

FSA *Dish it up*: Usage and impact Report

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Date January 2008

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1. Executive Summary

The FSA *Dish it Up!* resource was felt to be unique in its interactivity. While teachers claimed to have some of the content of the resource, they felt the interactive way in which it was presented was felt to be unique and appealing. Teachers thought they would be most likely to use the resource in Food Technology, PSHE and Science, but that it would be less likely to be used in PE as teaching was more practical (not theoretical) in the early years of Secondary.

The resource was predominantly used on whiteboards and/or projectors, rather than on individual PCs. Lessons that included the resource also tended to be teacher led and discussion based. The 'Breakfast' section of the resource was used the most and the 'Club' section was used the least, partly due to the emphasis that teachers placed on children eating and understanding the importance of eating breakfast. The 'body image' game was used rarely, as teachers found this a difficult subject to teach.

Lessons that worked particularly well included:

- a PE lesson where a teacher split a hall into sections, apportioned each a food group and asked students to run to the relevant section when she called out a food
- a Science lesson where students chose their meal options on the Balance-a-tron and were very engaged in the process
- a Home Economics lesson where the teacher showed the videos and encouraged healthy competition between groups in choosing a balanced meal
- a Home Economics lesson in a PRU which provided a striking graphical representation of the difference between a balanced and unbalanced breakfast

Dish it up! was thought to be an engaging resource and one that tapped into a number of priorities for teachers such as skills-based learning and personalised learning. They thought it had good educational value and that the colours, graphics and interactivity were appealing.

The quantitative and qualitative research indicated that the resource consolidated existing learning for the students, particularly around food groups and the importance of breakfast. The quantitative research showed that after the lesson the students had an increased knowledge of the Eatwell plate. The *Dish it up!* lesson had a significant impact on students' knowledge of the Eatwell plate. Some students found it difficult to apply this knowledge to choosing a balanced meal, however. Less than 40% chose the meal with the best or a good balance of foods. This could, however, be due to the options that were available. The best impact on knowledge was when students had used all sections of the resource (i.e. 'Breakfast', 'Lunch' and 'Club'), rather than just one. There was no noticeable impact on students' knowledge of hygiene and safety or consumer awareness, although they already had a good understanding of hygiene before the lesson anyway. When asked, in the quantitative research, to state what they thought they

had learnt the most about, the students stated in their own words that they had learnt most about choosing a varied, balanced diet and eating the right amount to be a healthy weight.

There was felt to be scope for *Dish it up!* to be used in both Pupil Referral Units and special schools as the graphics and the interactivity of the resource lends itself to use in these settings. There was however felt to be slightly too much text for use in some special schools.

There was felt to be less scope for usage of the resource in youth clubs for a number of reasons, however: the leaders were unable to give the young people their undivided attention, the young people were at the club for leisure more than learning, and the topics normally covered at the club were needs-led meaning the resource would only be used if chosen by the young people.

Young people were also unlikely to use the resource at home, unless it were set as a specific homework task as it was competing with other computer games with more sophisticated graphics and other leisure activities.

Barriers to using the resource included the teaching style of the teacher, the ability of the students, the fact that teachers did not think they could assess the students easily using the resource, the lack of technical detail (for some Science teachers), the confidence of teachers in using ICT, the availability of ICT suites, and a desire for practical-based lessons.

Teachers would like to see regional accents in the 'Watch' section, for the videos to be louder and to be able to see the food being discussed. They wanted the 'Energy expenditure game' to mirror the lives of children and to be simplified, and for some of the food choices in the 'Balance-a-tron' to be more relevant, including more desserts and drinks. Some teachers would have liked the layout and navigation of the resource to be slightly revised to make it more intuitive and to be given the option to turn the sound and character off at the start. They would have liked to be able to increase the screen size and be reassured about uploading it onto their school network.

Teachers thought the resource could be used with 10-13 year olds. The content was felt to be relevant for younger children, although there was perhaps slightly too much text for them. Teachers thought the resource would be useful to cover these topics with older but lower ability students or for revision purposes.

Most teachers thought the resource could be used during whole school day events such as PSHE and health days.

Conclusions

Most teachers claimed they would be likely to use the resource, despite the improvements they suggested. There was felt to be definite potential for wider use of the *Dish it Up!* resource outside mainstream Secondary schools, particularly in Primary, special schools and Pupil Referral Units (PRUs).

Dish it up! was thought to be particularly effective for teacher-led usage on an interactive whiteboard or projector. Some teachers commented that they thought it was rare to find interactive resources that worked so well in this way.

The resource was effective both in consolidating and increasing knowledge about the Eatwell plate in particular. There was, however, found to be some difficulty in applying this knowledge after only one lesson with the resource. It was particularly effective in promoting class discussion and debate, which fits in very well with the skills-based curriculum. The 'Breakfast' section was used the most by teachers as it was felt to be an important issue to cover with the students.

Recommendations

The most effective way to market the resource would be to target Food Technology, PS(H)E and Science teachers via direct mail, email and conferences. The resource is less relevant for PE teachers as the theoretical teaching of this subject is not relevant until students are older. We would therefore not recommend marketing the resource directly to PE teachers. However, any communication could stress the cross-curricular potential of the resource, which could, of course, include PE. This cross-curricular potential is a key benefit that should be emphasised. The Scottish *Curriculum for Excellence* and the English KS3 cross-curricular focus are obvious links here.

We would recommend promoting the resource as not just being effective in teaching health, but also balance of food across the day, as this is not a message that has reached all schools effectively. Teachers should be encouraged to use the Balance-a-tron across the sections of the resource (i.e. Breakfast, Lunch and Club) rather than just in one section. It was found that the resource had the best impact when more than one section was used in a lesson.

The resource's effectiveness in reaching visual learners through engaging colours and graphics, should be highlighted, as should the resource's potential for wider usage (e.g. with younger ages and older for revision as well as whole school use). Communications should also emphasise the resource's ability to personalise learning and to stimulate debate.

Teachers are looking for the resource to be as relevant to their students' lives as possible. They therefore suggested that the food choices available and the accents in the videos should be made as relevant to all the home nation countries as possible. Students and teachers also wanted to see the context of the food being discussed in the videos. The Energy expenditure game could also include more everyday activities, such as walking to and from school.

In order to involve parents further, teachers could set a joint parent and child homework task such as creating food diaries together and testing them on the Balance-a-tron if they had access to a computer at home.

Finally, students and teachers claimed that the videos could be made louder, the screen size of the resource should be made flexible (so it can be enlarged), the audio should be optional from the start and that the layout and the navigation could be made slightly more intuitive. Teachers should also be reassured about the ease of uploading the resource onto their school network.

2. Background and objectives

2.1 Background

Dish it up is an interactive tool on CD-ROM which has been designed to be used with young people in schools and other settings across the UK. It links up with different UK school curriculums providing young people with a range of nutrition and food-related information. The resource is aimed at 11-12-year-old young people and aims to help schools and parents/carers to bring the FSA's Food Competences to life and complement the progress made on improving school food. These are presented in four themes:

- Diet and health
- Consumer awareness
- Cooking (food preparation and handling)
- Food safety

The resource has links with Food Technology/Home Economics, Science, Personal (Social) Health Education and Physical Education. It also has the potential to be integrated into a whole school approach and policy on food education. *Dish it up* can be used independently for self study and reflection as well as for group and whole class teaching. It is also suited for use on interactive whiteboards.

Usability research informed the updated version of the resource which was launched at the Design and Technology show in November, and the resource is due to be rolled out to schools in January 2009.

In order to inform this roll-out, research was required to explore how the new *Dish it up* resource can be used and its likely effectiveness in schools and other settings.

2.2 Research objectives

A programme of qualitative and basic quantitative research was carried out in order to explore:

- how *Dish it up* is likely to be used in school/other settings
- what impact it will have on the schools/other settings and young people

More specifically, the research set out to:

- explore how the new version of *Dish it up* can be used in schools/other settings
- provide examples and case studies of when and how the resource is most useful and effective
- explore how the new version of *Dish it up* can engage with young people in developing their food choice skills and how it can help to improve pupils' knowledge around the relevant core competences

- explore the wider usage of *Dish it up* in settings other than schools e.g. pupil referral units (PRUs), youth clubs and in home
- identify any barriers that currently prevent schools/other settings from using the resource to its full potential e.g. training, confidence, helpfulness of the teachers notes, attitude of school etc.
- explore whether and how the resource works across wider age groups beyond the primary audience of 11-12-year-olds e.g. 9-14
- explore how the resource can be used across the whole school day and curriculum

Findings in relation to usability were noted; however, these did not form the focus of the research due to the separate piece of usability research being undertaken.

3. Methodology

The research design comprised qualitative and quantitative methodologies and the research took place during October 2008.

Qualitative Research:

The qualitative element of the research comprised:

- 9 school case study visits
 - 2 each in England (including a Special School), Northern Ireland and Scotland
 - 3 in Wales
- 4 case study visits in other settings (across the 4 countries)
 - 1 in a pupil referral unit in England
 - 1 in a youth club in Scotland
 - 2 with parents in home (1 in Wales, 1 in NI)
- 6 group discussions with teachers
 - 2 each in England and Scotland
 - 1 each in Northern Ireland and Wales
- 6 telephone depth interviews with primary teachers to ascertain potential for age stretch below 11-12-year-olds

The grids below detail when and where the fieldwork took place:

	Type of fieldwork	Year group	Location
1	Primary telephone interview	Year 6	England
2	Primary telephone interview	Year 6	England
3	Primary telephone interview	Year 6	England
4	Primary telephone interview	Primary 7	Glasgow
5	Primary telephone interview	Year 7	Belfast
6	Primary telephone interview	Year 6	Cardiff

	Type of fieldwork	Subject	Year group	Location
1	Group discussion	Food Tech	Year 7	London
2	Group discussion	Science	Year 7	London
3	Special school visit	Food Tech	Years 11/12	Surrey
4	School visit	PE	Year 7	Kent
5	PRU visit	Food Tech	Year 7 PRU	London
6	Group discussion	Science	Year 8 (Engl. Yr 7) 11-12 years old	Belfast, NI
7	School visit	Food Tech	Year 8 (Engl. Yr 7) 11-12 years old	Belfast, NI
8	School visit	PE	Year 8 (Engl. Yr 7) 11-12 years old	Belfast, NI
9	Parental visit	n/a	11 year old boy	Belfast, NI
10	Group discussion	Food Tech	Secondary 1 (11-13 years old)	Glasgow
11	Group discussion	PE/PSE	Secondary 1 (11-13 years old)	Glasgow
12	School visit	PSE	Secondary 1 (11-13 years old)	Glasgow
13	School visit	Science	Secondary 1 (11-13 years old)	Glasgow
14	Youth club visit	Youth Club	11-13 years	Glasgow
15	Group discussion	PE/PSHE	Year 7	Cardiff
16	School visit	Food Tech	Year 7	Cardiff
17	School visit	Science	Year 7	Cardiff
18	School visit	Science	Year 7	Cardiff
19	Parental visit	n/a	11 year old girl	Cardiff

Quantitative Research

The quantitative element of the research comprised:

- Student questionnaires completed before and after a *Dish it up!* lesson
 - Sample achieved = 254 (NB: aiming for 180)
- Fieldwork carried out in England, Northern Ireland, Scotland and Wales
- Range of subjects: Science, Food Technology, PSHE, PSD and Physical Education

Note: In order to ensure that students would understand the questions and to ensure that the language in the questionnaires was appropriate, the student questionnaire was tested with young people of the appropriate age before they were sent out to schools. Following the young people's feedback, the questionnaires were amended.

4. Main findings

4.1 Background to usage

Teachers are using a range of resources to cover healthy eating and nutrition topics, although few of them tend to be particularly interactive.

The Food Technology/Home Economics teachers that were interviewed claimed that they were mainly using paper-based resources and that they did not feel that there were many interactive resources on offer to use. They were using a small number of CD-ROMs and even using plastic food to demonstrate food groups (sometimes as part of a 'Junk it' McDonald's' pack). They were also employing resources such as 'Licence to Cook', the British Nutrition Foundation website and the Sainsbury's 'Get Cooking' website. All were using the FSA Eatwell plate in one form or another.

PS(H)E teachers claimed that there were not many interactive resources available for them to use to teach this area. They were tending to use DVDs of relevant films such as Super Size Me to act as stimulus for discussion. Most of the activities related to healthy eating were discussion-based, with group work and worksheets also being used. PSHE teachers also used physical, plastic food to demonstrate the Eatwell plate, on occasion.

Science teachers were tending to use more practical resources such as experiments, for example some mentioned burning nuts to assess the energy used in the process. They claimed to have quite a few interactive resources available to them including websites and other interactive resources such as 'Dreamworks'. They were often taking a more technical approach to this topic than other subjects and so were using resources such as 'Spotlight Science' or 'Starting Science'. They also used DVDs such as those featuring Jamie Oliver.

PE teachers claimed that they were using few, if any, formal resources to cover this topic. Due to the nature of PE as a subject that was predominantly physically taught, this was not an area that teachers focussed on in any detail.

"In Science I think we are probably spoilt a little bit in the type of resources that we have so we can be more critical, whereas food technology there's not that many resources produced for them" [Science teacher, England]

Fit with Curriculum

The *Dish it up!* resource is intended to have links to a number of different subject areas. The research suggests that there are stronger links to Food Technology/Home Economics, PS(H)E/Wellbeing and Science, and fewer links to PE.

There was felt to be a close link with the curriculum for **Food Technology** and **Home Economics**, particularly in relation to Diet and Health. The topics

included in the *Dish it up!* resource are covered explicitly within this subject area. Consequently Food Technology and Home Economics teachers were often enthusiastic about having a resource such as *Dish it up!* as it represented a more interactive and engaging version of the existing resources that they were using (that were currently often in paper-based form).

“I could see exactly where it could fit in the curriculum” [Home Economics teacher, Northern Ireland]

PS(H)E teachers felt that the resource fitted well with areas that they were likely to cover in their curriculum. However, this was sometimes dependent on whether they felt other subject areas (such as Food Technology) would cover it, as they would not be keen to repeat content. Most felt, however, that the discursive nature of the resource lent itself to being used in PS(H)E and that the competences were also relevant to the subject.

“I think the PSE curriculum would benefit from this resource” [PSE teacher, Glasgow]

Science teachers, more than teachers of other subjects, often thought that there were fewer direct links with the Science curriculum. While they claimed that food and nutrition were covered, Science teachers tended to approach the subject from a more technical angle. They liked to focus on hard facts about food (e.g. calories, nutritional content etc.) rather than the more discursive and lifestyle elements that *Dish it up!* focuses on. This meant that they could find other resources slightly more appealing. This was backed up by some students, who claimed that the lesson they had received, was not what they would have anticipated from a Science lesson.

“It didn’t really feel like it was a Science lesson. It was still good, it just didn’t really feel like Science” [Secondary 1 pupil, Glasgow]

Compared to other teachers, **PE** teachers felt that there were fewer links to their Year 7 curriculum. While they felt it was useful information for students to know, they claimed that theoretical elements were only really taught when students were 14-16 years old. This meant that while the resource might be relevant, in content, to older students, they felt its graphics and imagery were aimed at younger students. Some PE teachers worked with other departments in the school, such as the Food Technology department, to integrate the subjects and they felt *Dish it up!* would be relevant in this context, but not otherwise.

“Certainly it would be ideal if they were going to GCSE or BTech Sport in the future” [PE teacher, England]

4.2 How the resource is used

Teachers were asked to use the resource in any way that they felt was appropriate. This was in order to gauge the most likely ways in which teachers would use the resource. Most of the teachers who used the resource chose to use it on an interactive whiteboard or projector. Very few teachers used the resource in ICT

suites as they felt that it would work better as a teacher-led, discussion-based lesson resource. They claimed that it was often difficult to book ICT suites easily. Teachers were also slightly concerned that without significant direction students would 'get lost' if they were left to use the resource on their own on PCs.

"I would use it on the whiteboard because we only have one computer in the room"
[Food Tech teacher, London]

While teachers were free to use any part of the resource that they chose, they often based lessons around one particular section of the resource i.e. either 'Breakfast', 'Lunch' or 'Club'. This demonstrates the resource's flexibility, but it also should be noted that this meant that in many cases it prevented teachers from conveying the importance of balance across the day, as they were usually only using the Balance-a-tron in only one meal section, rather than two or all three.

The most widely used section of the resource in the qualitative research was 'Breakfast'. Teachers claimed that this was partly because this was the first element of the CD-ROM that they came across, but that also that this was an important issue to teach as not all of the children they taught ate breakfast in the mornings at all. This, they felt, could have a big impact on the children's daily behaviour. Additionally, breakfast was the meal that teachers often had the least control over, that nevertheless impacted on the school day.

In the quantitative research, almost all students stated that they had used 'Breakfast' and more than a quarter had used all sections of *Dish it up!*.

Sections used in the quantitative research

	Sections used	Overall usage (including 'Used all sections')
Breakfast	63%	90%
Lunch	36%	63%
Club	7%	35%
All sections	28%	28%

"Breakfast is a big issue because it's easy to miss. They can just pick up rubbish on the way to school. Lunch has different options" [PSE teacher, Glasgow]

Most used activities

The '**begin**' section was often used as a teacher-led starter activity, although in some instances it was not used and was instead replaced by a general discussion about healthy eating.

The '**watch**' section (which included the videos of young people discussing their food choices) was often used to stimulate discussion in classroom-based sessions.

"Nothing [no resource] gives you everything, you use snippets to keep their attention" [Science teacher, Belfast]

The **'learn'** section was used far less by teachers overall in the qualitative sample. Teachers claimed that the games included in this section did not, in all cases, seem to fit into the other topics dealt within it. In the 'Breakfast' section, for example, teachers did not always understand why the 'Hygiene Game' was included as it was not specifically connected to discussions around 'Breakfast'. This is not to say, however, that teachers did not use these games, it was just less obvious how they should include them in their lesson plans.

The **'improve'** section, which contained worksheets and activity sheets was used by some teachers. The 'Healthy Eating Quiz' and the food diary were the most used worksheets. There were many teachers, however, who did not choose to use a worksheet and instead devised their own activities around the resource.

The **Balance-a-tron** activity was by far the most consistently used by teachers. It was, in many ways, the crux of the resource. Teachers chose to use it as a teacher-led activity and it often became the basis for discussion alongside food diaries that were filled in by students within the lesson in groups.

The **'body image'** game was used infrequently by teachers. When interviewed teachers did acknowledge that this was an important issue to tackle, however there was some nervousness about raising this sensitive issue in a classroom context. There was some fear that parents might react adversely to the topic being broached and many teachers felt that they lacked the training to deal with the topic in a sensitive way. They claimed that the topic of self confidence was not one that students tended to warm to. The activity was also not felt to greatly enhance student's understanding of the issue and it could be viewed as slightly childish by some of the students. The activity would need to overcome teachers' fears of causing offence before it is used.

The **'glossary'** section was also infrequently used by students or teachers. Teachers thought it was a useful element to the resource but it was not used because they employed the CD-ROM as a teacher-led activity, and therefore could explain terms if necessary as they went through. Teachers claimed that the glossary would be more likely to be used if the resource were used in ICT suites for older, lower ability students, for example. By contrast, the parents that were interviewed as part of the home visits found this section particularly useful as background information for themselves as well as their children.

4.3 Useful and effective usage of the resource

Outlined below are some case studies detailing useful and effective uses of the *Dish it Up!* resource in schools. These case studies were chosen to highlight instances where the use of the resource was particularly effective and to typify the use of the resource across all the schools visited. Where the resource was used less effectively in schools, we have noted this and included in the recommendations for the use of the resource in the future.

4.3.1 Case Study 1: Physical education was integrated with learning about food groups in a PE lesson in Erith School in Kent, England

The lesson was with a Year 7 class and was held in the sports hall. The CD-ROM was not used in the lesson, but the content was used as stimulus for the activities and topics that were discussed. The teacher started by asking the students to identify which other curriculum areas healthy eating might link to. The students mentioned Food Technology and the teacher agreed and also mentioned Science and PSHE. The class then had a discussion around food groups, which some students knew. The teacher wrote these up on the board.

The teacher then divided the hall into food groups, with a different corner allocated to each group and one in the middle. All the students stood up and ran round the hall. The teacher called out different foods and the students ran to the section of the hall that corresponded to it. Once the students had run to their chosen part of the hall, the class had a discussion about each food. The students were all aware that a tomato was a fruit and that mackerel was an oily fish. The class was divided over jam, with half the class running to the fruit section and half to the 'foods high in fat and/or sugar' section. This prompted a discussion around it. There was also debate over whether chocolate should go in the dairy section or the 'foods high in fat and/or sugar' section. The children were engaged in this activity and enjoyed the combination of physical activity and learning.

The teacher then discussed energy expenditure and talked through a few examples of what it meant. She then showed the class pictures of people doing different activities which were adapted from the activities in the energy game on the CD-ROM. She placed these pictures in the middle of the hall and divided the group into five teams. Each team stood in a row and one person was told to go to the other end of the hall and wait. The team took it in turns to run to the other end of the hall, pick up a picture on the way and give it to the person at the other end. They then had to put the pictures in order to amount to the energy expended. The winner was the first team with all the correct answers who were sitting down at the end. The children really liked this part of the lesson and they were very enthusiastic and liked the element of competition.

The lesson ended with a discussion of what people need to consider when deciding what to eat and a relay race. The students were instructed to ask their Food Technology teacher about energy expenditure. This demonstrates that the resource can lend itself to good cross-curricular links between PE and other relevant subject areas.

"The lesson was good, 'cos it combined energetic with learning" - Pupil, Erith School, Kent, England

"I think everyone enjoyed that lesson, but not everyone enjoys it when we do dancing [i.e. a normal PE lesson at that time]" - Pupil, Erith School, Kent, England

4.3.2 Case Study 2: The Balance-a-tron was particularly effective at sparking off lively discussion in a Science lesson in Wales

The teacher started the lesson by handing out a worksheet quiz from the resource and going over it orally. She asked each person to circle what they thought was the correct answer for each and referred to the Eatwell plate as a prompt, orally, for some answers. She then went over her answers on the interactive whiteboard, highlighting the correct answers and discussing the wrong ones. She used this as a warm-up to find out what they already knew, to prompt discussion and to include an interactive element to the lesson.

She then chose to show the 'Breakfast' video and to ask the students about their attitudes towards breakfast, whether they normally ate it and what they tended to have. She then chose some volunteers to come up to the interactive white board and use the 'Balance-a-tron' to choose a breakfast. One volunteer was asked to choose a 'bad' breakfast. The whole class joined in at this point, shouting out unhealthy options and creating high engagement in the task. The students really liked the idea of coming up with unhealthy options and by doing so, they were reinforcing the options that they knew to be healthy. After the volunteers had made their selections from the Balance-a-tron section, the teacher went through each of their choices and discussed what they could have changed to make it a more balanced breakfast.

The teacher then looked at the 'Lunch/Begin' section and discussed new words such as 'fibre', 'saturated fat' and why they are good or bad. She then showed part of the 'Lunch/watch' video and discussed it briefly. Finally she summed up by asking a few students to tell the class one thing that they had learnt that day. Homework was to write a *Dish it up!* Guide to Healthy Eating or a Healthy Eating menu.

"I think the Balance-a-tron is brilliant, it's probably the best part of it" - Science teacher, Wales

4.3.3 Case Study 3: Watching lunch videos engaged children and prompted class discussion in a Home Economics lesson in Lagan College in Belfast, Northern Ireland

This lesson was conducted with a Year 8 class (equivalent to a Year 7 class in England). The *Dish it up!* resource was displayed on an interactive whiteboard and the teacher started by showing the 'Lunch/watch' video. All the students were paying attention even though the videos were small when viewed from the back of the room. The teacher asked questions about why the students made food choices and they were very engaged in answering the questions. The teacher used a poster of the Eatwell plate that was on display to remind them of the different food groups.

The teacher then moved onto the 'Lunch/Choose' section where she demonstrated selecting a lunch meal on the Balance-a-tron and explained the need for food to be balanced across the day. The students were split into four groups and were given two minutes to choose a lunch meal. One student from each group came up to the front and entered their meal into the computer, which was displayed on the whiteboard. This really engaged the students. While their peers made choices, the other groups were considering changing their choices to make theirs better. The teacher told the students that they would be planning a whole meal and that they would then cook it in another lesson.

This was a well prepared lesson. The teacher seemed confident using the resource and splitting the students into groups worked very well as it was almost like a competition. Starting the lesson off with the videos encouraged discussion which led them to the more detailed work. Both the students and the teacher appeared to be very enthusiastic about the resource.

“It had the little bit of DVD material which was brilliant, it really caught their imagination” - Home Economics teacher, Lagan College, Belfast

“It feels like you’re actually in their position” - Pupil, Home Economics Class, Belfast

“That’s one of the resources I’m going to use with all of my Year 8 classes...I will recommend it as a visual for the rest of them because I just thought that was so effective” - Home Economics teacher, Lagan College, Belfast

4.3.4 Case Study 4: A graphical representation of the difference between two breakfasts opened a girl’s eyes in a Food technology lesson in a The Park Centre PRU in Lambeth, London

The resource was used in a Pupil Referral Unit (PRU) in London. The classes in PRUs are much smaller than in a normal school and in this case there were two students in the class (one boy and one girl). The whiteboard in the first room did not work, so the lesson was completed on a PC at the back of a Food Technology lab. Both a Food Technology teacher and a teaching assistant were present. The environment was disruptive, with students from other classes coming in and out of the room constantly, causing interruptions.

The teacher started by guiding the male student through the food hygiene game, one-to-one. She asked him to complete the quiz at the end and helped him by reading out the text to him. He completed it and got all the right answers, which he was pleased about. The teacher then tried to engage the female student in the lesson and eventually managed to do so by showing her the ‘Watch’ element from the ‘Breakfast’ section.

The teacher asked the student to enter in her breakfast into the Balance-a-tron. The student entered her breakfast (which consisted of a packet of sweets) into the Balance-a-tron and viewed the summary of what she had eaten. This prompted a discussion with her teacher about the results. The student appeared disappointed with the results, but claimed that she ate a different kind of breakfast when she stayed with her Dad at the weekend.

The teacher then encouraged her to enter in the breakfast that she had with her father at the weekends (which was far more balanced and healthy). The student was visibly pleased to see the difference in the results. She then became so engaged that she wanted to enter her dinner into the computer.

This lesson demonstrated how well the resource can engage disengaged pupils, by offering them a visual way of understanding food balance across the day.

4.4 Pupil engagement and impact on knowledge

Engagement

Teachers valued the resource for what it could offer them as they felt that the resource lent itself to personalised learning. Students were able to identify what they, personally ate for breakfast for example, and use that as a starting point for their learning. This personalised learning not only fitted well into teachers' aims and objectives, but also served to engage students. Students claimed that they enjoyed the discussions and group work that arose from using the resource. Teachers liked that fact that these activities tapped into skills-based learning (such as group work and discussions), which is a focus for them currently.

Teachers thought that the colours and the graphics of the resource engaged the students as well and that overall the resource was easy to plan from and represented good educational value.

Knowledge

The qualitative research suggested that the resource consolidated pupil's existing knowledge and increased awareness in some areas. Teachers claimed that there was an increased focus on healthy eating at Primary level, which meant that students were now often coming into secondary school with more existing knowledge in this area compared to previous in-takes. This could have meant that some pupils were less likely to have learnt wholly new things from this resource.

"There were kids that already knew a lot of what I was telling them. There was the odd thing they didn't know" - PSE teacher, Glasgow

The qualitative research suggested that students were most likely to learn about food groups, the importance of breakfast, what starchy foods were and what their friends ate. Starchy foods were the food group that pupils were least likely to know about in detail.

"Some of those who don't have breakfast maybe now they've realised how important it is, that it does supply them with energy and keeps them switched on. So, hopefully in the morning they'll make different choices" - Science teacher, Wales

"I learnt that bread was a starch. I didn't know that before" - Boy, Glasgow

Some students also claimed to have learnt that 'normal' food could mean healthy food. This was surprising to some students as they assumed that it was only special 'diet' foods that could be healthy. Students also claimed to learn more about the fact that a healthy diet was about balance. They were less likely, however, to grasp the concept of balance across the day, especially if they had only used one section of the resource (e.g. just 'Breakfast' or just 'Lunch') rather than all three.

Quantitative research

Pupils were given a list of the five food groups from the Eatwell plate and were asked to label an empty version of the Eatwell plate, as shown below. The results are shown in Figure 4.4.1.

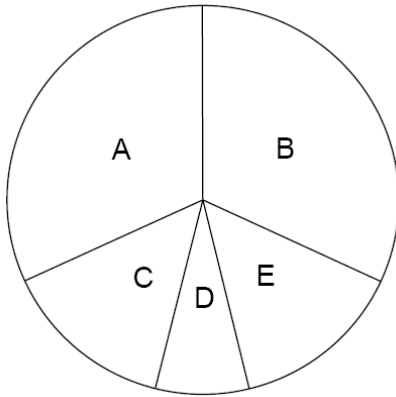
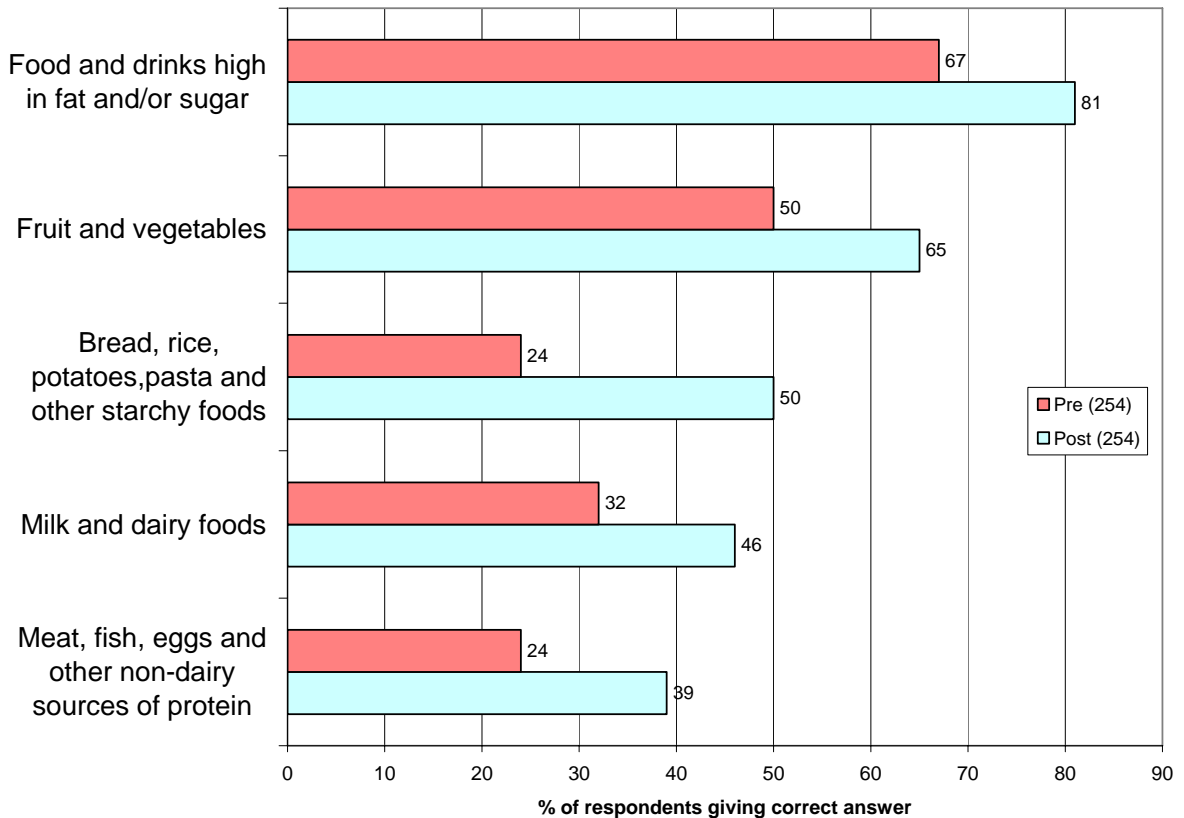


Fig. 4.4.1 Correct labeling of food groups on the Eatwell plate

Base: All students



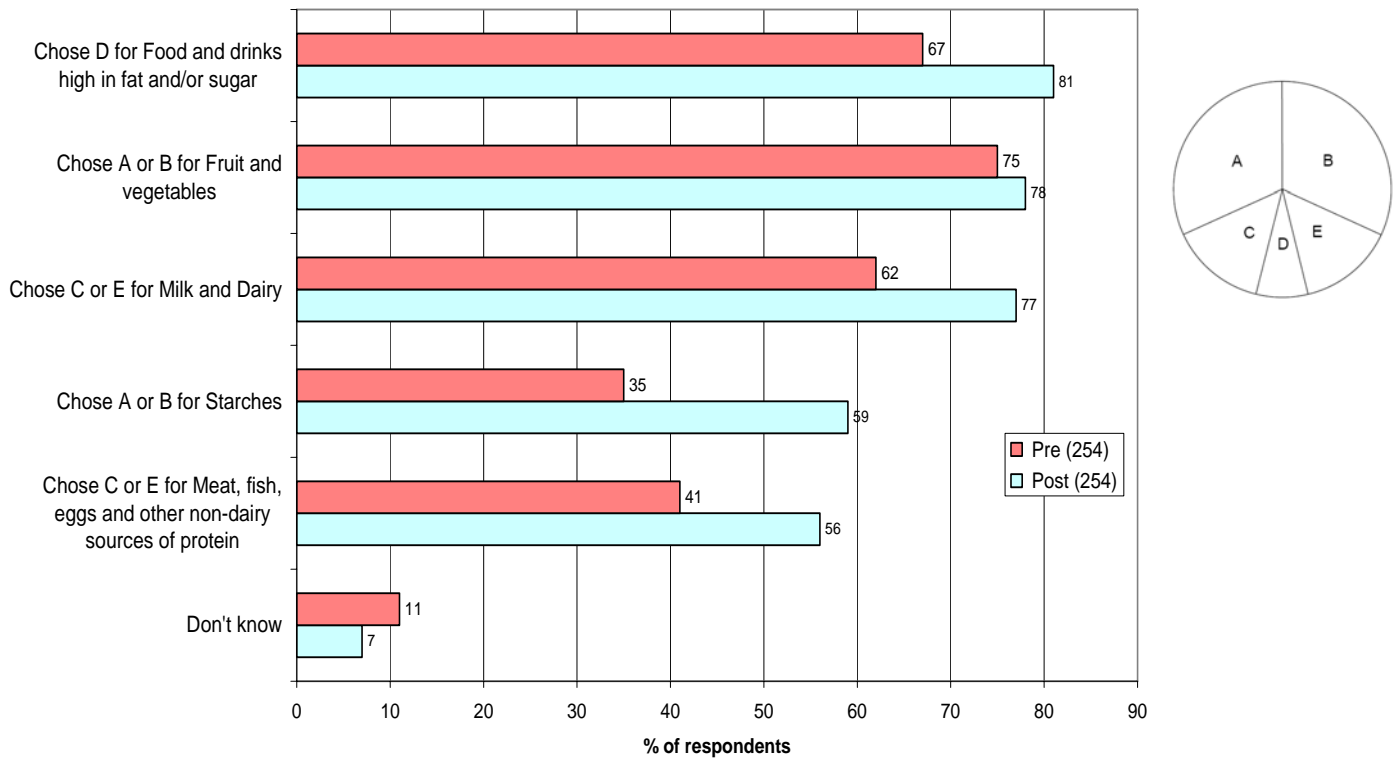
The chart shows that the *Dish it up* lesson had a significant impact on students' knowledge of the Eatwell plate. Students were more likely after the lesson, than before the lesson, to have correctly labelled the food groups on the Eatwell plate. The chart shows that many students already had a good knowledge of 'Food and drinks high in fat and/or sugar' (67%) and fruit and vegetables (50%), although these also increased after the lesson. The largest increase in awareness among the food groups was of starchy foods (24% in the pre- and 50% in the post-lesson questionnaire).

There was a significant increase in the proportion of students who gave the correct answer for each of the five food groups after the lesson (32%) compared to before the lesson (9%).

In order to assess students' understanding of the proportions of each food group on the Eatwell plate, the data has been analysed by proportion, as shown in Figure 4.4.2.

Fig. 4.4.2 Correct understanding of the proportions of food groups on the Eatwell plate

Base: All students



The chart shows that before the lesson, three quarters of students understood the correct proportion of fruit and vegetables that should be eaten (75%) and around two thirds understood the correct proportions for foods and drinks high in fat and sugar (67%) and milk and dairy (62%). Other than for the fruit and vegetable group, where awareness was very high in the pre-lesson questionnaire, understanding of the proportions we should eat of all other food groups increased significantly after the lesson. After the lesson, at least half of the students understood about the proportions needed for each food group.

There were significant differences in knowledge between groups. Before the lesson, girls were more likely than boys to have known all five food groups. However, after the lesson, boys increased their knowledge enough to know as much as girls about the food groups.

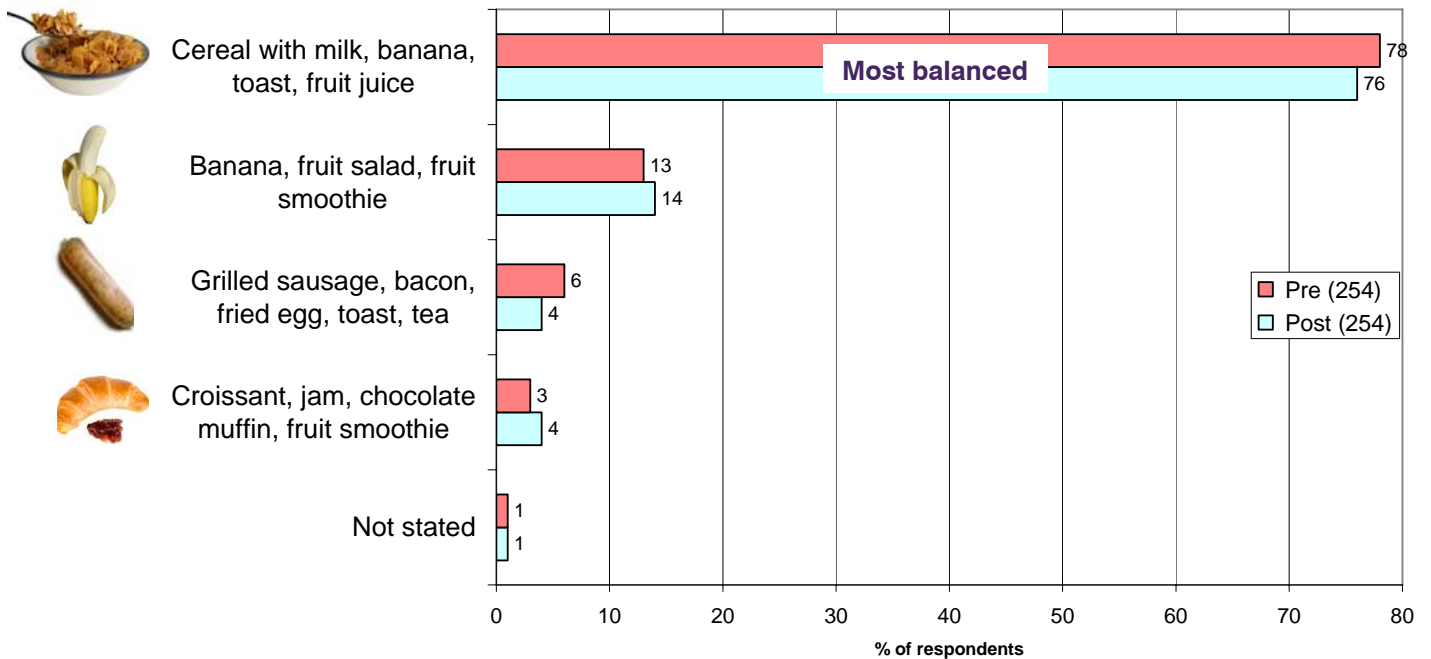
Students in Wales tended to have the greatest knowledge of the food groups before the lesson. After the lesson, students in Northern Ireland increased their knowledge so that they and students in Wales had the best knowledge of the food groups.

Those who had taken part in a Food Technology lesson using *Dish it up* were more likely than those having had PE or Science lessons to have answered all food groups correctly. Additionally, those who stated that they used 'Lunch' were more likely than those who used 'Breakfast' or all sections of the resource to have answered all food groups correctly.

Students were asked to choose the most balanced breakfast for 'David' from four options. The results are shown in Figure 4.4.3.

Fig. 4.4.3 Choice of balanced breakfast

Base: All students

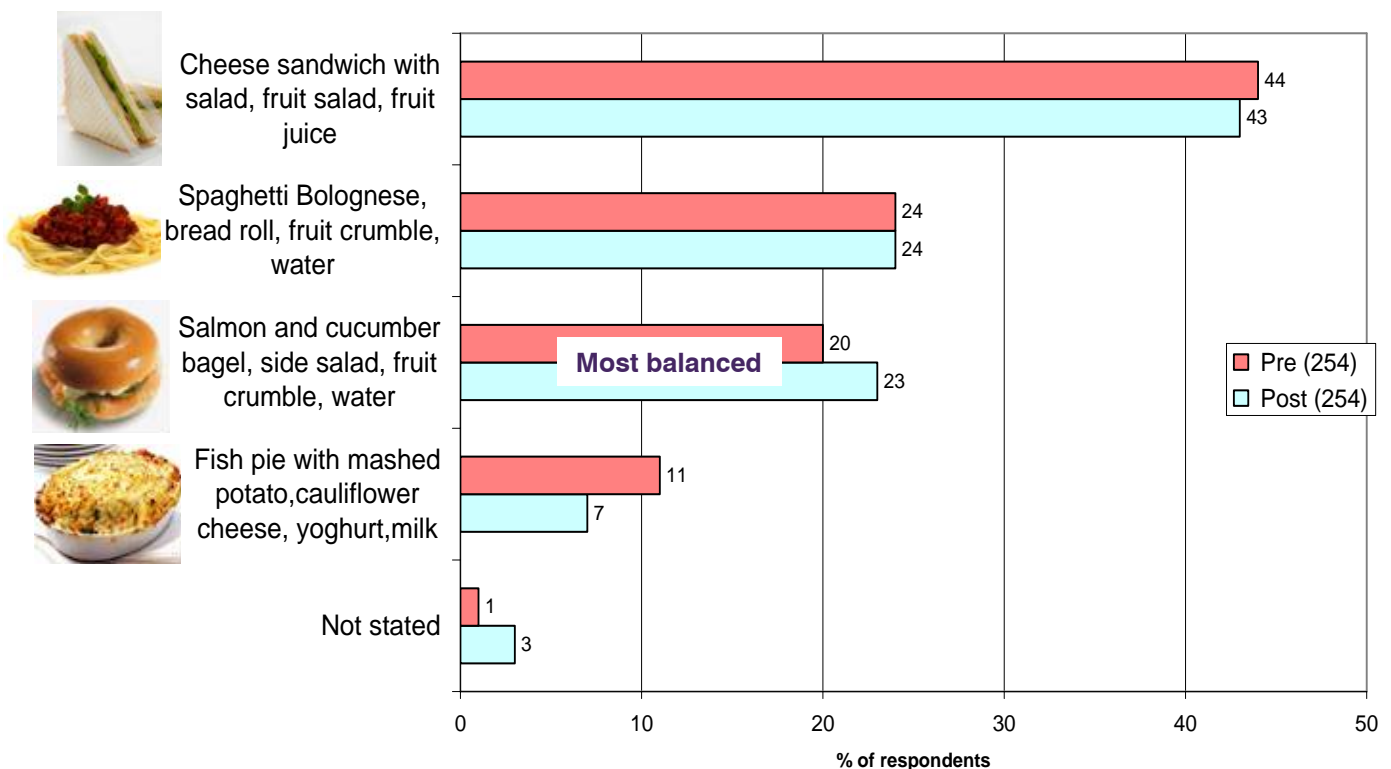


More than three quarters of students chose the 'most balanced' breakfast (78% in the pre- and 76% in the post-lesson questionnaire). There were no significant differences in choice of breakfast between these two questionnaires.

Students were then asked to choose the most balanced lunch for 'David' from four options. The results are shown in Figure 4.4.4.

Fig. 4.4.4 Choice of balanced lunch

Base: All students



Around a fifth of students chose the ‘most balanced’ lunch (20% in the pre- and 23% in the post-lesson questionnaire). More than two fifths of students (44% in the pre and 43% in the post) chose the cheese sandwich lunch, which was not the most balanced meal. There were no differences in choice of lunch between the pre- and post-lesson questionnaires.

Calculations were based on the proportions used in *Dish it up!* and reflect how each meal choice resembled the Eatwell Plate food group proportions.

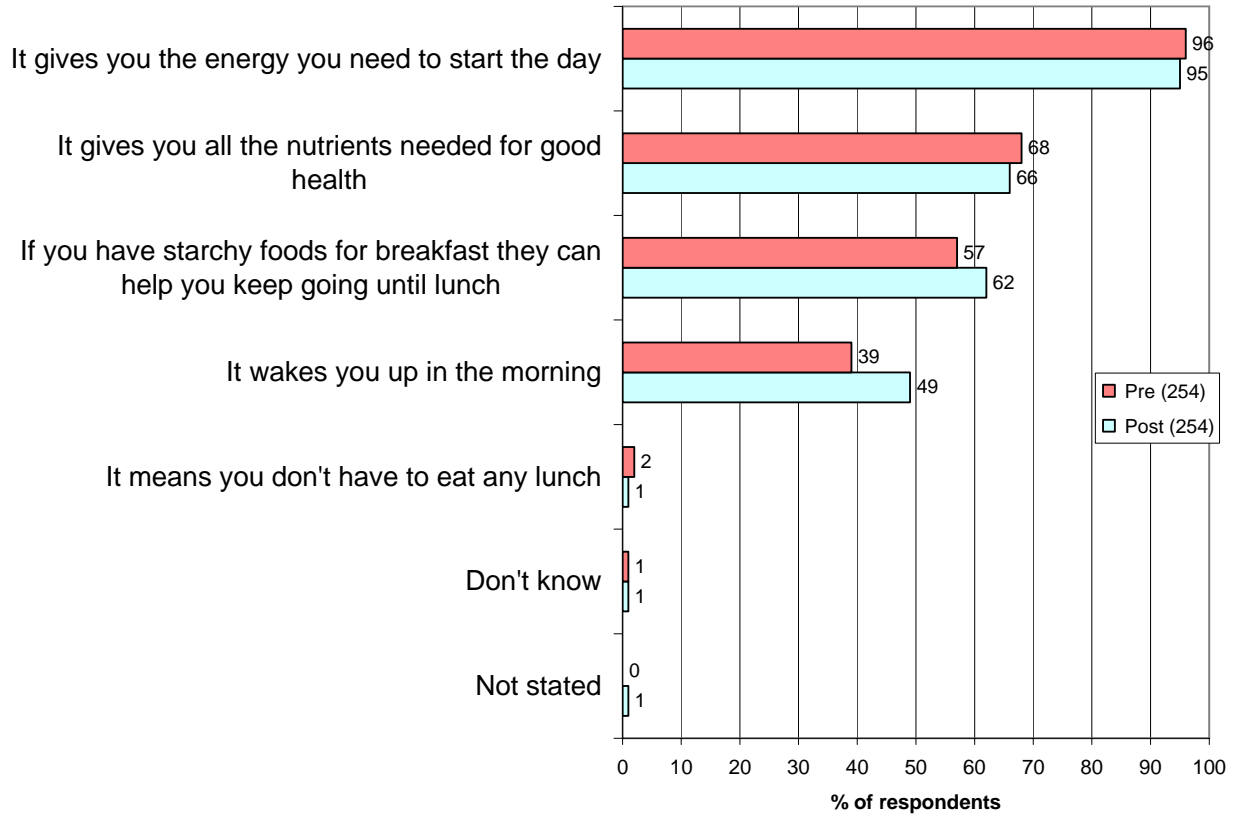
This provides only an indication of students’ ability to identify balanced choices. A nutritionally analysed food diary, recorded over a period of time, would provide more information on how their choices contributed to their dietary intake.

The choices of balanced breakfast and lunch were combined for each student in order to assess the balance across the two meals. The meal combinations were labelled by the FSA and are shown in Figure 4.4.5.

Students were given a list of possible reasons and were asked to tick those that explained why it is important to eat breakfast. The results are shown in Figure 4.4.5.

Fig. 4.4.5 Reasons why it is important to eat breakfast

Base: All students



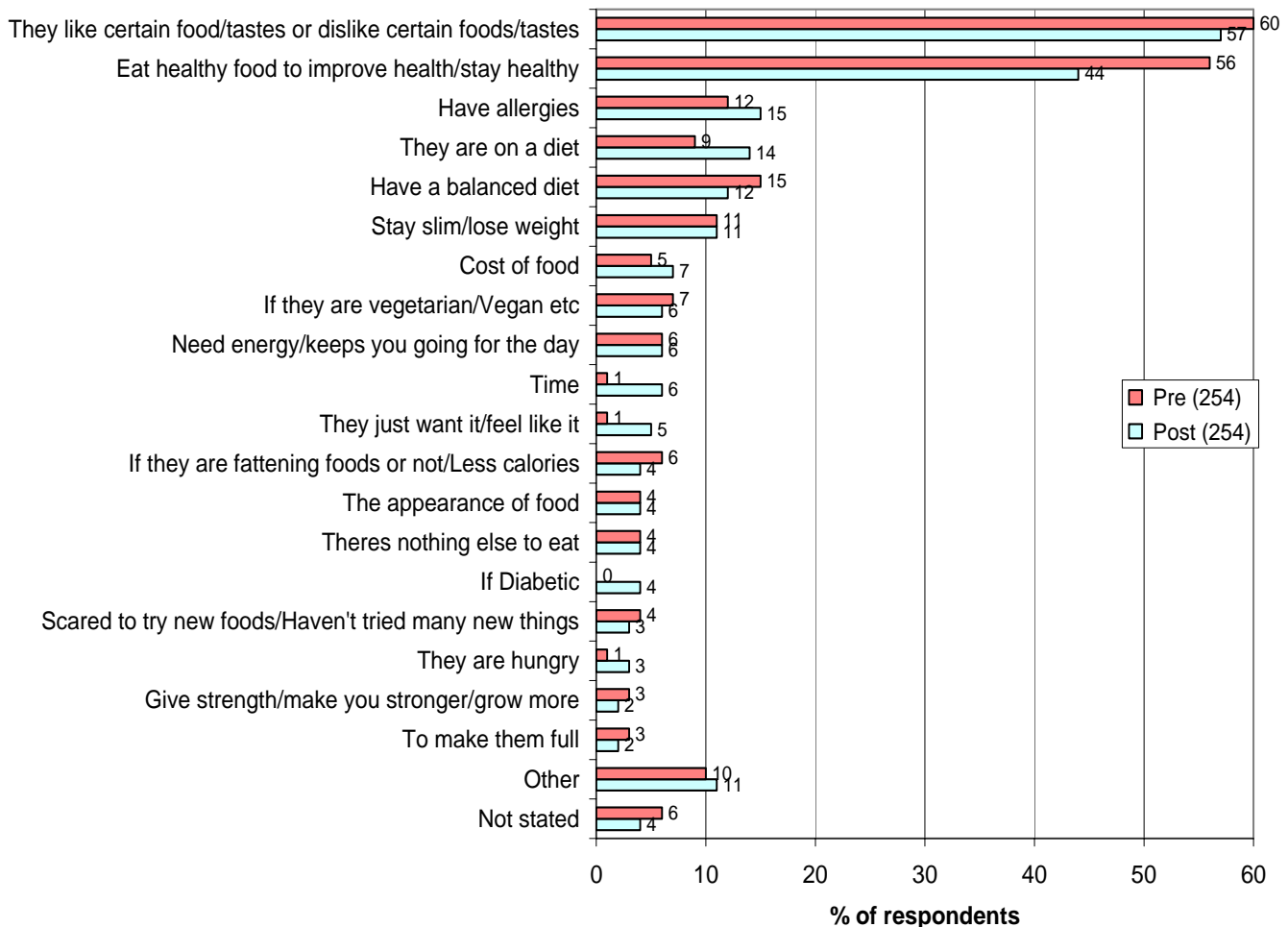
Almost all students thought that breakfast gives you the energy you need to start the day (96% in the pre- and 95% in the post-lesson questionnaire). Around two thirds of students thought that breakfast is important in providing the nutrients needed for good health (68% in the pre and 66% in the post). Around six out of ten students thought that having starchy foods for breakfast can help you keep going until lunch (57% in the pre and 62% in the post). Just 2% of students in the pre- and 1% in the post-questionnaire thought that eating breakfast means that you do not need to eat lunch.

Despite the majority of students having used the Breakfast section of *Dish it up*, there was no significant increase after the lesson in the proportion of students ticking two or more correct statements (70% in the pre- and 74% in the post-lesson questionnaire). The only significant change after the lesson was that a higher proportion of students thought that 'breakfast wakes you up in the morning' (49% compared to 39% respectively).

Students were asked to write down three reasons people choose to eat certain foods. The results are shown in Figure 4.4.6.

Fig. 4.4.6 Reasons people choose to eat certain foods (spontaneous)

Base: All students



Note: Responses over 3% shown

Students thought that people make food choices based on what they prefer the taste of (60% in the pre- and 57% in the post-lesson questionnaire) and in order to improve their health or to stay healthy (56% in the pre and 44% in the post). Other reasons included allergies or illnesses and dieting to lose weight. Just 1% of students in the pre-questionnaire and 2% in the post-questionnaire spontaneously mentioned the effect of advertising on people’s food choices.

The only significant difference in response before and after the lesson, was that a lower proportion of students mentioned that people eat food to improve their health or to have a healthy diet after the lesson than before the lesson (44% compared to 56%).

When looking at the data for why people should eat breakfast and why they choose certain foods to eat, there were a number of differences by gender and country. After the *Dish it up* lesson, although it was only mentioned by a few students, boys were more likely to have mentioned the influence of advertising on people’s food choices.

Students in Wales gave more reasons why people choose certain foods and their reasons tended to be more sophisticated than the answers given by students from other countries. For example, they were most likely to have mentioned that some people have allergies, that some people are scared to try new foods and that the

cost and appearance of food can affect people's choices. Students in Wales (before the lesson) were also most likely to have thought that you should eat breakfast because it gives you the energy to start the day; in fact all students in Wales agreed with this statement.

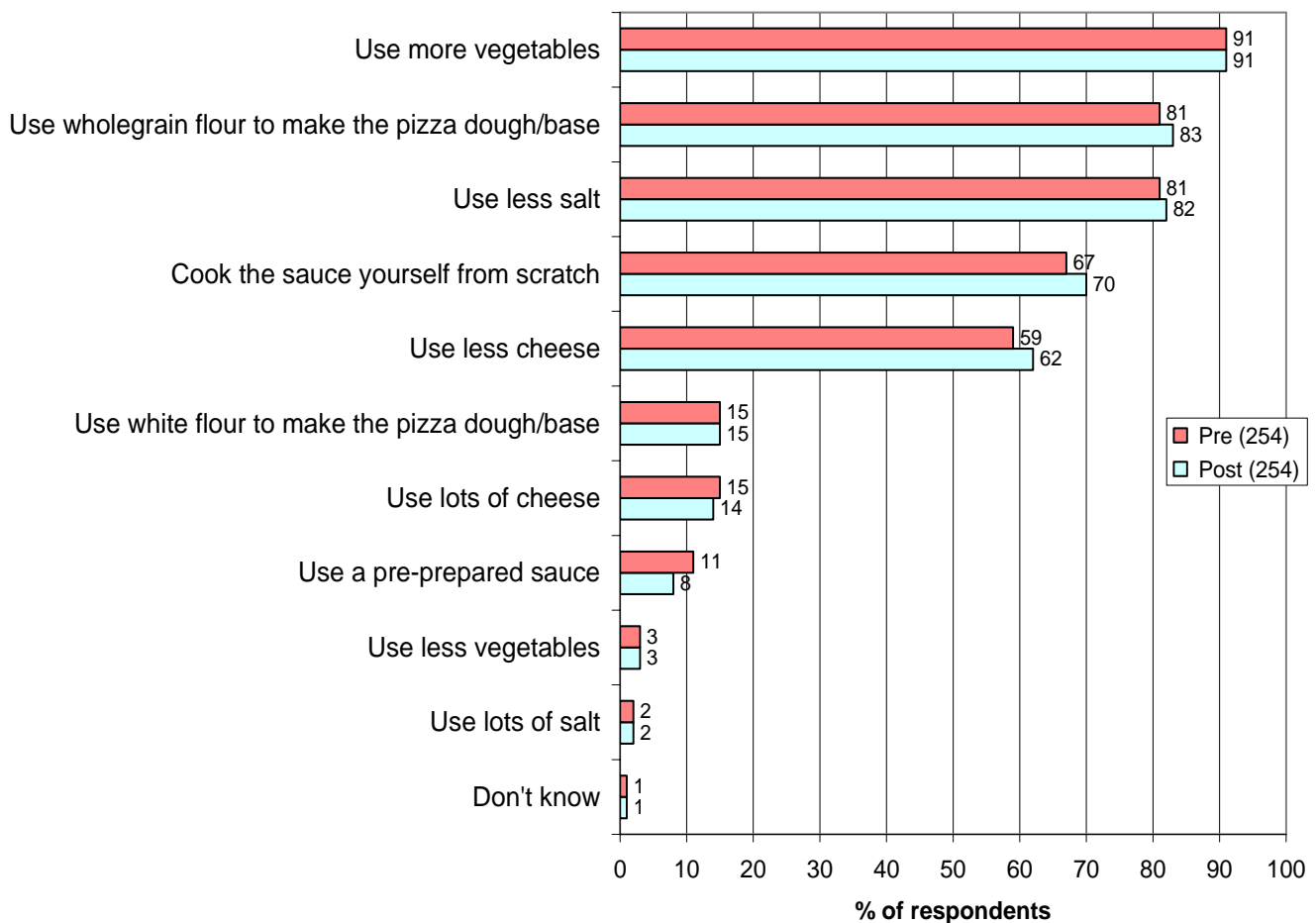
Students in England were most likely, before and after the lesson, to have given two or more correct answers when asked why you should eat breakfast. However, when asked why people choose certain foods to eat, those in England and Scotland were more likely to have left the question blank, suggesting that they may not have had any ideas of their own. Those who were able to answer the question in England were most likely compared to those from other countries to have mentioned choosing foods to give you a balanced diet.

Before the lesson, those in Scotland were least likely to have thought that eating starchy food for breakfast can keep you going until lunch. However, after the lesson, those in Northern Ireland were least likely to have said this. Interestingly, those in Scotland were least likely to have mentioned that some people eat certain foods because they are on a diet, or to have a balanced diet. They were more likely than others to have thought that there might be nothing else to eat or that people choose foods because they are hungry.

Students were asked to imagine that they were cooking a pizza and to select ways, from a list, to make it healthier. The results are shown in Figure 4.4.7.

Fig. 4.4.7 Ways to make a pizza healthier

Base: All students



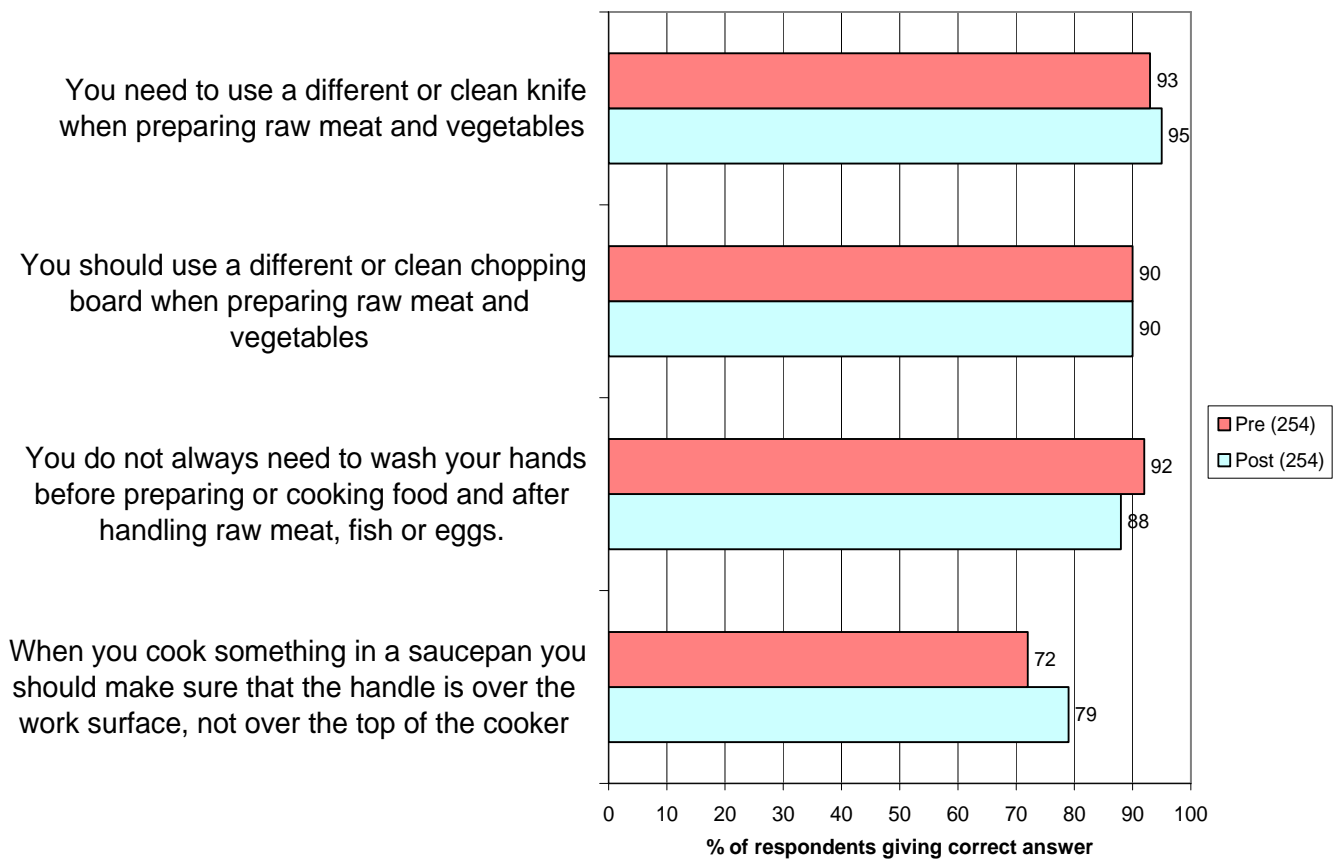
Most students thought that adding more vegetables to the pizza (91% in both the pre- and post-questionnaires), using wholegrain flour in the pizza base (81% in the pre and 83% in the post) and using less salt (81% in the pre and 82% in the post) would make a pizza healthier. More than two thirds of students thought that cooking the sauce from scratch would make a pizza healthier (67% in the pre and 70% in the post). Only a minority of students selected the wrong answers. There were no significant differences in the students' answers between the pre- and post-questionnaires.

Students in Wales were most likely to have given seven to ten correct answers compared to students from other countries; in fact 100% of them achieved seven to ten correct answers before the lesson.

Students were given a number of statements relating to hygiene and safety in the kitchen and were asked if each statement was true or false. The results are shown in Figure 4.4.8.

Fig. 4.4.8 Understanding of hygiene and safety issues in the kitchen

Base: All students

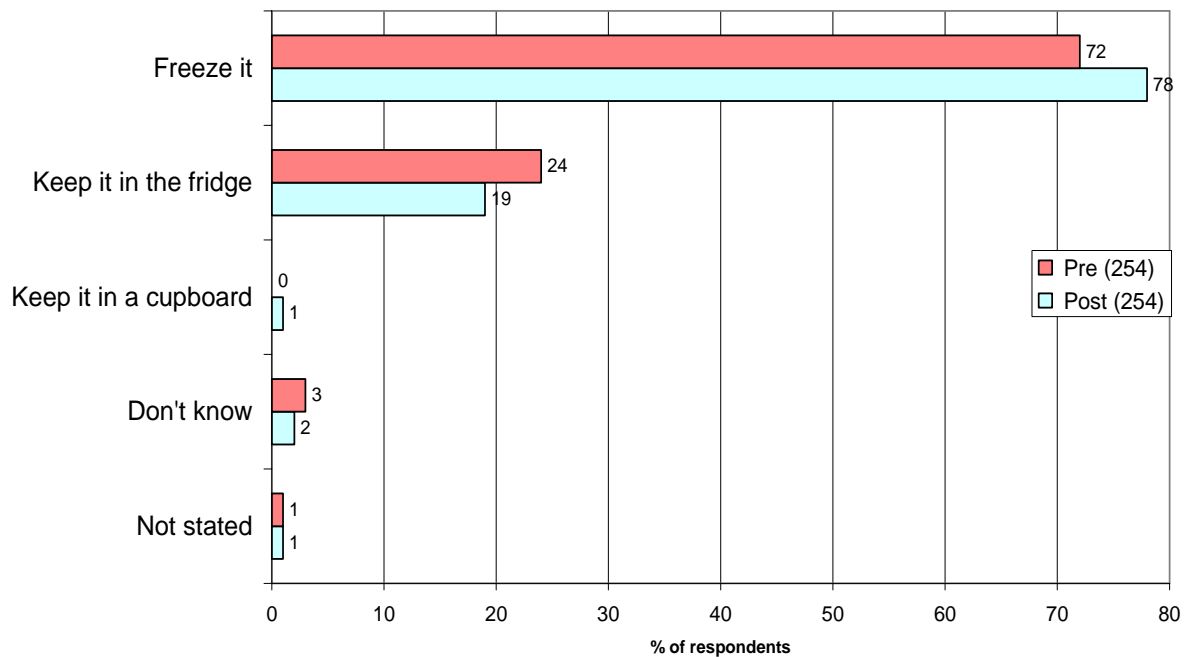


Even before the *Dish it up* lesson, students had a good knowledge of hygiene and safety issues and there were no significant differences after the lesson. Almost all students knew that you need to use a different or clean knife and chopping board when preparing raw meat and vegetables, and understood hand hygiene when cooking. However, the safety question about having a saucepan handle over a cooker may have confused some students, as only around three quarters answered correctly and 12% in the pre- and 10% in the post-questionnaire stated that they did not know the answer. This question was re-worded after some of the children who tested the questionnaire (prior to fieldwork) did not understand it; perhaps the long description of a more practical issue was unclear.

Students were given a list of options and were asked which the best ways were of storing fresh meat or fish for more than a week. The results are shown in Figure 4.4.9.

Fig. 4.4.9 Understanding of food storage

Base: All students



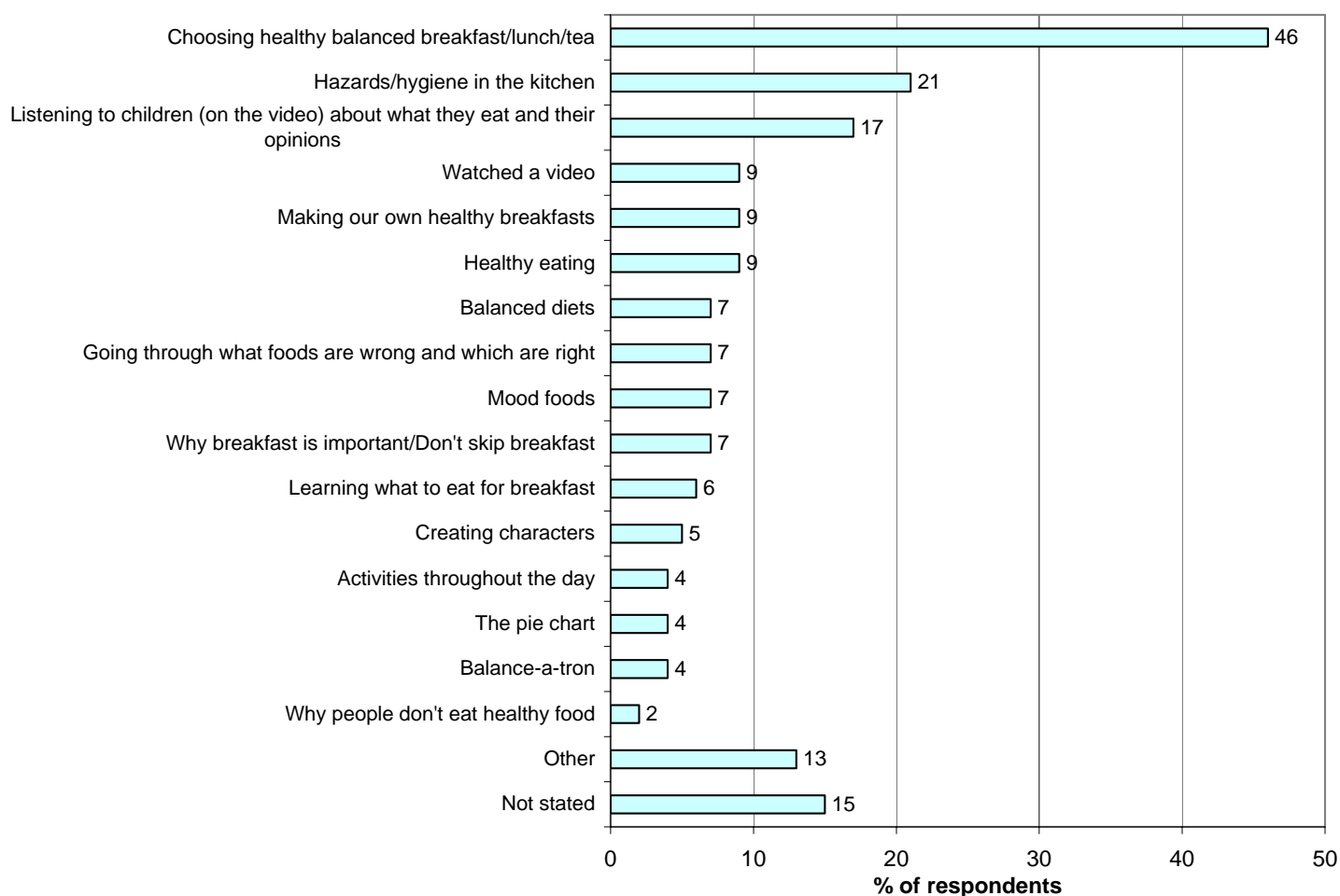
Around three quarters of students knew that you should freeze meat or fish if you need to store it for more than a week (72% in the pre and 78% in the post). There were no significant differences in response between the pre-questionnaire and the post-questionnaire.

There were a number of differences in knowledge about hygiene and safety between boys and girls. Before the *Dish it up* lesson, girls were more likely than boys to have answered most of the hygiene and safety questions correctly, although after the lesson, there were no statistical differences. This suggests that the lessons helped bridge the learning gap between boys and girls.

Students were asked what three activities they remembered from their *Dish it up* lesson. The results are shown in Figure 4.4.10.

Fig. 4.4.10 Most memorable aspects of the *Dish it up* lesson

Base: All students



Almost half of students (46%) remembered choosing a healthy balanced meal in their *Dish it up* lesson. Around a fifth mentioned the Hygiene Hazards game (21%) or listening to children (on the video) about what they eat and their opinions (17%).

A minority of students mentioned 'going through which foods are wrong and which are right' (7%). Although there were no significant differences between groups because the sample sizes were small, a higher proportion of students who took part in a PE lesson using *Dish it up* mentioned this compared to other subjects. This could indicate that some non-specialist teachers may lack the knowledge to use the resource to put across the message of balance, rather than about 'right' or 'wrong' foods.

In Food technology lessons, more than in other subjects, students remembered creating characters in the body image game, using the Hygiene Hazards activity and using the Balance-a-tron. Students in Food Technology and Science lessons were most likely to have remembered making their own healthy breakfasts and listening to other children's opinions on the videos.

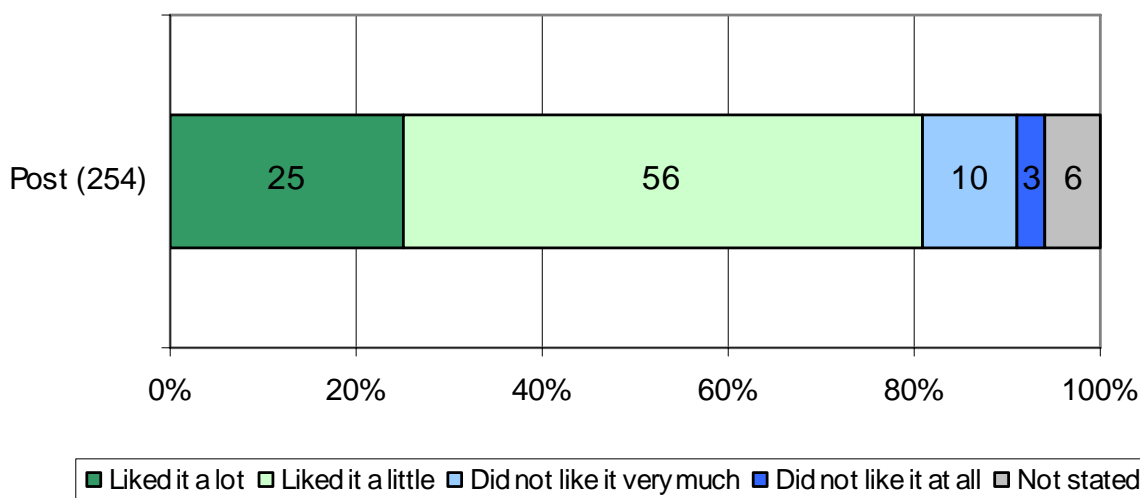
In a Science lesson in Wales, one group of students remembered completing the 'Mood foods' worksheet.

In PE and PSHE lessons more than in other lessons, students mentioned that they learnt about why breakfast is important. Students in PE lessons were also most likely to have mentioned learning about why people do not eat healthy food. The PE and PSHE lessons may not have been as focussed on the resource as in other Science or Food Technology lessons, as a high proportion did not answer the question, suggesting that they could not remember specific aspects of the lesson.

Students were asked how much they liked the *Dish it up* lesson. The results are shown in Figure 4.4.11.

Fig. 4.4.11 Enjoyment of the *Dish it up* lesson

Base: All students (post-lesson questionnaire)

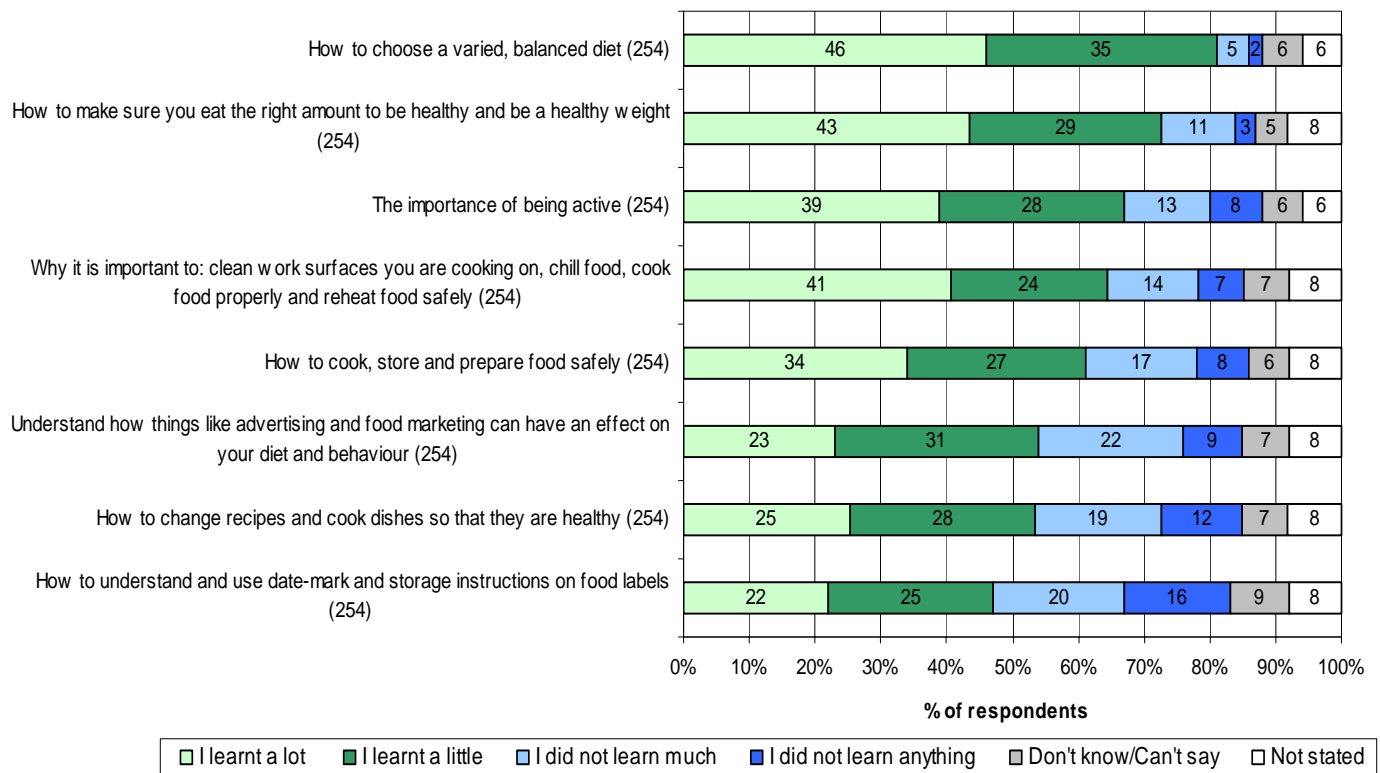


Most students liked the *Dish it up* lesson (81% liked it a little or a lot). The resource was more popular in Science lessons than in PE or in Food Technology lessons and was also more popular among girls than boys. Students in Wales and Scotland were more likely than those in England to have liked the lesson a lot.

Students were asked how much they felt that they learnt about some specific areas from the *Dish it up* lesson. The results are shown in Figure 4.4.12.

Fig. 4.4.12 Amount learnt from the *Dish it up* lesson

Base: All students (post-lesson questionnaire)



Most students felt that they learnt about how to choose a varied, balanced diet (81%) and how to make sure you eat the right amount to be healthy (72%). Around two thirds of students thought that they had learnt a lot or a little about the importance of being active (67%), why it is important to clean work surfaces, chill food, cook food properly and reheat food safely (65%) or how to cook, store and prepare food safely (61%).

Students who used the resource in Food Technology and Science lessons tended to learn more about each aspect than those in PE lessons.

4.5 Wider usage of the resource

One of the objectives of the research was to identify the extent to which *Dish it Up!* had the potential to be used in contexts other than schools such as in home, in Pupil Referral Units (PRUs) and special schools.

PRUs

The research showed that there is definite potential to use the resource within PRUs as many of the topics covered were felt to be particularly relevant to students there. Behavioural issues were the norm in the PRU visited and the teacher claimed that food choices had a definite impact on behaviour during the school day. As demonstrated earlier, the resource was particularly effective when students could work on the resource individually with a teacher. The way in which the resource was structured meant that it could be used in bite-sized chunks, which worked well with those students in the PRU, as their attention spans were typically very short.

Special School

Those students in the special school visited needed to be aided in their navigation of the resource, but could use it with help and particularly liked the graphics and colours. There was, however, too much text in the resource for all of the students in the special school to use. This was also an issue for some of the primary children involved in trialling the resource.

In home

Children were unlikely to use the resource at home with their parents unless it was as a directed homework task. While parents were often interested in the resource, the children interviewed felt they were unlikely to use it. The resource would be competing with other activities in their free time such as other online activities with sophisticated graphics and advanced social networking sites. They did not feel that the resource contained enough competitive games to keep children engaged in their own time, and the content was too education-based for them to enjoy outside of school or homework hours. If the children were to use the resource in their free time, they would be looking for more exciting games to keep them engaged, with less of an educational focus at this age.

They would be most likely to use the resource if it were to be set as a homework task, which would be seen as quite a fun homework. Children could be asked to do a family food diary, for example, and so involve the rest of the family also. If it were set as a joint parent and child homework task, this would encourage usage with one or both of their parents, who tended to show more interest in the resource for use at home than the children. The parents interviewed were so interested in the resource that they often also learnt more than their children. They did admit, however, that they would have been unlikely to look at the resource if the research had not prompted them to do so.

"I'm actually quite bored" - Boy, home visit, Belfast

"I thought the breakfast facts were interesting" - Mum, home visit, Cardiff

Youth club

The fact that the leaders in the youth club visited did not direct the children to a great extent meant that the resource was not likely to be used in this setting. The club had a dual role; it was both a place that children could come to relax and a place to learn. This meant that the children were unlikely to get the undivided attention of leaders.

The leader claimed that theirs was a needs-led agenda. The leaders canvassed the children and young people about what they wanted to learn about or do activities about. The leaders then followed what the young people themselves identified as being interesting topics. As a result the inclusion of activities around healthy eating was somewhat arbitrary. If the leaders did choose to cover healthy eating as a topic, however, they claimed they would be much more likely to use physical activities to get the key messages across e.g. moving around plastic foods on a large Eatwell plate.

"...being physically involved and moving things about is sometimes more effective than interactive things" - Youth leader, Glasgow

The leader interviewed felt that the resource use would require leaders to pre-plan, which he thought was unlikely to happen, given the more informal nature of their role.

4.6 Barriers to usage

Most teachers claimed they would use the resource, but there were some issues that might get in the way. Some teachers claimed that the availability of ICT facilities might be a barrier to using the resource with students on individual computers, as they claimed it was often difficult to book ICT suites in advance and that there often were not enough computers to go round. For some subject areas, such as PE, there were no ICT facilities (including interactive whiteboards) available.

"If I was going to use that with a PSE class, we need to find a room with 30 computers and there aren't any. So practically...you'd find that it is something that would be used on a projector, teacher-led" - PSE teacher, Glasgow

"I would use it on the whiteboard because we only have one computer in the room"
- Food tech teacher, London

Some teachers were also not confident in using CD-ROMs on interactive whiteboards as their ICT literacy was not as high as other teachers. Other teachers' teaching style did not lend itself to using this resource. Some, particularly older, teachers were not as comfortable leading discussion-based lessons, for example.

Those schools with more cross-curricular links were more likely to anticipate using the resource in PE as they could see clear links between PE and food technology. Those schools with few cross-curricular links were unlikely to use it in PE. There

were also teachers who were concerned about a potential overlap between subjects if more than one subject area used the resource as they had a fear of students getting bored. Science teachers in particular were looking for more technical detail to be included in the resource before they would use it as otherwise it would offer the students nothing different from other subjects that had covered it. There was also an awareness amongst some teachers less confident in the subject area that they might confuse students by teaching them the same thing as they had learned elsewhere, but in a slightly different way.

“I wouldn’t want the kids to get bored if the Food Tech department were using the resource extensively, I would probably look to use something else ” - PSE teacher, Glasgow

There were teachers who wanted to be able to assess students individually and did not feel that this resource allowed them to do this sufficiently. They were keen to be able to print off work and assess each student’s work separately.

“[I would like something] where it could be modified in terms of an activity that they could do on screen and then maybe print off so that you get something at the end of it and you can assess where they are, some feedback rather than just playing”- Science teacher, Cardiff

Food technology, PE and Science teachers claimed that there was pressure on them to run practically focussed lessons, as their subject areas were geared towards them. While they saw that the *Dish it Up!* resource was interactive, it was likely to take second place to the practical activities that they were planning to cover.

“I only have a 40-minute lesson time, my priority is not to discuss.” - PE teacher, England

4.7 Suggested improvements

Overall teachers would like the resource to be as relevant to the pupils’ lives as possible and they suggested some improvements to the resource that they felt would help to do this.

‘Watch’ section

The English accents lacked relevance for Scottish and Northern Irish children in particular. Teachers from these countries would have liked to see local accents included. Students also claimed that they would have liked to see the food that was discussed in the films, rather than just hearing the children talk about it. Some students thought that the videos could be too quiet at times.

“They’ve got English accents. Our kids would relate to a Scottish accent” - Food Tech teacher, Glasgow

Hygiene game

Teachers would have liked to see confirmation of correct answers in the quiz section of this game.

“If the children who were doing the quiz got three or four questions right, they didn’t know which ones. It would be better if they could go back and get the right answer to reinforce it in their minds. I had to explain why their answer was wrong”- Food Tech teacher, London

Energy expenditure game

Teachers felt that this game did not mirror the students’ lives enough. They would have liked to see an activity that replicated walking to and from school, for example, or other more everyday activities. There was a feeling that the game could be simplified further to communicate the message about energy expenditure in a more straightforward way.

Balance-a-tron

The food options were not felt to be reflective of what was eaten in the countries visited for this research (i.e. England, Wales, Scotland and Northern Ireland). This was a particular issue in Scotland and Northern Ireland where items such as bagels and wraps were not recognised as everyday food, and some students were unsure what these were. There were thought to be limited dessert and drink options and teachers would have liked to have had a wider choice of options, so that students could more accurately match their food diaries to the options available.

Navigation

Some teachers questioned the layout and navigation of the resource and thought that the organisation of content could be improved. As indicated above, the hygiene game was not felt to relate to the ‘Breakfast’ section and the term ‘Club’ was not fully understood. The fact that the Balance-a-tron was separated over three sections meant that the balance across the day was not emphasised enough.

“All we need is a very simple, basic healthy eating resource. We don’t need it split into Breakfast, Lunch and then the Club thing. It can all be rolled into one” - Food tech teacher, Cardiff

Technical issues

Teachers felt that some technical issues could be also be improved. Many teachers claimed that they would like to be able to turn the audio off for the duration of the resource as some teachers and students found it irritating. Others wanted to be able to increase the screen size of the resource so it could be seen more easily from the back of the classroom. Teachers with less technical confidence were concerned they would not be able to upload the CD-ROM onto their network.

4.8 Target age range

Dish it Up! was felt to be appropriate for a 10-13year-old age range. Teachers felt that it would be most appropriate for 11-12-year-olds due to the activities included

and the likely abilities of students of this age. They thought the graphics and animation were appropriate for this age group as well.

“It’s just too basic for anyone older than Year 7 and it would be a low ability Year 7 that I’d use it with” - PE teacher England

Teachers did suggest that students younger than 11-12 could use the resource. The content was felt to be particularly relevant to 10-11-year-olds, for example, as there was felt to be a focus on covering healthy eating at this age. There were some concerns raised about the amount of text that was used in the resource, if it were to be used with students of this age. This would not put teachers off using some, less text heavy, elements of the resource with their 10-11 year old students, however.

Teachers claimed that elements of the resource could be used with older students. While most felt it would be too basic for most older, i.e. 12-13-year-old students, it could usefully be used for revision or with lower ability students as they thought it would keep them engaged.

“If you were going to use it with Year 10 it would probably be a lower ability class and in an IT suite so they could get on with it themselves” - PE teacher England

4.9 Whole school and wider curriculum use

Most teachers thought that the resource was appropriate for whole school use. They felt that using the resource would require careful planning to ensure that subject areas did not overlap. If this were to happen, they thought that it could have a detrimental effect on students’ engagement levels. Encouragingly, teachers thought that the resource would be appropriate for PSHE days and health days throughout the year.





5. Appendix

Benchmark questionnaire

Dish it up *Benchmark questionnaire*

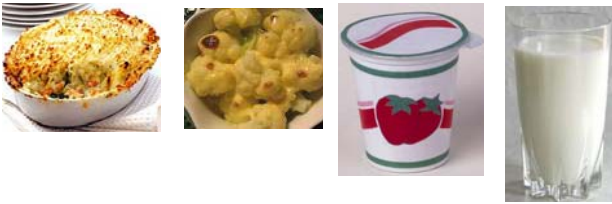



Please tick the boxes that go with your answers.

1. David wants to choose a balanced breakfast. Which breakfast should he choose? Please tick one box

<input type="checkbox"/> 1 Croissant, jam, chocolate muffin, fruit smoothie 	<input type="checkbox"/> 3 Grilled sausage, bacon, fried egg, toast, tea 
<input type="checkbox"/> 2 Banana, fruit salad, fruit smoothie 	<input type="checkbox"/> 4 Cereal with milk, banana, toast, fruit juice 

2. David wants to choose a balanced lunch. Which lunch should he choose?

Please tick one box

<input type="checkbox"/> 1 Fish pie with mashed potato, cauliflower cheese, yoghurt, milk 	<input type="checkbox"/> 3 Spaghetti Bolognese, bread roll, fruit crumble, water 
<input type="checkbox"/> 2 Salmon and cucumber bagel, side salad, fruit crumble, water 	<input type="checkbox"/> 4 Cheese sandwich with salad, fruit salad, fruit juice 

3. Why do you think it might be important to eat breakfast? Please tick all you think are true

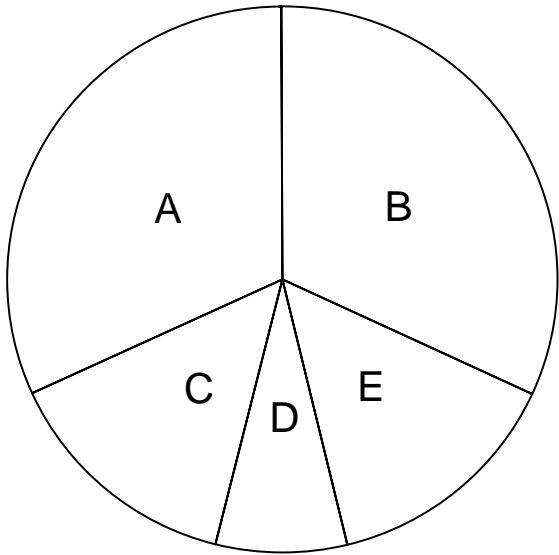
It means you don't have to eat any lunch	<input type="checkbox"/> 5
It gives you the energy you need to start the day	<input type="checkbox"/> 4
It gives you all the nutrients needed for good health	<input type="checkbox"/> 3
It wakes you up in the morning	<input type="checkbox"/> 2
If you have starchy foods for breakfast they can help you keep going until lunch	<input type="checkbox"/> 1
Don't know	<input type="checkbox"/> 0

4. The food we eat can be split into five different food groups. The list in the table below shows these groups. To have a balance of food each day we should eat more of some types of food than other types of food.


The circle below shows how much of each food group we should eat to have a balanced diet - for example, we should eat more of foods A and B than of C, D or E. But you need to tell us which food group A is, which food group B is, and so on... Please write in the letters, next to the groups in the table.

It is not a test so if you do not know the answer, just tick this box and go to Question 5.

FOOD GROUPS	Please write in A, B, C, D or E
Meat, fish, eggs and other non-dairy sources of protein	
Fruit and vegetables	
Milk and dairy foods	
Bread, rice, potatoes, pasta and other starchy foods	
Food and drinks high in fat and/or sugar	



5. Imagine you are cooking a pizza. Which of the following, if any, could you do to make it healthier? Please tick all you think are true

	Use lots of cheese	<input type="checkbox"/>	10
	Use more vegetables	<input type="checkbox"/>	9
	Use less cheese	<input type="checkbox"/>	8
	Cook the sauce yourself from scratch	<input type="checkbox"/>	7
	Use wholegrain flour to make the pizza dough/base	<input type="checkbox"/>	6
	Use a pre-prepared sauce	<input type="checkbox"/>	5
	Use white flour to make the pizza dough/base	<input type="checkbox"/>	4
	Use lots of salt	<input type="checkbox"/>	3
	Use less vegetables	<input type="checkbox"/>	2
	Use less salt	<input type="checkbox"/>	1
Don't know	<input type="checkbox"/>	0	





6. Why do you think people choose certain foods to eat?
Please write in up to three reasons

1)
2)
3)

7. If you wanted to store fresh food (e.g. meat or fish) for more than a week, what would be the best way to store it? Please tick the one box that you think is true. It is not a test so if you do not know the answer, just tick 'I don't know'

Keep it in the fridge	<input type="checkbox"/>	3
Freeze it	<input type="checkbox"/>	2
Keep it in a cupboard	<input type="checkbox"/>	1
I don't know	<input type="checkbox"/>	0

8. Please read the sentences below and tick the answer you think is correct.
If you do not know the answer, please tick 'Don't know'

		True	False	Don't know
	You need to use a different or clean knife when preparing raw meat and vegetables.	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	You do not always need to wash your hands before preparing or cooking food and after handling raw meat, fish or eggs.	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	When you cook something in a saucepan you should make sure that the handle is over the work surface, not over the top of the cooker	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	You should use a different or clean chopping board when preparing raw meat and vegetables	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0

9. Are you a... [Please tick one box only]

Girl / Female	<input type="checkbox"/> 1
Boy / Male	<input type="checkbox"/> 2

10. Please write your age in the space below.

_____ years


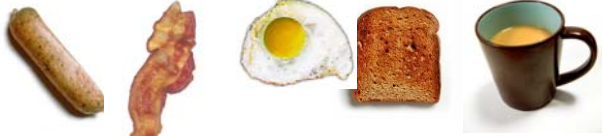

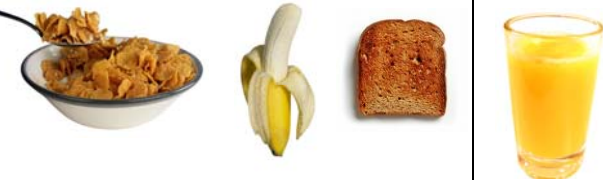
Thank you for your answers. Please hand this to your teacher.

Post questionnaire





Dish it up *Post-questionnaire*

Please tick the boxes that go with your answers.

1. David wants to choose a balanced breakfast. Which breakfast should he choose? Please tick one box

<input type="checkbox"/> 1 Croissant, jam, chocolate muffin, fruit smoothie 	<input type="checkbox"/> 3 Grilled sausage, bacon, fried egg, toast, tea 
<input type="checkbox"/> 2 Banana, fruit salad, fruit smoothie 	<input type="checkbox"/> 4 Cereal with milk, banana, toast, fruit juice 

2. David wants to choose a balanced lunch. Which lunch should he choose? Please tick one box

<input type="checkbox"/> 1 Fish pie with mashed potato, cauliflower cheese, yoghurt, milk 	<input type="checkbox"/> 3 Spaghetti Bolognese, bread roll, fruit crumble, water 
<input type="checkbox"/> 2 Salmon and cucumber bagel, side salad, fruit crumble, water 	<input type="checkbox"/> 4 Cheese sandwich with salad, fruit salad, fruit juice 

3. Why do you think it might be important to eat breakfast? Please tick all you think are true

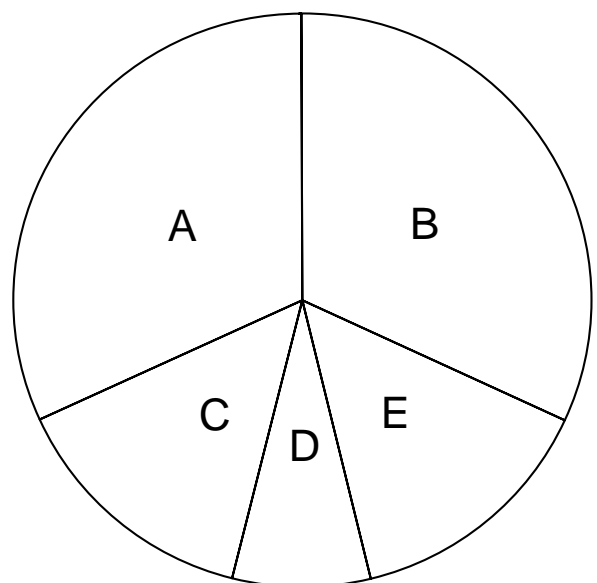
It means you don't have to eat any lunch	<input type="checkbox"/>	5
It gives you the energy you need to start the day	<input type="checkbox"/>	4
It gives you all the nutrients needed for good health	<input type="checkbox"/>	3
It wakes you up in the morning	<input type="checkbox"/>	2
If you have starchy foods for breakfast they can help you keep going until lunch	<input type="checkbox"/>	1
Don't know	<input type="checkbox"/>	0

4. The food we eat can be split into five different food groups. The list in the table below shows these groups. To have a balance of food each day we should eat more of some types of food than other types of food.


The circle below shows how much of each food group we should eat to have a balanced diet - for example, we should eat more of foods A and B than of C, D or E. But you need to tell us which food group A is, which food group B is, and so on.... Please write in the letters, next to the groups in the table.

It is not a test so if you do not know the answer, just tick this box and go to Question 5.

FOOD GROUPS	Please write in A, B, C, D or E
Meat, fish, eggs and other non-dairy sources of protein	
Fruit and vegetables	
Milk and dairy foods	
Bread, rice, potatoes, pasta and other starchy foods	
Food and drinks high in fat and/or sugar	



5. Imagine you are cooking a pizza. Which of the following, if any, could you do to make it healthier? Please tick all you think are true

	Use lots of cheese	<input type="checkbox"/>	10
	Use more vegetables	<input type="checkbox"/>	9
	Use less cheese	<input type="checkbox"/>	8
	Cook the sauce yourself from scratch	<input type="checkbox"/>	7
	Use wholegrain flour to make the pizza dough/base	<input type="checkbox"/>	6
	Use a pre-prepared sauce	<input type="checkbox"/>	5
	Use white flour to make the pizza dough/base	<input type="checkbox"/>	4
	Use lots of salt	<input type="checkbox"/>	3
	Use less vegetables	<input type="checkbox"/>	2
	Use less salt	<input type="checkbox"/>	1
	Don't know	<input type="checkbox"/>	0

6. Why do you think people choose certain foods to eat?
Please write in up to three reasons





1.....
2.....
3.....

Please read and answer the following questions. Do not worry if you do not know the answer, it is not a test so just tick 'I don't know'.

7. If you wanted to store fresh food (e.g. meat or fish) for more than a week, what would be the best way to store it? Please tick the one box that you think is true

Keep it in the fridge	<input type="checkbox"/>	3
Freeze it	<input type="checkbox"/>	2
Keep it in a cupboard	<input type="checkbox"/>	1
I don't know	<input type="checkbox"/>	0

8. Please read the sentences below and tick the answer you think is correct. If you do not know the answer, please tick 'Don't know'

		True	False	Don't know
	You need to use a different or clean knife when preparing raw meat and vegetables.	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	You do not always need to wash your hands before preparing or cooking food and after handling raw meat, fish or eggs.	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	When you cook something in a saucepan you should make sure that the handle is over the work surface, not over the top of the cooker	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
	You should use a different or clean chopping board when preparing raw meat and vegetables	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0

You recently had a lesson using the *Dish It Up* CD ROM. We would like you to tell us what you learnt and what you thought about the lesson.

9. Which three activities do you most remember doing in the lesson?
[Please write in the box below]

1.
2.

3.

10. How much did you like, or not like, the lesson you had using the *Dish it Up* CD ROM? [Please tick one box only]

Liked it a lot	<input type="checkbox"/> 4
Liked it a little	<input type="checkbox"/> 3
Did not like it very much	<input type="checkbox"/> 2
Did not like it at all	<input type="checkbox"/> 1

11. Please tick the box in the table that shows how much you think you have learnt from the *Dish it up* lesson? [Please tick one box for each]

	I learnt a lot about this	I learnt a little bit about this	I did not learn much about this	I did not learn anything about this	Don't know / can't say
How to choose a varied, balanced diet	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
The importance of being active	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
How to make sure you eat the right amount to be healthy and be a healthy weight	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Understand how things like advertising and food marketing can have an effect on your diet and behaviour	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
How to change recipes and cook dishes so that they are healthy	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
How to cook, store and prepare food safely	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
Why it is important to: clean work surfaces you are cooking on, chill food, cook food properly and reheat food safely	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0
How to understand and use date-mark and storage instructions on food labels	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1	<input type="checkbox"/> 0

12. Which of the following lessons did you do from *Dish it Up*? (Ask your teacher for the answer) Please tick all that apply

Breakfast	<input type="checkbox"/>	4
Lunch	<input type="checkbox"/>	3
Club	<input type="checkbox"/>	2
All of them	<input type="checkbox"/>	1

13. Are you a... [Please tick one box only]

Girl / Female	<input type="checkbox"/>	1
Boy / Male	<input type="checkbox"/>	2

14. Please write your age _____ years

Thank you for your answers. Please hand this to your teacher.