Drugs in Sport Debate Kit

Evaluation Report

Funded by

The Physiological Society

Summary

The Drugs in Sport debate kit, produced by Gallomanor and funded by The Physiological Society, was very successful in a number of ways. The evaluation questions we've looked at are:

1. How many of the Drugs in Sport debate kits sent out have been used?

   We estimate that at least 43% of the kits sent out have been used (around 860 kits) and there's a strong indication that the majority of those who haven't yet used it plan to use it in the future. The kits were also used by just under a third of teachers in I'm a Scientist – around 90 kits – and a further 100 kits are likely to be used in the future. There's more information about this on page 8.

   At least **43% of teachers used the kit** they were sent, equaling around **860 kits** having already been used.

2. Was Drugs in Sport a good topic for a debate kit?

   The topic of Drugs in Sport was very successful and popular – teachers requested this kit quicker than previous kits, nearly 300 new teachers signed up to receive it and we had very positive feedback from teachers. We think that the kit was popular partly as we hadn't created a new one for nearly two years, but also because the topic really appealed to teachers. Physiology topics are relevant to many aspects of the curriculum, and teachers told us that this topic fitted well into Biology, Chemistry and Sports Science syllabuses including GCSEs, A Levels and BTECs. With the London 2012 Olympics it was a current topic that their students could easily relate to and were interested in.

   We have received lots of positive feedback from teachers, including praise for the topic, content and structure of the debate kit, and also asking for more kits to be made. We were also surprised by how quickly teachers requested all of the 2,000 kits. We were still receiving requests after we'd distributed all the copies we had, and had to refer teachers to the downloadable digital version instead.

The Drugs in Sport debate kit was **very popular** with teachers. We printed **2,000 copies** and they demand for them was swift and strong, and **exceeded our expectations**.

3. Have changes we've made to the distribution of the kits this time round worked?

   We posted out 250 kits to heads of science in Ireland and 250 to specialist sports colleges. We can't yet tell whether this worked or not as we'll wait until after the summer holidays to ask whether they've used the debate kit or not.

For analysis of debate kit effectiveness in general please see the previous debate kits report: http://project.imascientist.org.uk/wp-content/uploads/2011/07/Im_a_Scientist_Debate_Kits_evaluation_report.pdf

Contents

Introduction

We were approached by The Physiological Society to produce a debate kit on the topic of doping in sport. It was researched and written by Gallomanor with advice from Dr Charlotte Haig and Dr Dave Lewis of the Faculty of Biological Sciences, University of Leeds.

2,000 kits were printed at the start of 2012. The Physiological Society distributed 150 directly to Society Representatives and at conferences and meetings, 250 were sent to heads of science in Ireland, 250 were sent to specialist sports colleges, 1,277 were posted out to teachers who requested them and Gallomanor kept 73 copies as spares and to distribute internationally and to those interested in the debate kits. They were also sent to 134 teachers who took part in I'm a Scientist, Get me out of here! in June 2012 in the teacher packs.

The debate kit is also available to download from: http://debate.imascientist.org.uk/files/2012/04/Debate-Kit-Drugs-in-Sport.pdf. However we don't have data for how many downloads there were.

The Physiological Society provided £7,500 of funding to produce and distribute this debate kit.

1.0 Background

Previous debate kits

I'm a Scientist have produced four debate kits previously, on the topics of IVF, Are we too clean?, Stem Cells and Cannabis. The first was developed as teaching resource as part of the I'm a Scientist pilot event in 2008, and the other three with a Wellcome Trust People Award.

The post-2006 GCSE curriculum calls for far more debate and discussion in science, however, simple to-use and effective resources to support this are lacking. Many teachers felt unequipped to facilitate discussions and told us that students often lack the skills they need, and these kits are designed to plug that gap.

They give a teacher everything they need to run a debate on a set topic and help their students develop their discussion skills. The activity provides a structured way to start discussions and gets the students engaged in thinking about contentious science issues. Using eight characters, with different points of view, allows us to introduce issues from many different angles – ethical, social, economic, political. Young people consider and weigh up these questions in an integrated way.

We produced an evaluation report in 2011 looking at the usage of the previous four debate kits, which is available for download here: http://project.imascientist.org.uk/wp-content/uploads/2011/07/Im_a_Scientist_Debate_Kits_evaluation_report.pdf. 8,521 kits were distributed (print and electronic) and 98% of teachers surveyed would recommend the kits to a colleague.

Drugs in Sport debate kit

The Drugs in Sport debate kit is funded by The Physiological Society. Physiology is an essential discipline which seeks to understand how the human body works; the study of how cells, organs and muscles interact contributes crucial insight into sports performance. The Physiological Society brings together more than 3,000 scientists from over 60 countries, and since their foundation in 1876, their Members have made significant contributions to the knowledge of biological systems – many in the area of sports physiology.

The Physiological Society is committed to engaging with public audiences; it also sponsored the Sports Zone in I'm a Scientist in March 2012, alongside the production of an Information Sheet looking at Sample Size in elite athletes.

2.0 Objectives and outcomes

2.1 Project objectives – were they met?

1. **Distribute the kit to 1,500 teachers around the UK, to those on the I'm a Scientist list of science teachers and to Heads of PE at specialist sports schools and colleges.**

This objective was exceeded. We distributed hard copies of the kit to 1,277 teachers round the UK who requested them, in addition to 250 teachers and specialist sports colleges and 250 heads of science at Irish schools. The total of 1,777 kits exceeds the target of 1,500 kits.

2. **Give 250 kits to the The Physiological Society for their distribution**

   We gave 150 kits to The Physiological Society to distribute at conferences and meetings and to their Society Representatives.

2.2 Project outcomes – were they met?

We set many outcomes at the start of this project, for students and teachers. We asked teachers in the feedback survey if they agreed with certain outcomes of using the debate kit. This and anecdotal evidence is used to conclude that all the outcomes we set were met.

10. To what extent do you agree with the following outcomes of using the Debate Kit?

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know	Responses
My students enjoyed using the Debate Kit	45.0% 9	50.0% 10	0.0% 0	0.0% 0	5.0% 1	20
My students know more about the topic of Drugs in Sport	60.0% 12	40.0% 8	0.0% 0	0.0% 0	0.0% 0	20
My students are more confident in debating and discussing Drugs in Sport	26.3% 5	73.7% 14	0.0% 0	0.0% 0	0.0% 0	19
My students have developed their higher thinking skills around Drugs in Sport	20.0% 4	70.0% 14	5.0% 1	0.0% 0	5.0% 1	20
My students have more confidence in their opinions	15.8% 3	63.2% 12	5.3% 1	0.0% 0	15.8% 3	19
My students are better at seeing all sides of an issue, and the point of view of others	10.0% 2	90.0% 18	0.0% 0	0.0% 0	0.0% 0	20
I am more confident in running debate and discussion sessions	15.8% 3	73.7% 14	5.3% 1	0.0% 0	5.3% 1	19

- **Students develop skills at debating and discussing contentious issues like Drugs in Sport**

  All 19 teachers think their students are now more confident about debating and five of these strongly agree.

  "Students were engaged, leading the learning - rather than being spoon-fed!"

  "I've used the debate kit twice and it was well received and stimulated debate" – Michael Ibbs, Teacher

60% of the teachers **strongly agreed** that their students now know more about Drugs in Sport, and the remaining 40% agree with this.

- **Students develop higher thinking skills around these issues**

  After using the kit and adapting it for her Year 6 students teacher Fidelia Nimmons shared how she'd run the debate, and her students voting on the topic in a comment on the site: http://debate.imascientist.org.uk/2012/03/01/should-all-drugs-be-banned-in-sport/#comments. Her comments are in Appendix 2.

  The class of 24 students voted on whether they thought ALL drugs should be banned in sport three times – before the lesson, after reading the character background information, and at the end of group discussions. The results of their voting are:

  Before lesson:
  Number for: 24 (all students thought all drugs should be banned in sport)
  Number against: 0
  Number abstained: 0

  After character background information:
  Number for: 18
  Number against: 6
  Number abstained: 0

  After character facts and issue and group discussions:
  Number for: 8
  Number against: 13 (the majority of students don't think all drugs should be banned in sport)
  Number abstained: 3

  As Fidelia says, this evidences the shift in view her students had after they had time to consider more facts and individual circumstances. The debate kit helped the students see that the issue isn't as simple as they first thought, therefore developing higher thinking skills.

  "The kit was really good ! – I used it with a Year 9 biology class, had them in groups with a chair person leading the disscusion and making a verdict on whether or not to ban drugs in sport. The cards really helped to liven up the debate with facts figures and personal anicdotes. The chair for each group had to compromise on the decision as there are valid reasons both for and against a complete ban. I then set a literacy based homework where they justified their own opinion on the use of drugs in sport." – Jo Chinner, Teacher

  "The character cards were helpful in helping students prepare their argument" – Ketchy, Teacher

- **Students develop confidence in their own opinions**

  "Students had the opportunity to voice opinions on a topic that was controversial and of interest to them."

  "[the debate kit] gets the pupils talking"

  "Students had fun whilst learning!"

  79% of teachers who answered thought their **students now have more confidence in the opinions**, and the remaining three teachers didn't know and one disagreed with this.

- **Students develop their ability to see all sides of an issue and the points of view of others**

  All the teachers who answered thought their students were better at seeing both sides of an argument. This was mentioned a lot in comments left by teachers on the debate kits site and the feedback survey.

  "Getting students to listen to others ideas"

  "Getting the pupils to understand that they need to be aware of both side of the argument."

  "The content was excellent and gave cause to think about the bias of people's opinions."

- **Students explore the social, ethical and environmental aspects of the topic**

  This is an outcome that we didn't ask about in the feedback survey, so is hard to evaluate. Teachers have provided anecdotal evidence in their feedback that their students are now much more aware of the topic of Drugs in Sport, which can be taken to include the wider aspects of the topic aside from just the science of it.

  "[the students] were able to work cooperatively together in discussing the wider issue of drugs use to enhance performance."

  "Pupil understanding of the topic"

  "Cross curricular activity with geography using olympics as a theme"

- **Teachers increase their confidence at running debate and discussion sessions**

  18 out of 19 teachers are now more confident in running debate and discussion sessions, and the remaining teacher isn't sure. Comments given by teachers indicate that their confidence comes from the easy-to-use format of the kit.

  "The cards were brief and did not require too much reading for low ability learners"

  "The discussion cards and teachers notes are very helpful."

  "Simple easy to follow instructions."

> *"The debate packs for drugs in sports are great. We know that debating skills are important for our students and our BTEC students can even pass some of their assessment criteria by engaging in debates."* – Ellie Russell, Teacher

- **Teachers increase their skills at running debate and discussion sessions**

  "a particularly useful resource to use to help with debates in class"

  "To enable students to develop their literacy skills through discussion, and to use role play for constructing their ideas"

  "I did the scientists in sport challenge with a science club and used your kit to enhance the practical aspects… it is the first time one of your debate kits has been relevant to chemistry so I was delighted to have it." – Dr Susan Wilkinson, Teacher

95% of teachers thought the format was excellent or pretty good, and the remaining one teacher thought it was OK

- **Teachers provide effective resources which they can re-use in future to help develop their students' skills, which don't require lots of preparation or effort from them**

  With 43% of kits being used at least once and a strong indication that the majority of those who haven't yet used it plan to use it in the future, the debate kit is clearly an effective resource which will be used in the future, by the same teacher and also shared with colleagues in different departments. This is shown by many positive comments by teachers.

  "useful to have relevant topics - I will use again in next 2 weeks as close to Olympics"

  "The Drugs in sport kit is great and has been shown to both science and sport lecturers. We intend to use the kit next academic year as it arises in the curriculum and lesson plans." – Jan Corner, Teacher

  "I did not personally use the drugs in sport kit but I did pass it on to our PE department who intend to use it with a GCSE PE class next year" – Amy Chestnutt, Teacher

"Brill loved it used with three mixed ability classes then went on to do some research about drugs in sport" – Alice King, Teacher

2.3 The Physiological Society aims – were they met?

1. Raise awareness of what physiology is within schools

The Physiological Society aims to raise awareness of what physiology is – the science of life *"from the molecular basis of cell function to the integrated behaviour of the whole body"*. Funding the Drugs in Sport debate kit allowed The Physiological Society to bring a physiological topic into schools.

We didn't directly ask teachers about whether they think awareness of physiology is raised from using the kits. However lots of teachers told us that their students now know a lot more about the topic of drugs in sport – *"[the debate kit increases] pupil understanding of the topic"* said one teacher.

Another teacher, Ketchy, describes how running the debate led to his students finding out more about topics raised in the debate – *"I gave them time to research more on some of the some of the keywords like blood doping".*

The debate kit raised awareness in schools of one area of physiology, drugs in sport, but it's not possible to say whether it raised awareness of physiology as a whole.

2. Increase the understanding of physiology's relevance to the school curriculum in schools

As with the first aim we don't know whether teachers and students are now more aware of physiology but we do know that teachers can see how the physiological topic of drugs in sport relates to their curriculum. Teachers told us the discussion was topical and linked well to different specifications, from chemistry and biology A level and BTEC to sport science.

The kit was shared between departments, from Geography to Sports. This will hopefully show teaches how relevant physiology is too a wide section of the school curriculum.

> *"very good and useful for the new AQA B1 biology specification. Please make us some more varieties!!!"* – Catherine Ash, Teacher
>
> *"Looking forward to using it – it looks like a great resource. It will fit in nicely to the AQA Unit 1 Drugs topic"* – Angela Knight, Teacher

3.0 Evaluation findings

3.1 Usage – how many kits were used?

Self-selecting responders

We emailed a sample of 828 of the 1,277 teachers who had requested a copy of the Drugs in Sport debate kit to ask whether they had used the debate kit, with a simple YES or NO answer. We only emailed 828 of the teachers due to an error in the mailing list. 216 teachers responded (26%), of whom 131 teachers clicked to say they had used it (61%) and 85 clicked to say they had not used it (39%). Of these 86 that didn't use it some emailed in voluntarily - nine to tell us they didn't receive their kit (10%) and 17 (20%) to tell us they haven't yet used it but plan to use it in the future, to fit in with Olympic theme or scheme of work next academic year.

Randomly selected responders

However, clicking through from the email was self-selecting and those who used the kits are likely to feel more obligation to reply. In order to get a more robust summary of how many kits were used we took a random sample of 100 teachers who'd requested a Drugs in Sport debate kit to ask if they had used the debate kit, and sent a second email to the 75 who hadn't replied to the initial email (our randomly selected responders group). We then followed up non-responders with letters and phone calls.

At the time of writing only 48 out of the sample of 100 teachers have responded to tell us if they've used the debate kit or not. We sent them two emails and one letter by post. As the letter was sent close to the end of term we didn't expect a high response and will follow up those who haven't responded at the start of term in September. We will update this report for the sample of 100 teachers at a later date, but we can currently draw some conclusions.

So, how many of the kits were used?

131 of the self-selecting responders said YES they used it (61%). However the % of randomly selected responders who'd used it was less, at 35% (8 out of 23). By extrapolating the % of randomly selected responders who'd used the kit up to the 612 teachers we didn't hear back from, 35% of 612 gives an estimate of 214 kits used. By adding to together this 214 + 131 of self-selecting responders + 8 randomly selected responders we get 353 kits used out of a total of 828 teachers asked – an overall usage of 43%.

> We estimate that at least **43% of teachers used the kit** they were sent.
>
> This amounts to around **860 kits** having already been used.

We only asked teachers if they'd used the debate kit at the latest four months after they'd received it, and at least 43% of teachers had used it within those few months. There is also a strong indication that the majority of those who haven't yet used it plan to use it in the future to tie in better with teaching related topics in their scheme of work.

3.2 Usage – how many kits were used from the I'm a Scientist teacher packs?

A copy of the Drugs in Sport debate kit was send out in all 317 teacher packs in the June 2012 I'm a Scientist event. In the 15 zones there were 134 teachers who took part with 2.4 classes on average.

10. Which parts of the teacher pack did you use, or plan to use in future teaching?

	Used in full	Picked bits out	Did not use	Plan to use later	Responses
Lesson 1: You're the Judges!	20.0% 3	60.0% 9	13.3% 2	6.7% 1	15
Lesson 2: Meet the Scientists	26.7% 4	73.3% 11	0.0% 0	0.0% 0	15
Lesson 3: Live chat	60.0% 9	33.3% 5	6.7% 1	0.0% 0	15
Lesson 4: Drugs in Sport Debate Kit	20.0% 3	6.7% 1	40.0% 6	33.3% 5	15

We asked teachers who (self–selectingly) replied to the post event survey which parts of the teacher packs they'd used. 15 teachers responded, of whom three had used the Drugs in Sport debate kit lesson in full, one had picked bits out, six did not use and five plan to use it later. This implies that 27% of I'm a Scientist teachers used the Drugs in Sport debate kit, and 33% plan to use it in the future. In terms of all the kits sent out in I'm a Scientist teacher packs this indicates that 86 kits were used during the I'm a Scientist event and 107 more will be used in future teaching.

> **27%** of I'm a Scientist teachers **used the Drugs in Sport debate kit**.
>
> **33%** plan to **use it in the future**.

3.3 Popularity – the kits went quickly

On March 1st we only had 380 copies left, after starting advertising them on February 10th, just before half term: http://debate.imascientist.org.uk/2012/03/01/strong-demand-for-drugs-in-sport-kit/

> The Drugs in Sport debate kit was **very popular** with teachers. We printed **2,000 copies** and they demand for them was swift and strong, and **exceeded our expectations**.

By the end of April we had despatched 1,820 copies and had requests for another 254, bringing us above the 2,000 copies we had printed. With requests still coming in we pointed teachers to the downloadable version online:

That's all folks

So far we have despatched 1,820 **Drugs in Sport Debate Kits**. We've got requests for another 254. And we only printed 2,000.

We're going to search around and find enough kits for those who have already requested a kit, but from now one we can't take anymore orders.

If you would like a Drugs in Sport **Debate Kit** you can download one from **here**.

Posted on April 23, 2012 by admin | Leave a comment

http://debate.imascientist.org.uk/2012/04/23/thats-all-folks/

The popularity of this debate kit showed what a contentious and relevant topic Drugs in Sport was, particularly as it was released near to the London 2012 Olympics. It was also set up a particularly good debate with many angles to this ongoing discussion.

3.4 Online feedback survey

21 teachers who said they'd used the debate kits filled out the feedback survey about the Drugs in Sport debate kit.

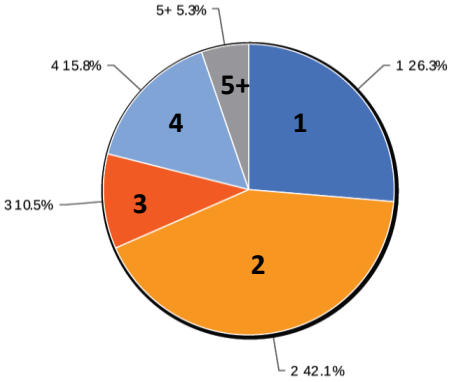
The responses were very positive – all 19 teachers who answered this question would recommend the Drugs in Sport debate kit to their colleagues and 70% of them had already lent the kit to at least one colleague. 90% of the teachers plan to use the debate kit again and 10% haven't decided yet. None said they don't plan to use it again. 45% said the debate kit was excellent, and 55% said it was pretty good.

100% of teachers would **recommend the kit** to their colleagues
90% of the **teachers plan to use the debate kit again**
45% said the debate kit was **excellent**

Number of classes

19 teachers told us how many classes they used the debate kit with. Eight teachers used it with two classes, followed by five with one class and three with four classes. This gives an average of each kit being used with 2.3 classes.

The number of classes the teachers used the kit with



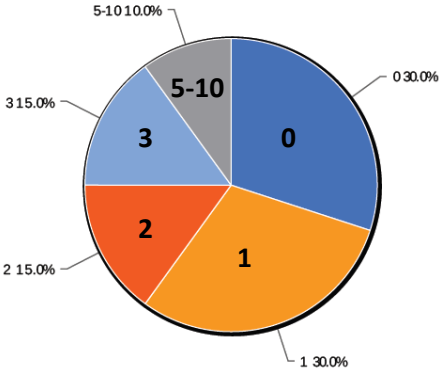
Number of times used

80% of teachers used the debate kit once or twice, although one teacher has used it 5+ times. The average number of times each kit was used is twice.

Teachers lending the kit to colleagues

14 out of the 20 teachers who completed the survey had lent the Drugs in Sport debate kit to at least one colleague; six lent it to one colleague, and two teachers even lent it to 5-10 teacher colleagues. On average each debate kit was lent to 1.8 other teachers.

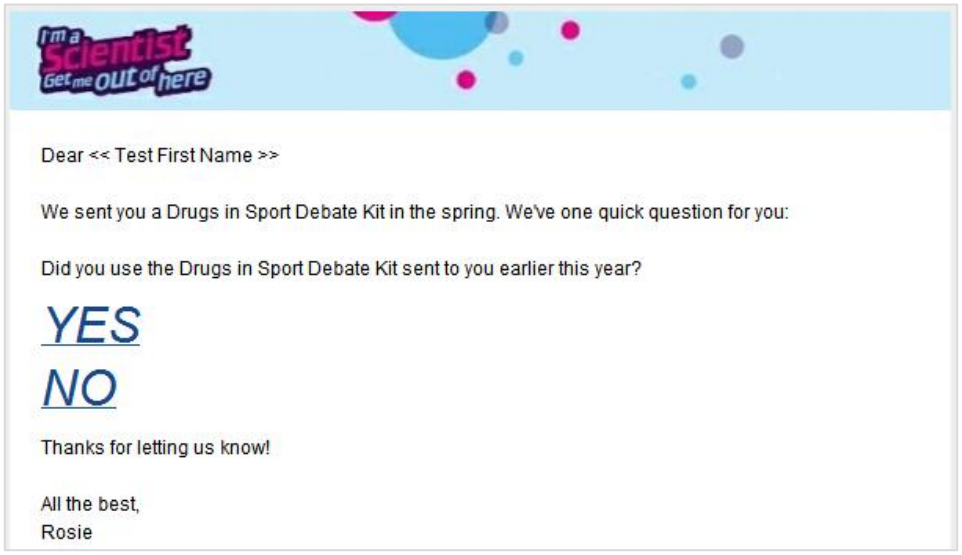
How many colleagues teachers lent the kits to



Appendix 1: Evaluation methodology

Usage audit

All teachers who had requested a Drugs in Sport debate kit were sent the email below, to ask them if they had used the debate kit. The clicks on the YES and NO links were then tracked and counted.



Dear << Test First Name >>

We sent you a Drugs in Sport Debate Kit in the spring. We've one quick question for you:

Did you use the Drugs in Sport Debate Kit sent to you earlier this year?

YES

NO

Thanks for letting us know!

All the best,
Rosie

Teachers who clicked on the NO link were taken to a page inviting them to email in any comments or improvements. Teachers who clicked on the YES link were taken to a page asking them to fill in an online survey about their use and opinion of the Drugs in Sport kit. Teachers commented on both these pages, such as why they hadn't used the kit, or how they ran their debate.

No, I didn't use the Drugs in Sport Debate Kit

Thank you for letting us know.

If you plan to use the Debate Kit in the future I hope your students enjoy it.

If there's a reason why you didn't use the Debate Kit, or a way you think it could be improved please let me know by email to rosie@gallomanor.com

Yes, I used the Drugs in Sport Debate Kit

Great! We'd also like to know how you used the Debate Kit and what you thought of it. Are there any ways to improve it?

Please fill in the (quick) feedback survey:

http://www.surveygizmo.com/s3/963013/Debate-Kit-feedback-Drugs-In-Sport

This will help us make the next Debate Kit even better.

Usage audit: sampled teachers

However, clicking through from the email was self-selecting and those who used the kits are likely to feel more obligation to reply. In order to get a more robust summary of how many kits were used we took a random sample of 100 teachers who'd requested a Drugs in Sport debate kit to ask if they had used the debate kit, and sent a second email to the 75 who hadn't replied to the initial email (our randomly selected responders group). We then followed up non-responders with letters and phone calls.

We also posted the Drugs in Sport debate kit out to 250 schools in the Republic of Ireland and 250 specialist sports schools. We don't have their email addresses so randomly selected 30 of each to post letters to, asking if they'd used the debate kit. Due to the school holidays we've also had only three responses from schools in the Republic of Ireland and specialist sports schools so will discount these in this report.

Online feedback survey

Teachers who clicked on the YES link were asked to fill in a short survey asking them about how they used the kit and what they thought of it. The survey was a mixture of 14 quantitative and qualitative questions. 21 of the 131 teachers that clicked to say they'd used the debate kits responded.

The questions mainly asked about the usage of the kits – what year group and ability students did the teachers use the kit with, and if the kits have been used more widely than just one debate with one class. Have the teachers lent the kit to any colleagues? How many times have they used the debate kit? We also asked for their views on the design and content of the kits, and outcomes from using the debate kit.

The Drugs in Sport kit was also included in every teacher pack sent out for the June 2012 I'm a Scientist event. All teachers who took part in these events were asked to fill in a feedback survey about taking part in I'm a Scientist, including a question about the debate kit.

Appendix 2: Case study of how teacher Fidelia Nimmons used the kit

I would like to share with you how I have used the kit with Year 6 children by adapting the procedure.

19th April 2012
Drugs use debate
Learning objective: I can put my opinion forward about drugs use in sports.

What to do

1. In your pair or group, take it in turns to read out sections of character card.

2. Decide who will read the first part of the card out loud to class

3. This person comes out to the middle of the class to read the section.

4. Every character has read their information; Child x will ask you to vote on the side you take.

5. After the voting, people who have not read will now read the fact, issue and question for your character.

6. Back in your group, complete the starter sentence on your view by your self – 5 minutes

7. When you have all finished, read out each person's sentence and combine your group views as one that your group will share with the rest of the class.

8. Each group to read out their composed sentence/s. Choose one person or a pair to do so.

9. After each person has read, Teacher will summarise the main points.

10. Child x will ask the class to vote again.

11. The motion will be decided from the vote.

Voting results:

Before lesson:
Number for: 24
Number against: 0
Number abstained: 0

After character background information:
Number for: 18
Number against: 6
Number abstained: 0

After character facts and issue and group discussions:
Number for: 8
Number against: 13
Number abstained: 3

This shows a shift in view after children have had time to consider more facts and individual circumstances.