

Food Security Debate Kit Evaluation Report



We estimate that 35% of the kits sent out to teachers have been used five months after requesting them.

All teachers agreed that running the debate made their students more aware that feeding the World is a global and complex issue.

The Food Security Debate Kit received positive feedback from teachers, including praise for the accurate content and easy to follow structure.

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1. Introduction

This debate kit was commissioned by the [Global Food Security Programme](#). Gallomanor carried out the research necessary to develop the debate kit with advice from many including Dr Riaz Bhunnoo from the Global Food Security Programme and Professor Maggie Gill from the University of Aberdeen.

The science curriculum requests for a greater understanding of the power and limitations of science and potential ethical questions and debates surrounding it. There is a need for easy to-use, effective resources to support this. Many teachers feel unequipped to deliver debates and report that students frequently don't have the abilities required. The debate kits are designed to meet these needs.

The debate kits offer all the resources needed for a teacher to run a debate on an established theme and help their students develop discussion skills. The activity provides a structured method to start debates and gets the students engaged in reflection on controversial scientific issues. The use of eight characters, with diverse points of view, lets us introduce topics from many different angles – social, ethical, economic, political. Students consider and take into account all these questions in a structured debate.

Food Security debate kit

Global food security is an enormous issue. An increasing population, decreasing land area, and the effects of climate change mean improving food security and sustainably is a real challenge. And it's not only about providing everyone in the world with enough calories, but making sure that people are receiving the correct nutrients for a healthy and balanced diet.

The Food Security Debate Kit aims to show students how complex the topic of global food security is, and to inspire them to consider and explore some of the main issues surrounding the ethics of food production.

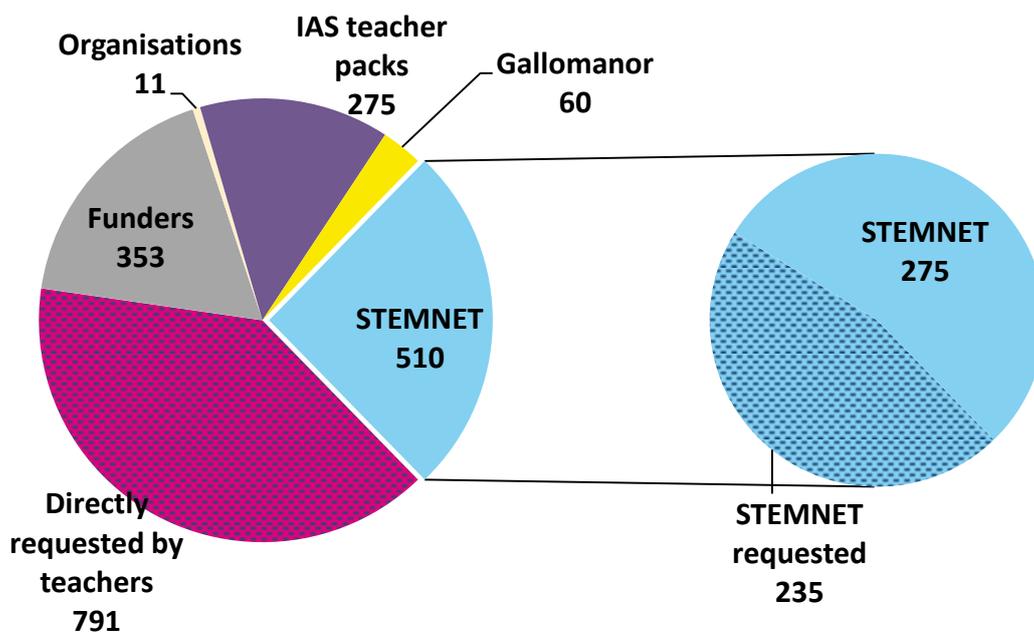


www.foodsecurity.ac.uk/programme/

2. Distribution

2,000 kits were printed in the summer of 2013. A total of 791 debate kits were posted out to teachers who requested them, 510 were sent to STEM Contract Holders, 11 were distributed among different science organizations, Global Food Security distributed 353 through different members of the organisation, and Gallomanor kept 60 copies as spares and to distribute internationally to those interested in the debate kits. Debate kits were also sent to 275 teachers who took part in *I'm a Scientist, Get me out of here!* in November 2013 (in the UK and Ireland) in the teacher packs. (See graph below.)

We emailed STEMNET contract holders¹ to get an approximate idea of how the kits that we sent them had been distributed, and we got a variety of responses. Some of the debate kits had been provided to teachers at county fairs and shows, or at teacher networking events. Other kits had been directly distributed to local schools or STEM Clubs. The debate kit is also available to download from: <http://debate.imascientist.org.uk/files/2013/10/Food-Security-Debate-Kit.pdf>



¹ STEM Cumbria, Global Science, W5 Online, Dudley STEMNET, University of Worcester, and many others across the UK

3. Usage

It is very important for us to know the extent to which our debate kits reach our target audience. With the current tools, measuring the amount of debate kits that have been used is the best way to get an idea of their global impact.

3.1 Usage – how many kits were used?

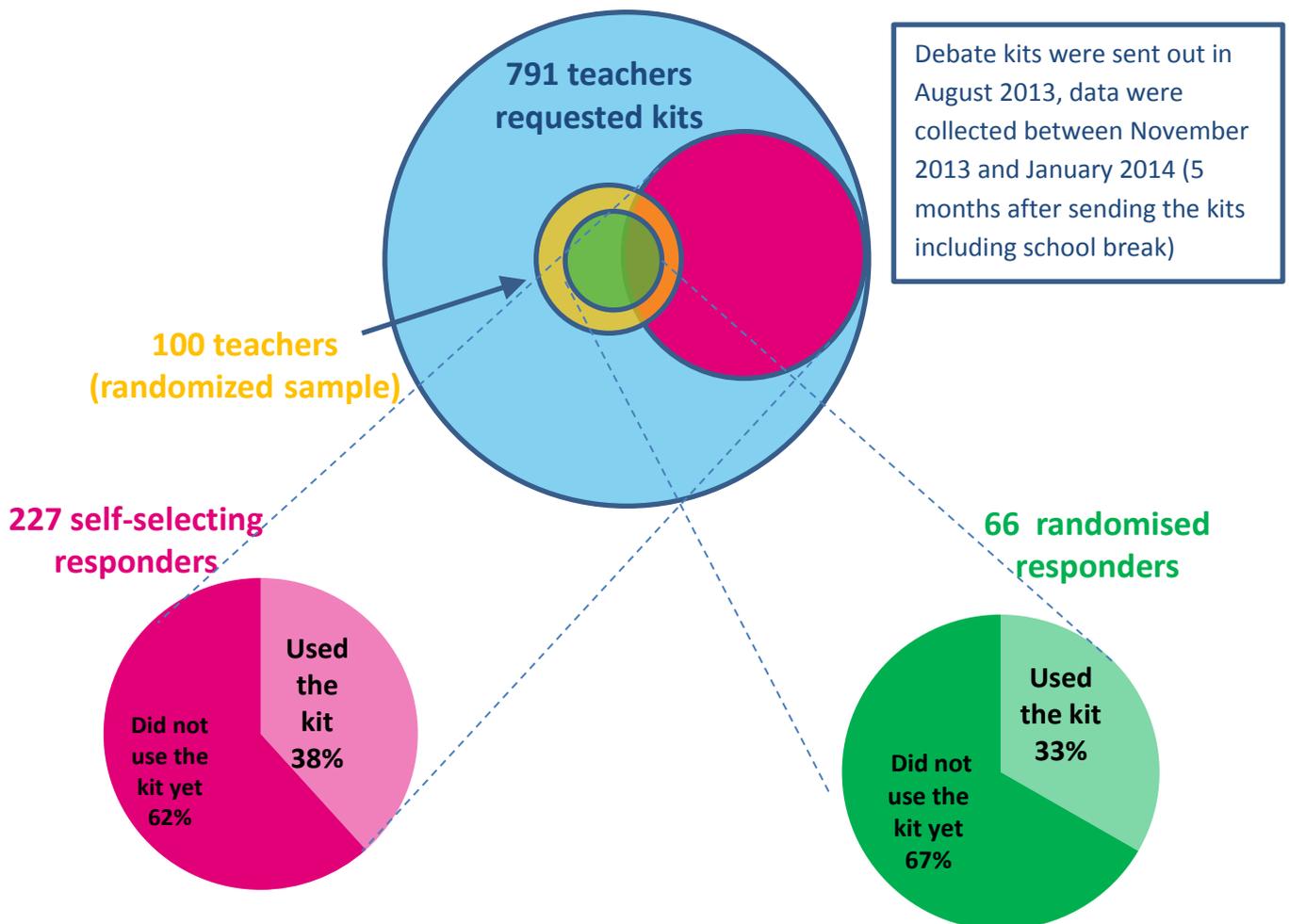
Self-selecting responders

We emailed all the 791 teachers who had requested a copy of the Food Security Debate Kit to ask whether they had used it, with a simple YES or NO answer. 227 teachers responded (29%), 87 of which clicked to say they had used it (38%), and 140 to say they had not (62%).

Randomly selected responders

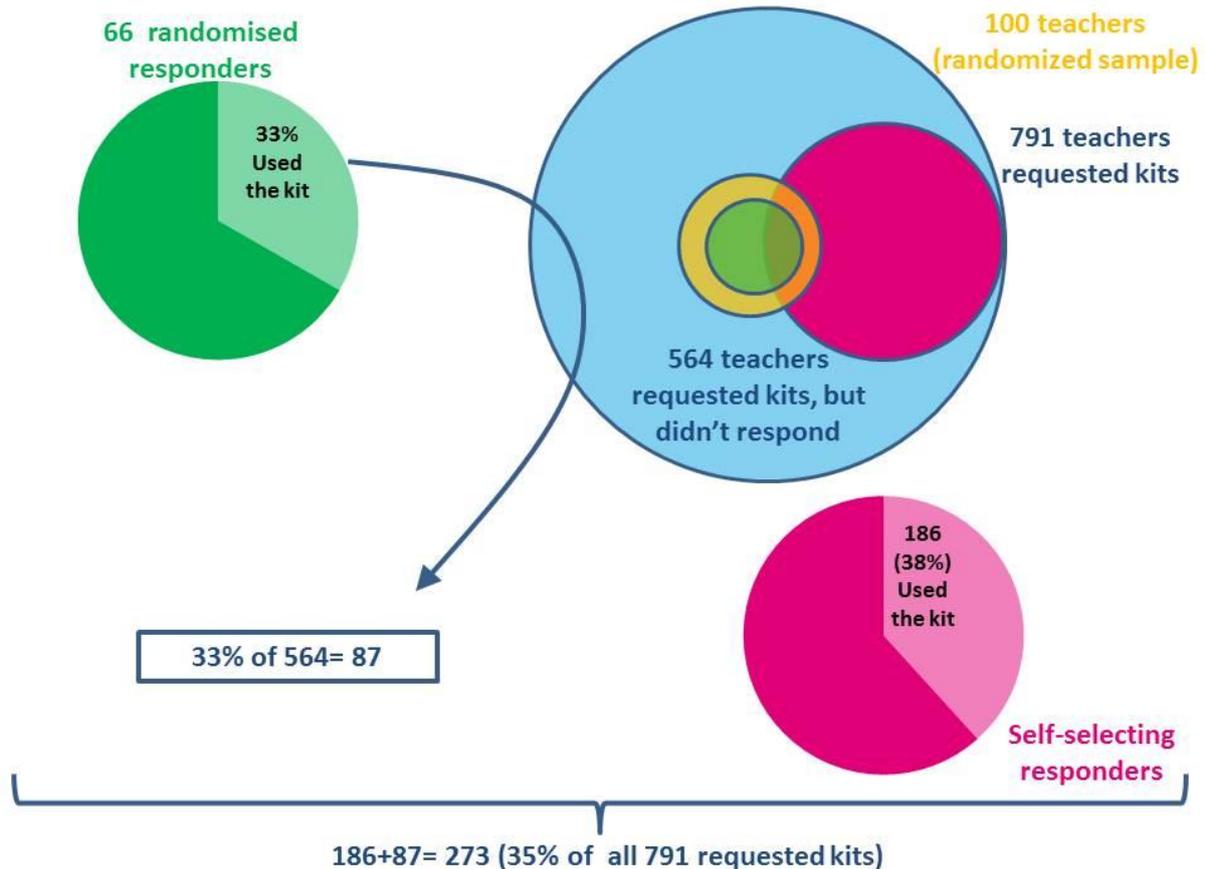
In order to get a more robust report of how many kits were used we took a random sample of 100 teachers who'd requested a Food Security Debate Kit, and sent a second email to the 70 who hadn't replied to the initial email. We then followed up non-responders with reminder emails, one letter and a phone call.

At the time of writing 66 out of the randomised sample of 100 teachers have responded to tell us if they've used the debate kit. Of this 66, 22 (33%) of them said they had used the kit.



So, how many of the kits were used?

Of the self-selecting responders, 87 (38%) said YES, they used it. The percentage of randomly selected responders who had used the kit was lower, 33% (22 out of 66). By extrapolating the percentage of randomly selected responders who'd used the kit up to the 498 teachers we didn't hear back from in the first email, 33% of 564 gives an estimate of 186 kits used. By adding together this 186 to the 87 self-selecting responders that said they had used the kit, we get 273 kits used out of a total of 791 teachers asked – an overall usage of 35%. (See graph below)



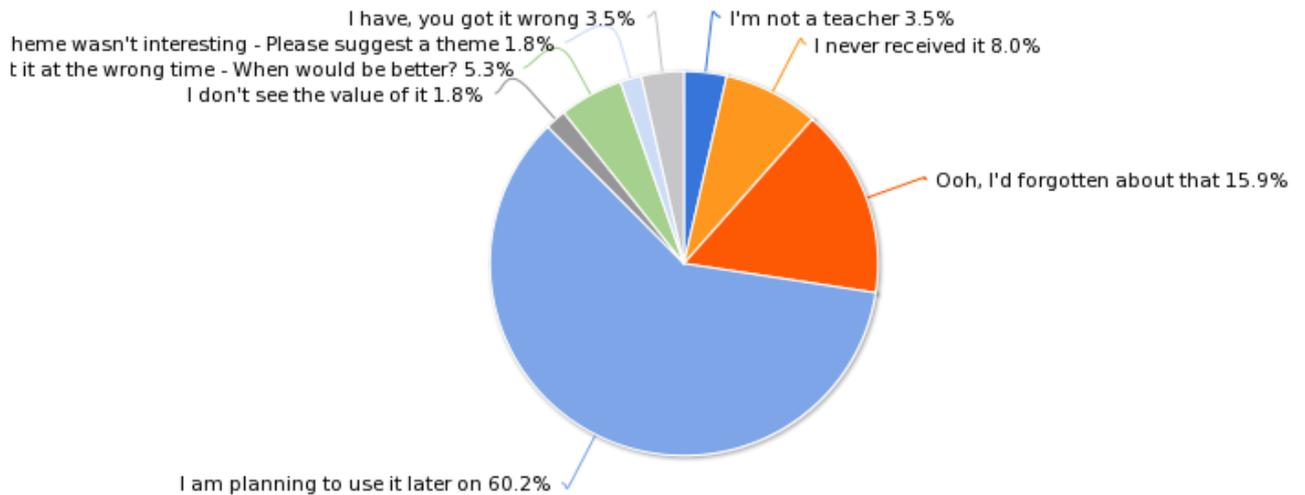
In summary, we asked teachers if they'd used the debate kit five months after they'd received it, and we estimate that at least 35% of teachers had used it within those few months. There is also a strong indication that most of those who haven't yet used it will use it in the future (see next section) when it might fit better with related topics of the curriculum.

We estimate that at least 35% of teachers that requested the kit have used it, five months after it was sent.

3.2 Usage – why some of the kits didn't get used?

All teachers who had requested a Food Security Debate Kit were sent the email in appendix 1, to ask them if they had used it. Teachers who clicked on the NO link were taken to a survey asking them why they hadn't used kit and inviting them to make any comments or suggestions.

The majority (60%) of the teachers that hadn't used the debate kit were planning to use it later on in the school year. Another 16% had forgotten about it and 8% of the teachers didn't have any recognition of having received the kits. The remaining teachers thought we had sent the kit at the wrong time; they didn't see the value of it or didn't think Food Security was an interesting theme.



3.3. Usage – how were the kits used?

72 out of the 87 teachers who said they'd used the debate kits in our first email filled out the feedback survey about the Food Security Debate Kit and responded to certain usage questions.

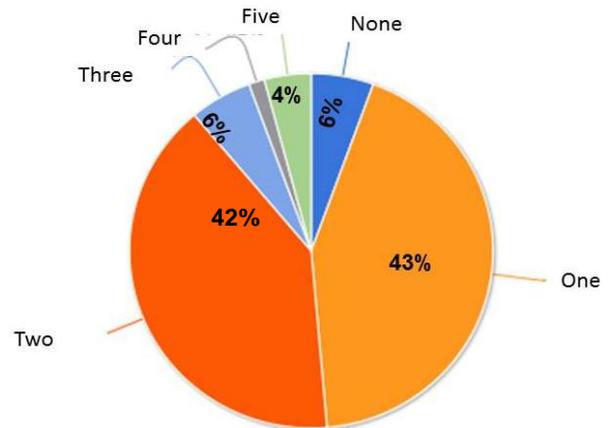
The responses were very positive: 61% of them had already lent the kit to at least one colleague. 60% of the teachers plan to use the debate kit again, 29% haven't decided yet, and only 1% said they don't plan to use it again.

Most of the teachers have recommended the kit to their colleagues
The majority of the teachers plan to use the debate kit again

Number of times used

72 teachers told us how many classes they used the debate kit with. 43% of them used it with only one class, but up to 42% of teachers had used the kit twice, followed by 6% that had used it three times and 4% that had used it in five different occasions. This gives an average of each kit being used 1.7 times.

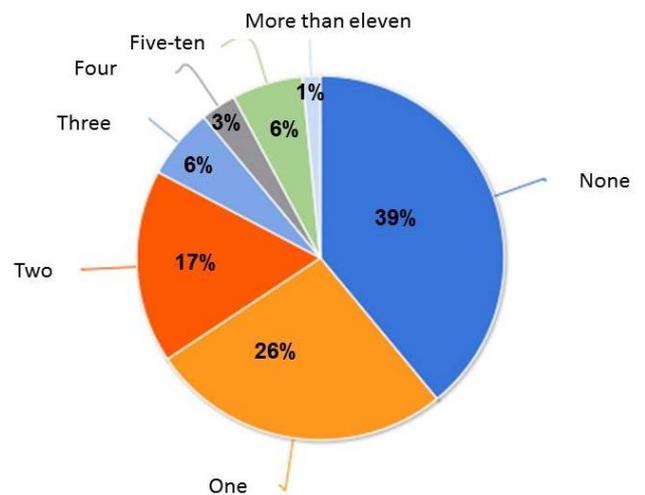
The number of times used the teachers used the kit with



Teachers lending the kit to colleagues

61% of the teachers who completed the survey had lent the Food Security Debate Kit to at least one colleague; 26% lent it to one colleague, and 6% teachers even lent it to 5-10 teacher colleagues. On average each debate kit was lent to 1.4 other teachers.

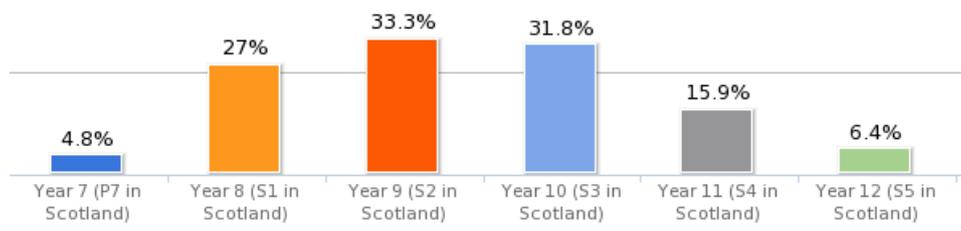
How many colleagues teachers lent the kits to



Taking into account that each kit was used 1.7 times and lent to an average of 1.4 teachers, we can estimate that **each kit was used with more than 3 classes on average**. If 273 kits have been used, this means **over 800 classes** have been debating about Food Security using this resource.

Year groups in which the kits were used

As it is shown in the graph below, most of the Food Security Debate kits were used in Years 8 to 10 (S1-S3 in Scotland), that is 12 to 15 year old students.



4. Aims and achievements

4.1 Global Food Security Programme aims – were they met?

The Global Food Security Programme’s main objective in funding this debate kit was to increase student awareness of Food Security and to understand that it is a very complex global issue that affects our daily lives.

In the feedback survey, we asked the teachers to what extent they agree with a number of outcomes of using the Food Security Debate Kit:

| | Strongly agree | Agree | Disagree | Strongly disagree | Don't know |
|--|----------------|-------|----------|-------------------|------------|
| My students know more about the topic of Food Security | 34.4% | 64.1% | 1.6% | 0.0% | 0.0% |
| My students understand now that Food Security is a very complex subject | 31.3% | 68.8% | 0.0% | 0.0% | 0.0% |
| My students understand now the concept of carbon footprint. | 22.2% | 68.3% | 3.2% | 0.0% | 6.3% |
| My students are better at identifying local and seasonal foods. | 28.6% | 55.6% | 7.9% | 0.0% | 7.9% |
| My students know now that a lot of our food comes from other countries. | 41.3% | 57.1% | 0.0% | 1.6% | 0.0% |
| My students are now aware that with an increasing population, feeding the World is a global issue. | 39.7% | 58.7% | 0.0% | 0.0% | 1.6% |
| My students are now more aware of World's inequality in terms of nutrition and resources. | 31.3% | 67.2% | 0.0% | 0.0% | 1.6% |

As a starting point, the majority (99%) of the teachers said that their students are now more aware of the complexity and issues relating Food Security, and 34% of them strongly agree with this. Also, all the teachers agreed that their students now know that feeding the World is a global issue.

Moreover, up to 90% of the teachers confirmed that using the debate kit allowed their students to develop higher thinking skills around Food Security, getting to understand complex concepts like the carbon footprint.

Finally, 85% of the teachers stated that their students applied what they learnt in the classroom to their daily lives, as they are now better at identifying local and seasonal foods. We think this point is particularly important, since it could evolve into a long term effect of behaviour change, which of the outcomes educational resources can aim for, is one of the more difficult to achieve.

99% of the teachers think that their students are now more that Food Security is a complex issue.

Apart from the teacher feedback collected through the survey, we got some very positive comments from STEMNET contractors, here is an example:

“The elements/jobs covered clearly define the significant issues for the sector” – Kaye Twomlow, Director of Derbyshire Education Business Partnership Ltd

4.2 Project achievements

We asked teachers in the feedback survey if they agreed with certain outcomes of using the debate kit. We also asked them to rate the kit’s design and content. More than 70 teachers completed this survey and we can use this anecdotal evidence to get an idea of the strengths and weaknesses of the Food Security Debate Kit.

Overall opinion on the Food Security Debate Kit

With 35% of kits being used at least once and a 60% of those who haven’t yet used saying that they plan to use it in the future, the Food Security Debate Kit is an effective resource which will be used several times by the same teacher and also shared with colleagues. This is further proved by many positive comments by teachers and STEMNET contractors and teacher response to the survey:

“Particularly like the format - size, shape and content cards plus the accuracy of the scientific information!” – Teacher

“The kits looked fab and I do not think we have any improvements to suggest” – Aileen Hamilton, Science Connects Manager, University of Glasgow

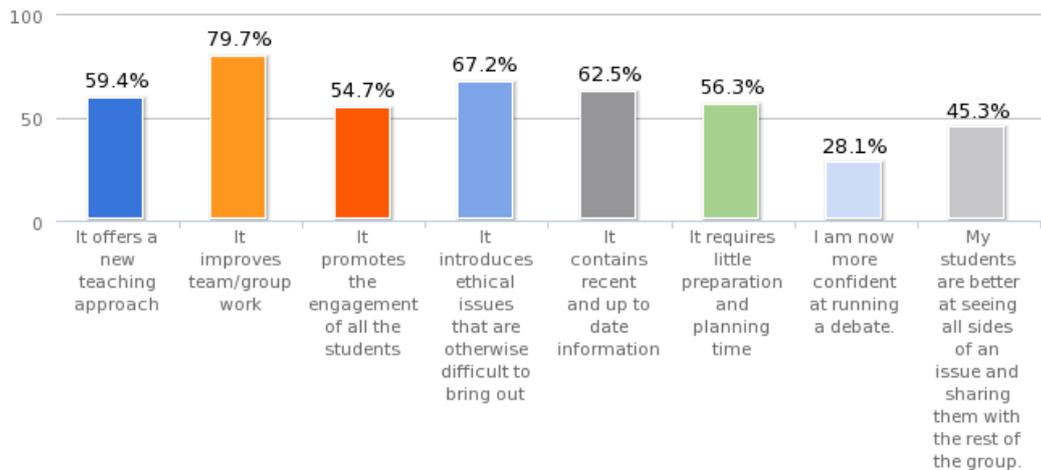
How would you rate the Debate Kit?

95% of teachers thought the content is **“excellent”** or **“pretty good”**, and the remaining 5% thought it is **“OK”**.

| | Excellent | Pretty good | OK | Not great | Rubbish |
|-----------------|-----------|-------------|-------|-----------|---------|
| Overall | 46.9% | 48.4% | 4.7% | 0.0% | 0.0% |
| Content | 43.8% | 50.0% | 6.3% | 0.0% | 0.0% |
| Design & format | 48.4% | 39.1% | 12.5% | 0.0% | 0.0% |

Importantly, when teachers were asked to mark the main positive outcomes that the Food Security Debate Kit had for them, they marked – on average – at least 4 of the 8 outcomes that they were given. From this we can conclude that the overall perception of this debate kit as a teaching resource is very good, but let’s look at the data more closely:

The main benefits of using the Food Security Debate Kit, for you as a teacher were:



A significant percentage of teachers (67%) said that one of the most important benefit of the Food Security Kit is that it introduces ethical issues that are otherwise difficult to bring out in the classroom.

“Excellent way to discuss an important but tricky subject.” – Teacher

“I particularly like that makes me think about different points of view I had never before” – Teacher

Teachers particularly value the access to education resources that contain current information and therefore, 63% of them list this as one of the main outcomes of using the Food Security Debate Kit. On top of this, schools are often under pressure, of with a tight schedule and extensive curriculum. This leaves teachers with little time to plan enrichment activities or alternative lessons. Hence, 57% of teachers marked “little preparation time” as a key benefit of the Food Security Debate Kit.

Additionally, 45% of the teachers considered that one of the main outcomes of using the Food Security Debate Kit is that students get better at seeing the different sides of an issue and sharing them with the group.

Finally, though only 28% of the teachers listed “being more confident at running debates” as one of the main outcomes of the Food Security Debate Kit, this doesn’t mean that they are not confident at running debates; teacher have used other debate kits before and are already comfortable with this kind of activity. In fact, in previous evaluation reports teachers stated that kits were a great tool to help them run debates:

“This is great I couldn't have done a debate without it” – Teacher

“Building confidence in holding debates with pupils” – Teacher

Appendix 1: Evaluation methodology

Usage audit

All teachers who had requested a Food Security 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.



Hi << Test First Name >>

We sent you a Food Security Debate Kit in the summer, which I hope you received. We've one quick question for you:

Did you use the Food Security Debate Kit?

[YES](#)

[NO](#)

We need to get the evaluation right for this, so we'll be chasing you if we don't hear from you. Please click *YES* or *NO* to help us and to get us off your back. Also, if you fill in the survey you will have the chance of winning a **£50 M&S voucher!**

Thanks for letting us know!

For more information on future Debate Kits, go to our website and discover the new [Electricity Distribution Debate Kit!](#)

If this is not your current email address, or if you'd like to update your details, click [here](#).

All the best,

Angela

angela@gallomanor.com

Teachers who clicked on the NO link were taken to a survey asking them why they hadn't used the Food Security debate kit and inviting them to make any comments or suggestions. Teachers who clicked on the YES link were taken to an online survey about their use and opinion of the Food Security Debate Kit.

Usage audit: sampled teachers

Given that clicking through from the email was self-selecting, since those who used the kit are expected to feel more obliged to reply. In order to get a more robust report of how many kits were used we took a random sample of 100 teachers who'd requested a Food Security debate kit to ask if they had used the debate kit, and sent a second email to the 70 who hadn't replied to the initial email (our randomly selected responders group). We then followed up non-responders with reminder emails, a letter (see below) and a phone call.

We also posted the Food Security Debate Kit out to 175 schools in the UK and 100 schools in Ireland who participated in *I'm a Scientist, get me out here* event. We asked whether they had used the debate kits in a post-event survey but the response rate was so low in this case that we are unable to estimate how many of these debate kits actually got used by the teachers.



17th January 2014

«AddressBlock»

Dear «First_Name»,

Did you use the Food Security Debate Kit?

Thank you for requesting a Food Security Debate Kit. We need to know how many of the kits were used in order to report to our funders, so **please** answer this one simple question: **did you use the Food Security Debate Kit** posted to you in the summer?

All you need to do is **tick the relevant box** below and send it by **fax** to our office at **0870 7627 451** or, if more convenient, you can also send your answer by **email** at **angela@gallomanor.com**

| Did you use the Food Security Debate Kit? | Comments |
|---|--------------------------|
| A. YES | <input type="checkbox"/> |
| B. NO | <input type="checkbox"/> |
| C. NO, but I plan to use in the future | <input type="checkbox"/> |
| D. I never received the kit | <input type="checkbox"/> |

Your answers will be kept anonymous. We need to get the evaluation right for this, so we'll follow up with a phone call to if we don't hear from you.

We really appreciate hearing your feedback.

All the best,

Angela Monahan

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7-9 North Parade Buildings, Bath, BA1 1NS
For more information please contact Angela Monahan, on 01225 326892 or angela@gallomanor.com
Registered in England & Wales, No. 02962700.
Registered Address: Duckwood Cottage, Farleigh Wick, Bradford-on-Avon, BA15 2PU



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 combination of 14 quantitative and qualitative questions. 72 of the 87 teachers who clicked to say they'd used the debate kit completed the survey.

The questions mainly asked about the usage of the kits; the year group, 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 them how the Drug and Sports and Food Security kits compare to each other and we asked for their views on the design and content of the kits, outcomes from using it and their preference on new themes for future debate

Online feedback survey



Food Security Debate Kit

Thank you for using the kit. What do you think of it?

Thank you for letting us know you used the Food Security Debate Kit! We hope you and your students enjoyed it.

You'll have noticed that this is a survey. We want to do more kits and to improve them. Your opinion is really important to us and we'd really appreciate you answering the following questions. They will help us measure what you and your students gained from the Food Security Debate Kit, and will help us make future kits as useful for teachers as possible.

It will take just 5 minutes and 39 seconds (We've timed it!). Don't feel you have to write lots, brief answers are fine.

1. How many times have you used the Food Security Debate Kit?

- 0
- 1
- 2
- 3
- 4
- 5+

2. Do you intend to use the Food Security Debate Kit again, this academic year?

- Yes
- No
- Haven't decided

3. What year groups of students have you used the Debate Kit with? (Please tick all that apply)

- Year 7 (P7 in Scotland)
- Year 8 (S1 in Scotland)
- Year 9 (S2 in Scotland)
- Year 10 (S3 in Scotland)
- Year 11 (S4 in Scotland)
- Year 12 (S5 in Scotland)
- Year 13 (S6 in Scotland)
- Other (please specify) Please enter an 'other' value for this selection.

4. What ability level class(es) have you used the kits with? (please tick all that apply)

- Top
- Middle
- Lower
- Mixed

5. What subjects has the kit been used to teach? (please tick all that apply)

- Science
- Geography
- PSHE/Citizenship
- General Studies
- Food Technology
- Other (tell us what) Please enter an 'other' value for this selection.

6. How many teachers have you lent the Food Security Debate Kit to?

- 0
- 1
- 2
- 3
- 4
- 5-10
- 11+

7. How would you rate the Debate Kit?

| 7. How would you rate the Debate Kit? | Excellent | Pretty good | OK | Not great | Rubbish |
|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Overall | <input type="radio"/> |
| Content | <input type="radio"/> |
| Design & format | <input type="radio"/> |

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

| 8. To what extent do you agree with the following outcomes of using the Food Security Debate Kit? | Strongly agree | Agree | Disagree | Strongly disagree | Don't know |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My students know more about the topic of Food Security | <input type="radio"/> |
| My students understand now that Food Security is a very complex subject | <input type="radio"/> |
| My students understand now the concept of carbon footprint. | <input type="radio"/> |

| 8. To what extent do you agree with the following outcomes of using the Food Security Debate Kit? | Strongly agree | Agree | Disagree | Strongly disagree | Don't know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My students are better at identifying local and seasonal foods. | <input type="radio"/> |
| My students know now that a lot of our food comes from other countries. | <input type="radio"/> |
| My students are now aware that with an increasing population, feeding the World is a global issue. | <input type="radio"/> |
| My students are now more aware of World's inequality in terms of nutrition and resources. | <input type="radio"/> |

9. The main outcomes from using the Debate Kit, for you as a teacher, were... (please tick all that apply)

- It offers a new teaching approach
- It improves team/group work
- It promotes the engagement of all the students
- It introduces ethical issues that are otherwise difficult to bring out
- It contains recent and up to date information
- It requires little preparation and planning time
- I am now more confident at running a debate.
- My students are better at seeing all sides of an issue and sharing them with the rest of the group.
- Other (please specify) Please enter an 'other' value for this selection.

10. Do you have any comments on the *content* of the debate kits?

11. Have you also used the Drugs in Sport Debate Kit we produce? If so, how does this Food Security Debate Kit compare to the Drugs in Sport one?

12. Which other topics would you like us to cover in following Debate Kits? (please tick up to three options)

- Diet and exercise
- Rare diseases
- Allergies
- Zoos
- Social Media
- Climate change
- Energy sources
- Nanotechnology
- Computing and Robotics
- Space travel
- Other (please specify) Please enter an 'other' value for this selection.

13. When would be the best time for us to send you the new Debate kit?

- Term 1
- Term 2
- Term 3
- Term 4
- Term 5
- Term 6

14. Is there anything else you would like to add, such as things you particularly liked or disliked about the Debate Kit, or what you would change about it?

Submit