

Food provision, cUlture and Environment in secondary schools (FUEL) study

An evaluation of the implementation of national school food standards in secondary schools and their impact on the school food environment and pupil intake of free sugars: a mixed methods study

Health Economic Analysis Plan (HEAP)

1. Administrative information

1.1. Title

Health Economic Analysis plan for the Food provision, cUlture and Environment in secondary schools (FUEL) study: An evaluation of the implementation of national school food standards in secondary schools and their impact on the school food environment and pupil intake of free sugars: a mixed methods study

1.2. Study registration number

ISRCTN68757496

1.3. Source of funding

This study is supported by funding from the National Institute for Health Research Public Health Research Programme (17/92/39)

1.4. Purpose of HEAP

The purpose of this HEAP is to describe the analysis and reporting procedure intended for the economic analyses to be undertaken. The analysis plan is designed to ensure that there is no conflict with the protocol and associated statistical analysis plan and it should be read in conjunction with them.

1.5. Study protocol version

This document has been written based on information contained in the study protocol version 7a, dated 19 April 2021.

1.6. Study Statistical Analysis Plan version

The HEAP is based on the statistical analysis plan outlined in the FUEL study protocol version 7a.

1.7. Study HEAP version

HEAP version: 6.0, Date: 7th June 2022

1.8. HEAP revisions

Updated HEAP version No.	Protocol version	Section number changed	Description of, and reason for, change	Individual making the change	Date changed
2		All	Expanding the HEAP based on the internal discussion	IP	January 2022
3		3-5	Revising the section on economic analysis approach based on the feedback from health economists (CEO)	IP	February 2022
4		2	Updates on statistical analysis to align the HEAP with the SAP	IP, MP	31/03/2022
5		4	Updating unit costs and the list of educational outcomes based on internal discussion	IP	25/05/2022

Updated HEAP version No.	Protocol version	Section number changed	Description of, and reason for, change	Individual making the change	Date changed
			and the feedback from the steering group		
6		5	Missing data section updated based on feedback from the Study Steering Committee and internal group discussions	IP, MP	07/06/2022

1.9. Roles and responsibilities

This HEAP was prepared by Irina Pokhilenko, health economist responsible for conducting and reporting the economic evaluation in accordance with the HEAP, and approved by, Professor Emma Frew, senior health economist and Co-investigator responsible for the economic evaluation.

1.10. Signatures of persons writing HEAP

Signature of person writing the HEAP: Signature of senior health economist: Signature of Chief investigator:



Name: Irina Pokhilenko

Name:

Name:

25.05.2022

Date:

Date:

Date:

2. Study introduction and background

2.1. Study background and rationale

National School Food Standards (SFS) were introduced in 2006 and are a legal requirement for most state schools. In 2013, the School Food Plan (SFP), a wider set of voluntary recommendations for schools, was developed (1), and subsequently updated standards were introduced in 2015 (2). In short, the SFS prescribe what types of foods and drinks are to be provided to pupils in schools required to adhere to the SFS in the UK. There is little information on the impact of SFS on school food provision and pupil food intake in secondary schools, and the impact of the updated standards and the SFP recommendations has not been explored. The way in which the SFS legislation has been introduced means that all academies and free schools set up between 2010 and 2014 are not obliged to meet the standards. This gives an opportunity to examine the influence of a legal requirement to meet the standards by comparing schools which are, versus those which are not required by law to meet them.

2.2. Aim(s) of the study

We aim to make comparisons between secondary schools required to meet the SFS (SFS schools) and those that are not required to meet the standards (non-SFS schools). We will compare: the food provided and sold in schools; the school eating environment and ethos; the healthy eating and cooking skills curriculum; the cost to schools of measures to improve healthy eating and food provision; the consumption of foods high in sugar, other elements of the diet and dental health in pupils. We will also explore the extent to which schools vary in how the SFS and SFP are implemented.

2.3. Objectives of the study

In the two school categories (SFS schools vs non-SFS schools) we aim to:

- Compare the provision and sale of foods, the school environment and culture relating to food, and the healthy eating/cooking curriculum;
- Compare free sugar intake, other dietary intake, and dental health of school pupils, and examine whether any observed differences in these outcomes in the two school groups vary by year group, usual lunch type (school-provided vs. brought from home/elsewhere), or socioeconomic status;
- Compare the costs of food provision, food curriculum delivery, and other measures to influence the school food culture and environment.

We aim to explore the variation in implementation of the statutory SFS and the voluntary SFP recommendations in secondary schools. As part of this we will develop a typology of schools relating to school food: provision; environment; culture; curriculum, and the wider school context, which will reflect the degree of implementation of the SFS, SFP and other local initiatives to improve the diets of pupils. We will use the developed school typology to explore associations between the school types and pupil dietary and dental outcomes.

The specific research questions to fulfil these aims are:

1. Are there differences in the provision of school food between the two school groups?
2. Are there differences in the sales of different food types (e.g. starchy foods, fruit and vegetables, foods high in fat, sugar and salt etc.) between the two school groups?
3. Are there differences in the uptake of school-provided food vs. home-packed lunches/food brought from elsewhere between the two school groups?
4. Are there differences in the eating environment provided / the wider school culture in the two school groups?
5. How does implementation of the SFS and SFP vary across schools?
6. How does the school context influence the implementation of the SFS and SFP?

7. What are the different school types in relation to food provision, culture, environment, the curriculum, and SFS and SFP implementation?
8. What is the economic impact of the SFS and SFP?
9. In pupils in the two school groups, are there differences in:
 - a. free sugar intake (on school days at lunchtime, whilst at school and during the whole 24-hour period),
 - b. other dietary nutrient intake (on school days at lunchtime, whilst at school and during the whole 24-hour period),
 - c. and dental caries experience?
10. Do any differences in pupil dietary and dental outcomes across the two school groups vary by:
 - a. year group,
 - b. lunch type (school-provided vs. home packed),
 - c. and socioeconomic status?
11. Is there an association between school type and dietary and dental outcomes in school pupils?

2.4. Study population

The sampling frame for the study comprises secondary phase academies and free schools located within 14 Local Authority areas in the West Midlands (Birmingham, Coventry, Dudley, Herefordshire, Sandwell, Shropshire, Solihull, Staffordshire, Stoke-on-Trent, Telford and Wrekin, Walsall, Warwickshire, Wolverhampton, Worcestershire). The West Midlands includes urban and rural areas and has a population of around 5 million. It is an ethnically diverse region with 14% from non-White backgrounds and nearly 9% of South Asian ethnicity, and contains high areas of deprivation (e.g. Sandwell, Birmingham, Wolverhampton). In March 2021, the sampling frame was widened to include secondary phase academies and free schools located in eight additional Local Authority areas in the East Midlands (Derby, Derbyshire, Leicester, Leicestershire, Lincolnshire, Northamptonshire, Nottingham City, Nottinghamshire and Rutland), in order to increase the pool of schools from which we can recruit from to meet our recruitment target.

We identified all state secondary school establishments in the Midlands twenty-two Local Authority areas outlined above, which include children aged 11-15 years, using Department for Education routine data. We excluded community schools, voluntary schools, foundation schools, secure and pupil referral units and special or alternative provision schools. We categorised the remaining schools into two groups: 1) schools mandated to adhere to SFS; or 2) schools not mandated to adhere to SFS. The sampling frame is restricted to academies and free schools, as these now comprise the majority of schools and are the only types of state funded secondary schools that have exemption from the national SFS (if established between January 2010 and May 2014). Other secondary school types were excluded as they are all mandated to adhere to the SFS and significantly differ from academies and free schools in terms of their governance structures, or are for specialist/alternative educational provision. Schools and pupils are recruited to participate from within this sampling frame.

Since school characteristics could differ by whether SFS was required or not, propensity scoring was used allow for differences in school characteristics and stratify schools into groups to target sampling. Propensity scores used the following school characteristics:

- Local authority name (area),
- Establishment type,
- Rural or urban categorization,
- Number of pupils,
- Percentage of male pupils,
- Black/minority ethnic groups %,

- English as an additional language %,
- Free school meals %,
- Income deprivation affecting children,
- Sixth form,
- Selective or non-selective admission types,
- And religious or secular type.

The propensity score was derived from a logistic regression model, fitted using these variables to predict whether or not SFS compliance was mandated. The SFS and non-SFS schools were each split into four groups using the propensity score quartile cut-offs in order to try and sample from each group across SFS and non-SFS schools to minimize extraneous differences that may arise from SFS grouping. Additionally, the propensity score will be adjusted for in the analyses.

Students from years 7, 9, and 10 are purposively sampled within each school, based on their classes or other groupings. The sampling process differs by the needs and structure of each school, but aims to be broadly representative of the year group, so groupings based on student-selected subjects or academic streaming are not used. The class's pupils are invited to participate in the study and are offered a £5 shopping voucher as compensation for their participation.

2.5. Intervention(s) and comparator(s)

In this study we plan to compare academies and free schools that are in the following two categories:

- Schools mandated to adhere to the SFS (intervention),
- And schools which are not mandated to adhere to the SFS (comparator).

Furthermore, school-level data relating to food provision and wider school support for healthy eating will be used to group schools into categories ('types') based on the school-level data on food provision and wider school support for healthy eating. We will compare pupil outcomes across the different types of schools. For more information on the development of the school typology, see the Statistical Analysis Plan for the FUEL study.

2.6. Study design

FUEL is an observational, mixed methods study. A variety of data is being collected at the level of the school and from individual school pupils. Initially we aimed to recruit 44 schools; 22 which have a statutory obligation to comply with the SFS, and 22 which are exempt from this requirement. Within each school we aimed recruit a minimum of 45 pupils from three year groups (total n=1980). An additional power analysis was done when it appeared that the average number of students from each school was 68 rather than 45, and that the study team were unlikely to achieve the original target sample size of 44 schools, due to ongoing interruptions resulting from the COVID-19 pandemic. With all the other parameters kept the same, 17 schools in each group would give 88% power while 20 schools in each group would give 93% power to be able to detect a 4g difference in sugar intake between groups. Power analyses were repeated accounting for a likely imbalance across SFS and non-SFS school groups. Keeping other parameters the same, 14 schools in the mandated and 20 schools in the non-mandated groups would give 87% power, and 17 schools in the mandated and 23 schools in the non-mandated groups would give 92% power. No separate sample size calculation was done for the economic evaluation.

We will compare outcomes at the school level (food provision and sales, school meal uptake, eating environment, food curriculum, school food culture, and costs related to these factors) and at the individual level (sugar and other dietary intake, dental caries experience, and health-related quality of

life) in the two school groups. We will also use data captured to explore the implementation and embedding of the SFS, SFP and the influence of the school context on this.

2.7. Study start and end dates

The original timeline for the study proposed data collection to start on October 2019 and continue until July 2020. However, due to school closures from the COVID-19 pandemic, the study was delayed from March 2020 to April 2021. Further, some schools who had agreed to participate before this pause in the study were no longer able to participate. Thus, data collection is planned to be extended through to April 2022.

3. Economic approach/overview

3.1. Aims of economic evaluation

The aim of the economic evaluation is to assess the economic impact of implementing the SFS and the wider SFP in secondary schools in West and East Midlands.

3.2. Objective(s) of economic evaluation

The objectives of the health economic evaluation are:

- 1) To estimate the costs of implementing and delivering the SFS and SFP,
- 2) To summarise the costs and consequences of the SFS and SFP in the secondary schools mandated to implement the SFS compared to the secondary schools not mandated to implement the SFS, and
- 3) To conduct an exploratory cost-utility analysis of the SFS and SFP in the secondary schools mandated to implement the SFS compared to the secondary schools not mandated to implement the SFS.

3.3. Overview of economic analysis

The economic analyses will take the form of a cost-consequence and a cost-utility analysis. For the cost-consequence analysis, costs and consequences will be summarised in the form of a balance sheet for each of the two groups of schools being compared. Furthermore, costs and consequences will be presented for different types of schools based on the developed typology of how schools adhere to the SFS. In addition, an exploratory cost-utility analysis will be performed. In the two groups of schools, differences in QALYs will be compared to the differences in costs.

3.4. Jurisdiction(s)

The study is conducted in the UK. The sampling is restricted to academies and free schools, both of which are publicly funded.

3.5. Perspective(s)

The study will adopt a broader societal sector perspective. We will consider and highlight the distribution of costs and consequences borne by schools, families and pupils.

3.6. Time horizon(s)

The analysis will compare costs and consequences over 12 months.

4. Economic data collection and management

4.1. Statistical software

Statistical analysis will be conducted using STATA version 17 or higher.

4.2. Identification of resources

The following resource-use items will be measured:

- 1) Costs to schools associated with provision of food and implementation of the SFS and the SFP (for more information on the types of resource-use data collected in schools, see section 8.1);
- 2) Costs to families/pupils associated with purchase of food during school (see section 8.3.).

4.3. Measurement of resource-use data

Resource-use data for schools will be measured at one point in time with the intention of capturing one-off costs associated with the implementation of the SFS and the SFP and ongoing annual costs associated with food provision using a study-specific costing survey for schools (see section 8.1.). Additional information on costs of food provision for schools will be obtained via interviews with selected case study schools (see section 8.2.). Costs for families and pupils will be measured at one point in time with the intention to capture typical daily costs of food purchase using a study-specific costing survey for pupils (see section 8.3.).

4.4. Valuation of resource-use data

All resource use will be valued in monetary terms using appropriate UK unit costs or participant valuations estimated at time of analysis. All costs will be converted to British Pounds 2021 using the ONS GDP deflator index.

Table 1. Unit costs for the valuation of resource use

Item	Unit of measurement	Unit cost	Description	Calculation	Source
Teaching staff time	Per hour	£20	Gross average annual salary for other teachers in England (excluding the London area) divided by 39 weeks, 5 working days and 8 working hours	£31,338 (range 25,714 – 36,961) / 39 weeks / 5 days / 8 hours	Teachers' salary: Department of Education (3) Teachers' working weeks: NASUWT Teacher's Union (4)
Catering staff time	Per hour	£11.47 (catering assistants) £19.47 (catering manager, chef)	Local government pay scale for support staff, hourly pay mid-scale of the lower and the higher portions of the scale		National Education Union (5)
Vending machine maintenance	Per week	£46	Weekly average rental		http://www.fhf.org.uk/meetings/2008-07-08_SFT_vending_in_schools.pdf

Item	Unit of measurement	Unit cost	Description	Calculation	Source
Water fountain maintenance	Per year	£17	Average cost of maintaining a water fountain		School data: one FUEL school reported spending £50 per year on maintaining 3 water fountains
Volunteer time	Per hour	£8.91	National Living Wage (for 23 and older)		Gov.uk (6) Based on the unit cost for an hour of unpaid work
Ingredients for cooking classes	Average cost per pupil spent every fourth lesson	£5			(7) Assumption based on parents' survey

4.5. Identification of outcome(s)

The outcome measures for the economic analysis will include:

- Quality Adjusted Life Year (QALY) derived from CHU-9D utility scores,
- Free sugar intake,
- Other dietary intake,
- Dental health outcomes, and
- Educational outcomes.

4.6. Measurement of outcome(s)

Outcomes data will be collected using a cross-sectional study-specific questionnaire for the pupils (see section 8.3.). QALYs will be measured at one time point using the Child-Health Utilities 9-Dimension (CHU-9D) instrument. CHU-9D has previously been used for the measurement of QALYs in general population samples of children and adolescents and has shown to have good psychometric performance (8). Free sugar intake and dietary intake will be measured at two time points on two non-consecutive days using Intake24, an online self-completion 24-hour recall tool that is based on the multiple pass method. Intake24 has been shown to be a convenient and appropriate low cost alternative measure for obtaining information on food intake in young people (11-24 year old) compared to interviewer-led recalls (9). There are also secondary nutritional/food intake outcomes that will be derived from the Intake24 data which include:

- Percentage of dietary energy intake from free sugars,
- Total energy intake (kcal),
- Total fat intake (g),
- Fibre intake (g),
- Number of sugar-sweetened beverages consumed,
- Number of sugar and chocolate confectionery items consumed,
- Number of fruit and vegetable portions consumed,
- Number of foods high in fat, sugar and salt consumed (defined according to the Nutrient Profiling model (10), please refer to the FUEL study SAP for more information).

The nutritional and food intake secondary outcomes listed above will be derived for school day lunch, whilst at school, and during the full 24-hour period of the same school day. Additional nutritional/food intake secondary outcomes (derived from Intake24 data):

- Free sugar intake providing greater than 5% of total energy intake,

- Consumption of 5 or more portions of fruit and vegetables per day,
- Number of eating/drinking occasions (excluding plain water).

Dental health outcomes will be measured at one time point using validated self-report measures from the national Child Dental Health Survey to assess dental symptoms in the last 3 months and treatment received in the last 24 months to indicate caries experience (11). The outcomes of interest from this tool are the presence or absence of caries, the number of dental caries symptoms and whether treatment for dental caries has been received.

Educational outcomes data will be collected from publicly available school records. Available indicators:

- Absenteeism
 - overall rate of absence
 - persistent absence
- Secondary performance
 - progress 8 score
 - attainment 8 score
 - staying in education or entering employment
 - grade 5 or above in English & maths GCSEs

4.7. Valuation of outcome(s)

Utility scores will be derived from responses to CHU-9D. To value the scores, preference weights obtained from a sample of the UK adult general population using the recognised valuation technique of standard gamble will be used (12).

5. Economic data analysis

5.1. Analysis population

All schools that complete the costing survey and all pupils that complete the pupil surveys will be included in the economic analysis.

5.2. Timing of analyses

The primary analysis will be conducted once the data is collected and will take a one-year time horizon.

5.3. Discount rates for costs and benefits

No discount rate will be applied as the data will cover the period of no longer than one year.

5.4. Cost-effectiveness threshold(s)

For the cost-utility analysis, the recommended threshold of £20,000 - £30,000 per QALY will be used (13).

5.5. Statistical decision rule(s)

Mean differences in costs and outcomes between the two school groups will be estimated with associated 95% confidence intervals.

5.6. Analysis of resource-use

Differences in the use of resources in relation to food provision and purchase between the two school groups and the pupils within these groups will be described but not compared statistically.

5.7. Analysis of costs

An appropriate statistical method will be employed to explore the differences in costs between the two groups of schools considering clustering (classes and schools), propensity scores and pupil-level confounders (age, gender, ethnicity, postcode data, and source of school day lunch, i.e. school-provided vs. food brought from home/elsewhere).

5.8. Analysis of outcomes

Linear multilevel models will be developed to assess differences in pupil outcomes between the two school groups (SFS and non-SFS), accounting for clustering (classes and schools), and adjusted for propensity scores and pupil-level confounders (age, gender, ethnicity, postcode data, and source of school day lunch).

5.9. Data cleaning for analysis

Study data will be examined for impossible values and standardised before the analysis.

5.10. Missing data

Study data will be examined for any missing data. The appropriate method for dealing with missing data will depend on the proportion of missing data and likely mechanism of missingness.

5.11. Analysis of cost-effectiveness

5.11.1. Micro-costing

All costs associated with food provision and, for the schools mandated to adhere to the SFS and the SFP, the costs associated with implementation and adherence to the SFS and the SFP will be summarised per school. These costs will be compared between the two groups of schools (SFS schools vs non-SFS schools) and across the schools based on the developed typology.

5.11.2. Cost-consequence analysis

For the cost-consequence analysis, costs and consequences for the two school groups will be listed in the form of a balance sheet, but no further analysis will be conducted. In addition, costs and consequences will be presented for different school types based on the developed typology.

5.11.3. Cost-utility analysis

For the cost-utility analysis, costs for schools and pupils and outcomes data will be combined per school group (SFS schools vs non-SFS schools) and per school type to calculate an incremental cost-effectiveness/cost-utility ratio.

5.12. Sampling uncertainty

The assumption of the study design is that both study arms are balanced and are representative of the general population. The composition of the sample in both study arms will be compared against the composition of the general population of this age (11-15) in the Midlands area. Furthermore, for all values, means and confidence intervals will be reported.

5.13. Subgroup analyses or analysis of heterogeneity

In addition to the comparison between the SFS schools and non-SFS schools, the schools will be compared based on the developed typology with particular emphasis on either end of the spectrum.

5.14. Sensitivity analyses

In the exploratory cost-utility analysis, the main analysis will only include complete cases. Based on the degree and the pattern of missing data, an appropriate method for dealing with missing data will be used. If appropriate, sensitivity analysis will be conducted with the imputed outcome data. Furthermore, non-parametric bootstrapping will be performed to simulate multiple cost and QALY pairs. This will be used to generate a cost-effectiveness acceptability curve, which will indicate the probability of the SFS being cost-effective.

6. Reporting/publishing

6.1. Reporting standards

CHEERS guidelines will be followed when reporting the health economic evaluation, in a format appropriate to stakeholders and policy makers.

6.2. Deviations from the HEAP

Any deviation from HEAP will be described and justified in the final published report.

References

1. Vincent J, Dimpleby H. The School Food Plan 2013 [Available from: http://www.schoolfoodplan.com/wp-content/uploads/2013/07/School_Food_Plan_2013.pdf].
2. HM Government. The Requirements for School Food Regulations 2014. [Available from: <https://www.legislation.gov.uk/ukxi/2014/1603/contents/made>].
3. Department of Education. School teachers' pay and conditions document 2021 and guidance on school teachers' pay and conditions. September 2021. 2021.
4. NASUWT The Teachers' Union. School Calendar, Directed Time Budget and Gained Time 2018 [Available from: <https://www.nasuwt.org.uk/static/uploaded/1ffb502a-f3ce-4a6b-8ce309f4502f51aa.pdf>].
5. National Education Union. Support staff pay and conditions 2021 [Available from: <https://neu.org.uk/advice/support-staff-pay-and-conditions>].
6. National Minimum Wage and National Living Wage rates 2021 [Available from: <https://www.gov.uk/national-minimum-wage-rates>].
7. Islington Council. Cooking Matters: A comprehensive toolkit and guidance for teaching cooking and nutrition in primary schools 2017 [Available from: <https://www.islingtoncs.org/sites/default/files/Cooking%20Matters%20Toolkit%20Screen%20Small%20040218.pdf>].
8. Rowen D, Keetharuth AD, Poku E, Wong R, Pennington B, Wailoo A. A review of the psychometric performance of selected child and adolescent preference-based measures used to produce utilities for child and adolescent health. *Value in Health*. 2021;24:443-60.
9. Bradley J, Simpson E, Poliakov I, Matthews JNS, Olivier P, Adamson AJ, et al. Comparison of INTAKE24 (an online 24-h dietary recall tool) with interviewer-led 24-h recall in 11–24 year-old. *Nutrients*. 2016;8:358.
10. HM Government. The nutrient profiling model 2011. [Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216094/dh_123492.pdf].
11. Holmes R, Porter J, Vernazza C, et al. Children's Dental Health Survey 2013. Country Specific Report: England, 2015. [Available from: <https://digital.nhs.uk/data-and-information/publications/statistical/children-s-dental-health-survey/child-dental-health-survey-2013-england-wales-and-northern-ireland>].
12. Stevens K. Valuation of the child health utility 9D index. *Pharmacoeconomics*. 2012;30:729-47.
13. NICE. Guide to the methods of technology appraisal. National Institute for Health and Clinical Excellence (NICE) London, UK. 2013. [Available from: <https://www.nice.org.uk/process/pmg9/resources/guide-to-the-methods-of-technology-appraisal-2013-pdf-2007975843781>].

7. Appendices

7.1. Schools costing survey (version 4 for online completion)

School Food: Costings Survey



Information for respondents

Thank you for taking the time to complete this survey about your school. The purpose of this survey is to gather information relating to the provision of food and eating environments, the activities and facilities that the school has to support healthy eating, and the related costs that are incurred by the school.

This will contribute to the wider FUEL study, in which we are evaluating the implementation of the national School Food Standards and School Food Plan in secondary schools. The findings of the FUEL study are intended to directly influence future school food policy with the ultimate aim of improving the nutritional intake of secondary school-aged children.

We anticipate that the survey should take about 20-30 minutes to complete. You may need to ask other staff members to help you complete the survey. **If you would like other staff to contribute to answering some questions, please pass the survey link and login code to them. Providing you click on 'save and return later', the system will save all your responses.**

If you would prefer to complete a paper copy of this survey, or would like to talk it through with a member of the research team, then please contact the FUEL study team at fuelstudy@contacts.bham.ac.uk.

The questions will start on the next page.

GENERAL QUESTIONS

Catering providers

1. Does your school have external caterers?

Yes (please go to question 2)

No (please go to question 3)

2. What is the total annual cost of the catering contract?

£

Places to purchase and consume food and drink

3. How many food outlets and dining areas are there within your school? Please think about both indoor and outdoor food outlets and dining areas (include canteens, kiosks, coffee shops and tuck shops in the school, outdoor areas on site and sixth form, if applicable).

4. Who is financially responsible for maintaining the food outlets and dining areas within your school? Please select one option.

The school (please go to question 6)

The catering provider (please go to question 6)

Both the school and the catering provider (please go to question 5)

Other (please specify and go to question 6):

5. What proportion of costs associated with maintaining the food outlets and dining areas is covered by the school?

%

6. Please tell us about the staff involved in food preparation, serving, and meal supervision on a typical school day.

Type of staff	School employed or caterer employed?	Number of staff needed per day	Total hours spent on food preparation, serving or meal supervision per day (for each staff group)
<i>Example: Catering staff</i>	<i>School employed</i>	<i>5</i>	<i>10 hours</i>
Catering staff			
Teaching staff			
Other staff (please specify):			

7. Does your school have vending machines?

- Yes (please go to question 8)
- No (please go to question 10)

8. How many vending machines are there in your school?

9. Is the school financially responsible for maintaining vending machines?

- Yes, all vending machines (please go to question 11)
- Yes, some vending machines (please go to question 10)
- No (please go to question 11)

10. How many vending machines is the school financially responsible for?

Alterations to food outlets and dining areas

We are interested in any substantial changes (and associated costs) that your school has made related to increasing uptake of school meals and/or improving the lunchtime experience for pupils.

11. Have you made any alterations to the food outlets or dining area(s) related to improving the lunchtime experience for pupils/increasing uptake of school meals over the last five years?

- Yes (please go to question 12)
 No (please go to question 13)

12. Please describe these changes and provide an estimate of the costs associated with the changes including one-off (e.g. set-up) costs and annual ongoing costs.

Description of change	Estimate of any one-off costs	Estimate of any on-going costs
	£	£
	£	£
	£	£
	£	£

13. Can you think of any other additional ongoing costs for improving the lunchtime experience for pupils/increasing uptake of school meals over and above what has already been listed? Please describe these costs and estimate an annual amount.

Other ongoing costs	Annual estimate of cost
	£
	£
	£
	£

If you are unable to complete this section, please ask the appropriate member of staff to complete it. Alternatively, you can provide us with the name/job title (and email address if you have it) of the appropriate staff member, and we will we contact them to complete it:

FOOD EDUCATION

Growing food

14. Does your school have an area for growing food?

- Yes (please go to question 15)
- No (please go to question 20)

15. What is the annual cost of maintaining the food growing area(s)? You can provide a rough estimate if you do not have a precise figure.

£

16. Who is responsible for covering the cost of maintaining the food growing area(s)? Please select one option.

- The school (please go to question 18)
- The catering provider (please go to question 18)
- Both the school and the catering provider (please go to question 17)
- Other (please specify and go to question 18):

17. What proportion of costs associated with maintaining the food growing areas is covered by the school?

%

18. Does the catering provider use any of the food grown on-site in its school meals provision?

- Yes
- No
- I don't know

19. Please tell us about the staff and/or volunteers involved in food growing activities at the school including delivery of activities and garden maintenance in a typical week.

Type of staff	Number of staff/volunteers needed per week	Total hours spent per week on food growing activities/garden maintenance (for each staff/volunteer group)
School-employed staff		
Volunteers		
External agency staff		
Other staff (please specify):		

School gardening clubs

20. Does your school offer extracurricular gardening clubs to pupils/parents?

- Yes (please go to question 21)
 No (please go to question 22)

21. Please explain and list the costs associated with the club e.g. costs to parents, pupils, the school, external agencies, etc.

Cookery classes in the curriculum

22. Does your school deliver practical food preparation/cookery lessons in the curriculum?

These may be referred to as Food Science, Food Technology, Cooking and Nutrition, Nutrition Science, Home Economics, or something similar.

- Yes (please go to question 23)
 No (please go to question 28)

23. Please tell us about the staff involved in delivering practical food preparation/cookery lessons.

Type of staff	Number of staff employed	Total hours spent per week delivering the food curriculum (for each staff group)
Qualified food education staff (e.g. Food Technology PGCE; Design and Technology PGCE?)		
Other staff (please specify):		

24. If you use an external agency to deliver these lessons, what is the average annual cost of this service? You can provide a rough estimate if you do not have a precise figure.

£

25. Do pupils/parents cover the cost of their own ingredients?

- Yes
 No

26. Does the school subsidise the purchasing of ingredients for particular groups of pupils e.g. those with Pupil Premium funding?

- Yes
 No

27. If yes, please provide more detail on what groups of pupils are eligible to receive support to purchase ingredients.

--

School cooking clubs

28. Does your school offer extracurricular food preparation/cooking clubs for pupils and/or parents?

- Yes (please go to question 29)
- No (please go to question 39)

29. Please provide a brief description of extracurricular food preparation/cooking clubs offered at your school.

30. Please describe the staff/volunteers involved in the delivery of food preparation/cooking clubs at your school.

Type of staff	Number of staff needed per week	Total hours spent on food preparation/cooking clubs (for each staff/volunteer group)
School-employed staff		
Volunteers		
External agency staff		
Other staff (please specify):		

31. Do pupils/parents pay a fee to attend?

- Yes
- No

32. If pupils/parents pay a fee to attend, how much do they pay per session?

£

33. If you use an external agency to deliver these clubs, how is this paid for? Please select all that apply.

- School pays some/whole costs
- Pupils/ parents pay some/whole costs
- Not applicable

34. If the school pays some/all costs, what is the average cost of this service to the school per session/programme? You can provide a rough estimate if you do not have a precise figure.

£	<input type="checkbox"/> Per session <input type="checkbox"/> Per programme
---	--

35. If you deliver the clubs in-house (i.e. using your own staff), what is the cost of delivering each session in terms of:

Equipment	£
Subsidising/waiving attendance fees?	£
Other (please specify):	£

36. Does the school subsidise the attendance fees/purchasing of ingredients for particular groups of pupils e.g. those with pupil premium funding?

- Yes (please go to question 37)
- No (please go to question 39)

37. If yes, please provide more detail on what groups of pupils are eligible to receive support for attendance fees/purchasing of ingredients.

38. Please estimate the number of pupils receiving support for attendance fees/purchasing of ingredients (total across the whole school per year).

Healthy eating events

39. Does the school run healthy eating events? This could be a one-off session or a range of sessions delivered over an extended period, such as a week or month. This could include nationally-organised events e.g. BNF Healthy Eating Week; LACA National School Meals Week; or those organised more locally or by the school alone.

- Yes (please go to question 40)
- No (please go to question 41)

40. Please provide some further details on the types of events your school holds, and annual costs associated with e.g. staff time, equipment hire, sessions, marketing materials, etc. You can provide a rough estimate if you do not have a precise figure.

Brief description of session	Total annual cost	Who covers the cost?
	£	
	£	
	£	
	£	
	£	
	£	

Other activities to promote healthy eating

41. Please tell us about anything else your school does to promote or support healthy eating, cooking or food growing and provide an annual estimate of costs spent on these activities.

Brief description of activity	Total annual cost	Who covers cost?
	£	
	£	
	£	
	£	
	£	
	£	
	£	
	£	

SCHOOL FOOD GOVERNANCE

Your school Healthy Eating Award

42. Does your school have a Healthy Eating Award?

- Yes (please go to question 43)
- No (please go to question 49)

43. Which of the following awards have been achieved by the school? Please select all that apply.

- Soil Association Food for Life Schools Award – Gold
- Soil Association Food for Life Schools Award – Silver
- Soil Association Food for Life Schools Award – Bronze
- Soil Association Food for Life Schools Award – Served Here / Catering Mark
- Healthy Schools Rating Scheme – Gold
- Healthy Schools Rating Scheme - Silver
- Healthy Schools Rating Scheme - Bronze
- LACA Award for Excellence
- Other (please specify):

44. Did your school need to pay a fee to receive the award(s)?

- Yes, a one-off fee
- Yes, a regular fee to retain the award
- No

45. If yes, what was/is the fee? You can provide a rough estimate if you do not have a precise figure. If you have multiple awards, please provide the figure for each one separately.

46. What additional costs to the school, if any, were associated with achieving this award beyond what has already been captured? You can provide a rough estimate if you do not have a precise figure.

47. Who covered the costs of achieving the award? Please select one option.

- The school (please go to question 49)
- The catering provider (please go to question 49)
- Both the school and the catering provider (please go to question 48)
- Other (please specify and go to question 49):

48. What proportion of costs associated with achieving the award was covered by the school?

%

Your School Food Policy

49. Does your school have a written School Food Policy?

- Yes (please go to question 50)
- No (please go to question 51)

50. If yes, please estimate how much staff time is spent developing or reviewing the school food policy each year. You can provide a rough estimation if you do not have a precise figure.

Subsidising school food

51. Beyond free school meals, please tell us about the subsidies/discounts in relation to food you offer to any of the following groups.

Group	Subsidies/discounts offered (y/n)	Annual cost of provision of these subsidies/discounts
Year 7 pupils		
Families with more than one child at school		
Children purchasing school lunch every day		
Staff		
Other group (please describe):		

52. Please tell us about any other subsidies / funding you offer to support pupils or staff to access food at school (including breakfast or an evening meal).

Other funding to support healthy eating

53. Please tell us about any other funding sources that support school food provision or food education (including funding source, value of funding and how this is spent).

Independent monitoring of school food

54. Have you sought expert and/or independent support for school food monitoring?

Yes (please go to question 55)

No (please go to question 57)

55. If yes, please provide an estimate of annual costs associated with school food monitoring.

£

56. Have you sought expert and/or independent support for any of the following tasks?

	Y / N
Drafting the catering contract	
Monitoring compliance with the School Food Standards	
Monitoring compliance with the Government Buying Standards	
Improving school food quality and take-up	
Teaching pupils about healthy eating or food preparation e.g. chefs	
Other (please specify):	

Training for school staff on health and well-being

57. In a typical year, do your staff undertake any training on health and well-being? This applies to teaching staff and any other school staff, including catering staff that are directly employed by the school (but not catering staff who are employed by external catering contractors). This may include internal or external workshops, qualifications/certificates, online training, webinars and attendance at conferences. Some examples may include the British Nutrition Foundation webinars, LACA seminars etc.

- Yes (please go to question 58)
- No (please go to question 59)

58. If yes, what type of health and well-being training is undertaken by staff in a typical school year? You can provide a rough estimate of cost if you do not have a precise figure.

Description of training	No. sessions	Total annual cost	Classroom cover required? (y/n)	Number of staff attending	Who covers the cost?
Workshop –external provider		£			
Workshop –in-house		£			
Course –external provider		£			
Course –in-house		£			
Formal qualification / certification		£			
Online training course		£			
Webinar		£			
Conference		£			
Other (please specify):		£			

If you are unable to complete this section, please ask the appropriate member of staff to complete it. Alternatively, you can provide us with the name/job title (and email address if you have it) of the appropriate staff member, and we will we contact them to complete it:

Other costs

59. Has your school incurred any of the costs associated with provision of food listed below?

Type of cost	Applicable (y/n)	Estimated annual spend	Who covers the cost?
Provision of water to pupils (e.g. water fountains)		£	<input type="checkbox"/> The school <input type="checkbox"/> The catering provider <input type="checkbox"/> Other (please specify):
School food clubs in which food is served (e.g. breakfast clubs, after school clubs)		£	<input type="checkbox"/> The school <input type="checkbox"/> The catering provider <input type="checkbox"/> Other (please specify):
Food rewards for good behaviour		£	<input type="checkbox"/> The school <input type="checkbox"/> The catering provider <input type="checkbox"/> Other (please specify):

Thank you for taking the time to complete the questionnaire

If there is anything additional you would like to tell us in relation to school food, please do so by writing in the space below. If you have nothing further to add please leave the space blank.

7.2. Interview questions for case study schools

Topic guide: Catering staff

Prior to starting interview:

- Ask if the interviewee has had a chance to read the participant information sheet
- Give a short summary of the research
- Ask if the interviewee has any questions
- Inform the interviewee the interview will be audio-recorded and confirm they are happy to go ahead
- Ensure that the consent form has been completed accurately and collected
- Ensure that the staff demographic questions have been completed

School culture / ethos

1. Can you tell me about your school's ethos in relation to food?

Factors influencing foods/drinks served at school

1. What influences the food and drinks you serve/provide?
2. How do you see your role in relation to ensuring healthy food/drinks are provided in school?
3. How do you interact/engage with the school / pupils / parents / others about school food?

The School Food Standards (if raised by interviewee)

4. [You mentioned the school food standards earlier]. Can you tell me about your experience of using the school food standards in your school?

Creating a culture of healthy eating

5. Can you tell me about any other ways in which your school supports pupils to have a healthy diet? What is your role in this?
6. How easy or difficult is it to support pupils to have a healthy diet?
7. Can you tell me about the lunchtime experience in your school?
8. Can you tell me about anything the school does to increase the uptake of school meals? What is your role in this?

The School Food Plan

9. Can I ask you about the School Food Plan? Is this something you have used in your school? If so how?

Monitoring and evaluating school food

10. Can you tell me about any ways in which you monitor or evaluate school food?
11. What kind of impact do you think your work on school food has?
12. What would you change about school food in your school?

Costs

13. Can you explain how your contract with the school is set up? What are the key factors that are negotiated with the school during the contracting process?
14. Can you tell me about the costs of providing healthy food / creating a culture of healthy eating specifically?
15. How do you decide how much to charge the pupils – how are prices set?

Wider contextual factors

16. What other factors play a part in the food culture in your school?
17. Is there anything else you would like to add that you haven't already mentioned?

Topic guide: Governors

Prior to starting interview:

- Ask if the interviewee has had a chance to read the participant information sheet
- Give a short summary of the research
- Ask if the interviewee has any questions
- Inform the interviewee the interview will be audio-recorded and confirm they are happy to go ahead
- Ensure that the consent form has been completed accurately and collected
- Ensure that the staff demographic questions have been completed

School culture / ethos

2. Can you tell me about the school's ethos in relation to food?

Factors influencing foods/drinks served at school

18. Can you tell me about your involvement in school food?
19. How do you see your role and the role of the Board of Governors in relation to ensuring healthy food is provided in school?
20. What influences the food and drinks served/provided at the school?
21. What influenced decision-making regarding the school's catering arrangements?

The School Food Standards (if raised by interviewee)

22. [You mentioned the school food standards earlier]. Can you tell me about your experience of using the school food standards in your school?

Creating a culture of healthy eating

23. Can you tell me about any other ways in which the school supports pupils to have a healthy diet?
24. As a governor, what do you feel is your role in this / in health and well-being within the school generally?
25. Can you tell me about the lunchtime experience in your school?
26. Can you tell me about anything the school does to increase the uptake of school meals? What is your role in this?
27. Can you tell me about food education at the school?

The School Food Plan

28. Can I ask you about the School Food Plan? Is this something that has been used in the school? If so how? Can you tell me about your experience of the School Food Plan in the school?
29. Are you aware of a protected budget to support implementation? If no budget then, how do you prioritise spend towards implementing SFP versus other alternative uses of resource?

Monitoring and evaluating school food, health and well-being

30. Can you tell me about any ways in which you are involved in the monitoring or evaluation of school food, health and wellbeing?
31. What kind of impact do you think your school's work on school food has?

32. What would you change about school food in your school?

Costs

- 33. Can you tell me about your involvement in decisions on expenditure in relation to school food, health and well-being?
- 34. Can you tell me about the costs of providing healthy food / creating a culture of healthy eating specifically?

Wider contextual factors

- 35. What other factors play a part in the food culture in your school?
- 36. Is there anything else you would like to add that you haven't already mentioned?

Topic guide: Business Managers / Head Teacher / Assistant or Deputy Head

Prior to starting interview:

- Ask if the interviewee has had a chance to read the participant information sheet
- Give a short summary of the research
- Ask if the interviewee has any questions
- Inform the interviewee the interview will be audio-recorded and confirm they are happy to go ahead
- Ensure that the consent form has been completed accurately and collected
- Ensure that the staff demographic questions have been completed

School culture / ethos

3. Can you tell me about your school's ethos in relation to food?

Factors influencing foods/drinks served at school

37. What influences your decisions regarding your catering arrangements?
38. What influences the food and drinks you serve/provide?
39. How do you see your role in relation to ensuring healthy food/drinks are provided in school?
40. Who leads on school food provision and healthy eating within the school?
41. How do you interact/engage with colleagues, pupils and parents about school food?

The School Food Standards (if raised by the interviewee)

42. [You mentioned the school food standards earlier]. Can you tell me about your experience of using the school food standards in your school?

Creating a culture of healthy eating

43. Can you tell me about any other ways in which your school supports pupils to have a healthy diet?
44. What is your role in this? Who else do you involve?
45. How easy or difficult is it to support pupils to have a healthy diet? What are the challenges?
46. Can you tell me about the lunchtime experience in your school?
47. Can you tell me about anything the school does to increase the uptake of school meals? What is your role in this?
48. Can you tell me about food education at the school?

The School Food Plan

49. Can I ask you about the School Food Plan? Is this something you have used in your school? If so how?

Monitoring and evaluating school food

50. Can you tell me about any ways in which you monitor or evaluate school food and/or food education?
51. What would you change about school food in your school?

Costs

52. Can you tell me about the costs of providing healthy food / creating a culture of healthy eating specifically?

Wider contextual factors

53. What other factors play a part in the food culture in your school?

54. Is there anything else you would like to add that you haven't already mentioned?

Topic guide: Teachers involved in food education

Prior to starting interview:

- Ask if the interviewee has had a chance to read the participant information sheet
- Give a short summary of the research
- Ask if the interviewee has any questions
- Inform the interviewee the interview will be audio-recorded and confirm they are happy to go ahead
- Ensure that the consent form has been completed accurately and collected
- Ensure that the staff demographic questions have been completed

School culture / ethos

4. Can you tell me about your school's ethos in relation to food?

Food education

5. Can you tell me about food education at your school?
6. What is your role in this? Who else is involved?
7. How easy or difficult is it to deliver food education at your school?
8. How do you interact with colleagues / pupils / parents / others about food education?
9. Can you tell me about any ways in which you monitor or evaluate food education in your school?
10. What kind of impact do you think your work on food education has?
11. What would you change about food education in your school?

Factors influencing foods/drinks served at school

12. What influences the food and drinks served/provided at your school?

Creating a culture of healthy eating

13. Can you tell me about any other ways in which your school supports pupils to have a healthy diet? What is your role in this?
14. How easy or difficult is it to support pupils to have a healthy diet?

The School Food Plan

15. Can I ask you about the School Food Plan? Is this something you have used in your school? If so how?

Costs

16. How is the delivery of food education budgeted for within the school?
17. What are the competing priorities, and how are decisions made on where to divert the funding?

Wider contextual factors

18. What other factors play a part in the food culture in your school?
19. Is there anything else you would like to add that you haven't already mentioned?

7.3. Pupil cross-sectional survey



Pupil Survey Session 1

Information for pupil

Only the researchers will read your answers. Your name will not be used in any reports.

Part 1 Personal details

1. What is your year group?

- Year 7
- Year 9
- Year 10

2. What is your name?

a) First name: _____

b) Surname: _____

3. What is your date of birth? Day: __ __ Month: __ __ Year: __ __ __ __

4. What is your home postcode? (Please write in full) _____

If you have more than one address, please use the one where you spend most of your time

Please continue overleaf

Part 2 About you

5. What is your sex? (Please select the option for how you identify. Tick one box only)

- Female
- Male
- Other (please describe) _____
- I would rather not say

6. Please select **one group** from the list below that best describes you

White

- English / Welsh / Scottish / Northern Irish / British
- Irish
- Gypsy or Irish Traveller
- Any other White background (please specify) _____

Mixed / Multiple ethnic groups

- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed / Multiple ethnic background (please specify) _____

Asian / Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background (please specify) _____

Black / African / Caribbean / Black British

- African
- Caribbean
- Any other Black / African / Caribbean background (please specify) _____

Other ethnic group

- Arab
- Any other ethnic group (please specify) _____

- I would rather not say

7. Do you receive Free School Meals? (Tick one)

- Yes
- No
- I don't know
- I would rather not say

Part 3 Your school canteen

8. To what extent do you agree or disagree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Not relevant to me
a) I feel rushed when <u>buying</u> food from the canteen						
b) I am given enough time to <u>eat my lunch</u> at school without feeling rushed						
c) There is space in the school dining area for me to sit down at a table to eat						
d) The areas where I can eat my lunch at school are clean						
e) The areas where I can eat my lunch at school are attractive						
f) The areas where I can eat my lunch at school are happy environments						
g) The areas where I can eat my lunch at school are calm environments						
h) The food and drink on offer at school looks appetising						
i) School food tastes good						
j) Teachers and staff eat in the school dining areas						

9. a) Do you ever get food or drinks for your lunch from the school canteen?

- Yes
- No [If no, please go to part 4]

9. b) On days when you get food or drinks for your lunch from the school canteen, how long do you usually queue to buy your lunch?

- Less than 5 mins
- 5-15 mins
- 16-30 mins
- Over 30 mins

9. c) To what extent do you agree or disagree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Not relevant to me
i. Catering staff encourage me to try new foods						

ii. Catering staff are happy						
iii. Catering staff talk to me / help me / are helpful						
iv. Catering staff encourage me to have a variety of food types (e.g. fruit/vegetables; dairy foods etc.)						
v. Catering staff put vegetables on my plate without me asking						

10. Has your school changed the types of food and drink it serves this term due to Covid-19 restrictions?

- Yes
- No
- I don't know

11. If yes, please tell us how it has changed

12. Have eating arrangements at your school changed due to Covid-19 restrictions? E.g. How long you are given for your lunch break, the spaces you are allowed to eat/drink in

- Yes
- No
- I don't know

13. If yes, please tell us how they have changed

Part 4 Does your school support healthy eating?

14. Does your school have a School Food Policy?

- Yes
- No
- I don't know

15. To what extent do you agree or disagree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
a) The school encourages healthy eating					
b) I know what to eat and drink to have a healthy diet					
c) I am confused about what to eat and drink to have a healthy diet					
d) There are signs/posters promoting healthy eating messages at school					
e) The school encourages me to drink water as my main drink					
f) I have easy access to free drinking water at school (including being able to easily fill up a water bottle brought from home)					
g) The school offers prizes for bringing in a healthy packed lunch					

16. To what extent do you agree or disagree that the school menu is easily available for you to view in advance?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Not relevant to me

17. In the last 6 months has your school/any of your teachers used confectionery or sweets, chocolates, cakes, or biscuits as a reward?

- Yes
- No
- I don't know

Part 5 Food education at your school

18. To what extent do you agree or disagree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
a) I learn about healthy eating and nutrition at my school					
b) I have had opportunities to learn food preparation and cooking skills <u>during lessons</u> in this school e.g. food technology / food science or similar					

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
c) I have had opportunities to learn food growing/gardening skills <u>during lessons</u> in this school					
d) I have had opportunities to learn food preparation and cooking skills at <u>school clubs</u> (outside of timetabled lesson time)					
e) I have had opportunities to learn food growing/gardening skills at <u>school clubs</u> (outside of timetabled lesson time)					

19. To what extent do you agree or disagree that in cooking lessons (e.g. food technology / food science or similar), you mostly learn how to cook savoury dishes?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree
- Not relevant to me

Part 6 School engagement with pupils

20. To what extent do you agree or disagree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
a) There are opportunities for me to give my views on food and drink provided by school					
b) There are events, assemblies or displays about healthy eating at my school					
c) In the last 12 months, I have had the opportunity to try samples/tasters of school food					
d) There are opportunities for me to help out in the school kitchen/dining room e.g. help prepare, cook or serve the food					

Part 7 Your dental health

21. Overall, would you say that your dental health (that is the health of your teeth and mouth) is... (Tick one answer only)

- Very good
- Good
- Fair
- Poor
- Very poor

22. In the last three months, have you experienced any of the following?

- a) Toothache Yes No
- b) Sensitive tooth Yes No
- c) Bleeding or swollen gums Yes No
- d) A broken tooth Yes No
- e) Mouth ulcers (small painful sores inside the mouth) Yes No
- f) Bad breath Yes No
- g) A filling Yes No
- h) A decayed tooth taken out Yes No

23. Have you ever had any of the following treatments?

- | | | | | |
|---|--------------------------|-----|--------------------------|----|
| a) Filling of a permanent (adult) tooth | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| b) Permanent (adult) tooth taken out due to decay | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| c) Filling of a milk (baby) tooth | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| d) Milk (baby) tooth taken out | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| e) A general anaesthetic before dental treatment (you were put to sleep during the treatment) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| f) Sedation before dental treatment (you were awake during the treatment but were given medicine to relax you before the treatment started) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| g) A brace fitted or adjusted | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| h) Repair of damage to teeth after fall or other injury | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| i) Scale and polish (teeth cleaned) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| j) Preventive treatment to stop teeth decaying or going bad (e.g. by painting and/or scaling the teeth) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| k) Advice on how to look after teeth (diet or tooth brushing advice) | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| l) Other treatments | <input type="checkbox"/> | Yes | <input type="checkbox"/> | No |

24. How often do you usually brush your teeth with toothpaste?

- Three times a day and more
- Twice a day
- Once a day
- Less than once a day
- Never

Part 8 What did you have to eat and drink yesterday?

You will now be asked to open a webpage where we will ask you about everything you had to eat and drink yesterday.

Before you complete the next survey, please answer the question(s) overleaf.

25. Were you at school yesterday?

- Yes – please tell us what you had to eat and drink yesterday

- No – please tell us about what you had to eat and drink on your most recent day at school

If yes to Q20:

25. a) Did you eat lunch yesterday?

- Yes
- No

If no to Q20:

26. a) Did you eat lunch on your most recent day at school?

- Yes
- No

26. b) (If answered yes to either questions for 21a) When did you eat your lunch?

- During the school lunch break
- During mid-morning break
- Any other time of the day (please specify)

Thank you for taking the time to complete this questionnaire

Follow-up

Would you like to receive a summary report of the study findings once complete?

- Yes
- No

If yes, please provide your email address (You can give your personal or school email address. This will not be stored with your answers to this questionnaire).

Pupil Survey Session 2

Information for pupil

Only the researchers will read your answers. Your name will not be used in any reports.

Part 1 Personal details

27. What is your year group?

- Year 7
- Year 9
- Year 10

28. What is your name?

a) First name: _____

b) Surname: _____

29. What is your date of birth? Day: __ __ Month: __ __ Year: __ __ __ __

30. What is your home postcode? (Please write in full) _____

If you have more than one address, please use the one where you spend most of your time

Part 2 About you

31. What is your sex? (Please select the option for how you identify. Tick one box only)

- Female
- Male
- Other (please write in) _____
- I would rather not say

32. Please select one group from the list below that best describes you

White

- English / Welsh / Scottish / Northern Irish / British
- Irish
- Gypsy or Irish Traveller
- Any other White background (please specify) _____

Mixed / Multiple ethnic groups

- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed / Multiple ethnic background (please specify) _____

Asian / Asian British

- Indian
- Pakistani
- Bangladeshi
- Chinese

Please turnover for more options

- Any other Asian background (please specify) _____

Black / African / Caribbean / Black British

- African
 Caribbean
 Any other Black / African / Caribbean background (please specify) _____

Other ethnic group

- Arab
 Any other ethnic group (please specify) _____

- I would rather not say

Part 3 Travel to and from school

33. How do you usually travel to school?

- Walk/cycle
 Public transport
 By motor vehicle
 Other (please state) _____

34. Please tell us roughly how long it usually takes you to travel to school from home

- Less than 10 mins
 10-19 mins
 20-29 mins
 30-59 mins
 60 minutes or longer

35. How do you usually travel home from school?

- Walk/cycle
 Public transport
 By motor vehicle
 Other (please state)

36. Please tell us roughly how long it usually takes you to travel home from school

- Less than 10 mins
 10-19 mins
 20-29 mins
 30-59 mins
 60 minutes or longer

Part 4 Your lunch arrangements

37. In a typical school week, how often do you consume any of the following?

	Every school day	Four times a week	Three times a week	Twice a week	Once a week	Less than once a week	Never
A school dinner/lunch							
Breakfast from school canteen							
Snacks or drinks purchased from school							

If you never buy food or drinks from school, please continue to question 14.

38. Do you receive Free School Meals? (Tick one)

- Yes
- No
- I don't know
- I would rather not say

39. Roughly how much do you typically spend on food and drink purchased at school across the school day? (If you have a Free School Meal, only count spending on food and drinks purchased in addition to your Free School Meal)

- Less than £1
- £1-£2.99
- £3-£4.99
- £5-£6.99
- £7 or more
- I do not buy food and drink at school

40. In a typical school week, how often do you take any of the following with you to school?

	Every school day	Four times a week	Three times a week	Twice a week	Once a week	Less than once a week	Never
Food snacks to eat at morning or afternoon break							
Drink(s) to have at morning or afternoon break							
Packed lunch							

41. In a typical school week, how often do you do the following?

	Every school day	Four times a week	Three times a week	Twice a week	Once a week	Less than once a week	Never
Buy your lunch from local shops or takeaways to eat during the school day							
Buy a drink or a snack from a local shop or takeaway that is not part of your lunch on your way to and/or from school							

If you never buy food or drinks from local shops to have during the school day, please continue to PART 5.

42. Roughly how much do you typically spend on food and drink purchased from shops and takeaways to have during the school day?

- Less than £1
- £1-£2.99
- £3-£4.99
- £5-£6.99
- £7 or more
- I do not buy food and drink at school from local shops to have during the school day

Part 5 Questions about your general well-being and sleep

These questions ask about how you are **today**. For each question, read all the choices and decide which one is most like you **today**. Then put a tick in the box next to it like this . Only tick **one** box for each question.

Example

Today I feel quite upset so I will tick this box.

Upset

- I don't feel upset today
- I feel a little bit upset today
- I feel a bit upset today
- I feel quite upset today
- I feel very upset today

Now think about and answer the rest of the questions below

43. Worried

- I don't feel worried today
- I feel a little bit worried today

- I feel a bit worried today
- I feel quite worried today
- I feel very worried today

44. Sad

- I don't feel sad today
- I feel a little bit sad today
- I feel a bit sad today
- I feel quite sad today
- I feel very sad today

45. Pain

- I don't have any pain today
- I have a little bit of pain today
- I have a bit of pain today
- I have quite a lot of pain today
- I have a lot of pain today

46. Tired

- I don't feel tired today
- I feel a little bit tired today
- I feel a bit tired today
- I feel quite tired today
- I feel very tired today

47. Annoyed

- I don't feel annoyed today
- I feel a little bit annoyed today
- I feel a bit annoyed today
- I feel quite annoyed today
- I feel very annoyed today

48. School Work/Homework (such as reading, writing, doing lessons)

- I have no problems with my schoolwork/homework today
- I have a few problems with my schoolwork/homework today
- I have some problems with my schoolwork/homework today
- I have many problems with my schoolwork/homework today
- I can't do my schoolwork/homework today

49. Sleep

- Last night I had no problems sleeping
- Last night I had a few problems sleeping
- Last night I had some problems sleeping
- Last night I had many problems sleeping
- Last night I couldn't sleep at all

50. Daily routine (things like eating, having a bath/shower, getting dressed)

- I have no problems with my daily routine today
- I have a few problems with my daily routine today
- I have some problems with my daily routine today
- I have many problems with my daily routine today
- I can't do my daily routine today

51. Able to join in activities (things like playing out with your friends, doing sports, joining in things)

- I can join in with any activities today
- I can join in with most activities today
- I can join in with some activities today
- I can join in with a few activities today
- I can join in with no activities today

52. Roughly, what time did you fall asleep last night? (We are interested in the time you went to sleep, not the time you went to bed) _____

53. Roughly, what time did you wake up this morning? (We are interested in the time you woke up, not when you got out of bed) _____

Part 6 What did you have to eat and drink yesterday?

You will now be taken to another webpage where we will ask you about everything you had to eat and drink yesterday.

Before you complete the next survey, please answer the question(s) below.

54. Were you at school yesterday?

- Yes – please tell us what you had to eat and drink yesterday
- No – please tell us about what you had to eat and drink on your most recent day at school

If yes to Q28:

55. Did you eat lunch yesterday?

- Yes
- No

If no to Q28:

29. Did you eat lunch on your most recent day at school?

- Yes
- No

30. (If yes to either versions of question 29) When did you eat your lunch?

- During the school lunch break

- During mid-morning break
- Any other time of the day (please specify)

Thank you for taking the time to complete this questionnaire

Follow-up

Would you like to receive a summary report of the study findings once complete?

- Yes
- No

If yes, please provide your email address (You can give your personal or school email address. This will not be stored with your answers to this questionnaire).
