



## FOOD & HEALTHY EATING

A collection of experiments investigating food and linking to the topic of healthy eating

---

### Curriculum Links

**Sc1** Testing ideas, planning investigations, collecting & using evidence, making observations & measurements, evaluating & presenting results

**Sc2** Nutrition & the importance of an adequate and varied diet for health

---

### Summary of Experiments

*General Format: Whole class with small groups (each approx 5 children) or carousel with small groups (each approx 6 children) on each experiment*

- TESTING FOR VITAMIN C ~ in samples of fruit juices
- TESTING FOR STARCH ~ using a colour-change reaction
- TESTING FOR FAT ~ by careful observation
- TESTING FOR PROTEIN ~ using a colour-change reaction
- CAN FOOD CLEAN COINS? ~ testing the properties of different foods
- DANCING FOOD ~ observe how static electricity & gas make foods move
- ICE-CREAM IN A BAG ~ a recipe which is simple, but tasty!

---

### Health & Safety Considerations

NB. ALL FOOD ITEMS TO BE PROVIDED BY SCHOOL DUE TO HEALTH & SAFETY LIMITATIONS (THEY CANNOT BE STORED IN CHEMISTRY DEPT)

SOME EXPERIMENTS REQUIRE LAB-COATS (OR SIMILAR E.G. PAINTING APRONS) & EYE-PROTECTION – SAFETY GLASSES OR GOGGLES

! NO EATING OR DRINKING IN THE LABORATORY

! ALWAYS WASH YOUR HANDS AFTER DOING SCIENCE

**! DISCARD ALL FOOD SAMPLES IMMEDIATELY AT END**

---

**Box Development by:** Sarah Earle, Elmlea Junior School

**EQUIPMENT LIST**

Item	Number in Box	For Experiment/s	Returned?
Sample trays	6	Testing for Vitamin C	
Plastic stirring rods - 150mm	6	Testing for Vitamin C Testing for Starch	
Clear plastic petri dishes	30	Testing for Starch	
Spatulas	6	Testing for Starch	
Stopwatches	6	Testing for Starch Dancing Food	
Test tubes	12	Testing for Protein	
Test tube racks	2	Testing for Protein	
Plastic beakers (50ml)	6	Testing for Protein	
Spatulas	6	Testing for Protein	
Woollen rubbing cloths	3	Dancing Food	
Glass friction rod	3	Dancing Food	
Perspex friction rod	3	Dancing Food	
Ebonite friction rod	3	Dancing Food	
Polythene strip	3	Dancing Food	
Perspex sheet	1	Dancing Food	
Teaspoon	1	Can Food clean Coins	

**CONSUMABLES LIST**

Item	Amount in Box	For Experiment/s	Returned?
Plastic pipettes	24 total	6	Testing for Vitamin C
		6	Testing for Starch
		6	Testing for Fat
		6	Testing for Protein
pH Paper strips	2 books	Testing for Vitamin C	
		Can Food clean Coins	
Cotton Buds	300 total	100	Testing for Fat
		200	Can Food clean Coins
Sugar paper A4, white	30 sheets	Testing for Fat	
Lab roll	2 rolls	Testing for Fat	
		Can Food clean Coins	
Balloons	6	Dancing Food	
Clear plastic cups	130 total	30	Dancing Food
		100	Can Food clean Coins
1% DCPIP solution (2,6-dichlorophenol-indophenol)	100ml	Keep in Fridge	Testing for Vitamin C
Iodine solution (I in KI, concentration < 1 mol/l)	100ml	Testing for Starch	
Biuret solution	100ml	Testing for Protein	
De-ionised water	1 litre	Testing for Protein	
Salt	500g	Can Food clean Coins	

**TO BE PROVIDED BY SCHOOL**

*For Health & Safety reasons all food items must be provided by school  
(they cannot be stored in Chemistry Prep Room)*

<b>Item</b>	<b>Number / Amount required (per class)</b>	<b>For Experiment/s</b>
Range of fruit juices/drinks e.g. orange juice, water, milk, squash	Approx. 200ml of each	Testing for Vitamin C
Selection of uncooked food e.g. rice, apple, potato, cereal, crackers...	Approx. 100g of each	Testing for Starch
Food e.g. peanut butter, oil, margarine, milk, cake, bread, crisps etc.	Approx. 100g of each	Testing for Fat
Food/Drink e.g. egg white, milk, lemonade, yogurt, fruit puree etc.	Approx. 100g / 100ml of each	Testing for Protein
Old 1p or 2p coins	Approx. 100	Can Food clean Coins
Acidic food e.g. vinegar, fizzy drink(s), fresh lemon and/or orange juice, tomato ketchup	Approx. 1 litre of each	Can Food clean Coins
Selection of cereal	Approx. 500g of each	Dancing Food
Fizzy Water / Lemonade	Approx. 1 litre of each	Dancing Food
Raisins, nuts, grapes etc.	Approx. 200g of each	Dancing Food

**Ice Cream in a Bag**

*As the ice cream will be consumed, all ingredients, containers & utensils must be provided by the school*

**Amount required for one class (approx. 30 pupils)**

Yazoo Milk Drink (chocolate and strawberry)	3 x 500ml bottles
Fresh Milk	Approx. 250ml / ½ pint
Blue bags ice cubes	7 bags (approx. 35 cubes per bag)
Salt	1 kg
Caster sugar	150 g
Wafers	30
Small zip-seal bags (approx. 12x12cm)	10
Large zip-seal bags (approx. 20x20cm) – to double-bag when shaking	20
Large bowls e.g. washing-up bowl (to shake over)	6
Plastic cups (for measuring)	6
Tablespoon measures	6
Small bowls (for serving)	6
Spoons (for serving)	6
Paper towel	2 rolls
Warm gloves	Each child to bring a pair