	*
1999	27.8	31.5	34.6	6.1	2768	*
1995	28.0	33.5	30.9	7.6	1707	*

\* indicates a significant difference from 2007

*Note: wording of question was slightly different in 1999 and 1995*

**13** How often do you do these things in your science lessons?

**Q13B** We watch the teacher demonstrate an experiment or investigation

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	22.7	38.2	35.9	3.2	3936	-
2003	20.9	39.4	36.8	2.9	2666	NS

**Q13C** We design or plan an experiment or investigation

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	16.7	34.1	42.5	6.7	3918	-
2003	17.6	36.7	38.7	7.0	2658	*

\* indicates a significant difference from 2007

**Q13D** We carry out an experiment or investigation

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	21.0	39.4	35.7	3.8	3898	-
2003	21.3	41.3	33.9	3.5	2657	NS

**Q13E** We work in small groups or pairs on an experiment or investigation

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	32.3	37.5	27.0	3.2	3918	-
2003	33.6	37.5	25.9	3.0	2655	NS

**Q13J** We relate what we are learning in science to our daily lives

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	13.0	27.5	41.6	17.9	3907	-
2003	10.9	24.4	45.3	19.4	2656	*

\* indicates a significant difference from 2007

*Note: wording of question was slightly different in 2003*

**Q13K** We check our homework

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	17.1	22.5	38.3	22.0	3907	-
2003	13.5	18.4	39.3	28.9	2637	*

\* indicates a significant difference from 2007

**Q13L** We listen while the teacher teaches the whole class about something

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	55.7	25.0	16.8	2.4	3920	-
2003	52.4	25.1	18.8	3.7	2649	*

\* indicates a significant difference from 2007

**Q13M** We work on problems on our own

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	20.1	36.3	36.9	6.7	3916	-
2003	16.0	32.8	41.1	10.1	2641	*

\* indicates a significant difference from 2007

**Q13N** We are allowed to start our homework in class

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	5.2	11.8	39.9	43.1	3924	-
2003	6.4	11.7	42.8	39.1	2652	*

\* indicates a significant difference from 2007

**Q13O** We have a test

	Almost every lesson	Half the lessons	Some lessons	Never	Valid N	Significant
2007	6.1	20.3	67.9	5.7	3930	-
2003	5.3	17.6	69.5	7.6	2655	*

\* indicates a significant difference from 2007

**Q14A** Do you ever use a computer? (Do not include PlayStation™, GameCube™, XBox™, or other TV/video game computers.)

	Yes	No	Valid N	Significant
2007	100	0	3948	-
2003	99	1	2669	*

\* indicates a significant difference from 2007

**Q14B** Where do you use a computer?

## a) At home

	Yes	No	Valid N	Significant
2007	95.7	3.9	3944	-
2003	91.5	7.4	2668	*

\* indicates a significant difference from 2007

## b) At school

	Yes	No	Valid N	Significant
2007	79.2	20.4	4025	-
2003	88.5	10.4	2660	*

\* indicates a significant difference from 2007

**Q16A** Was your mother (or stepmother or female carer) born in the United Kingdom?

	Yes	No	Valid N	Significant
2007	86.6	13.4	3908	-
2003	88.2	11.8	2632	NS
1999	84.0	16.0	2833	*
1995	87.6	12.4	1710	NS

\* indicates a significant difference from 2007

**Note:** wording of question was slightly different in 2003 and more so in 1999 and 1995

A 'not sure' option was also available in 1999 and 1995

**Q16B** Was your father (or stepfather or male carer) born in the United Kingdom?

	Yes	No	Valid N	Significant
2007	84.4	15.6	3886	-
2003	86.9	13.1	2621	*
1999	82.4	17.6	2812	*
1995	86.5	13.5	1699	*

\* indicates a significant difference from 2007

**Note:** wording of question was slightly different in 2003 and more so in 1999 and 1995

A 'not sure' option was also available in 1999 and 1995

**Q17** On a normal school day, how much time do you spend before or after school doing each of these things?

b) I play computer games

	No time	Less than 1 hour	1-2 hours	2-4 / 3-4 hours	4 hours +	Valid N	Significant
2007	27.3	29.4	21.2	13.4	8.8	3905	-
2003	29.6	32.1	21.3	10.0	7.0	2645	*
1999	24.5	33.4	29.6	8.8	3.7	2795	*
1995	36.4	34.4	21.0	5.0	3.2	1699	*

\* indicates a significant difference from 2007

**Note:** wording of question was different in 1999 and 1995