

Food for Life Partnership Evaluation

# Primary Schools Case Study Evaluation

Full Report



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# **Primary Schools Case Study Evaluation Full Report**

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*in collaboration with*

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# Executive Summary

## Overview

This report presents an account of findings for the Primary School Case Study conducted as one part of the Food for Life Partnership (FFLP) Evaluation. The purpose of the study was to examine FFLP's facilitation of food culture reform in flagship primary schools. It included a focus on implementation in settings of higher social deprivation. The study objectives concerned the impact of the programme on school organisations, pupil and parental involvement, food in school, children's health related behaviour, and home influence.

## Study and Fieldwork

Between May to July 2009, the researchers worked with six FFLP flagship primary schools: two in the North, two in the Midlands, and two in the South of England. The pupil sample focused on whole mixed ability classes in Years 3/4 and Year 5. The parent sample was drawn from the parents, carers and guardians of these pupils. Lead staff and pupils participating in School Nutrition Action Groups (SNAGs) were also interviewed in each school.

430 pupils completed in class questionnaires and 77 of these pupils took part in focus groups. Out of the total sample, 376 pupils took home questionnaires to their parents or carers. 150 parents responded to this questionnaire (a response rate of 40%) and 63 parents took part in interviews or provided written feedback by email. Interviews were held with 26 staff from the six schools, including teachers, teaching assistants and cooks.

From May to September 2008, data from Year 3/4 and 5/6 pupils (N=344), school staff and secondary data sources were collected for schools at the point of enrolment on to the FFLP flagship scheme. These baseline data were used to help form an assessment of FFLP's impact in the study schools.

## School Profiles

Three of the six schools are in the top national quintile for free school meal eligibility and one also has a high Black/minority ethnic background pupil intake. On enrolment with the FFLP programme, all case study schools had a school council and had achieved National Healthy School Status. At the point of follow up in May 2009, all schools had achieved a Bronze Award against the FFLP Mark.

## Key Findings

### Changes in Food Culture

All participants in the evaluation identify ways in which the school food culture has changed as a result of participation in the FFLP programme. Whilst schools work with many food-related initiatives, staff report that FFLP's distinguishing contribution is the practical approach to achieving a coherent vision for school food culture. Before enrolling with FFLP all study schools reported that they were delivering piece meal,

disconnected activities. Some schools lacked adequate cooking, growing facilities or educational links with farms. However, at follow-up all schools were able to evidence a systematic programme of reform through school food action plans and Bronze Mark award accreditation.

In terms of food education, FFLP helped teachers take a planned, integrated and curriculum linked approach, connecting different elements of food education in a more systematic way. This was a move away from one-off and isolated activity delivery. Topic based delivery also helped teachers make links: between health, sustainability and different components of the primary school curriculum.

### Involvement in school life

FFLP has supported all study schools to develop new opportunities for pupils and parent involvement in school life. Compared against the period before enrolment, schools became more democratic and involved pupils in decision-making about food and food policy. SNAG member pupils benefit personally by developing their knowledge and awareness of sustainable food, and developing transferable decision making and consultation skills. Pupils who are not SNAG members report being able to voice views on whole school food reform via SNAG consultation channels.

Staff and parents report that activities such as gardening and cooking have facilitated involvement of a wider range of parents, as well as new involvement from other community members, such as allotment societies. Children are positive about activities which engage their parents in school life and identified activities, such as cooking and serving dinner to their parents as positive experiences.

### Food provision in schools

Take up of school meals has risen in four out of the six schools. Take up has increased more in schools with high free school meal eligibility (mean = +3% from 07-08 to 08-09 financial years). Within schools, free school meal take up has increased in schools that already have high eligibility (mean =+9% from 07-08 to 08-09 financial years). There are school level variations in pupil meal ratings and those schools with the lowest school meal take up also have poorer ratings for school meals.

Pupil cohorts rate school meals more positively since the case study schools enrolled with FFLP. For all schools with baseline and follow-up data, there is a 15% increase in the rating of *good* or *excellent* for school meals. This positive shift applies to both pupils who take, and those who do not take, school meals. Parents concur with their children and it is possible, therefore, that negative perceptions of school meals have become less of a barrier to school take up under FFLP. Positive ratings of school meals are also associated with self reported fruit and vegetable intake at follow up (but not at baseline).

### Cooking, growing and healthier eating

Children report enjoying cooking (82% say they *enjoy* or *really enjoy* cooking) and growing (53% say they *enjoy* growing) in school and would like to do more cooking and growing activities both in school and at home. Children in focus groups, their parents

and teachers are almost universally enthusiastic about cooking and growing experiences, both in school and at home. They are also readily able to link these experiences directly to new opportunities provided through FFLP. Trends in the quantitative data concerning self reported confidence and skills in cooking and growing skills point towards a positive impact of FFLP, which is supported by the qualitative findings.

Pupil quantitative data show significant associations between cooking and growing activities - and self reported fruit and vegetable consumption. For example, of those children who report eating the highest levels of fruit and vegetables, 45% state that they cook with basic ingredients two or more times a week at home and 54% state that they often help to grow fruit and vegetables at home. By contrast for children who report eating the lowest levels fruit and vegetables, only 17% help to cook two or more times a week at home and 17% state that they often help to grow fruit and vegetables at home.

The findings also highlight barriers to helping children participate in cooking and growing activities. These include constraints at home (lack of space to grow vegetables or lack of opportunity to cook), as well as challenges of delivering uniform experiences of practical cooking and growing experiences in schools. Nevertheless, FFLP activities provide a valuable opportunity for children to practise these skills and to develop their knowledge and enthusiasm for cooking and growing.

#### Attitudes toward healthier and sustainable food

Pupils recognise the need to eat a balanced diet. Exploring ideas around healthy eating in focus groups with pupils highlighted several ways that the FFLP programme could be changing children's attitudes toward healthy food. These included providing a range of opportunities for children to try new foods.

There is evidence that sustainable food messages promoted by FFLP, such as issues around food miles, organic and sustainable food production, are being taken up by children. However, the extent to which these are communicated varies considerably amongst the schools involved. The issues are complex and teaching staff express some concerns and confusion over which messages to promote. Pupils, in particular, younger pupils, have a very mixed understanding of local, seasonal, organic, higher welfare and fair trade food issues.

A central issue is the link between sustainable food related behaviours and healthier eating. Evidence from the pupil and parent questionnaires indicates a weaker set of associations between these concepts— in comparison with the associations between cooking, growing and healthier eating. As other research also highlights (Joshi *et al*, 2008), the complexity of some of the concepts presents challenges for evaluation measurement in primary school age children.

#### Impact on the home environment

Parents were generally aware of and positively endorse FFLP activities and the fact that the school was participating in the FFLP project. To a lesser extent FFLP activities are reported to have an impact upon wider family food consumption attitudes and



behaviour. Half (75/150) of parents reported that FFLP had helped change their child's food preferences. Parents emphasised that these connections are not simple and that it is not easy to attribute changes to children's willingness to try new foods or changes in family consumption patterns to one specific stimulus.

Whilst research in this area is very limited, the longer term whole school approach of FFLP may account for the relative success of take home communications compared with short term initiatives. Several processes were identified in which FFLP activities promote changes in family norms and consumer behaviour in the home and community setting: children raise awareness at home and motivate families to change shopping and cooking habits; children practise their practical food learning with relatives at home; fuller engagement with parents on school food issues and school meal improvements help set an agenda for change for families and the wider local community; school events with parents and the local community offer direct experiences for growing, purchasing and cooking healthier and sustainable foods.

## **Recommendations**

### Challenges for FFLP

In the early stages of the programme's implementation, practical food education activities are dispersed across pupil cohorts. There are relatively few occasions where pupil cohorts experience all elements of the programme as an integrated package. However, this may change as the programme becomes more embedded within schools.

Whilst school meal take up is an overall programme focus for outcomes, this focus does not appear to be equally reflected at the school level in terms of school food action planning and monitoring. This may reflect the challenging nature of the task. FFLP supported actions on healthier packed lunches and cooking from scratch at home are reported to run counter to the school meal take up objective.

There is a diverse range of messages schools are expected to deliver through the programme. It is likely that these will not all be delivered equally and FFLP will need to consider whether to rationalise these objectives and/or clarify the importance of different messages (e.g. the relative importance of organic, local and fair trade issues).

### Opportunities for FFLP

The methods developed as part of this study provide a good basis for focusing on promising lines of enquiry with the wider group of FFLP flagship schools and Mark enrolled schools.

Case study schools investigated provide a number of examples of good practice and innovative delivery. These could be developed into case studies to provide ideas and examples to schools joining the FFLP programme.

The programme has the potential to have a substantial impact on the pupils involved and there is the opportunity to explore the impact of such a whole school programme on pupils over time. Given the achievements of the Bronze level schools examined in

this report, schools progressing towards Silver and Gold FFLP Mark status present a very promising focus for in depth evaluation. Providing structured programmes of FFLP work can be identified in advance, this can be evidenced with cohorts of pupils – and their parents - in other flagship school settings.

## Overview

By 2012, Food for Life Partnership (FFLP) will have selected 180 Flagship Schools based on their commitment and enthusiasm to improve food culture in the school and in the wider community. Flagship Schools must be willing to take the fast track towards the FFLP Gold Mark award and to achieve the Bronze Mark award within two years. FFLP select a wide range of schools for the Flagship scheme including those with little previous track record in practical food education.

This report brings together evaluation studies of six primary schools participating in the FFLP Flagship scheme. It forms one part of a wider evaluation of the Big Lottery funded initiative in England. This element of the evaluation aims to examine FFLP's promotion of food culture reform in selected primary schools. The study included a focus on implementation in settings of higher social deprivation: notably three of the six schools were in the top national quintile for free school meal eligibility. This report focuses on the period from flagship enrolment up to the point at which schools achieved the Bronze Mark award.

The objectives of the study were to:

1. Explore how the elements of the FFLP programme provide a stimulus for food culture reform in schools
2. Explore how the FFLP programme facilitates pupil, parent and wider community involvement in school life
3. Analyse perceptions of the impact of FFLP on food provision in schools
4. Analyse the association between FFLP supported activities and children's cooking, growing and healthier eating behaviours
5. Investigate perceptions of FFLP's influence on children's awareness and attitudes towards healthier and sustainable food
6. Investigate perceptions of FFLP's influence on the home environment

The study reported on here forms one component of a larger programme of evaluation work with the Food for Life Partnership. A supplementary objective for the evaluation process is to develop lines of enquiry and methods for the analysis of the wider programme. Approximately twelve months after the May-June 2009 fieldwork presented in this report, the participating case study schools will be invited to take part in further evaluation in order to examine the progress in relation to the study objectives.

This report presents an account of the research methods used in the study. This is followed by findings in relation to the quantitative aspects and then the qualitative findings. The final discussion section revisits the study objectives and gives a synthesis of key lines of enquiry.

## Context

Recent UK initiatives have focused on supporting a move to both healthier and more environmentally sustainable schools (e.g. Healthy Schools, Eco-Schools and Growing Schools). These initiatives have tended to focus on either improving children's health or focusing on how the school could be more environmentally sustainable, rather than tackling issues around sustainable food production. Evidence from initiatives focused on specific year groups, such as 'Cooking with Kids', suggests that specific, focused interventions related to growing or cooking are effective at developing skills and changing attitudes (Hutton, 1994; Walters & Stacey, 2009). However, less is known about whole school approaches to reform. Multicomponent, whole school programmes enable bottom up integration which may facilitate more sustainable changes than one-off focused interventions (Corcoran, 2010). However, it may be more difficult to find evidence of impact for these more diverse initiatives (Connell & Kubisch, 1998).

Concerns about rising levels of obesity amongst young people underpin UK Government initiatives to support food and nutrition related education in schools. As well as changing food provision in schools, policies also seek to build pupils ability to make informed choices about food (HMI, 2004). Since school meals are offered in all maintained primary schools and form part of a means tested programme to provide free school meals to those on low income, approaches that address both health and environmental impact through school meals could have far reaching impacts on children's health and could go some way to overcoming income related inequalities in access to healthy food.

There is evidence from other studies that improving the nutritional value of school meals can have a direct impact on educational performance. Reports from parents involved in the 'Cooking with Kids' programme report practical cooking instruction leads to an increase in their children's willingness to try new foods (Walters & Stacey, 2009). Belot & James (2009), for example, evaluated the Jamie Oliver 'Feed me Better' campaign and showed that primary schools implementing healthier meals achieved a 3-6 per cent increase in number of pupils obtaining a level 4 in English SATs testing and a 5 – 8 per cent increase in the number of pupils obtaining a level 5 in Science. Impacts can also be seen at the school level. Schools involved close to attaining Healthy School status as part of the National Health Schools Programme tended to have better Ofsted ratings (Fuller, 2009). There was a trend toward children in these schools being absent less often.

Despite the benefits of healthy food, research shows that children prefer foods which are less healthy. A study of primary school children found that while children identified food as healthy on the basis that it had less fat or more nutrients, they also indicated that they preferred foods which were less healthy (Noble *et al.*, 2000; Gosling *et al.*, 2008). This study recommended that food and nutrition education should focus on ways of supporting pupils to make healthy choices. Exploring a multicomponent programme aimed at kindergarten and first grade pupils found that while knowledge of healthy foods increased, changes in eating behaviour was variable (Blom-Hoffman *et al.*, 2004). Research into health promoting schools suggests that key factors which enable pupils to engage in healthy dietary patterns include: clear leadership, community involvement, enabling pupils to be involved in decisions, facilitating links

between experience and understanding and the school acting as a role model (Larkin & Littledike, 2008). However, it should be acknowledged that the wider influences on pupil food choices, such as the home environment, proximity to fast food outlets and food advertising, may limit the impact that schools can have on food consumption (see for example, Walton *et al.*, 2009).

Given that home environment plays a significant role in children's food consumption, finding ways to engage parents with issues related to sustainable food production can be expected to have an impact on children's food-related behaviours. Although school-based initiatives often seek to influence behaviour at home, there is little evidence in the academic literature to support an indirect transfer of knowledge from child to parent. Parkin *et al.* (2006), for example, found little evidence that children discussed National Arbor Week activities with their parents, although the parents themselves recalled being involved in these activities as children. Although focused on specifically on tree planting, this study found little evidence that children's involvement in National Arbor Week led to them planting trees with their parents.

Tikkenan (2008) suggests that both parents and pupils need to be provided with targeted messages to change pupils' attitudes to school meals. It may be that initiatives that bring parents into direct contact with healthy food and sustainability messages, such as gardening projects, will have a greater impact on behaviours at home. Regardless of whether such initiatives have a direct impact on consumption of healthy and sustainable food, there is evidence that involving parents in their child's primary school education has wider benefits. For example, is evidence that parental involvement in primary schools has long term benefits in terms of children's educational performance (see for example, Barnard, 2004).

While issues of nutrition and health are widely accepted drivers for improvements in school meals, sustainability remains a poor cousin, with little focus on the environmental impacts of school meals or education for sustainability more generally within schools (Sustainable Round Table, nd). Yet the UK Government provides clear drivers to promote sustainability across the UK economy and a recent European Commission report highlights that what we eat contributes up to 31 per cent of our greenhouse gas emissions (Tukker *et al.*, 2005).

Evidence from a number of studies suggests that children participating in a growing intervention increased their uptake and preference for fruit and vegetables (Libman, 2007; McAleese & Rankin, 2007; Morris & Zidenberg-Cherr, 2003). An evaluation of farm-link programmes shows that greater understanding of food production can also increase school meal uptake, as well as changing pupils' knowledge, attitudes and behaviours toward food (Joshi *et al.*, 2008). This report also suggests that parents of children involved with farm link projects report changes in their food consumption and purchasing behaviours.

This evaluation focuses on a new programme, The Food for Life Partnership (FFLP) programme, led by the Soil Association. FFLP is unusual in that it seeks to draw together education on nutrition, food production and sustainability. FFLP seeks to

enable young people 'to explore how their food choices impact on their health and that of the planet, and to rediscover the pleasure of taking time to enjoy real food'.<sup>1</sup>

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<sup>1</sup> <http://www.foodforlife.org.uk/about-us> [accessed 11 January 2010]

## Methods

### Methodology and Study Design

This study draws upon the theory of change evaluation approach (Weiss, 1995) in order to shape the lines of enquiry, data collection and data analysis. Connell & Kubisch (1998; ix) define a theory of change approach as “systematic and cumulative study of the links between activities, outcomes and the contexts of the initiative”. It proposes that a central task of an evaluation is to test theoretical linkages between programme inputs, interim outcomes, context and longer term outcomes. In the context of this study, the researchers applied this approach to explore the links between programme related activities (inputs) participant engagement (interim outcomes), school setting (context) and longer term outcomes (healthier eating, sustainable food awareness and school meal take up). The relationship between these variables is examined through a range of data sources that include questionnaire and other quantitative data as well as qualitative interview and focus group data. Quantitative data provide plausible estimates of FFLP impact on outcomes whilst the qualitative data help explore how and why the initiative may be creating change for schools.

To date, the quantitative element of the study has included measures at the time of enrolment as an FFLP flagship school and a minimum of nine months after this time. These data collection exercises are independent cross sectional school level studies: the study design does not track longitudinal change for individual pupils. Furthermore, the study design cannot offer findings generalisable to the FFLP national programme as a whole. However, this study is intended to inform evaluation work currently in progress with a larger national sample of FFLP flagship primary schools.

### School level sampling

Six primary schools from FFLP’s Flagship scheme participated in the study. These were chosen to reflect a range of different settings. These included a selection of one school from each of six out of the nine England regions. Selection also included a range of schools in terms of size, rural and urban environments, catering models and Black/minority ethnic representation on the school role. The question of how FFLP is received in areas of higher social deprivation is a particular focus given the links between lower income, diet related health status and barriers to health and well-being resources. Three of the six schools were selected to include high pupil eligibility to free school meals, a widely accepted proxy for social disadvantage in school settings. FFLP regional coordinators were consulted on the selection process in order to confirm that prospective schools had been actively delivering all elements of the FFLP scheme after a minimum of nine months post enrolment. At this point, all study schools had achieved the FFLP Mark Bronze Award and were working toward a Silver Award. The schools involved were: Middleton Primary (Yorkshire & Humber); Park End Primary (North East); The Oval Primary (West Midlands); Abbey Road Primary (East Midlands)<sup>2</sup>; St Andrews Primary (South West); and Lyndhurst Junior (South East).

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<sup>2</sup> The original school selected for the East Midlands had to withdraw from the study at short notice on the advice of the FFLP delivery team. An alternative, Abbey Road Primary School, proposed by FFLP, kindly agreed to participate. Whilst this school did not participate in the pupil baseline questionnaire,

Between May to June 2009 the researchers contacted Heads or school leads to discuss participation as an evaluation case study school. This was followed by a visit to undertake the pupil questionnaire and pupil focus groups. A further visit involved interviews with parents, lead staff, the cook and pupils involved in the SNAG. School records on the SNAG and the school meal records were also obtained.

All schools are already involved in the national FFLP evaluation and had provided data at the point of enrolment with the programme. Between May to September 2008 staff in the six schools had completed an enrolment questionnaire covering practical food education activities, pupil involvement, food provision and community involvement. Pupils from five of these schools had completed a baseline questionnaire.

In this report the following convention is used:

**'Baseline'**: data collected at enrolment in May to September 2008

**'Follow up'**: data collected in May to June 2009

### **Data collection at baseline**

Three staff in each of the six schools completed questionnaires at the time of enrolment to the initiative. In five of the six schools 344 pupils in Years 3/4 and 5/6 completed questionnaires in a class setting with assistance from teachers using standardised guidance. Questionnaire respondents were from mixed ability whole class groups. There were no significant differences between study participants and the pupil school roll in terms of gender. At the baseline point, no qualitative data were collected from pupils and no data were collected from parents.

### **Data collection at follow up**

At least three staff in each of the six schools took part in semi-structured interviews. In total 26 staff participated. Schools were asked to identify one class from Year 3 or 4 (ages 7 to 9) and one Year 5 (ages 9 to 10) class to participate in the follow up study. Pupils completed a short questionnaire in a class setting with assistance from the researchers. From each class, 2 groups of 4 to 7 pupils then took part in focus group interviews.

Pupils completing the classroom questionnaire were asked to take home a parent/carer<sup>3</sup> questionnaire, which included an additional invitation to parents to take part in an interview either in-person or by telephone. Parents were also invited to participate in a correspondence interview by email.

A breakdown of all follow up study participants is provided in Table 1. 430 pupils completed the questionnaire. This includes two schools where pupils from additional classes were recruited but did not use the parent take home questionnaire. Questionnaire respondents were from mixed ability whole class groups. There were no

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the school satisfied the purposive sampling criteria of reported delivery of all elements of the FFLP programme.

<sup>3</sup> Hereafter 'parent' is used as an abbreviation for 'parent/carer'



significant differences between study participants and the pupil school roll in terms of gender.

376 pupils took home the parent questionnaire. 150 parents responded to this questionnaire, giving a response rate of 40%. Out of this group, 63 parents took part in interviews or provided supplementary written feedback by email.

The parents of girls were more likely to respond to the questionnaire (61% were parents of girls). There were no significant differences between parent responders and non-responders in terms of child take up of meals, either paid or free. Parent interviewees were not significantly different from the parent questionnaire respondents in terms of a range of variables (free school meals, rating of school meals, and reported consumption of ethical foods). Park End, Middleton and The Oval schools had lower parental response rates. Anecdotally, school staff and parent participants believed this reflected parental literacy levels and the 'culture of parent engagement' in these schools.

Table 1. Study Participants at Follow up and School Records

		Park End	Middleton	Lyndhurst	Abbey Road	The Oval	St Andrews	Totals
Year 5	Pupil Questionnaires	26	32	26	28	48	25	185
	Pupil Focus Group	8	8	8	8	7	4	43
	Parent Questionnaires	12	10	10	14	4	14	64
Years 3/4	Pupil Questionnaires	55	23	27	59	53	28	245
	Pupil Focus Group	8	8	8	6	-	4	34
	Parent Questionnaires	13	10	15	20	10	13	81
SNAG pupil interviews		3	3	4	4	7	5	26
Parent qualitative feedback (in-person, phone & email)		9	8	11	17	6	12	63
Staff interviews		3	4	3	4	2	4	20
Cook interview		1	1	1	1	1	1	6
Checklists of class activities. SNAG and school records.		Yes	Yes	Yes	Yes	Yes	Yes	-
School meal records From 12 months pre-enrolment		Yes	Yes	No	Yes	Yes	Yes	-

## Pupil baseline and follow up comparisons

Whilst the overall baseline and follow-up number of respondents is similar for the five schools where data are available, Tables 2 and 3 show differences in the Year groups and overall school-level sample sizes. There is also a difference in the percentages of pupils taking school meals (37% at baseline compared with 49% at follow-up). In the context of this study it is therefore important to understand these as independent sets of data: any comparisons between the two cross sectional datasets needs to be interpreted with caution. Where there were significant Year group variations, the results are presented in the findings section specify Year groups.

Table 2. Baseline Pupil Questionnaire Respondents

	Years 3-4 Baseline Frequencies	Years 3-4 Baseline School %	Years 5-6 Baseline Frequencies	Years 5-6 Baseline School%	Total Frequencies
Lyndhurst	24	27.5	63	72.5	87
Middleton	18	29.5	43	60.5	61
St Andrews	21	30.0	49	70.0	70
The Oval	16	23.1	53	76.9	69
Park End	13	22.8	44	77.1	57
Totals	92	26.7	252	73.3	344

Table 3. Follow up Pupil Questionnaire Respondents

	Years 3-4 Follow-up	Years 3-4 Baseline School%	Year 5 Follow-up	Years 5-6 Baseline School%	Total frequencies
Lyndhurst	27	50.9	26	49.1	53
Middleton	23	41.8	32	51.2	55
St Andrews	28	52.8	25	47.2	53
The Oval	53	52.4	48	47.5	101
Park End	55	67.9	26	32.0	81
Subtotal	186	54.2	157	45.8	343
Abbey Road*	59	67.8	28	32.1	87
Total	245	56.8	185	42.9	430

\*This school is excluded from baseline-follow up analysis because no baseline data were collected at this school.

## Tools and measures<sup>4</sup>

### School records

For staff, structured questionnaire forms or checklists were used to collect data on the status and rating of practical food education, school policies on food, pupil and parent involvement and school meal provision.

<sup>4</sup> See Appendix A for further details

## Pupil questionnaires

### *School meals*

Self reported school meal take up was measured through two questions 'what are you having to eat at school today?' and 'how often do you have school meals?'. Children were also asked to rate school meals from 'excellent' to 'very poor', whether they did or did not have school meals.

### *Self reported fruit and vegetable intake*

Children were asked to estimate their average daily intake of portions of fruit and vegetables using a standard questionnaire measure (Abdallah *et al.* 2008: primary schools tool). Eight written examples of one standard portion were given such as 'one apple' or 'a small bowl of salad'. Administrators of the questionnaires used standard guidance and pictures as the questions were read out to the class to reinforce understanding of portion size. After checking that pupils understood and had thought about the question, they were asked to record their estimate. Responses for fruit and vegetables were coded separately from '0' to 'over 5' portions, these were then summed together and categorised in a five point scale from 'highest' to 'lowest'. Table 4 illustrates the application of these categories to the follow up data.

Table 4. Five point scale for categorising self reported average daily fruit and vegetable consumption [Follow up]

		Frequency	Percent
	1. Lowest	46	10.8
	2. Lower	66	15.5
	3. Middle	164	38.4
	4. Higher	95	22.2
	5. Highest	56	13.1
	Total	427	100.0
	Missing	4	
Total		431	

Following previous research (Morris & Zidenberg-Cherr, 2002) a separate series of questions asked pupils in the follow up questionnaire to record their views on eating five different vegetables (beetroot, carrot, spring onion, carrot and lettuce) using a five point scale from 'Like a lot' to 'Really don't like'. For each vegetable, these preferences all associated highly ( $p < 0.05$ ) with the self reported fruit and vegetable five point scale (i.e. children reporting a low fruit and vegetable consumption were more likely to also reported that they did not like these vegetables). Whilst this scale requires further validation, its utility is explored in this study to test associations with other key variables.

### *Cooking and growing*

Using five point scales, questions asked children about their cooking at home and confidence to cook with ingredients such as rice, pasta and fresh vegetables. Last occasion of use of a knife to chop fruit or vegetables was used as an indicator of cooking skills.

Similar questions were asked with regard to growing fruit or vegetables without much help at home – with examples provided such as ‘sowing’, ‘weeding’ and ‘harvesting.’ Children were also asked to rate their enjoyment of cooking and growing.

#### *Sustainable food attitudes*

Before the study a range of measures on sustainable foods had been piloted with children aged 7-9 and 10-11. These included knowledge, awareness and attitudinal measures. Focus group feedback on the measures indicated problems with question interpretation and links to school learning in the initial stage of the programme. No measure for this construct was therefore adopted at baseline. An intention type question, for example ‘what do you think about eating free range eggs?’ with a scale of options, including ‘don’t know’, was piloted at follow-up after promising results with in the secondary school students and use with the national Food Standards Agency Low Income Diet and Nutrition Survey (Nelson *et al.*, 2007a,b). These measures were highly associated: between-measures reliability analysis for free range eggs, local food, organic food (and organic meat specifically), food in season and fair trade food provided a Cronbach’s alpha of 0.725.

#### *Parent questionnaire*

This questionnaire adopted similar measures to the pupil questionnaire with regard to perceptions of child’s average daily fruit and vegetable intake, sustainable food attitudes, school meal ratings. The questionnaire also asked child’s free school meal status, household consumption of sustainable foods in the last week and perceptions of programme impact on their child and household [see Appendix A for further details].

Where available, existing validated measures were used, these included measures previously adopted in the Low Income Diet and Nutrition Survey and Big Well-being programme Evaluation.

#### *Qualitative interview topic guides*

Focus group and individual interviews took place with pupils, parents and staff associated with FFLP activities in the selected classes. Interviews also took place with members of the SNAG. The semi-structured interviews explored perceptions of the implementation of the programme in schools, personal involvement and the take home message [see Appendix B for further details]. The focus group format was adopted as an appropriate tool for data collection from this age group of children (Hill *et al.*, 1996; Krueger, 1998; Gosling, Stanistreet & Swami, 2008).

### **Ethical Issues**

Ethical consent for the study was obtained from UWE, Bristol’s Research Ethics Committee. School Heads were asked for written agreement for their school to take part in the study. This consent was based upon written and verbal information provided by the researchers. Pupils were informed of the purpose of the study and made aware of the right to opt out of participation in the questionnaires and focus groups. Parents were provided with a written information letter on the study, data protection protocols and the procedure for requesting withdrawal of personal information. Responses to the take home questionnaires were accompanied by parental written consent. Parents attending interviews were further advised on the

purpose of the study and right of withdrawal of data. Parents making special arrangements to attend the interview at school were given a £10 book voucher as a token of appreciation. All participants were informed of anonymity, confidentiality and the child protection conditions

### **Data Analysis**

Quantitative data were entered on to SPSS, a statistical database package. Descriptive statistics were employed to analyse the data. Pearson chi-square was used to test the associations between the key variables for fruit and vegetable self reported consumption, school meals, cooking, growing and sustainable food awareness. Qualitative data were transcribed from audio recordings or written statements. These data were then categorised according to topics of investigation and thematically analysed (Mason, 1996). Qualitative and quantitative data were then used to inform the logic models set out in the discussion section (McLaughlin & Jordan, 1999).

## Findings

### School Profiles

School profile information is taken from School Census returns of January 2008 and National Statistics datasets. Tables 5 and 6 show that three of the six schools are in the top national quintile for free school meal eligibility. One of these schools, The Oval in Birmingham also has a high Black/minority ethnic background pupil intake. Five of the six schools have higher than the England average pupil numbers (School Census 2008 average headcount 238). St Andrews is notable as a smaller school, with low free school meal eligibility and in-house catering.

Table 5. School profiles (1)

School	Town/City Region	School type	Caterer	FSM eligibility 2008	Quintile rank FSM eligibility 2008 in England	Pupil Black/minority ethnic background*
Abbey Road Primary School	Nottingham East Midlands	Community	LA	6.3%	4	20%
Middleton Primary School	Leeds Yorkshire and Humber	Community	LA	50.4%	1	11%
St Andrew's Primary School	Salisbury South West	Voluntary aided	In-house	3.2%	5	3%
The Oval Primary	Birmingham West Midlands	Community	LA	36.2%	1	41%
Park End Primary	Middlesborough North East	Community	LA	51.5%	1	5%
Lyndhurst Junior School	Portsmouth South East	Foundation	In-house	7.0%	4	8%

\*Note: Census data on ethnic monitoring for BMEGs may include 'unknown'

Table 6. School profiles (2)

	FTE Number of pupils	Males	SEN (statemented)	SEN (non-statemented)	Number of FTE teachers	Staff-pupil ratios	First language English
Abbey Road Primary School	411	49.9%	0%	13%	15.8	1:26	93%
Middleton Primary School	354	52.8%	4%	47%	19	1:19	96%
St Andrew's Primary School	155	46.60%	0%	12%	7.5	1:21	97%

The Oval Primary	445.5	51.8%	0.9%	36%	19.6	1:24	73
Park End Primary	440.5	52.4%	No data	16%	19.2	1:22	100%
Lyndhurst Junior School	552	52.5%	1%	21%	22	1:25	95%

### School baseline status with respect to FFLP delivery

Table 7 gives information on the status of schools on enrolment to the FFLP Flagship scheme. All case study schools had a school council, had achieved National Healthy School Status and had developed a whole school food policy. The other columns shows that whilst 5/6 had no dedicated forum for food policy decision making, all schools except St Andrews had at least one resource to support practical food education.

Table 7. Baseline status (1): Groups and resources in the year prior to FFLP enrolment

	Eco School	SNAG (or similar forum)	Cooking Club	Garden/ External growing Space	Link with a farm for educational visits
Abbey Road Primary School	No	No	Yes	No	No
Middleton Primary School	No	No	Yes	No	Yes
St Andrew's Primary School	No	No	No	No	No
The Oval Primary	Yes	No	No	Yes	Yes
Park End Primary	Yes	Yes	Yes	Yes	Yes
Lyndhurst Junior School	No	No	No	No	Yes

Table 8 provides information of the degree to which children were involved with FFLP related activities within the school. This shows that at the outset of FFLP enrolment, pupil participation was limited in most schools and took place mainly through the School Council.

Table 8. Baseline status (2): pupil involvement in the year before FFLP enrolment

	Pupil involvement in the development of whole school food policy	School approach to consulting pupils on school meal provision	Pupil involvement in the planning and cultivation of the school growing area
Abbey Road Primary School	Yes	Via School Council	Active involvement with most activities
Middleton Primary School	Yes	Via School Council, Surveys Group based consultation	Very limited involvement
St Andrew's Primary School	Yes	Group based consultation	No involvement
The Oval Primary School	No	Via School Council	Active involvement with some activities
Park End Primary School	Yes	Via School Council	Active involvement with most activities
Lyndhurst Junior School	No	No data	No involvement

### School follow-up status with respect to FFLP delivery

Progress at follow up against key FFLP delivery targets shows that all study schools had achieved the FFLP Bronze Award. This meant that each school had in place a school food action plan, educational cooking and growing facilities, an established farm link, had begun reform school meals and had completed a process of consultation with pupils and parents. All schools had received a specialist package of FFLP support across the flagship scheme's delivery areas.

Table 9. Follow-up status: school progress against the FFLP Mark: July 2009

	Bronze Award	Silver Award # out of 21 criteria	Gold Award # out of 15 criteria
Abbey Road Primary School	Award achieved	19	4
Middleton Primary School	Award achieved	11	0
St Andrew's Primary School	Award achieved	9	0
The Oval Primary School	Award achieved	5	0
Park End Primary School	Award achieved	8	0
Lyndhurst Junior School	Award achieved	17	4

Tables 10 and 11 provide greater detail on practical food education delivery at the level of the specific classes participating in the follow up study. It is clear from these data that Year 3 children in participating schools are offered one off opportunities for cooking and growing, but that more sustained cooking and growing activities are not provided by all participating schools. Similarly, education around sustainability is not provided at all by 2 out of 6 schools.



For Year 5, participating schools reported delivering educational cooking and growing courses. These were topic based and referenced against the curriculum. Cooking provision was more clearly skill based. Teachers were more confident at identifying transferable – as opposed to horticulturally specific - skills with regard to growing activities. Only 3 of the 6 schools made the opportunity for these children to visit a farm. Only one school did not tackle some aspects of sustainable food education with this year group.

Table 10. Teacher Checklist Report. Year 3 Classes.

In the past school year what activities has your class taken part in?

		Park End	Middleton (Yr 4)	Lyndhurst	Abbey Road	The Oval	St Andrews
Cooking	One-off in-class cooking activities	Yes	Yes	Yes	Yes	Yes	Yes
	Course of in-class cooking activities	No	Yes	In part	Yes	No	Yes
	Extra curricular e.g. cooking club	In part	Yes	No	Yes	No	Yes
Growing	One off work in school garden	Yes	Yes	Yes	Yes	Yes	Yes
	Course of work in school garden	Yes	Yes	No	Yes	No	Yes
	Extra-curricular e.g. gardening club	No	Some pupils	No	Yes	No	Yes
	Produce made available to eat/cook	Yes	Yes	No	Yes	No	Yes
Farm Links	Visit to a farm	Yes	Some pupils	Yes	Yes	Yes	Yes
	Project work on food and farming	Yes	Some pupils	No	No	Yes	No
Sustainable food education	Food origins, local food	Yes Food origins	No	No	Yes	Yes	No
	Animal welfare, organic, seasonal, ethical food issues	Yes animal welfare Organic food	Environmental issues	No	No	No	No
Food in school	SNAG	1 rep	1 rep	1 rep	1 rep	No	1 rep
	School meals consultation	Questionnaires Suggestion box	Questionnaires	Yes Dining hall	Yes	Yes	Yes Food in break
	Other food in school consultation	Questionnaires Suggestion box	Yes - informal	No	Yes	Yes	Yes
	Breakfast club	Yes?	Yes	Yes	Yes	No	

Table 11. Teacher Checklist Report. Year 5 Classes  
In the past school year what activities has your class taken part in?

		Park End	Middleton	Lyndhurst	Abbey Road	The Oval	St Andrews
Cooking	One-off in-class cooking activities	Yes	Yes	Yes	Yes	Yes	Yes
	Course of in-class cooking activities	Yes	No	Yes	Yes	Yes	No
	Extra curric activities e.g. cooking club	Yes	Some pupils-cooking bus	No	Yes	Yes	Yes
Growing	One off work in school garden	Yes	Yes	Yes	Yes	Yes	Yes
	Course of work in school garden	Yes	Yes	Yes	Yes	Yes	Yes
	Extra-curric e.g. gardening club	Yes	Yes	No	Yes	No	No
	Produce made available to eat/cook	In part	Yes	Yes	Yes	Yes	No
Farm Links	Visit to a farm	No	No	Yes	Yes	No	Yes
	Project work on food and farming	No	No	Yes	No	No	No
Sustainable food education	Food origins, local food	No	In part	No	Yes	Yes Rain forest	No
	Animal welfare, organic, seasonal, ethical food issues	Yes Environmental	Yes Free range Organic Environmental issues	Animal welfare Fair trade	No	Yes Fair trade	No
Food in school	SNAG	1 rep	No	1 rep	1 rep	Council	rep
	School meals consultation	Suggestion box	No	Survey	Yes	Yes e.g. themed dinners Packed Lunches	Yes
	Other food in school consultation	Suggestion box	No	Yes	Yes	Yes Fruit in school Break times	Yes
	Breakfast club	Yes	Yes	Yes	Yes	Yes	No

## School Meal Take Up

School meal take up figures were calculated using the NI52 national formula. Where data were available, figures were collected from the period 12 months before FFLP enrolment, up to the end of the 2008/9 school year.

Table 12 on school meal take up figures show the following:

- Take up has risen in four out of six schools.
- Take up has increased more in schools with high free school meal eligibility (Park End, Middleton, Oval: mean = +3% from 07-08 to 08-09 financial years).
- Within schools, free school meal take up has increased in schools that already have high eligibility (Park End, Middleton, Oval: mean =+9% from 07-08 to 08-09 financial years).

These data show that the schools in settings of higher social deprivation are achieving an increase in take up of school meals.

Table 12: School Meal Take Up

Park End Primary School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	479	59%	166	87%	31%
08-09	473	62%	190	89%	34%
09-10 (to June09)	473	60%	190	95%	27%

Middleton Primary School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	335	52%	169	81%	22%
08-09	341	58%	165	92%	26%
09-10 (to June09)	341	64%	165	100%	25%

The Oval Primary School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	465	41%	154	76%	24%
08-09	464	43%	148	90%	21%
09-10 (to June09)		45%		97%	18%

Abbey Road Primary School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	411	58%	26	90%	55%
08-09	416	54%	25	72%	53%
09-10 (to June09)	416	47%	25	81%	45%

St Andrews Primary School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	157	25%	5	Low FSM registration	22%
08-09	161	26%	15	73%	20%
09-10 (to June09)		? data quality			? data quality

Lyndhurst Junior School					
Financial Year	Reported number of pupils in Census	School Meal Take Up: All	Reported number of FSM eligible pupils in Census	School Meal Take Up: FSM	School Meal Take Up: Paid
07-08	529	23%	28	98%	14%
08-09	493	No data Reported Lower	30	No data Reported no change	No data Reported Lower
09-10 (to June09)		No data		No data	No data

\*Note on Lyndhurst: The school has missing records due to administrative changes. Take up for paid meals is reported to be lower [last correspondence: 7/12/09]

Note 09-10 financial year: FSM take up figures calculated on basis of census data for 08-09 financial year.

Parent and other non-staff adult consumption of school meals is only clearly recorded in Abbey Road. There is a small increase in adult meals provision in this school for these groups. This is evidence of community involvement in school life. However it was not a strong data source in the study schools.

## Quantitative Findings: Pupil and Parent Questionnaires

This section reports on data collected from pupil questionnaires at baseline and follow up and parent questionnaires at follow up. It covers pupil data on self reported fruit and vegetable consumption, school meals, cooking, growing and sustainable foods. The parent data cover perceptions of school meals, cooking, growing, sustainable foods and the impact of FFLP at home.

### Pupil Questionnaire Findings

#### Self reported fruit and vegetable consumption

Pupil estimates of their average daily fruit and vegetable consumption are categorised in the form of a five point scale from 'highest' to 'lowest' (see Methods section). This is used to explore the associations with school meals, cooking, growing and sustainable food variables. These findings are outlined below.

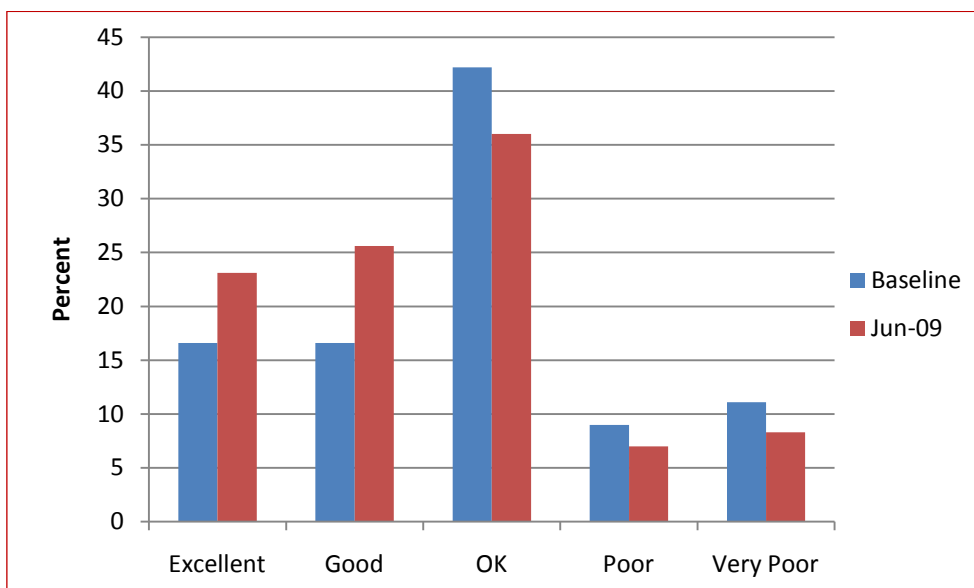
Comparisons between the pupil reports at baseline and follow-up show a positive trend in self reported average daily fruit and vegetable consumption. This trend is consistent across schools. For example, comparisons between pupils in Year 5/6 (n=252) at baseline and Year 5 (N=185) at follow up show a mean increase of 1 portion in self-reported daily fruit and vegetable intake from 4.19 to 5.21. The reliability of this finding is questionable due to the small and unbalanced sample sizes. Nevertheless, these data offer important lines of enquiry for the larger national FFLP evaluation study.

#### School Meals

In the follow-up survey almost half of the respondents rate school meals positively, with 21% (n=90) and 27% (n=115) rating meals '*excellent*' or '*good*' respectively. School meal ratings and take up are highly correlated ( $p < 0.05$ ), thus children taking school meals are likely to rate school meals more positively. In contrast, those who report never having school meals are more likely to say that school meals are *poor* or *very poor*. Year 5 children rate school meals less positively than younger peers. However, the association between positive school meal rating and higher level of fruit and vegetable intake is highly significant ( $p < 0.05$ ) at follow up. This association is not present at baseline. There is no statistical association between take up of school meals and fruit and vegetable intake at baseline.

A comparison between baseline and follow up respondents shows a trend towards more positive ratings of school meals (Figure 1). This shows a 15% increase in the rating of *good* or *excellent* for school meals. This positive shift applies to both pupils who take, and those who do not take, school meals. At follow-up, fewer pupils taking packed lunches have a negative view of school meals.

Figure 1. Pupil Ratings of School Meals in the Baseline and Follow up Surveys



Pupils at baseline (n=344) and Pupils at follow-up (June 09, n=343)

Improvements in pupil ratings were consistent across all the five case study schools although the percentage improvement across schools varied. There was no significant difference between the schools with higher levels of FSM and those with less. There are, however, school level variations in pupil meal ratings. Notably the schools with the lowest school meal take up also have poorer ratings for school meals.

### Cooking

In the follow-up survey, pupils provided overall positive responses to their engagement with cooking activities, for example:

- 52% report helping to cook at home with basic ingredients one or more times a week,
- 72% report being confident cooking with basic ingredients,
- 82% report enjoying or really enjoying cooking,
- 62% report having chopped a fruit or vegetable with a knife in the last week.

These behaviours are gendered: with girls being significantly more likely to cook at home, enjoy cooking and practise chopping skills. There are no significant gender differences in confidence to cook with basic ingredients. Year 3 children are significantly less likely to cook at home or to practise chopping skills, but there are no significant age differences for enjoyment and confidence measures.

Helping to cook at home, confidence to cook with basic ingredients, practise at cooking and chopping skills are all significantly associated ( $p < 0.05$ ) with self reported fruit and vegetable intake. For example, 45% of children in the highest bracket of self reported fruit and vegetables consumption state that they cook with basic ingredients two or more times a week at home. This compares with 17% of children reporting low consumption of fruit and vegetables. There was no significant association between enjoyment with cooking and self reported fruit and vegetable intake. Figures 2 to 5 illustrate these associations.

Figure 2. Pupil reported frequency helping to cook at home with basic ingredients by self reported fruit and vegetable average daily consumption. N=430

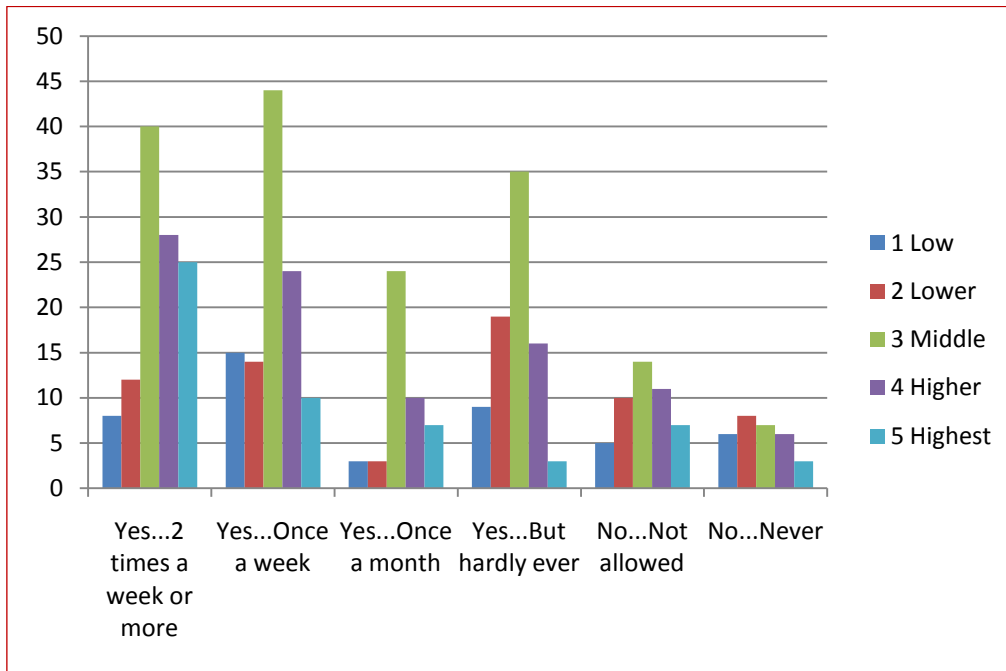


Figure 3. Pupil reported confidence to cook with basic ingredients by self reported fruit and vegetable average daily consumption. N=430

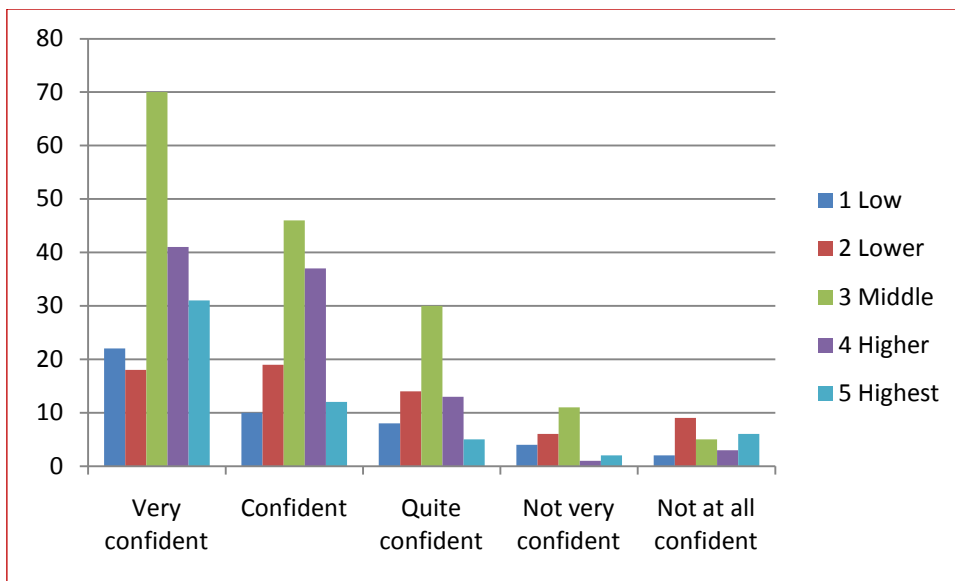


Figure 4. Pupil reported enjoyment of cooking by self reported fruit and vegetable average daily consumption. N=430

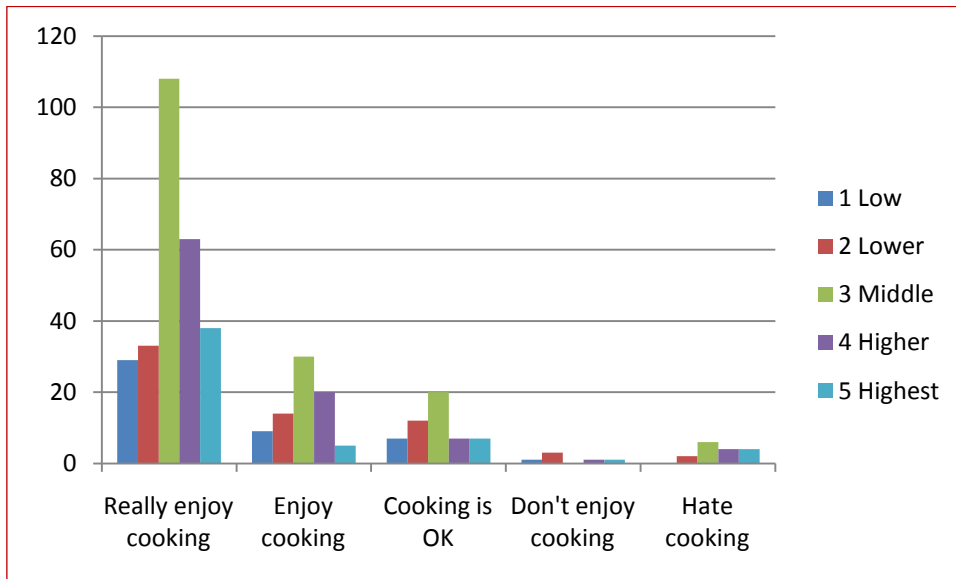
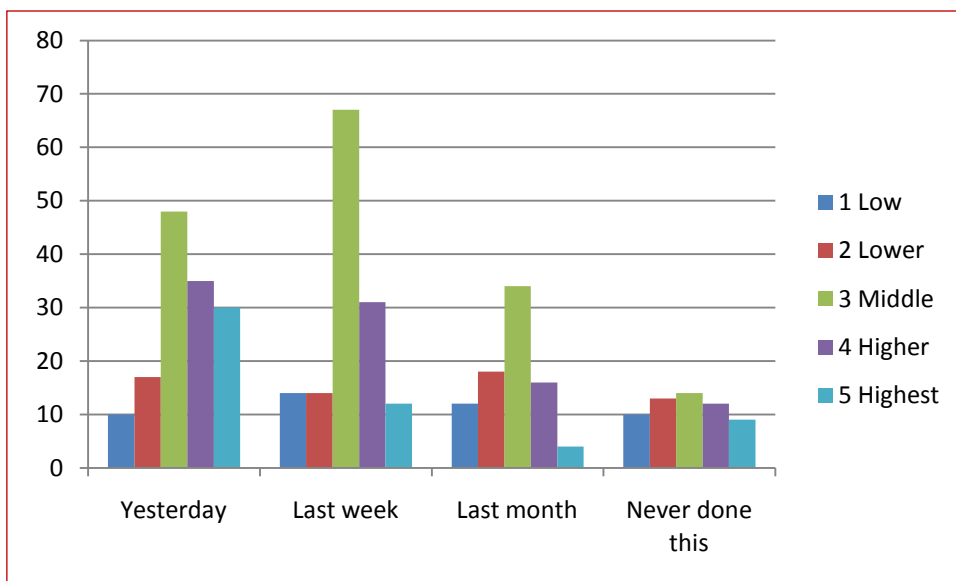


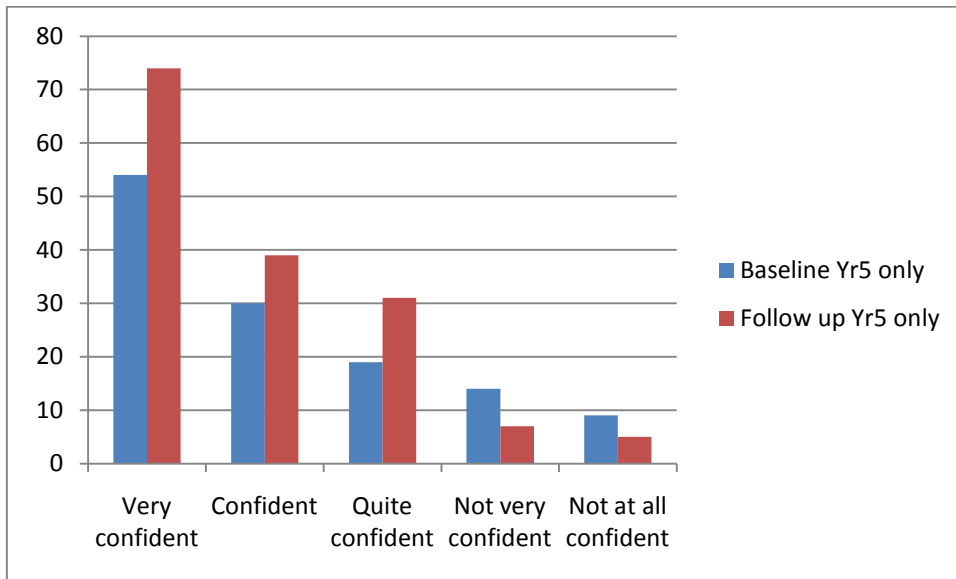
Figure 5. Last occasion using a knife to chop fruit or vegetable at home by self reported fruit and vegetable average daily consumption [N=430]





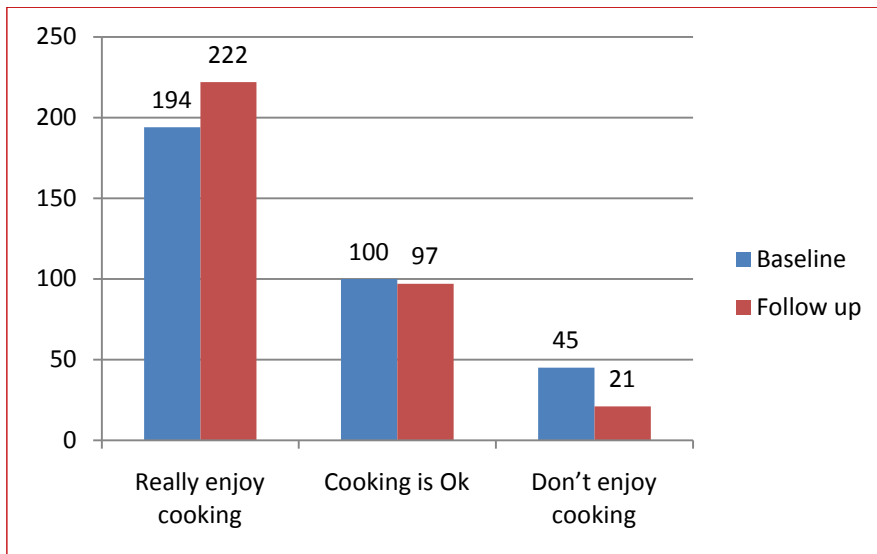
Baseline and follow up comparisons for cooking related behaviours in Figures 6 to 8 show a positive trend for enjoyment and confidence, but a less clear shift for cooking at home.

Figure 6. Pupil reported confidence to cook with basic ingredients.



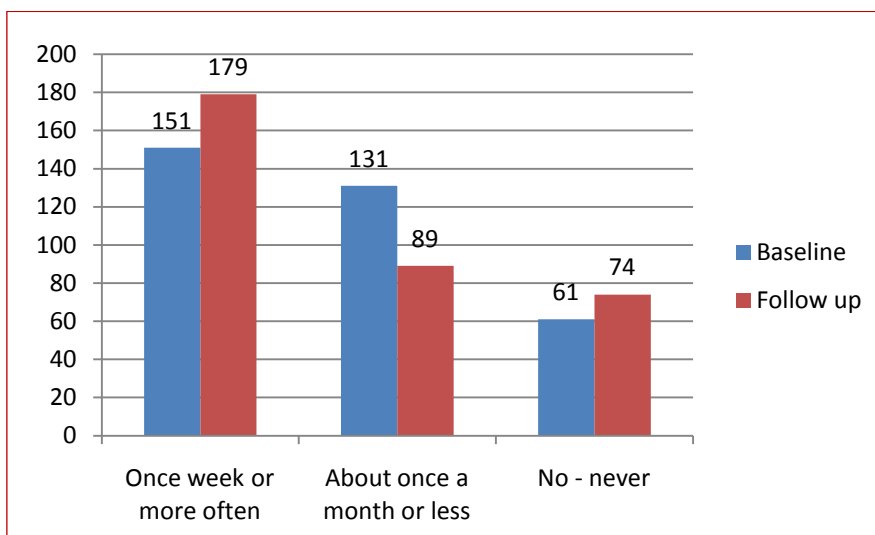
Baseline Yr5 N=126. Follow up yr5 N=156

Figure 7. Pupil reported enjoyment of cooking [N=430]



Baseline N=339. Follow up N=340

Figure 8. Pupil reported frequency helping to cook at home with basic ingredients.



Baseline N=343. Follow up N=342

### Growing fruit and vegetables

In the follow up survey over half (53%) of children reported that they enjoyed activities that involved growing fruit or vegetables. Less than 2% (n= 8) state that they do not. Two thirds (66%) reported that they felt confident at helping with selected growing activities at home. Compared with cooking activities, fewer children (70% compared with 82%) reported that they had taken part in growing activities at home.

Girls tend to enjoy growing food more than boys (n=431, 68% compared with 46%), but there are no significant differences in confidence or participation in growing activities at home.

Table 13: Children's enjoyment of growing fruit and vegetables [Follow up]

	Frequency	Percent
Enjoy growing food	227	56.9
Growing food is OK	110	27.6
Don't enjoy growing food	8	2.0
Don't know, never one it	50	12.5
2/+ responses	1	.3
No response	3	.8
Total	399	100.0

In the follow-up survey, helping to grow fruit and vegetables at home, confidence at undertaking growing related activities, and enjoyment with growing fruit and vegetables are all behaviours significantly associated ( $p < 0.05$ ) with self reported fruit and vegetable intake. For example, 54% children who report eating higher levels of fruit and vegetables state that they often help to grow fruit and vegetables at home. For children who report the lowest levels of fruit and vegetable consumption only 17%

report helping to grow fruit and vegetables at home. These associations are less significant at the level of individual schools level. Analysis by gender and year group shows no significant differences. Figures 9 to 11 illustrate these associations.

Figure 9. Help with growing fruits or vegetables at home by self reported average daily fruit and vegetable consumption

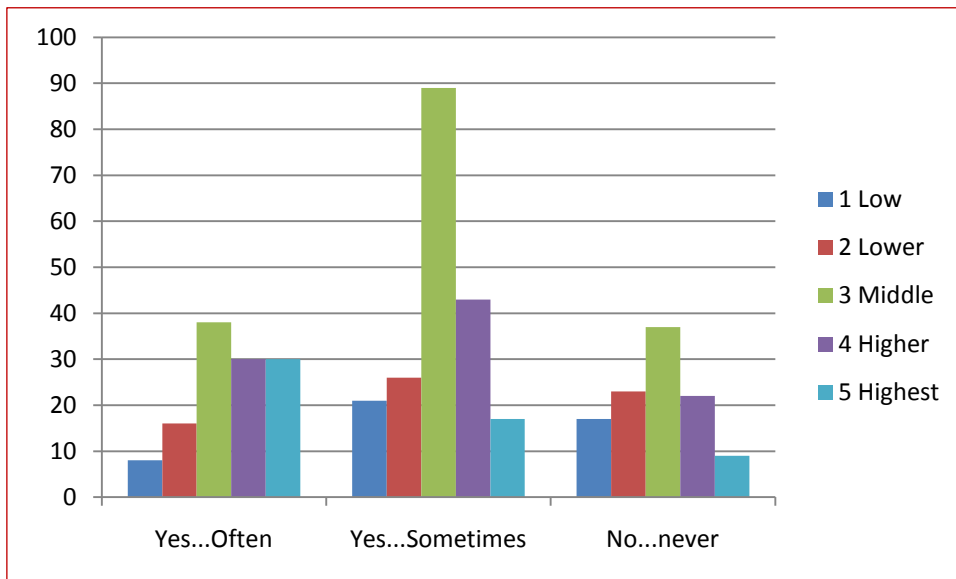


Figure 10. Pupil reported confidence to grow fruit or vegetables without much help by self reported average daily fruit and vegetable consumption

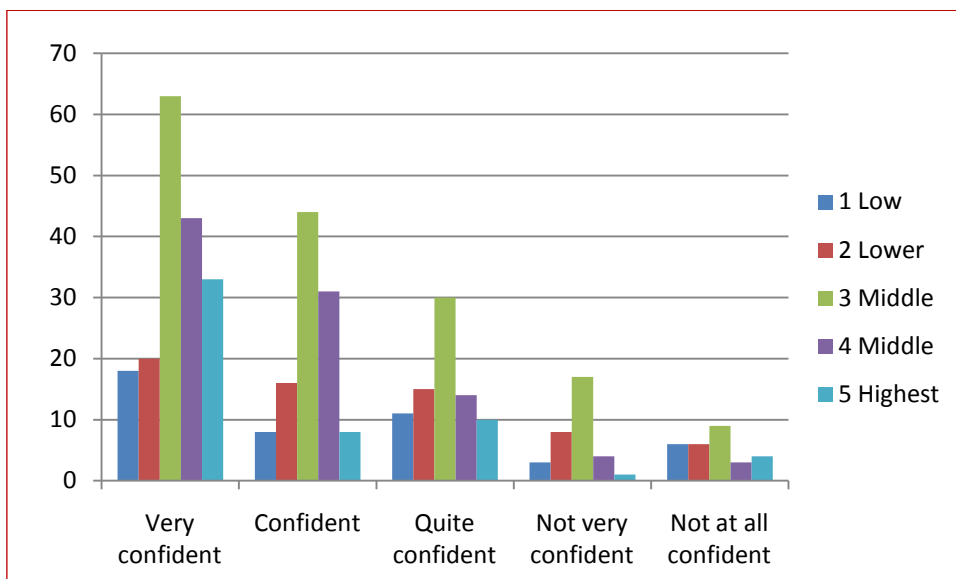
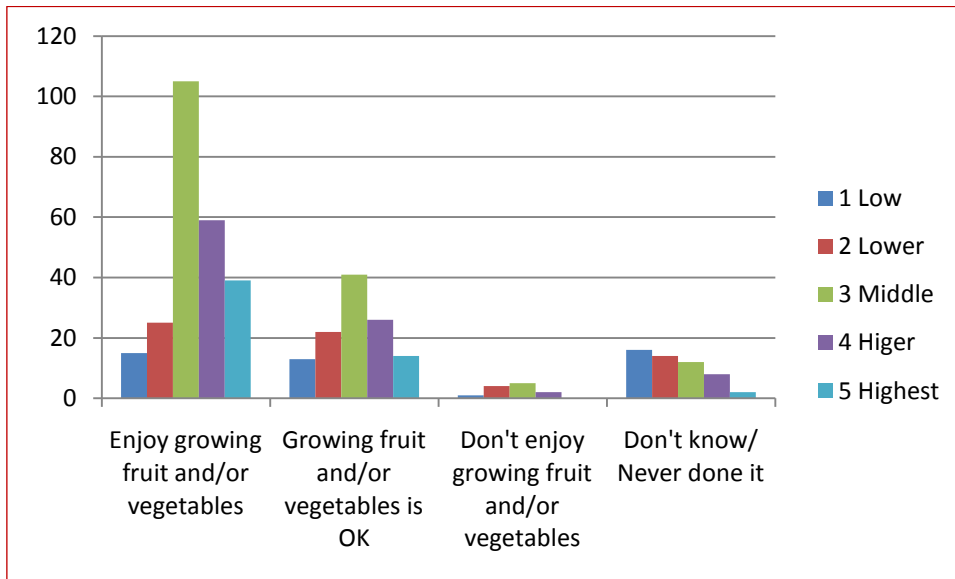
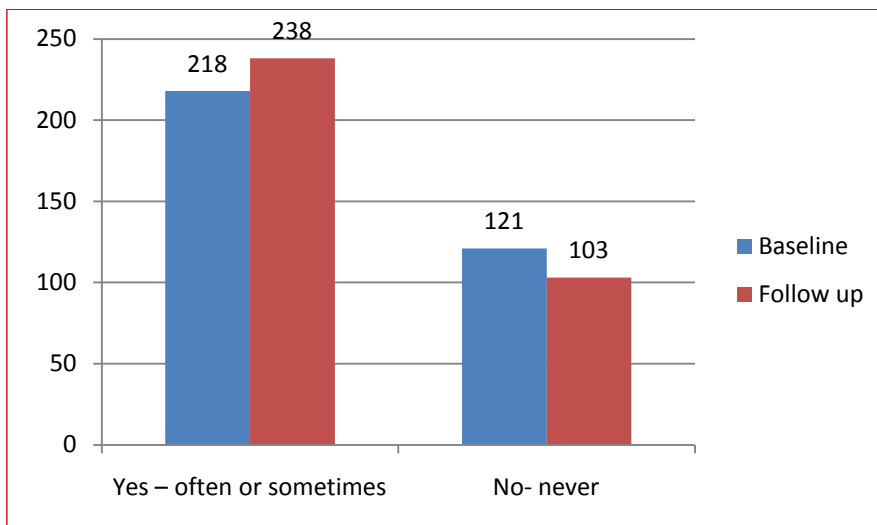


Figure 11. Pupil reported enjoyment of growing fruit or vegetables by self reported average daily fruit and vegetable consumption



The baseline to follow-up trends for growing related activities are positive. As Figure 12 shows, at follow up the percentage of children reporting that they had taken part in growing at home is 70% compared with 64% at baseline.

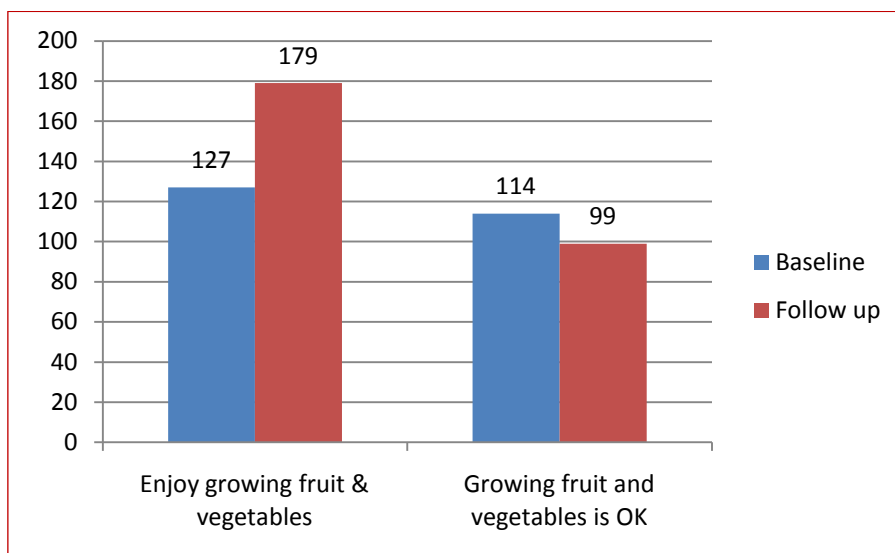
Figure 12. Pupil reported help with growing fruit or vegetables at home last year



Baseline: N=339. Follow up: N=341

There is also a difference between the baseline cohort and follow up cohort in the percentages of children responding that they enjoy growing food (38% at baseline compared with 53% at follow up).

Figure 13. Pupil reported enjoyment of growing fruit or vegetables.



Baseline N=336. Follow up N=338.

A significant contrast is in children's self reported participation in a school-based growing activity, from 48% at baseline to 85% at follow-up. At baseline, children in schools with no school garden were less likely to report ever taking part in a growing activity at school.

### Sustainable food attitudes

Children report positive attitudes towards sustainable foods. The findings are reported more fully in the section below alongside the parent findings. Five measures on intentions to eat specific types of sustainable foods were used (organic, free range, local, seasonal, fair trade). These had internal reliability (Cronbach's  $\alpha$ : 0.725), however their validity can be questioned given the complexity of the concepts. This is perhaps indicated by the mean of 15% 'don't know' responses across the measures. Analysis with respondents at follow-up found that self reported fruit and vegetable consumption was not correlated with intentions to eat free range eggs, organic, local, seasonal or fair trade foods. However intentions to eat free range eggs, seasonal and local foods are correlated for Year 3 pupils and for girls there are highly significant associations between reported fruit and vegetable intake and intentions to eat local and fair trade foods.

### **Parent Questionnaire Findings**

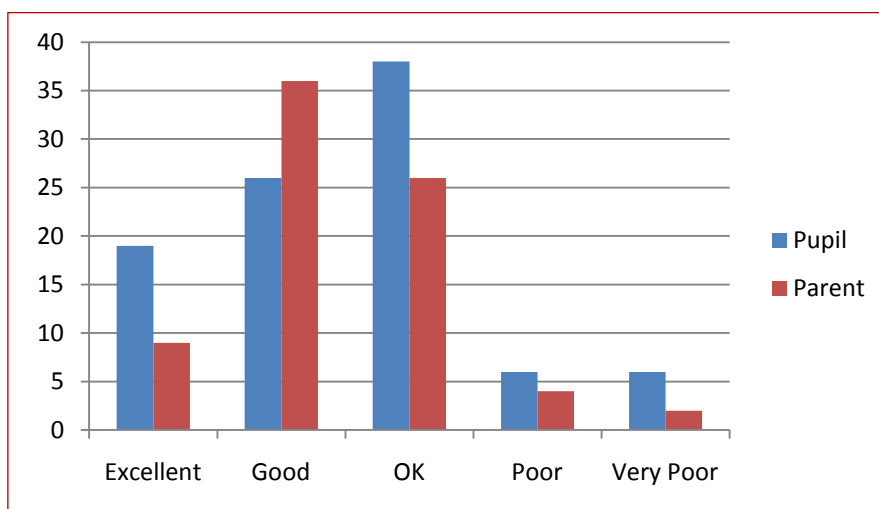
Out of the total pupil sample at follow up, 376 pupils took home questionnaires to parents. 150 parents returned their questionnaires. 22% of respondents reported that their children were entitled to free school meals, which is above the national average for England of 15.6% (School Census, 2008).

### School meals

Figure 14 shows that children held stronger and more discriminatory views about school meals than their parents. Thus fewer parents believed school meals to be

'excellent' (n=15, 10%) and more children report that they were 'very poor' (n=26, 7% young people; n=2, 1.3% parents).

Figure 14. Parent and child views on school meals at follow up



Parents (N=150) and their children (N=150)

### Cooking and growing

Parents have somewhat more positive views than their children on the extent of their child's involvement in cooking at home (Table 14). 75% (n=113) of parents report that their children help cook with basic ingredients at home at least once a month, compared with 65% (n=97) of their children. Parents are more conservative in their estimate of the extent of their children's involvement in growing fruit and vegetables at home: 52% (n=78) of parents report that their child has helped in the last year, compared with 78% (n=117) of their children. Parents of children who take free school meals report higher levels of non-involvement with growing in the last year (66% compared with 51%).

Table 14. Parent and child views on cooking at home using basic ingredients [Follow up]

Frequency	Pupil Frequency	Pupil Percent	Parent Frequency	Parent Percent
Yes...2 times a week or more	101	25.3	31	20.7
Yes...Once a week	102	25.6	44	29.3
Yes...Once a month	47	11.8	38	25.3
Yes...But hardly ever	77	19.3	27	18.0
No...Not allowed	45	11.3	9	6.0
No...Never	26	6.5	1	.7
2/+ responses	1	.3	0	0
Total	399	100.0	150	100.0

## Sustainable food attitudes

Reflecting on the range of types of food consumed in the last week, parents report (Tables 15 – 18) that they have eaten organic food (n=63, 42%), fair trade food (n=70, 47%), free range eggs (n=117, 78%), local in-season food (n=115, 75%) and locally produced food (n=80, 53%). Parents who report that their children receive free school meals were less likely to say that they eat organic and fair trade food; however they were as likely as other parents to say that they would like to eat more organic and fair trade food. Although no parent reported that they would like to eat less local in-season food and other locally produced food, parents who report free school meals are more likely to say they intended to eat the same amount rather than express a desire to eat more.

Table 15. Child and parent reported intentions to eat more organic food [Follow up]

	Child Frequency	Child Percent	Parent frequency	Parent Percent
More	173	43.4	69	46.0
Same	109	27.3	45	30.0
Less	25	6.3	2	1.3
Never	16	4.0	17	11.3
Don't know	65	16.3	10	6.7
2/+ responses	5	1.3	0	0
No response	6	1.5	7	4.7
Total	399	100.0	150	100.0

Table 16. Child and parent reported intentions to eat more seasonal food [Follow up]

	Child Frequency	Child Percent	Parent Frequency	Parent Percent
More	159	39.8	87	58.0
Same	133	33.3	51	34.0
Less	18	4.5	1	0.7
Never	14	3.5	0	0
Don't know	59	14.8	5	3.3
2/+ responses	4	1.0	0	0
No response	12	3.0	6	4.0
Total	399	100.0	150	100.0

Table 17. Child and parent reported intentions to eat fair trade food [Follow up]

	Child Frequency	Child Percent	Parent Frequency	Parent Percent
More	162	40.6	56	37.3
Same	97	24.3	55	36.7
Less	37	9.3	2	1.3
Never	22	5.5	9	6.0
Don't know	62	15.5	13	8.7
2/+ responses	5	1.3	0	0
No response	14	3.5	15	10
Total	399	100.0	150	100.0

Table 18. Child and Parent reported intentions to eat free range eggs [Follow up]

	Child Frequency	Child Percent	Parent Frequency	Parent Percent
More	146	36.6	42	28.0
Same	116	29.1	91	60.7
Less	25	6.3	1	.7
Never	38	9.5	0	0
Don't know	61	15.3	6	4.0
2/+ responses	2	.5	0	0
No response	11	2.8	10	6.7
Total	399	100.0	150	100.0

Substantial numbers of parents report that they would like to eat more organic (n=69, 46%), fair trade (n=56, 37%), local in-season food (n=87, 58%) and locally produced food (n=82, 55%). However there was little consensus between parents and their children. Only just over half of the parents of children who said they would like to eat more local food agreed with their children (n=40, 54%). Similarly, only half of parents of children who said they would like to eat more organic food agreed with their children (n=34, 49%); even fewer parents agreed with their children on eating more fair trade food (n=27, 38%).

#### Take home impact of FFLP

The parental responses show a broadly positive perspective on the influence of FFLP at home (Tables 19 – 21). Parents report FFLP has helped change their child's food preferences (n=81, 54%), their interest in food or the environment (n=104, 69%) and their general behaviour or interest in learning (n=78, 52%).



Table 19. Parent views on whether FFLP activities have helped change their child's food preferences [Follow up]

	Frequency	Percent
Yes	81	54.0
No	54	36.0
Don't know	13	8.7
No response	2	1.3
Total	150	100.0

Table 20. Parent views on whether FFLP activities have helped change their child's interest in food and environment issues [Follow up]

	Frequency	Percent
Yes	104	69.3
No	26	17.3
Don't know	18	12.0
No response	2	1.3
Total	150	100.0

Table 21. Parent views on whether FFLP activities have helped change their child's general behaviour or interest in learning [Follow up]

	Frequency	Percent
Yes	78	52.0
No	47	31.3
Don't know	20	13.3
2+responses	1	.7
No response	4	2.7
Total	150	100.0

## Qualitative Findings: School staff perspectives on implementing the FFLP programme

This section reports the perspectives of teachers, teaching assistants and cooks on implementing the Food for Life Partnership programme and the impacts that the programme has on children and at home. Interviewees offered a considerable range of views on different aspects of the initiative. This section is organized around key issues and draws upon examples from the study schools. The section covers:

- A whole school approach to food culture
- Children's voice: pupil involvement through SNAGs
- Involving parents and the wider community
- Improving school meal take up and healthier eating
- Mainstreaming practical food education in the curriculum
- Teaching resources: from 'optional extra' to 'key resource'
- Achieving fairness and inclusion for all children
- Impact on behaviour, attainment and special educational needs
- Effective communication

### **A whole school approach to food culture: from piecemeal activities to a systematic approach**

In all study schools staff reported that they had previously run some aspects of the programme. Food-related education was also an established feature in parts of curricular schemes of work. In this sense, most individual elements of the FFLP programme were not perceived to be new to the schools. What did strike staff as distinctive was the breadth, the depth and integration of the whole school vision. This vision, communicated through FFLP's 'food policy', expert support and Mark accreditation processes enabled staff to pull together a range of formerly disconnected and piece meal initiatives. Notably the food action planning process provided a coherent framework to connect food-related activities with school priorities. At The Oval school this value-adding approach to reform helped staff harness under-tapped potential from within the school:

OVT2: I think for us personally, it's given structure to some of the enrichment activities that were going on around the school anyway. We would sometimes cook, we had workshops for the parents, we would do visits to the allotment: but FFLP has actually given a focus so that we can use these things for one goal...So it's given that sort of umbrella and it's given us a focus to pull together all the expertise we have actually got within the staff and wider community.

Support from FFLP staff was seen to be essential in the initial stages to mobilise coordinated action. Teachers reported that FFLP staff had helped them set up procedures and adopt an approach that could be tailored to their school environment.

MDT3: A real value of the external support from FFLP has been to support some of the time consuming elements of the programme because the first priority for teachers is teaching and learning

PET1: For me, the best thing about FFLP has been [the regional coordinator's] motivation to keep us going, the prompts to keep it high up the agenda, and lots of good ideas.

## **Children's voice: pupil involvement through SNAGs**

In 5 out of 6 schools, the SNAG format was new to the study schools. Staff drew upon their experience of running a school council to go about recruiting pupil representatives. The process for pupil SNAG member selection differed considerably across schools, ranging from class elections, to co-opting school council members, to selection of pupils by the head teacher. Staff were broadly very enthusiastic about the SNAG as a forum to ensure that pupils were party to decisions and as an educational resource in itself. The ongoing involvement of children in decision making was perceived to be a real benefit and strength of the FFLP programme.

SAT1: I think the big thing that's established is the involvement of the children and the staff actually having to listen to what their opinions are.

PET1 (Chair): The children have loads of ideas. The SNAG feels like it's part of the school as a whole rather than just me or another member of staff.

PET3: I think it's good that everyone comes together and shares ideas: children have very different ideas compared to the adults. It gives the children part ownership in what's going on.

In most schools, staff felt that the SNAG was not simply a temporary or transitional group. Future developments included extending pupil involvement and changing the format of meetings to become more child focused. However, administration time spent by staff, particularly with regard to organising and planning for SNAG meetings, was reported to be a resource concern in two schools. Whilst good quality pupil involvement was reported to carry 'resource costs', teachers also noted 'resource efficiencies' associated with pupil involvement, for example, SNAG pupil representatives could be effective advocates of changes to rules on food in schools.

Interviewees felt that, whilst pupil participation was of considerable importance, ultimate responsibility rested with staff. The Head teacher – or a staff member with delegated responsibility – exercised leadership whilst specific roles were allocated amongst the teaching or other staff.

### **Involving parents and the wider community**

In two of the six schools, parent representatives had become regular participants in the SNAGs. These representatives acted as a conduit for information exchange, as a 'parent voice', and as participants in specific projects. Four schools had little or no current parent representation on the SNAG. These schools involved parents and the wider community in specific activities such as cooking and growing events and community celebration days.

Teachers reported that initiatives attracted in parents who would not normally be involved with the school. This has not only led to practical support, but also promoted the interest of parents in wider school life:

SAT3: With fund raising and stuff, we've had people [parents] that we've never seen before, you know, coming along and offering their services.

Located in an area of high social deprivation, Park End school has funding for a parent support advisor. The advisor has worked closely with FFLP officers to promote

involvement of parents in school life. Whilst the school has always had an open door policy, practical food events have proved particularly popular with parents who would not normally attend formal meetings.

PET2: We never used to be able to attract parents into the school: I don't know why. But with the events like the Growing Day the response from parents has been absolutely amazing – on that day about sixty parents came. We seem to have attracted a lot more parents in just lately with Food for Life.

The new mood of involvement has helped the parent support advisor to promote healthier packed lunches and advise on entitlement to free school meals through parent consultations.

### **Improving school meal take up and healthier eating**

SNAGs in all schools identified specific elements of school meal reform as priorities for school action. These action areas were linked to Mark criteria. Teaching staff had greater engagement with elements such as dining room reform and packed lunches than the issues of food sourcing or school meal take up. In two schools teaching staff reported that they felt that catering issues were somewhat outside their scope of influence

In 5/6 schools where baseline data were available, cooks reported that they were in closer dialogue with pupils, parents, the school senior management team and staff. At baseline, three of the six school cooks reported that they had no consultation with pupils regarding school meals. This changed radically following involvement in the SNAG and had led to food tasting and other forms of consultation initiatives both in and out of the lunch period. Cooks used these occasions to gauge children's willingness to try new dishes, to advise on presentation and to give feedback on the organisation of the lunch period.

LC: I find children are willing to try food. Sometimes they don't like how it looks. They say, I don't like the look of that. But I get them to taste the food before deciding. Then sometimes they say, oh that's not so bad. We also go around at the end of the lunch session and ask children to try things left on their plates.

Staff also reported that school-based growing initiatives encouraged children to try new foods. Children were keen to try the vegetables that they had grown in the school garden and food which they have cooked themselves.

PET3: Yr 3 had carrots last year: they were quite small – but when washed under a tap the children ate them and were very impressed by their taste

PET1 Where children know that things have been grown in their garden and they see them in the dinner hall you can see that they are really – oh yes did you see that, lets see what it s like - and they talk about it

But I'll say that a lot of children would still prefer to have a chicken nugget and nothing else for their dinner – or our packed lunches are not particularly healthy.

## **Mainstreaming practical food education in the curriculum**

Practical food education is a familiar part of primary school education and has an established place in selected areas of the curriculum. Through FFLP, teachers reported that they had adopted a more planned and integrated approach. Formerly practical food education activities had tended to be tokenistic, disconnected from one another and not necessarily linked to health or sustainability education. A teacher at Abbey Road explained this transition:

ART3: I started off being rather dubious about the relevance of the project [FFLP] to the curriculum if I am honest. I couldn't see how it fitted in with what we have to deliver in class. But it seems to work..... and I think it largely works through the kids because they make the links across science, mathematics and food technology rather than us. They talk about food and growing all the time. It has helped them to learn about the relevance of food in so many different areas that I have become more and more convinced of the project's effectiveness in supporting our curriculum delivery around healthy eating...Food for Life has made these issues very real for them.

Food was reported as a 'perfect example' (MDT2) of an integrator for child-led topic based education that could span science, literacy, mathematics, design and technology and history. However staff stressed that the integration of topic-based practical food education into teaching and learning was best understood as a medium term development. Class delivery plans show that teachers delivered extended courses in most cases, as opposed to one off isolated sessions. The delivery of cookery and growing activities was more consolidated than farm link and sustainability education.

### **Teaching resources: from 'optional extra' to 'key resource'**

Staff reported that under FFLP, school cooking facilities, farm centres and other practical food education resources had moved away from simply being 'nice-to-have' extras. This was clearly illustrated in the case of school growing plots for the study schools. Whilst previously The Oval did have a school allotment, enrolment as a flagship school has helped the school become more strategic in the use of the allotment as a teaching and learning resource.

OVT2: In the past we had an allotment: it was nice but it was very much just an enrichment to the school experience. There was no greater thought beyond that.

OVT1: It would be a bit of a treat: you'd go off to the allotment and make perhaps a thing out of it. Now each year group has got a bed and so each year group needs to decide what to put in there.....

OVT2: Now we are more focused on how we can use the allotment for education. Each year group has got a plot, children are involved in the actual selection of produce to grow, the growing process and the use of the produce. It's very much curriculum linked.

OVT1: Yes in fact it's very much above and beyond what the curriculum demands.

OVT2: So eventually we'll be using the produce in cooking and healthy meals education and things like that and not even shout about it.

Similarly Middleton school has gone through a process of making the vegetable plots a mainstream teaching and learning resource.

MDT1: The challenge for us at the moment is embedding [growing] in classroom culture and practice. So the teacher makes sure all kids are going out, seeing to their plants in their beds regularly through the whole cycle, you know, not just planting up and then forgetting about it!

Middleton has made growing activities a central focus of themed weeks, such as a community week, in which all children throughout the school sow seeds and later take plants home. Middleton has given dedicated hours to a teaching assistant to oversee gardening activities in the school. This has helped provide coordination and planning to cultivation activities. Meanwhile rotations of pupils take on the role of watering and maintenance for their class's growing area. The result has been a quite dramatic transformation of the school environment: fruit and vegetables are growing outside all classrooms, on sunny windowsills and corridors and in plots around the school.

### **Achieving fairness and inclusion for all children**

The delivery of practical food education raised issues of equity and inclusion for teachers. Notably, the involvement of whole class groups represented a resource issue for some staff. As one teacher explained:

PET1: With cooking you can only involve small groups and you need to send your teaching assistant out for an hour before hand to prepare. Sometimes you wonder whether it's viable to send a teaching assistant out for two hours with six children. You wonder whether it's viable from an educational point of view when I could have her in my class working with four groups of 6 children.

Growing can present different challenges:

PET1: Growing is bitty: it's a case of a little here and little there – you don't go from sowing, to harvest, to eating in one go! It's very different from doing a cookery lesson. With a weekly rota, if you're the first pupil you may not be the one to try the produce – and you don't always get to see the whole process. Then there's the issue of whether you've got enough activities for everyone to do on a session. It's difficult educationally.

Case study schools adopted different delivery strategies to make sure that they were equitable and inclusive. Three strategies, outlined in the following accounts, were (1) a targeted approach (2) an incremental approach and (3) a rotational approach.

The Oval targeted their activities with one Year group in the first instance. This was partly due to the limited cooking facilities within the school.

OVT2: Its a Year 5 thing at the moment: the idea being rather than everyone just getting a little taste they get more in-depth experience of the cookery and they build up their skills on a week on week basis...

Its absolutely skills based: literally from how to hold a piece of food, to chop it, to different stirring and whisking techniques, and all the extra cookery techniques you would want to learn, its teaching the children safe ways to do that.

Having introduced sessions into Year 5, SNAG staff are in the process of putting educational cookery into the curriculum so every year group will explore an aspect of cookery.

By contrast Middleton school adopted an incremental approach to build up skills in delivery across the whole school:

MDT2: This year we have just asked everybody to cook, next year we are going to ask for a format of what is going to be cooked throughout the year so with seasonal products involving those planted in the summer term.

As a large school, Abbey Road's rotational approach has helped staff promote maximum class involvement in the garden and to develop projects with larger groups over the course of the gardening calendar.

ART1: I just found that there were so many children in the school it has presented a real challenge. We have allocated dedicated slots in which we will take groups of children into the garden during the week. At the moment we have a potato competition going on. Every class has sacks, potato seeds and compost and we are going to see who can grow the heaviest yield of potatoes. The winners are going to have a day cooking potato based products. So we've tried to include every child in the school. Over the summer holidays every child in the school is going to take a plant home, whether it be a sunflower, a courgette, a cucumber and ...hopefully children can bring their produce to a fete in September.

### **Impact on behaviour, attainment and special educational needs**

Teachers reported that the impact of the whole school food reforms on pupil attainment and personal behaviour was not clear at this stage in the programme's development. They felt that it would be difficult to quantify the extent of these changes in school attainment and behaviour monitoring data. Interviewees felt that FFLP work must underpin positive attainment and behaviour change, however their responses were limited to specific individual cases or scenarios.

Interviewer: Do you have evidence that FFLP has had an impact on attainment and behaviour in your school?

MDT2: We have not got the data there yet, but anything like that [FFLP] is going to enhance the curriculum. It's going to enhance the learning and engagement and, you are hoping, to therefore impact on attainment.

PET1: I would have said that the top table has had a pretty big impact and that has made them keener to behave. But I would not say that changing the dining hall has been a magic wand.

LT2: We stopped having fizzy drinks before or during school and children were better behaved.

Interviewees were more confident that FFLP initiatives could be used in targeted educational support for children with special educational needs (SEN). Teachers felt there was a positive impact on students self esteem, social skills and attitude to learning - particularly for those with high levels of involvement in the programme (e.g. as a SNAG representative).

MDT2 Gardening is the sort of thing that engages them: taking them out, weeding the plots... I mean it's completely inclusive if we need to resources or anything for someone with special needs then there's no issue and no problem: behaviour-wise it's the ideal curriculum isn't it?

PET3: Children with special needs or behavioural difficulties flourish with activities like this. If you take them into the greenhouse to water the plants they feel so valued. It can help turn help a child around.

The Oval school focused their farm links work SEN children and cascaded this learning back to whole class groups.

OVT1: We've focused our farm links work with SEN children. Literacy skills, maths skills help support their self confidence and become 'the experts'. They do better with in-depth work. They've visited [the farm] three times and seen how a farm changes over the year. The children then report back to their classes...

OVT2: ...I feel we are very good at cascading our experiences to the rest of the school. In this case at assembly they've given that message across to the other children, getting them involved from that point of view. So then if the rest of year doesn't have first hand experience, they learn straight from the horse's mouth so to speak.

A minority of staff interviewees felt that the FFLP programme was indirectly connected to school performance priorities:

ART3: At the end of the day, Food for Life will only be a medium priority for the school. The important thing is improved school performance that is our main priority which will always take priority.

## **Effective communication**

### Galvanising the school community into action

Staff in all case study schools felt that there was no lack of good will, or skills, to make changes to food culture in schools. Reflecting on circumstances before FFLP enrolment, teachers stated that sometimes a barrier to change was simply one of inertia. One off events promoted through FFLP had in a number of cases acted as the catalyst for whole school change. At Abbey Road school the cooking bus visit set in train a chain of events. As a teaching assistant explained:

ART1: The parents were enthused about the cooking bus and said: "You know it would be great if we could get more children cooking" then the idea came up about doing a cooking club.

As a relatively large primary school, Abbey Road adopted a short structured rolling course that could be offered to the maximum number of children as an after school club. The course adapted key skills and healthier recipes from the cooking bus training sessions. Over one school year 325 out of 420 pupils volunteered to take part in the course. This interest has expanded. The club required active parental consent, which has been accompanied by widespread parent feedback on its impact at home. Within curriculum time teachers adapted cooking classes and have devised special sessions to support children with literacy and numeracy education.

Whilst the cooking bus had not had the same scale of impact in the other study schools, all interviewees reported that the visit had helped focus attention and inspire further work.

Assemblies were identified a simple and effective medium for communicating messages on food across the whole school community. In line with FFLPs Mark scheme, staff employed assemblies as an opportunity to cover sustainability issues.

OVT2: We used the assembly to raise the idea of making small changes. We're very aware that all families are on a budget. So we proposed that if one family buys one fair trade item a week, then that would be over 400 items in our school. If another school does the same that figure becomes 800. So small changes can make a big effect.

Similarly, Middleton school staff reported that an assembly on local produce had a significant impact:



MDT2: ...In Key Stage 1 I did an assembly a couple of weeks ago. I took sunflowers in, some tomatoes in for them to smell the leaves and some of the other things we were growing. I just talked [about where the produce came from]. I said it would be cooked at lunchtime and most of them wanted to try it and most of them were saying 'its lovely.' Even if they hated the veg they said they'd give it a go.

Assemblies, often supported with pupil input and expert advice from FFLP staff, therefore helped convey simple key messages on issues that could be perceived to be too complex in a primary school context. Anecdotally, staff felt that such assembly events were often a take home point of discussion between pupils and their parents.

Staff clearly recognized that influencing behaviour at home represented an overall goal of the programme. This was considered a longer term and ambitious goal.

MDT2: I suppose it's quite informal at the moment and the parents might come back and say oh we cooked that last night and you are sort of you know... and we sell fresh fruit and veg on a Tuesday so we get quite a few parents buying that. So it's more um no we haven't pinpointed it down in to tracking a certain group of pupils or anything you know

ART3 The FFL messages getting back to parents are not always clear. Local parents are very traditional and tend to see FFL activities as an interesting extra: a jolly. They don't really listen to the messages that kids have learned in school.

ART3: Certainly more selling of these ideas needs to be done to the parents particularly around the idea of healthy food and sustainable practices. On the whole parents pay a lot of lip service to the ideals. They will say that they eat locally grown sustainable food but you only have to look beyond the gate and you see what kids are given when they leave school for home. It's back to more junky food and treats.

## Qualitative Findings: SNAG Pupil Perspectives

This section reports the views of pupils from year 3 – 6 on their involvement as SNAG members and the role of the SNAG within the school environment. The section covers:

- SNAG membership and roles
- SNAG management and communication processes
- Impact of the SNAG

### SNAG Membership and Roles

#### Membership of SNAG

In all cases, pupils clearly recognised that they were members of the SNAG and all linked the SNAG to improving food in the school. Children were able to identify a number of different adults who were also members of the SNAG, including: the Head Teacher, staff, parents and others, although children were often vague about who these others were. In some cases, children were unsure exactly how many other children were members of the SNAG.

A variety of mechanisms are used to choose pupil members of the SNAG; in general, members reported being chosen by the Head Teacher or class teacher, rather than having a direct pupil election to the SNAG. In some schools, SNAG membership was linked to participation in the school council which is an elected position. Many children were uncertain about the duration of their responsibilities as SNAG members, for example whether they would remain on the SNAG in the following school year.

SAS1: She [Head Teacher] said do you want to be on this SNAG team? You either say yes or not really.

PE103: I got picked by Miss because I was on packed lunches.

MD100: I got chosen by my teacher. It we're really good and we talked about how we could improve the school.

LHS1: Um I was a school counsellor ... well I think we are all school counsellors and then that's how we first got involved.

LHS2: I am not a school counsellor though.

#### Role of the SNAG and SNAG pupils

Children report that the role of the SNAG is to come up with ideas for activities that will improve school food or make the school healthier. Pupil SNAG members focus on coming up with ideas themselves, although there are also mechanisms for other children to feed ideas to SNAG members.

LHS1: We sort of had to come up with ideas and the school cook and I come up with this idea to make smoothies. We only did it once it was meant to be quite a regular thing but we only ended up doing it once.

OVS3: What happens when we want to address issues is that we write it down. We take it to the SNAG and Miss XX will look at it and [the Head Teacher] can take it from there.

PES3: We've got suggestions boxes...

PES1: No one puts anything in my one.

The SNAG also plays a role in gathering information from other children in the school. This focuses on issues that the children would like to see changed, such as changes to school dinners. However, this also potentially has some overlap with the role of the school council and this could lead to confusion amongst children regarding their role.

OVS3: So we have a different subject. Then we go around and ask. Like we just went and asked every class what to put their hands up and tell us what they thought about school meals. Even if it's not a very good idea, we still write it down, because it's their idea.

Schools may also give the SNAG a particular role or task. For example, at St Andrews, SNAG children were involved in a food tasting group – a 'Food Tasting Task Force' - with the cook. These children taste new foods that the cook has prepared before the food is offered as part of the regular school dinner menu. Examples of foods tested range from home made tomato sauce to raspberry crunch. This group also lobby for specific foods to be included in school dinners.

SAS2: We get to taste food and then we have to report back to our cook and see what we think.

In all the SNAGs, members have been active in promoting and monitoring healthier packed lunches. Work by members of the Park End SNAG is one example:

PES3: We asked people what they have in their packed lunches and we made a display in the entrance area showing what healthy and unhealthy lunches are. We tell people who are having packed lunch that they shouldn't be bring in coke or chocolate bars if we see them. But some people are still bringing them in.

The SNAG at Abbey Road conducted a lunch box survey (before and after) and found the lunch boxes were healthier the second time they surveyed them.

ABS2: ... I have been like planning questionnaires....

I: at home?

ABS2: Yeah, at home. Then I went in school the next day and I had to give... I was allowed to go in the sandwich room and find out what people were having and go to see the children the day after in the dinner hall ... and since we did it the first time, the second time people have got more healthier.

Occasionally children seemed confused as to whether they were participating in particular activities because they were on the SNAG or for some other reason. For example, in the extract below, the school trips referred to are for specific year groups rather than the SNAG.

I: Do you go on trips just as a SNAG?

LHS2: Yeah, there's one coming up.

LHS3: I've been on two trips

LHS1: I haven't been on one yet.

LHS3: I've been on more than one.

## **SNAG Management and Communication Processes**

### Decision making

Decisions about whether to implement ideas put forward by the SNAG rested with adults within the school, either the Head Teacher or adult members of the SNAG.

PES1: We've done a survey once so far and it came up with a good result. One of the questions was 'Would you like a reward table?' I think it was Miss's idea. Miss decides what the SNAG does.

I: So, if you wanted to do that, how would you do that at the SNAG? If you wanted them to consider your idea, what would you do?

ABS2: Well, we would suggest the idea and then they would like write it down and then they like check with everyone who is related to that idea, like the kitchen staff and people. And then they decide.

### Level of involvement

The level of activity or involvement of SNAG groups varies across schools but several groups reported that it had been some time since the SNAG had met. There was some evidence that SNAG groups were highly active early on but that as the year progressed children perceived that they became less active.

LHS1: 'We sort of haven't been as involved well I haven't anyway this year.

I: So that was more last year?

LHS2: This is our first meeting in Year 4.

LHS1 Yeah it was the first meeting that we had this year. So the other people who were like elected as a school counsellor we sort of got a bit shoved out of the way.

MD101: I feel a bit stuck at the moment because we haven't had a SNAG group in about two months.

At some schools children can contribute ideas directly to teachers but then the teachers may have a separate meeting when they discuss these ideas and the children may not be present at these meetings.

LHS1: Generally when they do the meeting it's usually just the teachers not really...

However, in other schools, meetings occurred more regularly. In Abbey Road, for example, meetings took place every two to four weeks. This school, like several others had a formal approach to SNAG meetings, with minutes, agenda items, voting and so forth. Children also report enjoying the SNAG position:

ABS1: It's really good because you are more involved in more things and also you are like one of the first people to know and so you feel like you are more into things....

### Information flow to and from SNAG

Children not part of the SNAG can contribute ideas to SNAG pupils and/or teachers using a variety of mechanisms; these included talking to SNAG members, suggestions boxes and gathering information from whole class groups on topical issues. In several cases, SNAG pupils mentioned that suggestions boxes were not well used or had been abandoned.

PES1: Ever since the competition they've just been abandoned.

There is also evidence of SNAG members seeking permission directly from the Head Teacher to undertake an activity (i.e. by-passing the SNAG itself), for example in the case of the smoothies the pupil and cook went direct to the Head for permission.

LHS1: Yeah, its me and [school cook] that sort of...

I: ...and then she would say?

LHS1: ...then we spoke to the Head Teacher just to make sure it was all right.

Children found out about SNAG meetings mainly from teachers.

LHS4: Yeah, the way you get to know is just the teachers normally just come along and tell you and then I get like tell me what's coming up, and I just like go there.

SNAG pupils also identify a number of ways that they could communicate information back to the class, such as: mini diaries, speaking to the whole class, the school newsletter and personal communication with friends. Having a specific role, such as the food tasting group at St Andrews gave children a reason to talk to other children both formally, during school assemblies and to their classes, and informally to friends. Similarly other groups undertook special projects to report back to their peers:

OVS2: We had the cooking bus and we went on and made a three course healthy meal. Then we told everyone in our class.

### **Impact of the SNAG**

In general, there was a feeling that the FFLP activities had helped schools to be healthier, happier and to have made children feel more involved in decision making about food related matters. SNAG pupils felt that they had helped make improvements to school meals and the dining room environment. Members also report that they felt they had helped make the whole school aware of food-related environmental issues. It was apparent that in general the SNAG pupils were more knowledgeable about growing, cooking and sustainability.

SAS3: I think we have kind of improved because let's just say that the meals have got better and we've found a way of being more green.

MDS02: I think we've changed the attitude of the children. Like at assembly we're doing interesting things about [food] and the children are taking it all in and going back their classroom. They are really impressed because they've been pulled in to it all.

MDS3: Before we didn't have any people trying new foods and now with the SNAG group we're like changing the attitude of people to trying new foods. So the dinner menu now has red and green options, so now most of the people will try new foods.

The SNAG at Abbey Road had conducted a lunch box survey (before and after) and found the lunch boxes were healthier the second time they surveyed them.

ABS2: ... I have been like planning questionnaires....

I: at home?

ABS2: Yeah, at home. Then I went in school the next day and I had to give... I was allowed to go in the sandwich room and find out what people were having and go to see the children the day after in the dinner hall ... and since we did it the first time, the second time people have got more healthier.

SNAG members argued that growing projects encourage children to try school dinners and to try different foods. Children have also been proud of their experiences of growing.

LHS3: .. a lot more people come to school dinners knowing that we are trying to grow our own.

I: Did you think that it was effective that you got to plant it, grow it and eat it?

LHS1: I know it sounds a bit silly but don't you feel like more proud of it if you know that you have put some effort towards it?

The FFLP cooking activities gave the children more confidence to cook and children reported being more willing to try new foods. The cooking bus for example:

PES1: Loads of parents came on and they didn't want to leave. At that time, loads of people [children] really wanted to choose the healthy food options like salads and dips and stuff.

Pupils suggested improvements that could be made to the SNAG including: having more regular meetings, making the SNAG role more visible (e.g. having badges) and involving more children.

OVS6: I think we should have more people.

MD101: If more people could have a say and if we could have it more regularly.

Other children thought that the name of the group could be changed to something more recognisable, such as "SNAC".

ABS1: "SNAG" doesn't really help people eat healthier but "SNAC" it makes you think 'Oh, SNAC that must mean they are doing healthy snacks.

## Qualitative Findings: Pupil Focus Group Perspectives

This section outlines pupil views on and experiences of the FFLP project. All pupils involved in focus groups were aware of the FFLP programme and had experienced activities such as gardening and farm visits which they linked with FFLP. This section focuses on:

- Experiences of the FFLP school activities: overview
- Views on changes to school meals and the school dining environment
- Learning developed through FFLP supported activities
- Transfer of information between children and their families

### Experiences of FFLP school activities: overview

All children taking part in the focus groups were clearly aware of the FFLP initiative in their school. FFLP was reported to be about 'making food better in school', 'changing school meals', 'learning all about where food comes from' and so forth. The initiative was recognised through a number of channels including notice board displays, assemblies, and the work of the SNAG.

Special events stood out during the focus group interviews. For example, at Park End school Year 3 children visited a working farm and butchers to see the whole sausage production process in action. Their study included learning about pig rearing, humane butchering, mince meat production, the use of sausage manufacturing machinery and retailing. The sausages produced were then included as part of their school meal. Pupils later gave a school presentation on their learning. As the following extract illustrates, children interviewed recall the experience in some detail:

PE28: We went on a trip to Larchfield farm – there was pigs there.....

PE06: I saw a leg of pig and I couldn't believe how big it was.

PE11: There was a big machine and a long sausage came out of the machine. And they had to turn it and tighten it.

PE28: They put mince into the machine. It was made out of pork.... They got this soft pig and put it in the mince maker and they put onions in as well...

Children who were not directly involved had been interested to hear the report and recalled the sausages served for school lunch.

PE54: Year 3's gone on a farm visit and they saw how sausages were made and learnt how they were made. We all had them for school dinner. They told us about the pigs that died.

Other children recalled events such as the cooking bus visit, cooking and serving food for their parents or themed weeks. The key FFLP initiatives recalled by children, therefore tended to be compelling learning experiences that crossed curriculum boundaries, year groups and involved the wider school community. The majority of children indicate that these are the type of activities they would like to do more of, either in school or at home.

## Views on changes to school meals and the school dining environment

Overall children are proud and enthusiastic about changes to their school dining room and meal arrangements. They identify changes in relation to, for example, themed days, the table layout, queuing and serving systems, posters and displays, plates and waste disposal. Whilst some changes were disputed in the focus groups, children discussed the issues with a sense of ownership of the dining room – and awareness that they had been consulted on some of the changes. On the subject of meals themselves, focus groups gave feedback that was mixed and school specific. The introduction of a salad bar, the use of school garden produce and changes to packed lunch rules were clearly identified.

PE57: At the salad bar you can try new things that you might not have ever had before.

PE35: I can't eat cheese – so I'm on packed lunches. You're not allowed in crisps sweets fizzy drinks – you can bring in a bit of chocolate. I think the rules are a bit alright – but I think if they want to be unhealthy it's up to them.

PE51: You'll just get bigger and bigger if you have that sort of stuff. The teacher's want you to be more healthy and more active.

Qualitative feedback on school meals broadly reflects school meal take up trends and school meal ratings. For example, at Middleton school the introduction of a new system for choosing meals was positively received.

MD01: Most of the time before [recent changes] there were like really unhealthy things like chips. But like now the dinners have been getting better. It's like every month it seems to change and it gets better and better. We've got red bands and green bands. Its like red is the meat and green the healthy option. You can always get the salad at the end if you want it.

Children also report the opportunity to try new foods at school.

PE57: [Talking about new foods] Some [foods] I'd tried before... but some were a bit new.

PE35: If you think you don't like it because of the look... if you taste it you might like it.

However, children themselves sometimes feel that their willingness to try more foods could not necessarily be attributed directly to changes in school meals.

Children appreciate being listened to by lunchtime attendants and school cooks: 'she kind of listens to what we like and she still makes it healthy by like adding vegetables' (SA08). Whilst some children acknowledged a necessary limit to choice, for others the issue of choice persisted – unresolved - through the focus group discussions.

SA34: I would actually love to choose ... what we eat and say this to the Chef, if we don't like something they don't do it again.

MD43: You can say what you want I take in chocolate in my packed lunch...Its our food and its our body and our choice.

Home circumstances may also limit some children's ability to participate in school dinners, though this may be for a variety of reasons.

LH13: I don't have them that often because my mum doesn't have the money but if we have nothing to eat then my mum, she gets some out of the cash point and gives me some for school.



## Learning developed through FFLP supported activities

Children report that they take part in practical food education activities in a variety of ways. Some activities, such as farm visits, are attended by whole classes at the same time. Where facilities have limited space, such as a cookery room, class groups may participate on a rota basis. Other in-school activities are more selective, for example, where pupils are chosen to take part in small group projects or where pupils chose to take part in extra-curricular clubs.

### Learning about growing

FFLP activities can contribute to children's learning about growing food. Schools provided a range of opportunities for children to participate in growing activities, from planting seeds in class, to growing competitions and to managing class-based garden plots. Differences in class-based activities and development of growing related activities probably account for wide variations in personal learning reported across focus groups. The Oval and Park End schools have had a long standing focus on gardening before FFLP enrolment. Meanwhile, Middleton and Abbey Road have rapidly developed growing projects across their year groups. Focus group participants from these schools were able to give fairly detailed accounts of how their growing activities were organised:

PE06: We have gardening clubs for year groups. Year 5's and 6's have different ones compared to us [in Year 3]. For the gardening club at lunchtime and gardening at 'golden time' [a period of the week], you normally get choosed.

MD01: We've got little planters for each class and we're growing carrots, lettuce, cauliflower, tomatoes and last year we were planting peas. We've the three allotments on the back of the school and we're going to keep chickens.

MD11: Every class has planters and does it. Most of the people in growing club get to do a lot more growing than that.

High profile projects, such as growing competitions are also recalled in schools that have taken a more selective and project based approach to growing:

LH46: We are also growing our own potatoes –each class has their own potato plants. We started last year in spring and we doing again this year. It's a competition to see who grows the biggest lot of potatoes – and they're going to be used in school dinners

Growing activities have encouraged some children to be more interested in gardening and possibly more willing to eat fresh fruit and vegetables. These Year 5 focus group interviewees provide a good illustration of children's enthusiasm to talk about new learning:

LH53: When you plant them and water them and you go away for quite a long time you came back and they've got a little leaf coming out. And when you go away and come back they've just started getting bigger. It's wicked. I've learnt at school that not all vegetables grow on top of the ground: some grow underground. We grow mushrooms in the shed and I look at them every day.

LH32: I've learnt that carrots are roots.

LH43: We made some carrot pots and took them home. My mum wasn't sure about them but I persuaded her. Now I just think I can't wait till they're ready. I just can't wait to eat them.

For most children, school-based gardening activities provide an opportunity to practise new skills:

OV99: We have done things in the garden and one day we were raking some stuff to do the potatoes, but it wasn't deep enough so we had to dig a bigger hole. And then we had to dig a really big hole because some rows we put two or three potatoes in at a time.

While there were examples of children with some understanding of organic food production and sustainability, it was not always clear how much FFLP sponsored growing activities were contributing to this understanding - as opposed to knowledge already held by these children. The majority of children participating in the focus groups had limited understanding of what the term 'organic' means or any detailed understanding of the concept of sustainability.

PE24: My nana told me about it [organic food] but I've forgotten what it means.

PE54: Potatoes... is it them that can be organic? 'Cos I've tasted them once before.

PE13: I remember they said about it...but I can't remember anything about it.

MD31: We get organic food, 'cos it grows outside in the ground.

### Learning about cooking

School based cooking activities were popular with children. A number of children mentioned activities such as the class-based sessions and extra-curricular cooking clubs. Children were involved in preparing a wide variety of different types of food in schools, ranging from bread through to salads. Unlike much cooking reported at home, school-based cooking activities mainly focused on the use of whole grain flour, fresh fruit and vegetables. However there were exceptions that involved the preparation of high sugar, high fat dishes such as chocolate buns and sweet biscuits.

Children have a clear idea of the organisation and goals of their cooking education. For example, a Year 5 group at Park End explained their class-based learning:

PE42: We have a [rota] sheet and every week we have something new – like fruit salads and different sorts of sauces.

PE40: The teacher is trying to make sure that everyone gets a chance to be part of the club. We go down [to the cooking room] in groups.

[...] PE51: Its like if you try a food in your first experience you might eat it more often

PE42: Some don't do it because they don't fill out the form. They don't want to try new things

PE40: We made bagels – it was the dough we made had cheese in it – you put ham on and pineapple. We ate one half and take one home. Pineapple was a new thing I tried. My mam said the next time we go shopping we'll have to get some.

Similarly with the cooking club at St Andrews, the children have a clear idea of the rota systems '[Head Teacher] runs it... they pick ten people out of two classes and the next term they pick another ten people out of another two classes' (SA203). The selection process for taking part in cooking activities was a point of discussion in focus groups. In relation to the cooking bus, interviewees are very aware that only some children got to participate.

MD01: All week we were waiting and Miss chose four people to go on it – who were really, really good. And it was like that with every class.

Children recall learning specific cooking skills at school such as chopping, making bread dough and baking skills.

SA57: We learned chopping skills, like the bridge and claw.

SA54: ... rolling out some pastry, puff pastry and things.

Some children, especially in the Year 5 focus groups, were able to explain how these cooking activities were linked to the curriculum. Some examples include making ships biscuits as part of history studies on Tudor England; safe use of cooking equipment in design and technology study; and preparing French dishes as part of a geography project. These children were also able to outline how they worked in teams, researched, planned and presented their project work to others.

### Learning about food ethics and sustainability

Learning on food ethics and sustainability issues was class specific and reflected the particular project based activities that had been recently undertaken. For example, at Lyndhurst school Year 5 children had visited a farm involved in dairy production whilst Year 3 visited a fruit and vegetable small holder. Differences in these experiences reflected their recollections: Year 5 children were able to discuss milk origins and animal welfare, whilst Year 3 children showed greater awareness of organic vegetable cultivation.

LH43 [Yr5]: [Talking about milking]. It makes the thought of drinking milk now more scrumptious- because now you know what's actually going into the milk and you know that nothing else apart from grass goes in to make up the milk. So you know its safe without any added stuff like sugar and that its straight from the cows into a container then into a bottle.

LH14 [Yr3] We learnt at Tuppeny farm that they didn't use chemicals. They have a lot of slugs and snails but they aren't allowed chemicals on the vegetables. They keep pests off with nets.

LH11 [Yr3]: It was organic food. They kept all the things out naturally. They sprayed no chemicals on it. And, did you know, if you put onions and garlic at the bottom of the plant, no animals actually eat it because they don't like garlic?

Schools used projects that are also adopted widely in other schools nationally to explore science and sustainability issues. For example, also at Lyndhurst school Year 3 focus group pupils' primary recollection was the pond dipping exercise during their farm visit:

LH27: We went pond dipping and we found lots of creatures and we put them in this pot and there was this magnifying glass that. ... so you could see a close up of what you've got.

LH13: I always found it funny finding out different creatures that you've never heard of before.

Children in the Year 3 focus groups were interested, but often did not have a consolidated understanding of their learning experience. For example, at St Andrews children visiting one small holding were fascinated by the composting toilet and explained what was different about it, though it was less clear whether they understood the wider benefits.

SA52: Yeah because you had to put every kind ... every time you finished on the toilet, you had to get this compost and put it back in the toilet then..

I: and did they talk about why they had solar powered composting toilets?

SA54: I think it was um...

SA58: ...generate water or something?

SA52: Yeah, because they had a water tank nearby and then when the sun kind of...

By contrast Year 5 pupils and, in particular, SNAG pupils gave clearer accounts. The following extract illustrates how participation in project-based activities and use of sources of information outside school helped consolidate learning.

MD41: Flying things a long way causes a lot of pollution. They cost a lot because of petrol from the engines. Also the people who pick them will only get 25p out of £1.80. And the supermarket makes loads of money out of selling the fruit for lots more. But if you buy like apples from this country it works out cheaper to buy them. We did some things about global warming. We did some poster showing what it were

MD38: Bananas and oranges are being flown away from countries likes ours and the gases from the planes will create air pollution and we'll have to cut down.

MD45: I heard about that on [BBC] Newsround as well.

MD41: [Through school] I went to a presentation day about global warming. That was just me and another person.

MD38: They come back and showed us all the presentations and stuff on things like composting.

MD41: We did about composting – like you put in apple cores and paper and you can use for growing. You can put it in your carry bins in school. I have a compost at my dads. I went home and talked to family and now they are putting down their use of electricity and stuff like that. My Mam don't have a car anyway so that helps- she gets on a bus which takes more people at once. I told her about the presentations and now when she goes to the shops she buys free range eggs and she'll buy all sorts now.

Children's recollections on food ethics and sustainability focused on packaging, recycling, composting, and fair trade products. There is relatively less awareness of other issues including food origins, seasonality, transportation, organic cultivation and animal welfare. This could be influenced by specific school strategies to introduce some, but not all, potential topics during the early stages of engagement with the FFLP programme. It is also likely to reflect the relative status of learning resources in the teaching community: for example, resources on packaging and recycling are more established and widely adopted than those for exploring local food issues.

### **Transfer of information between children and their families**

Children report talking to other family members (mainly their parents) about FFLP related activities. These interactions take a range of forms: from structured engagement around take-home projects and home work, to informal conversation on everyday topics that relate to food. Understandably, participants in focus groups often did not dissociate FFLP and school-related messages from broader influences on their lives.

#### Cooking and healthier eating

Despite the complexity of the issues, there is evidence that school messages about healthy eating have an impact on the family environment. For example, talking about changes in packed lunch rules, a Year 3 girl said that there had also been changes in rules on snacking at home:

LH14: When I get home I get a banana or an apple. I used to get a bar of chocolate or a bag of crisps, but now my mum says I should eat more fruit.

Other connections are more direct. For example, children recall school activities like cooking and serving a meal for their parents.

SA58: [In the cooking club] In our final six weeks, we get to do this special thing where we get to cook our food and serve our mum's and dad's.

Children are often able to give examples where they felt their learning or ideas have had an influence at home. New recipes or healthier food alternatives were often mentioned:

PE54: I made some scones at school and my Mam asked me how they were made and she said she'd make them with me.

PE5: [At school] I learnt about making potato farls, 'cos it was on St George's day. They always celebrate with potato farls. My mum asked me how it was done and she tried them and loved them.

PE40 A few days ago my mum said we'd make cookies in stars with all fudge in it and stuff, but I suggested we make fruit salad instead.

Children were not entirely positive about the transfer of new ideas home. One focus group discussion shows how children report unintended consequences of a take home cooking project.

MD33: [Making salad] We put in blue cheese, spring onions garlic, carrots and some sorts of sauces. We learnt how to chop things and the teachers showed us how to keep our fingers away from the knife.

MD51: I didn't try it because I don't like any kind of salad

MD40: We took it home. We don't usually have that sort of thing...

MD51: I didn't eat it. It were disgusting. My mum tried it but then she chucked it away because she said that it were off.

MD33: I threw mine in the bin because nobody [in the family] said they liked it

MD40: My dad ate the salad.

For some children cooking at home with their parents was a routine activity. However, for the majority, this was seen as a special opportunity. Most of the dishes children reported cooking at home were cakes and puddings, though some reported making savoury dishes, such as omelettes.

LH38: I cook the tea sometimes.

LH45: I made a chocolate cake with my mum and that's for pudding after tea and on Pancake Day I made the pancakes.

OV111: We made fairy cakes when we were at home.

Children also reported cooking with other relatives (e.g. uncles, aunts, grandparents) and these were sometimes seen as special occasions.

LH37: I help doing the cooking for tea and sometimes I make my own birthday cake round my Grandma's.

OV111: I also have a cooking class.

I: Where do you have a cooking class?

OV111: We have it on Saturday with my cousins.

I: Have you learnt how to make cakes at home?

MD02: It were my aunty that showed me.

Focus group participants often conflate cooking from scratch and home cooking with healthier eating. For example, one child explains: 'We make loads of healthy stuff at home – like we have loads of Yorkshire puddings and things' (PE29). There is also an issue of permission. Whilst the majority of children indicate that they would like to do more cooking, many children report that their parents are reluctant to let them help cook at home.

SA52: Actually, it's the other way around. I want to cook and they don't let me.

SA58: I want to do more cooking. I really like cooking.

LH26: It's really fun and it's good for when you get older.

Home circumstances also limit the opportunities for some children to cook at home. For example, a child explained that her family 'did not have much of a kitchen' so usually had takeaways, snacks or sandwiches at home. Home cooked dishes are a treat:

PE11: On Sunday we go over to our sister to make a Sunday dinner because we don't have an oven.

### Growing fruit and vegetables

Whilst, overall, focus group participants are very interested in growing plants, a significant minority of children said that they had few opportunities at home. The high density housing catchment area for Lyndhurst school illustrates some of apparent restrictions for children, despite the best efforts of households.

LH06: I've got this little small pot of strawberries and I tasted some they were very sour. My garden's covered in concrete and dead leaves and my cat's poo in the garden. It's covered in it.

LH08: We have a very small garden at home so we don't grow anything. So we get most of things from Asda.

LH14: We've had this apple tree and I've found that you need two apple trees to get apples. We don't grow anything because most of the garden is covered in grass or bushes.

More frequently, however, children were able to give more positive examples of taking part in growing activities out of school. A notable theme was gardening with older relatives, such as grandparents. Discussion amongst children at Park End School illustrates how this inter-generational activity was clearly perceived as a valued and special time.

PE05: My Nana plants loads of vegetables. Every Saturday I go around and I often help her plant stuff. Like last Saturday we planted carrots in a tub- the seeds are very little and I ended up dropping loads on the ground. We sow lettuce the last week. My mum and dad don't grow much at home, just some bushes and flowers.

PE24: I help my Nan put the seeds in that and watering. She knows a lot about growing things.

PE06: I go to my Nan's and she plants flowers. I planted some of those and on Sunday and Saturday I helped my nana grow carrots and flowers. She got some carrot seeds in a bag and we had to put out five rows. She grows carrots every year.

PE51: I help my Gran grow peas, and rhubarb and all sorts. When I stay at my Gran's if I'm bored then...she'll help me make like a Victoria sponge with cream and strawberries and it were great.

PE35: My Granddad grows leeks on a patch [allotment]. When I helped most of time I've been watering. I picked the apples off his trees.

These children were able to explain how their general gardening enthusiasm at school had influenced their home interests. However they often struggled to give examples of specific school-based skills and knowledge that they had applied in their home environment. Discussion at Lyndhurst illustrates how general interest was perceived to stimulate change at home:

LH46 [after talking about growing in school] My mum's now thinking she could dig up a bit more of the garden so that we could grow more carrots and potatoes and maybe lettuces too.

LH21: I planted squash plant [on a farm visit]. I've never seen a squash plant. I told them about going to the farm and my parents said that they've eaten squash and would we like to try it again at home.

### Food ethics and sustainability

Messages on food ethics and sustainability appear to be more likely to reach home where schools deliver focused and high profile initiatives. For example, Middleton school's assemblies on animal welfare and food origins are recalled by children participating in the focus groups. Children show awareness and could illustrate how their insights transferred home:

MD43: [At school] We're going to get chickens because then we'll have free range eggs. These are eggs where the chickens get to run about and get loads of space. But other chickens are all caged and squashed together and stuff.

MD40: Sometimes [at home] we get them free range from markets and stuff. I know that my grandma gets them from the market, but I don't know where we get them from.

MD01: We were talking [at home] about using eggs from caged up chickens. Before we didn't used to get cage free eggs but now we get them from Asda from cage free chickens.

MD41: I told her [mother] about the presentations and now when she goes to the shops she buys free range eggs and she'll buy all sorts now.

Another focus group from the same school held the following discussion:

MD51: Sometimes we get food from a farmer. We did this thing. With mum and uncle, we did this test. We got some sausages from the supermarket and some from the farmer – and we all liked them from the farmer because they were fresh. And now don't get from the supermarket.

MD40: We've got apples at home. They're only little but when they are ready we'll see which ones taste better: apples from our tree or from the supermarket

MD43: We're growing tomato plants and strawberries and we're going to try the same as XX [...].

Similarly Park End School's Year 3 project on sausages clearly raised further discussion at home:

PE11 I told my mum and I said we went to the farm and we had some sausages and we took them back and we had the sausages and they were yummy. They were thinner than the normal sausages we have at home which are more chubby.

PE06: They tasted really different because they had a different flavour.

PE13: The ones that we made at the farm were nicer than the ones we have at home.

Children, especially the Year 5 focus groups, are aware of restricted opportunities at home to change consumption patterns.

LH46: My mum and dad used to buy organic apples and things- but I don't really see them much around our house now because we don't have so much money.



## Qualitative Findings: Parent Perspectives

This section reports on interviews and written feedback with parents. The parents involved in the interviews valued the involvement of their child's school in the FFLP programme, with a majority indicating that the FFLP programme had changed their involvement in the school and that the programme had an impact on their child's food preferences at home. Parents also report that farm link programmes are a memorable part of their child's education. This section covers:

- Awareness and Engagement with Food for Life Partnership Flagship School Activities.
- Views on the Food for Life Partnership programme.
- Views on food in school reforms.
- Views on practical food education.

### Awareness and Engagement with Food for Life Partnership Flagship School Activities

#### Awareness of Food for Life Partnership activities

In all schools parents report being kept informed of FFLP activities. Aside from direct reports from their children, newsletters are the key route for information. Parents are also aware of FFLP activities through one-off events and informal dialogue with teachers and other parents. Special events were more likely to be recalled – notably the cooking bus visit, school food tastings, food celebrations and farm visits. Parents are less able to give feedback with confidence on curricula and extra-curricular activities or other lower profile changes.

Some parents want to emphasise that they could not always respond to interview questions with confidence. There are a number of reasons for this including:

- They are not clear on whether the activities were delivered through the FFLP programme. In part this was because all schools are delivering related activities in partnership with other external organisations.
- Some of the initiatives reported on preceded engagement with FFLP and, in some cases, an established annual element of the school's delivery.
- It is hard to attribute changes to FFLP activities in cases where other external influences through, for example the mass media, may also have had an impact.

Parents also want to express caution about taking at face-value their views (or the views of other parents) on complex subjects. For example, the consumption of healthier and ethically sourced foods and positive changes in child development reflect socially desirable norms. Parents might profess opinions that reflect these socially desirable norms but which might not, in fact, reflect the situation in their home. This can lead to over reporting of change. As one interviewee said:

AR74: Parents will tell you these things [like they cook from scratch or eat healthily] but you just need to go to a birthday party or go to a parent's home and you'll see all kinds of snacks and treats. You have a party and you can put out the carrot sticks and the like, but their eyes light up when the cakes comes out.

A minority of parents report that they are not aware of –or could not recall - what was taking place in their child’s school with regard to specific areas of FFLP-related activity.

### Parental engagement with Food for Life Partnership activities

Two thirds of parents report that FFLP activities had changed their interest and involvement in school life [21/32].

Parents from three schools report that invitations to eat school meals – either as a special event or as part of a rolling programme – is both a good route for feeling involved in school life and for changing their perceptions of school food:

MD68: The constant feedback to parents has been really, really good. You feel like you’re informed of what’s going on. They’ve done a thing where you can go in and have a meal with your kid.

MD68: To be quite honest I were dreading what we were going to have. But I really quite enjoyed it when I come in. I think it’s because I remember what we were offered when we were kids and I thought god it’s going to be like that.

MD73: Every parent had the choice because they told you which days the class could have their parents come in and have a meal – and it were just once it were on a few different days.

LHX108: I’ve been to eat in school where you are served by the children. I thought it was a fantastic thing to do. It got the children really involved and we got to taste the school dinners.

Cooking bus events, gardening days and food festivals are other key activities that are reported to succeed in engaging parents who might not otherwise become involved in school events:

OV56: [The cooking bus] was fabulous. Lots of parents were interested- even them that you’d never normally see. We produced beautiful food salads. It was fabulous. Both the parents and the children loved it.

OV56: Yes, we’d like it to come along again!

Oval E: They showed you how you hold a knife – and the kids loved seeing how the professionals do it.

PEX34: The gardening day was a lot of fun. I must admit I don’t usually do that sort of thing.... I mean I don’t do meetings and things. But I will get stuck in...

Parents are also directly involved in helping organise or leading on FFLP activities either as part of the SNAG or through other less formal groups. For example, two parents in one school describe their role in championing free school meal take up amongst parents who were eligible.

MD 73: My kids were entitled to free school meals but they were bringing packed lunches. It were a case of getting kids on packed lunches to have a healthy school meal. I think it went from there.

We were approached and asked if we were willing to be parent representatives

MD 68: We’ve been meeting every two months and agreeing how to do things like how to advise or contact parents. But it [the SNAG] hasn’t just been a talking shop. You can see the progress of getting things done.

MD 73: We find out parents ideas from questionnaires and also a weekly coffee morning.

Parents gave mixed feedback on their recollection of questionnaires. Some are not clear on how to give feedback on FFLP related activities to the school.

### **Views on the Food for Life Partnership programme**

Parents provided feedback on the rationale and operation of the whole programme in their school. Whilst parent interviewees are not necessarily aware of the breadth of the initiative, the 'whole school approach' is often mentioned and taken to include both practical food education and food in school reforms. The whole school approach is taken to have a focus on pupil and parent involvement and to emphasise the need for practical action. As one parent says, her school had done a lot of work on food in previous years, but since the school joined the FFLP programme she feels that activities have become more coordinated.

OV78: The lunch box actions used to be a bit hit and miss. But now it's more organised I suppose you could say.

Nevertheless only a minority of interviewees have any awareness of the school food action plan or school food policy. Awareness of the FFLP Award is more common.

Parent interviewees are almost all supportive of the need to include practical food education as a part of their child's learning. Hands on education is reported to support different learning styles, to make learning fun and engaging, and to contribute to maths, literacy and science curricula.

OV40: [Talking about farm visits and educational cooking] I wish when I was younger we'd been educated in this way. I find that my children are so aware now.

LH07: My son does enjoy hands on education. He remembers and concentrates more.

LH11: The visits and hands on involvement made the learning experience interesting and real. My daughter now likes more salad things and is willing to try different things. She is always excited about the new things she is learning about different foods and the environment.

PE93: Growing food at school is wonderful for the children, cooking with it afterwards and making the connections with where it comes from has to be even better.

Many interviewees also want to emphasise how FFLP supported work has created opportunities for actively involving their children in decisions about food in school.

SA20: Nowadays the cook quite regularly comes out at lunch time asks them what they would like to eat and what they would like to see on the menu and what they wouldn't like to see on the menu. The cook has had great influence on the menu this term actually. And now nearly every day they have a salad bar.

MD73: I think the children get lots of feedback. With the red and green band system: they got more choice at meal times. They've put top tables in now which is for like a 'thank you' assembly and you get to have a proper plate. The children asked for a choice of music and they've changed the seating arrangement.

A major theme in both written feedback and interviews is the importance of giving all children a fair opportunity to take part in FFLP activities. Parents appreciate some of the organisational difficulties associated with including all children. Nevertheless some parents express concern that their – or others – children have not been able to take part in SNAG meetings, cooking clubs, gardening clubs or external visits.

AR31: My little boy hasn't been able to take part in any of the activities because there is a waiting list [for the cooking club]. The problem is that the children have been getting all geared up. But

then they find that they might have to wait a year, and they sort of lose their motivation. They've been very keen because they'd done lots of work on food and came home and told us about it. When it came to doing something practical he was in tears because he wasn't allowed to do it that time.

OV56: I think there is so many children in the school that when it gets round to them its every few months when they get a go [to do school allotment visits]. It would be nice if they went more often – but I think it's a practical thing about making sure that all children get to have a go.

A majority of parents express the view that, if anything, there should be further opportunities for extending whole school work on food in primary school settings. For example, one parent feels strongly that there should be greater emphasis on practical food project activities as part of homework:

LH34: There needs to be more [practical] projects set as homework.... We have so much numeracy and literacy homework at the weekend. If the school could incorporate say, more growing projects like seed planting as homework tasks... he could practice lots of different skills.

Whilst the majority of parents are very supportive of the programme, a minority want to express caution about the extent to which FFLP actually addresses unmet needs for families:

AR74: This school is already starting from a very high level; you just need to look at the [middle class] demographics of this area. I find that this school helps support us in what we want to do. But it isn't something that we would be doing differently.

AR74: I don't think you are going to see much change. This is a well heeled middle class area.

LHX90: There seems to be as much interest in marketing the school's food project to the press as to the children.

Interviewees also want to express caution about the extent to which children – and their families are able to change their behaviour.

PE55: [My daughter] shows interest in cooking and often tells us how important eating fruit and veg are. Yet she will not try vegetables.

SA50: They often stick to their comfort zones of what they know. And what ever you do you can't convince him to try it. They are amazingly stubborn.

SA60: We always go out to the farmers market and we visit farms and we enjoy that but we also like going to MacDonald's.

PEX95: I already try to ensure we eat a varied healthy diet but where I shop and what I buy is dictated more by price than whether something is seasonal, local or organic.

## **Views on food in school reforms**

Reforms to food in school in this context cover changes to school meals, packed lunches and other in-school food provision.

### School meals

Parents report that changes in school meals have had an impact on their child's' food preferences at home.

OV56: It's helped make real changes – like I used to buy them crisps and chocolates and things but now I'd hardly buy them any, only now and again. It's made me think more about how we bring them up.

MD 73: I've noticed that my children are more willing to eat vegetables: they'll happily eat them raw which they never used to do. It were at school that she first got to try fresh carrots because at home we would always have them tinned. She said I like 'em raw I just don't like them if you cook 'em'. That was something that she'd brought from school to home.

PE42: My son has started eating dishes he would normally not have tried. He is eating more fruit and vegetables and taken an interest in cooking at home and helping to prepare food.

Parents are aware that some of the changes in food provision in schools had been brought about through the ideas of pupils:

SA 60: A lot of things have been addressed by the school now. I mean they used to like to bring their sandwiches to school and eat outside but now they can have their school meal outside as well if the weather is nice. So some of the older pupils have hot dinners outside and we are now going to experiment with having parasols outside over the tables. But it was the children who said they wanted to eat outside and now we have made it happen.

Awareness of changes to school meals is quite limited amongst the parent interviewees. There are also differences between schools. There is some evidence that the changes have led to parents deciding to take up school meals:

SA60: There is a big improvement [in school meals] so mine are having them nearly every day now. Before they were only having them twice a week. There is more variety now than before. Like before it all used to be the same every week. But now there is much more variety on the menu.

However, other parents report that their children did not like the revised school menus:

PE42: I find the children's only complaints about school meals is the total lack of seasoning. It is all very well using the best food, if it tastes bland, it's pointless. A little salt isn't bad.

Parents are also aware of advice on packed lunches and changes to dining arrangements for children taking packed lunches. Interviewees report that these changes are having a very positive impact on healthier eating during school time:

MD13: The school sent letters out with: 'No crisps, no sweets, and no chocolate'. So we had to find alternatives.

MD12: It was quite hard to start with because mine's a fussy eater. We had to just keep trying different things with him. But now he tries pretty much anything I put in for him. He's changed quite a lot.

MD13: Believe me; they come home with empty boxes every day whereas before you'd get sandwiches back home.

MD12: They would because they'd rather eat sweets and chocolate before their sandwiches.

However, a theme is the competing influences of changes to school meals occurring alongside improvements in packed lunch arrangements. Improvements to packed lunches, in some cases, are taken as active disincentives to take up school meals:

MD31: I think, as a parent, you want see what they're eating. But with schools meals there's not enough adults around to see what they're eating.

MD32: Now that packed lunches have got healthier I'm thinking of putting my child back onto to them.

Others state that, because they were cooking a full meal from scratch at home every day, they did not feel that their child needed a school meal.

OV56: It's a cost thing for me, because with two children its seventeen pounds a week [for school meals]. I cook properly at home anyway. So for me two dinners a day is just too much for anybody – it's too much for mine personally.

## **Views on practical food education**

Practical food education in this section covers gardening, cooking, farm visits and activities on the theme of sustainable food issues.

### Fruit and vegetable gardening activities

A strong theme from parent interviewees is the impact of growing activities on their child's attitudes toward and consumption of fresh fruit and vegetables.

SA 40: Mine's definitely keen. In fact she is so keen she is digging up my mum's garden to grow vegetables. I haven't got a garden that's why she is digging up hers..... She is doing it herself so that she can grow food and eat them at home. Before this it was very difficult to get her to eat vegetables, but she is a lot better now.

AR26: As a result of growing lettuce at school, which she didn't like before, she now enjoys eating and has showed a keen interest. She's keen to grow our own and has turned eight square foot of lawn over to carrots and spring onions. My daughter is interested in buying strawberry plants...

MD 73: I think it has made my kids more willing to eat it because they've been growing it their self.

MD 68: They see that process going – to something that they can watch and grow.

MD 73: They are actually looking after it – not just looking at the plants. I think it gives them a lot of 'Oh they're ours'. Since then my children have been asking whether we can go and grow some strawberries and gooseberries in the back garden. So it's made them want to do it home.

Parents also report that school-based growing activities have a wider impact upon the whole household. Parents state that they themselves had to learn new skills – often drawing upon the experience of grandparents and other relatives.

MD12: We've actually started growing our own tomatoes at home with my son and his grandma. Before all this Food for Life thing happened my son wouldn't touch fruit or veg': but now he's getting there.

MD13: My grandson is an enthusiast. He's watched them at school and carried on growing them at home. I used to be a bit of a gardener myself and he's learnt from me how to do it.

Many parent interviewees report that they are already growing fruit and vegetables at home. For these families, FFLP activities help stimulate and support this interest.

PEX100: My children already have a keen interest in food and where it comes from but the Food for Life scheme at school has been excellent for nurturing their enthusiasm even further, especially in relation to growing produce at school, which they love.

SA50: My daughter brought home two radishes. I think they came from her class and she gave them to me and asked me to buy them! But we do grow things at home because it is quite easy

to do that. In fact we have got lots of veg', raspberries, strawberries and we have also got rhubarb... At school she has commented on the vegetables that are grown in the garden. I think she is also keen on the food in the kitchen because the menu changed a few months ago..... Yes she is definitely enjoying the new menus.

Some parents express disappointment with the standard of the growing projects and the quality of their child's experiences. Constraints on the impact of these activities include the lack of time or garden space at home to pursue growing with their child. Conversely others report that their household gardening was more advanced than the activities at school.

AR126S: We've always grown our own food anyway: so it hasn't really been a big change for us.

### Farm link activities and sustainable food education

Parents report farm visits and sustainable food education activities as memorable and special events in their child's education:

OV40: I know it's really changed my kids. When we go shopping they'll read the labels and ask if they are free range eggs. They look at the labels and I wouldn't know what they mean but they do. They look at chicken and ask how they have been reared. I wouldn't – but they've been teaching me. They'll say 'We can't have those eggs because they're from caged hens.' They've learnt that at school because that's not come from me.

SA40: I think the only time they've ever talked about organic food was when they went for a visit to Lake Farm. They learnt about all the animals and how it was all very environmentally friendly. In particular they learnt about the environmentally friendly loos. It was so very different to what they see normally.

PEX104: My son tried sausages that he saw being made. He was so interested in the machines, the meat, the blood and everything he saw [about the process of making sausages]. He was asking for sausages just like them at home.

OV121: [After a farm visit] he is more interested in the growing process of the foods we eat, where our food comes from and how it gets to us.

AR92: My son understands how food is produced and which meats come from which animals, in the supermarket, he often reads the labels on items!

However, this interest does not necessarily translate into changes in behaviour:

LH47: Since her visit to the farm this year she has become a lot more considerate as to where her food comes from: especially meat, which she wishes to be free range. However her interest in trying new things has not been awakened so noticeably.

PEX11: We always try to eat healthily and I think it's good to teach children about food and the environment. But as her mum, I haven't seen any change.

Interviewees are mixed in their views about whether these activities had a direct impact upon their own and their household's food consumption. Half the interviewees report that these activities had changed their own – or their household's - views about choosing local, fresh, seasonal foods. The main reported changes are with regard to free range eggs, local milk and locally produced fruit and vegetables.



ARX92: My daughter wants to know where her food comes from, which is an excellent start to an informed choice. The farm visits and discussions about food production have had a profound effect on my daughter's relationship with food. She now insists upon free range meat and eggs.

Parents who thought that FFLP had little impact report on the limited understanding that their children had of the issues. Less than a third of parents report any clear relationship between education on organic issues at school and their own household's attitudes and consumption. There is some confusion reported on the subjects of food miles, organic food and fair trade food:

SAX101: Although it may help inform their views in later life, I don't think that seven year old children generally connect these school activities with what their parents buy in the shops or put on their plates.

AR49: We haven't really heard much about local food or organic food issues – my children are much more likely to talk about whether a food is healthy or not, how much she should eat of something or not.

SA30: She did mention about organic food but for the life of me I don't know what it was.

SA50: I think this fair trade thing is more relevant to teenagers really. I don't think mine have picked up on it yet. Whether they have done it in their classes I don't know.

Whilst there are clear school differences, overall the food education messages are reported to focus more on healthier foods than on sustainable / ethical food issues. This parent reported a consensus arrived at in one focus group meeting:

AR126: I would say that it's the healthy messages that come across, not so much the local or free range or organic things.

### Cooking activities

Parents report very positively on the impact of practical cooking sessions, both as part of the school day and as an after school activity. 27 out of 32 parents believe that FFLP activities had helped their child learn how to cook with healthier ingredients. The main focus is on the impact of these activities on their child. But this enthusiasm often extends to routine and special occasion cooking at home.

SA50: A thing they do is a cooking club after school. It's where they learn to prepare the food - and they have even extended it to include food hygiene. It is really useful and they do enjoy it. This means that she now wants to help me at home. I mean she always wanted to but if you say you are going to do something in the kitchen she is there straight away now.

AR96: My twins in Year 3 both take part in the cooking club and both have thoroughly enjoyed [it]. It has had an impact because, whilst they were already helping in the kitchen, now they are thinking about where ingredients come from and what types of ingredients go together. They've been very experimental and that's been a lot of fun for them.

AR74: Mine picked up little things about the claw technique [for using a sharp knife].

AR21: That's right; my little one now likes cutting things the way she was taught

AR49: Sometimes you don't realise that your child might be capable of using a technique. It just doesn't occur to you.

AR34: With food preferences, my child would normally object to peppers and mushrooms, yet adding them to pizza made in school, they loved eating it.

OV40: Since the bus came my little ones have been saying 'mum can we do that bake or mum can we do that pasty that we learnt how to do?' They know that they have to make a bridge to cut



the onion – they still remember. And they're saying 'Mum, remember to bridge whilst you're cutting those'

OV71: My children have got really keen on trying things. If I had said 'why don't you try these peppers?' or something they'd have refused. But because they prepared it in school they actually eat it. They would not have done it if I had shown them. I think it's really changed their outlook.

As with growing activities, many parents report that they already taught their children how to cook. This includes using recipes to cook from scratch and/or how to use healthier ingredients. Overall, most of these parents feel that FFLP cooking activities provide additional support to activities that are already taking place at home:

SAX102: A lot of these things [cooking in school] my children might have done anyway, but it did help to raise their awareness.

ARX97: We were already keen to use local seasonal food, and to cook at home.

ARX98: We try to always eat fresh, organic food anyway but we have been more careful about trying to buy local or at least British grown produce since Food for Life. We already have an allotment and the children have home cooked food, so they haven't benefited as much as some children from the scheme.

## Discussion

This section revisits six study objectives. It discusses key findings from both the quantitative and qualitative components of the research in relation to each objective. The section brings together different sets of data sources to tease out key issues and explore processes of change associated with the programme. Logic models are used to illustrate the links between programme processes and impacts.

### **FFLP programme provides a stimulus for food culture reform in schools (Objective 1)**

All participants in the evaluation identify ways in which the school food culture has changed as a result of participation in the FFLP programme. FFLP is seen to support other initiatives, such as National Healthy Schools, that promote food development in schools. Whilst schools work with many food-related initiatives, staff report that FFLP's distinguishing contribution is the practical approach to achieving a coherent vision. At enrolment all study schools reported that they were delivering piecemeal, disconnected activities. After the course of a year all schools are able to evidence a systematic programme of reform through school food action plans and Bronze Mark award accreditation.

Practical food education is a familiar aspect of the primary school curriculum. FFLP enables teachers to take a more planned, integrated and curriculum linked approach to practical food education. This is a move away from one-off and isolated activity delivery. Topic based delivery also helps teachers make links between health, sustainability and different components of the primary school curriculum. Whilst separate 'silo' delivery of growing, cooking, and farm education featured for class cohorts, pupils – and their parents - report making links particularly between cooking and growing.

Teacher and other interviewees feel that an important aspect of 'the FFLP stimulus' is the promotion of whole school events. These have included assemblies, community days, special topic weeks and high profile occasions such as the cooking bus visit. Not only do these events attract widespread interest in school food reform in some cases they act as a catalyst for changes, such as the development of clubs, action groups and longer term projects.

Staff believe that changes introduced into schools through FFLP could be justified in terms of their likely contribution to pupil attainment and positive behaviour, though staff noted that it would be hard to quantify through short term pupil attainment and behaviour monitoring (*cf.* Belot & James, 2009). Practical food education connects with the core curriculum and supports differentiated learning, whilst healthier food provision may support improved classroom behaviour. Staff confidence in this case has enabled staff to connect FFLP and food culture reform with core school business

### **FFLP programme facilitates pupil, parent and wider community involvement in school life (Objective 2)**

FFLP has supported all study schools to develop new opportunities for pupils and parent involvement in school life. SNAGs are new to five out of six schools and are reported to be sustainable, on-going forums by staff in five schools. SNAG member

pupils benefit personally in terms of healthy and sustainable food knowledge and awareness, and transferable decision making and consultation skills. Pupils who are not SNAG members report being able to voice views on whole school food reform via SNAG consultation channels. Pupil involvement in decision making is reported by staff to legitimise actions and to make change more effective.

Staff and parents report that activities such as gardening and cooking have facilitated involvement of a wider range of parents, as well as new involvement from other community members. For example, growing activities have brought more fathers into schools as well as involving community groups, such as allotment societies. Children are positive about activities which engage their parents in school life and identified activities, such as cooking and serving dinner to their parents as positive experiences. Parental participation in SNAGs and other formal meetings was less consistent across the six schools. Successful examples have developed out of pre-existing parent forums.

### **Perceptions of the impact of FFLP on food provision in schools (Objective 3)**

In this study, school participation in the FFLP flagship scheme is positively associated with an increase in the take up of school meals in four out of six schools. Take up has increased more in schools with high free school meal eligibility (mean = +3% from 07-08 to 08-09 financial years). Within schools, free school meal take up has increased in schools that already have high eligibility (mean = +9% from 07-08 to 08-09 financial years).

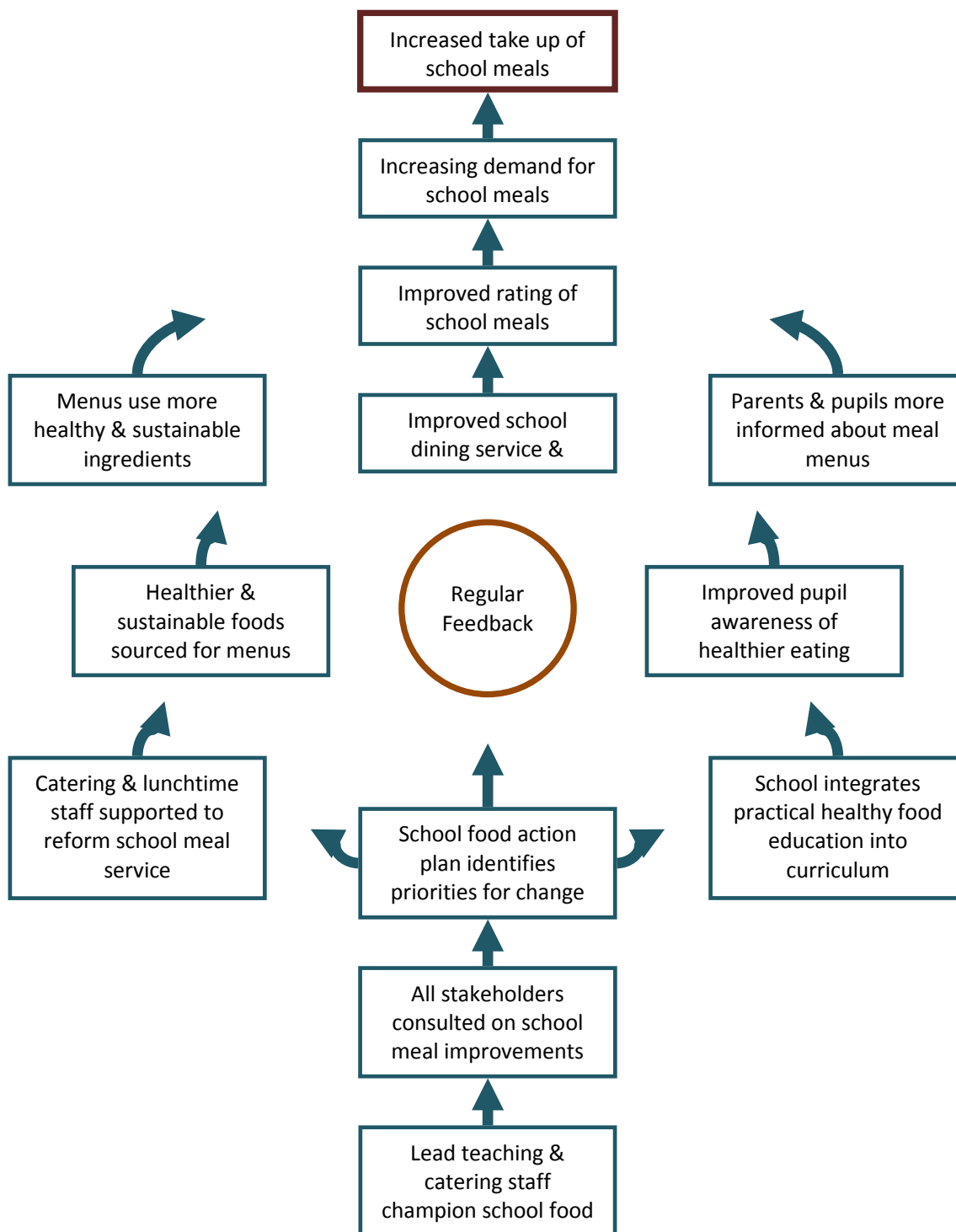
Pupil cohorts rate school meals more positively since the case study schools enrolled with FFLP. For all schools with baseline and follow-up data, there is a 15% increase in the rating of *good* or *excellent* for school meals. This positive shift applies to both pupils who take, and those who do not take, school meals. At follow-up, fewer pupils taking packed lunches have a negative view of school meals. Parents concur with their children. It is possible, therefore, that negative perceptions of school meals have become less of a barrier to school take up under FFLP.

Positive trends in school meal take up and pupil ratings of school meals in schools with high free school meal eligibility provide evidence that the FFLP programme is being successfully implemented in settings of high social deprivation. The success of the scheme is not limited to more affluent school settings.

SNAGs in the case study schools are new, or at least invigorate pre-existing activities - and bring together a range of stakeholders. In some schools SNAGs reflect other successful approaches (e.g. Tikkenan, 2008) in targeting their messages to specific groups – such as to parents eligible for free school meals for their children. Under FFLP's food action planning process all study schools have implemented guidance and rules on healthier packed lunches. Pupil, parent and cook reports show broad adherence to these policies. Monitoring through the SNAG and pupil volunteers maintains a school focus in this area. By contrast, SNAGs and lead school staff report less clear monitoring and feedback systems to help drive school meals take up.

Figure 15 seeks to bring together a number of the areas discussed in the form of possible routes through which FFLP could increase the uptake of school meals.

Figure 15. Model for Change: Promoting school meal take up



**Impact of FFLP supported activities on children’s cooking, growing and healthier eating behaviours (Objective 4)**

Many children are actively involved in practical cooking and growing. Fifty two per cent report cooking at home with basic ingredients in the last week. Seventy per cent report having helped to grow fruit or vegetables at home. These activities are regarded positively. A large majority of children enjoy hands on cooking activities (82% say they *enjoy or really enjoy* cooking) whilst 53% report enjoying growing fruit or vegetables. Children in focus groups, their parents and teachers are almost universally enthusiastic

about these experiences, both in school and at home. They are also readily able to link these experiences directly to new opportunities provided through FFLP. Trends in the quantitative data concerning self reported confidence and skills in cooking and growing skills point towards a positive impact of FFLP and qualitative data reinforce this case. The focus groups pupils overwhelmingly indicated that they would like to do more cooking and growing activities in school and at home because these were seen as fun, creative and memorable.

These positive experiences clearly have value in themselves and may assist with wider positive dispositions towards learning. Furthermore, the findings lend support to previous research (e.g. McAleese & Rankin, 2007) suggesting that these experiences are associated with healthier eating. Pupil quantitative data show significant associations between cooking and growing activities - and self reported fruit and vegetable consumption. For example, of those children who report eating the highest levels of fruit and vegetables, 45% state that they cook with basic ingredients two or more times a week at home and 54% state that they often help to grow fruit and vegetables at home. By contrast for children who report eating the lowest levels fruit and vegetables, only 17% help to cook two or more times a week at home and 17% state that they often help to grow fruit and vegetables at home.

Qualitative data from children, parents and staff support the case that practical learning about food actually promotes healthier eating behaviours. School cooks and staff report that growing and cooking activities encourage children to try new foods and healthier foods. For many parents and pupils themselves the link was often felt to be obvious and self evident. Interviewees identify several ways that FFLP activities could influence children's willingness to try new foods. These include:

- Cooking in school – most children report that they tried cooking new dishes that had healthier ingredient and that they were able to take home and eat the food they made in school.
- Growing in school – most children report that they are keen to try the vegetables grow in the school gardens. This was backed up by the school cooks who indicate that children were keen to try vegetables they had grown when they were served as part of the school dinner.
- Farm visits – there are examples of farm visits where children had been able to try new foods produced on the farm and had gained a clearer understanding of food origins

These data, however, also point towards more complex processes. Children with healthier eating attitudes may already be predisposed to grow and cook, the behaviours can be mutually reinforcing, and underlying factors -such parental socio-economic status – may exercise greater influence. Participants also gave examples where school based practical education could be disappointing or even reinforce negative perceptions of healthier and novel foods.

The findings highlight some barriers to helping children participate in cooking and growing activities. These include constraints at home (lack of space to grow vegetables or lack of opportunity to cook), as well as challenges of delivering uniform experiences of practical cooking and growing experiences in schools. Nevertheless, FFLP activities

provide a valuable opportunity for children to practise these skills and to develop their knowledge and enthusiasm for cooking and growing.

### **Perceptions of FFLP's influence on children's awareness and attitudes towards healthier and sustainable food (Objective 5)**

There is evidence that sustainable food messages promoted by FFLP, such as issues around food miles, organic and sustainable food production, are being taken up by children. However, the extent to which these are communicated varies considerably amongst the schools involved. The issues are complex and teaching staff express some concerns and confusion over which messages to promote. Examples where messages appear to have been effectively conveyed include assemblies on:

- free range eggs – children in this school understood that free range chickens had more space to run around and that this might be nicer for the chickens than being in cages.
- fair trade products- children understood that small purchases by many people could add up to make big changes

Farm visits were particularly valued as providing a focus for new experiences. For example, children reported learning about animal welfare, organic horticulture, small scale food manufacturing, composting, food tasting, and looking after animals.

A central issue is the link between sustainable food related behaviours and healthier eating. Evidence from the pupil and parent questionnaires indicates a weaker set of associations between these concepts– in comparison to the associations between cooking, growing and healthier eating. As other research also highlights (Joshi *et al*, 2008), the complexity of some of the concepts presents challenges for evaluation measurement in primary school age children.

These less clear cut associations may reflect the slower pace at which sustainable food issues become embedded within school food culture in comparison to more mainstreamed healthier food messages. At the latest point of this research, these schools reflected FFLP Bronze Mark achievement. The impact of the food sustainability agenda should become more evident as the schools attain Silver and Gold Awards.

### **FFLP Activities: Impact on the home environment (Objective 6)**

Parents were generally aware of and positively endorse FFLP activities and the fact that the school was participating in the FFLP project. Parents also espoused many views compatible with FFLP aims, such as a desire to eat more organic food. This mandate included parents on lower incomes with children eligible for free school meals. To a lesser extent FFLP activities are reported to have an impact upon wider family food consumption attitudes and behaviour. Parents emphasised that these connections are not simple and that it is not easy to attribute changes to children's willingness to try new foods or changes in family consumption patterns to one specific stimulus. Furthermore parents and pupils emphasised that there are limits to what can be changed in the home setting due to financial and other constraints.

Teachers and children participating in the evaluation also provided anecdotal evidence that FFLP activities had an impact on food culture in the home environment. Examples included discussion in the home of animal welfare issues (e.g. free range chickens), local food issues/food miles and provision of healthier packed lunches. Children also reported undertaking cooking and growing activities in the home, some of which were also linked to other family members, such as grandparents or uncles and aunts. Pupil and parent interviewees provided highly positive accounts of school growing and cooking projects stimulating home-based activities across generations. Whilst research in this area is very limited, the longer term whole school approach of FFLP may account for the relative success of take home communications compared with short term initiatives such as that reported in Parkin et al's research (2006).

Pupils report changes in their food preferences both at school and home and 1 in 2 parents believe that a whole school approach to changing food has helped change their child's food preferences, for example, for trying new fruits, vegetables or dishes. Parents report (69.5%) that their child's interest in food and environmental issues has increased as a result of hands-on cooking and growing activities and through provision of healthier food in schools and farm visits.

Involvement in school activities bring parents into direct contact with FFLP messages. Few parents in the study schools were actively involved planning and delivery of FFLP supported work. Successful, and important, examples included parent groups engaged in promoting free school meal take up and maintenance of garden facilities.

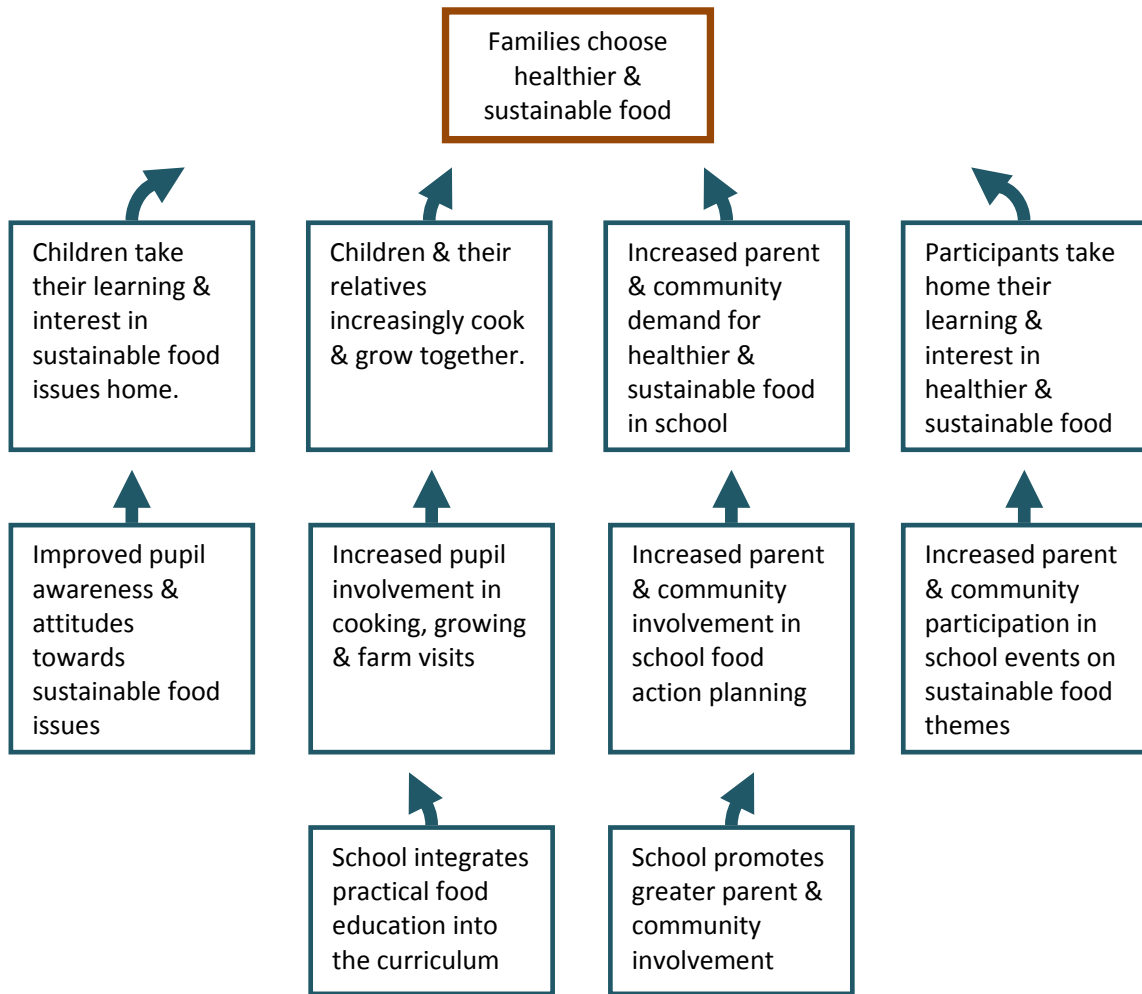
Project-based initiatives in some of the schools studied illustrate good practise in the effective communication of issues. Pupils and parents reported clearly and positively on the messages raised and their reactions. Nevertheless pupils, in particular, younger pupils, have a very mixed understanding of local, seasonal, organic, higher welfare and fair trade food issues.

Several processes were identified in which FFLP activities promote changes in family norms and consumer behaviour in the home and community setting.

- ➡ Children raise awareness at home and motivate families to change shopping and cooking habits.
- ➡ Children practise their practical food learning with relatives at home.
- ➡ Fuller engagement with parents on school food issues and school meal improvements help set an agenda for change for families and the wider local community.
- ➡ School events with parents and the local community offer direct experiences for growing, purchasing and cooking healthier and sustainable foods.

Processes through which FFLP activities can influence food culture in the home are illustrated in Figure 16.

Figure 16: Model for Change: FFLP's influence on the home environment





## **Recommendations**

### **Challenges for FFLP**

The current programme delivery format disperses activities across pupil cohorts. In the early stages of the programme's implementation there are relatively few occasions where pupil cohorts experience all elements of the programme as an integrated package. However, this may change as the programmes are embedded within schools.

Whilst school meal take up is an overall programme focus, this focus does not appear to be equally reflected at the school level in terms of school food action planning and monitoring. This may reflect the challenging nature of the task. FFLP supported actions on healthier packed lunches and cooking from scratch at home are also reported to run counter to the school meal take up objective.

There is a diverse range of messages schools are expected to deliver through the programme. It is likely that these will not all be delivered equally and FFLP will need to consider whether to rationalise these objectives and/or clarify the importance of different messages (e.g. the relative importance of organic, local and fair trade).

### **Challenges for Evaluation**

The current programme delivery format does not allow the identification of specific cohorts of pupils and parents to track changes in attitudes and behaviours over time, making attribution of changes to the programme itself difficult.

The programme promotes a wide range of behavioural changes amongst pupils and parents. The breadth, diversity and subtlety of the changes are not readily quantifiable through evaluation measurements.

Changes at the level of the schools and individuals were in progress before enrolment with FFLP and accompany other initiatives in which the schools are taking part. This makes it difficult to attribute specific changes in behaviour to the FFLP programme itself.

### **Opportunities**

Case study schools investigated provide a number of examples of good practice and innovative delivery. These could be developed into case studies to provide ideas and examples to schools joining the FFLP programme.

The programme has the potential to have a substantial impact on the pupils involved and there is the opportunity to explore the impact of such a whole school programme on pupils over time. Given the achievements of the Bronze level schools examined in this report, schools progressing towards Silver and Gold FFLP Mark status present a very promising focus for in depth evaluation. Providing structured programmes of FFLP work can be identified in advance, this could be evidenced with cohorts of pupils – and their parents - in other flagship school settings.

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## Appendix A: Questionnaire Tools

### **“Food for Thought” Pupil Questionnaire**

*This is an in-class questionnaire for Year 3,4,5 pupils. It is self completed with guidance from researchers and support from teachers and teaching assistants*

**1. What is your Year and class group?**

**2. Are you a...?** Boy Girl

**3. Do you have school meals?**

- Every day
- Most days
- Sometimes
- Never

**4. Do you think school meals are...?**

- Excellent
- Good
- OK
- Poor
- Very Poor

**5. At HOME do you help to cook with basic ingredients like: rice, pasta or fresh vegetables?**

- Yes... Two times a week or more
- Yes... Once a week
- Yes... Once a month
- Yes... But hardly ever
- No... Not allowed
- No... Never

**6. At HOME would you feel confident cooking with basic ingredients like: rice, pasta or fresh vegetables?**

- Very confident
- Confident
- Quite confident
- Not very confident
- Not at all confident

**7. Do you enjoy cooking?**

- Really enjoy cooking
- Enjoy cooking
- Cooking is OK
- Don't enjoy cooking
- Hate cooking

**8. When was the last time you chopped a vegetable or fruit AT HOME?**

- Yesterday
- Last week

Last month  
Never done this

**9. Have you ever grown fruit or vegetables AT HOME?**

Often  
Sometimes  
Never

**10. Do you feel confident at growing vegetables without much help?**

For example: sowing, weeding, feeding and watering, harvesting

Very confident  
Confident  
Quite confident  
Not very confident  
Not at all confident

**11. Do you enjoy growing fruit or vegetables?**

Enjoy growing food  
Growing food is OK  
Don't enjoy growing food  
Don't know, never done it

**12. How many helpings of FRUIT do you eat a day?** One helping of fruit could be a handful of grapes, a glass of fruit juice, an apple, a banana. [prompt: "Think of an ordinary or normal day, not a special day"]

0 1 2 3 4 5 More than 5

**13. How many helpings of VEGETABLES do you eat a day?** One helping of vegetables could be a small bowl of salad, some carrots or a handful of peas or beans. [prompt: "Think of an ordinary or normal day, not a special day"]

0 1 2 3 4 5 More than 5

**14. What do you think about eating these vegetables?**

Really Like	Quite like	Don't know	Don't like	Really don't like
----------------	---------------	---------------	---------------	----------------------

Lettuce  
Carrot  
Spring Onion  
Beetroot  
Spinach

**15. What do you think about eating these? / Would you like to eat more or less of these?**

More	Same	Less	Never	Don't know
------	------	------	-------	------------

Organic food  
Seasonal food  
Fairtrade food  
Local food  
Free range eggs  
Organic meat

## **“Food for Life at Home and School” Parent Questionnaire**

*This is a questionnaire for parents (or carers and guardians) of pupils in Years 3,4 and 5. It is delivered to parents by child in a sealed envelope and returned to the school in a sealed envelope*

**What is your child’s Year at school?**

**Is your child a...?    Boy    Girl**

**Do you think school meals are...?**

- Excellent
- Good
- OK
- Poor
- Very poor
- Don’t know

**Does your child have free school meals?    Yes    No**

**Do you or your family grow fruit or vegetables at all, either in a garden or on an allotment?**

- No...not in the last year
- Yes...and my child often helps
- Yes...and my child sometimes helps
- Yes...and my child doesn’t usually help

**At HOME how often does your child help to cook with basic ingredients like: rice, pasta or fresh vegetables?**

- Yes... Two times a week or more
- Yes... Once a week
- Yes... Once a month
- Yes... But hardly ever
- No... Never

**On average, how many helpings of FRUIT does your child eat a DAY?**

One helping of fruit could be a handful of grapes, a glass of fruit juice, an apple, a banana.

- 0    1    2    3    4    5    More than 5

**On average how many helpings of VEGETABLES does your child eat a DAY? One helping of vegetables could be a small bowl of salad, some carrots or a handful of peas or beans.**

- 0    1    2    3    4    5    More than 5

**Did your household eat any of these foods in the last week?**

- |                      | Yes | No | Don’t know |
|----------------------|-----|----|------------|
| Organic food         |     |    |            |
| Fair trade food      |     |    |            |
| Free range eggs      |     |    |            |
| Local in-season food |     |    |            |

(eg summer strawberries)  
Other locally produced food

**Would you like your household to eat more or less of these?**

	More	Same	Less	Never	Don't know
Organic food					
Seasonal food					
Fairtrade food					
Local food					
Free range eggs					
Organic meat					

**Your school has been running hands-on cooking, growing and farm visit education. It supports healthier food in school.**

**What impact do you think these activities have had on your child's...?**

Scale + DK

Food preferences  
Eg to try new fruits, vegetables or dishes  
Please write examples or comments here

Interest in food and the environment  
Eg locally produced food  
Please write examples or comments here

General behaviour at school and home  
Please write examples or comments here

Interest in learning at school  
Please write examples or comments here

*[supplement section]*

**12. With Food for Life Partnership, your school aims to transform school and community food culture**

**Your school has been running hands-on cooking, growing and farm visit education. It supports healthier school meals and packed lunches**

**Do you think these school activities have helped your child...?**

Scale + DK

learn how to grow organic food  
learn how to cook with fresh, seasonal, local & organic food  
learn how to cook with fresh, seasonal, local & organic food  
eat fresh, seasonal, local & organic food  
learn about the farms where their food is produced  
learn how food choices impact on health  
learn how food choices impact on the environment  
express views about improving food in school  
take pleasure and time to enjoy good food



Please write examples or comments here

**13. With Food for Life Partnership, your school aims to transform school and community food culture**

**Your school has been running hands-on cooking, growing and farm visit education. It supports healthier school meals and packed lunches**

**Do you think these activities have changed YOU and/or YOUR household's.... ?**

views about choosing local food

views about choosing fresh food

views about choosing seasonal food

views about choosing healthier food

views about choosing organic food

interest and involvement in school life

Your views are very important to us. Please add examples or comments here

Please write examples or comments here

Thank you for your help

## Appendix B: Interview Topic Guides

Version #3 28<sup>th</sup> May 2009

### FOOD FOR LIFE Partnership

#### PRIMARY SCHOOL CASE STUDIES

#### Topic Schedule Parent, Carer, Guardian or Family Member

##### Researcher Notes

Please remind interviewee on Green form ethics: right of withdrawal, access to personal data, confidentiality conditions, anonymity, purpose of the study, audio recording, and opportunity to ask questions

Assume 20-30 minute interview. Voucher: Interviewee asked to sign the Voucher Receipt form

##### Your child, your school and Food for Life Partnership

Your school has been running hands on cooking, growing and farm visit education. It supports healthier food in school and focuses on food and environmental issues

What have you heard about these activities?

Prompts regarding each area.

Have you heard about Food for Life Partnership? What have you heard? What - for you - is it about? How – if at all – is it different from other food activities in school?

Can you tell me what your child tells you about food education at school (e.g. does the child initiate it or the parents, what level of detail is it)? How did you hear?

Tell me about what your child has been involved with...? What impact do you think these activities have had?

Cooking

Growing

Farm links

Food and environmental education: animal welfare, fair trade, free range eggs, organic food, local food, seasonal food

Anything else

##### Food in school

Now I'd like to ask you about your views about food in schools: meals, rules on snacks and treats and so on

What are your views on school meals? Prompt: healthier school meals.

[If your child has packed lunch] What are your views on packed lunch at schools?

What are your views lunch break times and the dining hall?

What are your views on other food in schools? [snacks, in class treats]

Have there been any changes to food in school changed recently [say in last year]?

Overall how well do you think the school has supported your child's diet at school?

Do you know if your child is involved or has a role in decisions about food in school?

I'm thinking about, say, being asked about opinions on how to improve school meals, the dining room, helping out with the tuck shop and so on.

### You and FFLP

Have you participated in any of these FFLP activities?

Prompt. Some activities might include food themed assemblies, celebrations, open days, invitations to eat at school

Do you feel you have had the opportunity to get involved?

If yes, what have been the benefits or drawbacks?

### Food messages home

Has your child/children brought home information or talked about any of these issues?

- Healthy Diet
- Cooking from scratch
- Growing food
- Food, the environment and sustainability
- Understanding of where food comes from/ including growing/food production, organic food, animal welfare
- Other, please state

Has this led your household to make any changes at home? How?

Has your child's opinion of cooking/growing changed over this year? How has it changed? Can you give examples? Why do you think this is/isn't?

Has your family's diet/cooking habits changed over the course of this year? Why? How?

Prompt about other influences.

### Your family and food at home

How do you involve your child in cooking activities?

Do you grow fruit and vegetables? Do you involve your child?

How do other members of your family [such as a grandparent or an aunty] involve your child in cooking, growing or food shopping?

What are your views about food and environmental sustainability issues (list some and ask about specifically)? Why?

For example:

What are you looking for when you shop for food – like chicken, eggs or vegetables?

When you buy chicken are you concerned about how it was reared and where it came from?

### Finally

Do you have any views on FFLP? Changing meals, hands on food education, involving students, parents and wider community

**FOOD FOR LIFE PARTNERSHIP: PRIMARY SCHOOL CASE STUDIES**  
**Student Topic Guide Version #2**

Researcher Notes

Please remind interviewees of ethics: right of withdrawal, confidentiality conditions, anonymity, purpose of the study, audio recording, and opportunity to ask questions  
Assume 20-30 minute interview.

School, Date, Class Names and Ages: .....     
--

**1. “Tell me about the sorts of \*activities you have been involved in at school?”**

*\* Activities: Go through each one of these in turn. Ask about specific occasions*

- A] Cooking**
- B] Growing**
- C] Links with farms**
- D] Food sustainability**

*Use terms eg ‘how food is grown’ ‘food and the environment’ ‘organic food’ ‘looking after the welfare of farm animals’*

**E] Changing school meals and other food in school**

*Include changing dining area, rules on food in school*

**2. What sorts of things did you do?**

**3. How did you get involved?**

**4. What did you enjoy? Why?**

**5. Who have you told about it?**

Who have you shared your experiences with? What did they say?

- other children at school, your family and friends at home

**6. What effects has this had on you?**

Have these activities changed how you think about food and how food is produced? In what ways?

Have these activities changed any of the things you do? For example, do you grow food at home or cook at home from scratch?

Prompts:

a. would you do these things if you were able to at home?

b. have you changed what you eat (like more vegetables or organic food)?

**7 Is there anything else you would like to tell me about?**

*Props: Fruit and vegetables: organic, air freighted, unusual, fair trade, home grown*

