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Healthy Schools Plus - *Food Factor*

Food Factor was a project designed and run by Bath & North East Somerset's Healthy Schools Plus team in partnership with Bath and North East Somerset Catering Services. Piloted by a local junior school, it aimed to increase the uptake of hot school meals and improve attitudes to healthy eating.

Background

The pilot school is situated in one of the top 20% of England's most deprived wards. Life expectancy is on average 9.2 years lower for male and 8.7 for females compared with the rest of the region (Bath & North East Somerset Council, 2007a). It is also amongst the poorest 5% for child poverty in the area (Bath & North East Somerset Council, 2007b). At the time of the project, 40% of the children on the school roll were entitled to free school meals, meaning that it met the criteria for becoming a South West Healthy Schools Plus school - a Primary Care Trust funded programme which focuses on improving health and reducing health inequalities.

In recent years obesity, prevalence has risen sharply across the whole country (National Obesity Observatory, 2011). In addition, according to the National Child Measurement Programme data, in 2008-09 Bath & North East Somerset had the highest percentage of overweight Reception age children in the South West. This figure was statistically significantly higher than the South West region and national figure (The Information Centre for health and social care, 2010). Responding to the national and regional concerns about weight, the local

Children and Young People's Plan and NHS Vital Signs indicator list made healthy weight one of their Public Health Local Priorities (Bath & North East Somerset Council, 2009a & NHS Bath & North East Somerset, 2010a). The school itself has levels of obesity 1.5 times higher than expected for children in year 6 (Tapson et al, 2010). There were also issues around poor uptake of hot school meals and low levels of understanding or appreciation of healthy food.

It was against this backdrop that the pilot school was selected and the health priority chosen. *Food Factor* was then developed as a suitable intervention.

Aims and Objectives

To ensure *Food Factor* remained focused on addressing the overarching local and school health priorities, it was important to establish some clear objectives to:

- Educate the school community on what makes a healthy meal
- Raise the profile of healthy eating within the school
- Increase the uptake of all school meals, including free school meals
- Support the school in creating a culture of health behaviour change such that it can be sustained and built on beyond the length of the project
- Develop a food project which could be appropriately replicated in other schools

Forming a working partnership

Food Factor was led by the Bath & North East Somerset Healthy Schools team. The team included the Healthy Schools Plus Project Worker as project lead and the Healthy Schools Project Worker who, as a qualified teacher, led the education sessions.

For *Food Factor* to work it was necessary to take a whole-school approach. It needed to be supported by the senior leadership team, be teacher-led, and child-focused. On understanding the project proposal and appreciating the potential value that it would bring to pupil and school development the chosen school was able to engage fully with the 4 month project.

Bath and North East Somerset Catering Services provide school meals to 60 out of 62 Bath and North East Somerset Primary Schools. They ensure that hot school meal provision is nutritionally balanced, locally sourced, freshly prepared and contributes to at least two of the recommended five portions of daily fruit or vegetables (Bath & North East Somerset, 2009b). Partnering with them to address the uptake of school meals seemed appropriate.

Other project partners included NHS Bath & North East Somerset who provided funding, expertise and food education; Bath & North East Somerset Trading Standards who provided inspiration and nutritional analysis; and City of Bath College who provided kitchen facilities for cooking and taste testing.

Methodology

A representative sample of pupils (n=18) was selected from those entitled to a free school meal - some who were taking up the offer and others who were still bringing in a packed lunch. Also included in the sample were students who generally ate a school meal everyday and some who brought in a packed lunch everyday. These seven-to-eleven-year-olds became the all important

'Dinner Designers'.

Their challenge was to design 9 new healthy dishes for their school meal menu, including 3 meat, 3 vegetarian and 3 dessert dishes.

The project had three distinct parts to it, each one aiming to facilitate the student's sense of ownership over making healthy food choices:

1. Developing skills and knowledge

Few of the young people had experience of eating school dinners, so each 'Dinner Designer' ate one free school dinner for a week and kept a food diary noting down what they had eaten and whether they liked the taste of it. Next, it was necessary to carry out some education sessions at the school where the students could develop their learning about what makes a healthy meal and why it is important to eat healthily. To introduce the 'Dinner Designers' to new flavours and further their appreciation of different food types, taste testing was carried out as part of the education sessions. Each student recorded the extent to which they liked the food on a simple evaluation scale.

2. The 'Dinner Designers' set to work

In order to know more about the meal preferences of the rest of the school, the 'Dinner Designers' conducted a whole school survey. All student's (and staff) were invited to post a slip with their favourite main meal and a dessert written on it into a *Food Factor* ballot box. The students were then guided to group these into meal types and to shortlist their survey.

With their research into personal and wider meal preferences complete, the 'Dinner Designers' were able to design 12 new dishes. The Catering Services & Trading Standards took these designs and developed nutritionally compliant recipes for them. A visit to Bath City College then provided the 'Dinner Designers' with the opportunity to help cook and taste their

dishes. A vote was cast and of the initial 12 designs, the nine most favourite were chosen (3 meat, 3 vegetarian, 3 dessert). It was these dishes that were added to the school meal menu. Finally, the students gave each dish an inspiring name.

3. Marketing Food Factor

The staff and students had taken part in the whole school food preferences survey. This, along with the enthusiasm of both the lead teacher and the 'Dinner Designers', led to the initial rise in profile of *Food Factor* within the school. However, in order to achieve whole school involvement, it was necessary to take some further steps. Firstly the 'Dinner Designers' presented their work in a school assembly using photographs, drama and speeches about their experience and what they had learnt about healthy eating and school meals. Catering Services produced new school meal menus clearly marking on them the *Food Factor* dishes. These were pinned up around school and sent home to parents. In order to further inform parents and families, a recipe book, including nutritional information displayed as recognisable 'traffic lights' and the approximate cost of each *Food Factor* dish went to every family in the school. The school also hosted a parent food tasting and demonstration of the 9 dishes where the 'Dinner Designers' shared their designs and helped with the food preparation. Finally, a photo competition was launched. Families cooked the recipes at home and brought pictures into school to help create the *Food Factor* display in the dining room.

Evaluation & key findings

To understand the impact of *Food Factor* and to learn whether it had met the initial objectives, the project was independently evaluated by the University of Bath. Another local junior school with a similar demographic and health profile agreed to take part as a 'control' school. To complete the evaluation, evidence was collected by

the following means:

1. Collecting weekly meal data from both schools before, during and after the project.
2. Conducting a whole school attitude survey in both schools before and after the project.
3. Focus groups with a sample mix of students including some who had taken part in *Food Factor* and others who had not. These were carried out in the pilot school only.

The evaluation was able to present some key findings:

- Students in the pilot school are now 1.7 times more likely to report positive attitudes towards school dinners and twice as likely to report trying to eat a healthier diet.
- Students in the pilot school have reported being 2.5 times more likely to feel they have a say about what goes on in their school due to their active involvement in bringing change.
- There is much evidence to say that it can take time for a change in attitudes to translate into behaviour (e.g., Sahota et al, 2001; Saksvig et al, 2005) and this was the case with the attitudinal change brought about by *Food Factor*. However the school is now seeing an average 5% increase in uptake of school meals compared to when the project began. It is also worth noting that meal uptake often reflects seasonal influences. Hot meal uptake is generally higher during the cold winter months and lower during the warmer summer months when cold packed lunches are often more popular. To have an average uptake in July 5.7% higher than in January goes against the general meal uptake trends.

	Av. meals per day (numbers)	Av. uptake of meals (%)
Jan '10	73.0	41.0
Feb '10	80.1	45.0
March '10	81.8	45.9
April '10	84.5	47.5
May '10	84.1	47.3
June '10	81.0	45.5
Jul '10	83.1	46.7

Food Factor menu introduced

Average school meal uptake numbers and percentage (pilot school: 178 pupils on roll)

When discussing school meals in the focus group, one of the 'Dinner Designers' is quoted to have said, "I eat more dinners now than I used to and also I could say that a school dinner a day keeps the doctor away."

- In January 2010, 78% of those eligible for free school meals ate them. Since the introduction of the new menu, this is consistently above 80%.

	Av. FSM per day taken (numbers)	% uptake of FSM
Jan '10	56.3	78.1
Feb '10	58.5	81.3
March '10	57.0	79.2
April '10	59.0	81.9
May '10	60.4	83.9
June '10	59.9	83.2
Jul '10	58	80.6

Food Factor menu introduced

Free School Meal (FSM) uptake numbers and percentage (pilot school: FSM eligibility: 72 students)

Evidence also showed that positive student engagement through giving the 'Dinner Designers' a sense of ownership of the project contributed to the change in attitudes towards healthy eating. They felt

listened to and believed that *Food Factor* really had an impact on school meals. Those who did not take part in the project also reported that what their peers were doing really did make a difference.

One of the students in the focus group described a problem and how when it was quickly responded to, actually added to the feeling of being listened to:

"There's one meal that nearly everyone hated ... Funky Quack Quack. Because it's duck, people get put off cause you go to the park and see a duck and you're like oh I ate that yesterday... They changed it though".

This was a response made by a non-'Dinner Designer'. The students who had particularly designed this meal were encouraged to help change the dish which resulted in substituting the duck meat for chicken meat. The new dish was named '*Funky Cluck Cluck!*'

Continuing the work

It became clear from the evaluation that one of the main successes of the project was its ability to raise student voice in the school and give them a sense of control over their choices resulting in a positive attitude change.

Although initially there wasn't a vast increase in school meal uptake *Food Factor* as a health intervention gained a sustainable momentum within the school and they have plans to ensure positive attitudes towards food and health continue to become embedded into the school community. Bath & North East Somerset's Healthy Schools Plus team continue to monitor meal uptake. *"The children have loved Food Factor - it has created a real buzz in the school. Months on, children are still telling me, "I have dinners every day now!". Children are more aware of their food, and have a really positive attitude to school dinners!" - Food Factor lead teacher*

Healthy Schools Plus is now looking to understand which key elements of *Food Factor* can be appropriately replicated successfully in other schools. Giving

students a voice which translates into action on behalf of the whole school community has been of particular value. They will be working with schools to develop similar successful health behaviour change projects such as *Food Factor*.

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