Science - Year 3

Animals incl. Humans - Block 3AH

Keeping Healthy

Session 1

Resource Pack

		N	umber of portions	of Fruit and Vegetable	s eaten each day		
sus							
Number of portions							
r of p							
aqwr							
ž							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Monday	ruesuay	weullesday	Day of the Week	riludy	Saturday	Sunday

Client's N	ame			Researchers' Name	S		
			Number of Teas	oons of Sugar Eat	en per Day		
ugar							
Teaspoons of sugar							
Teaspo							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	Worlday	Tuesuay	weullesday	Day of the Week	Filday	Saturday	Sunday

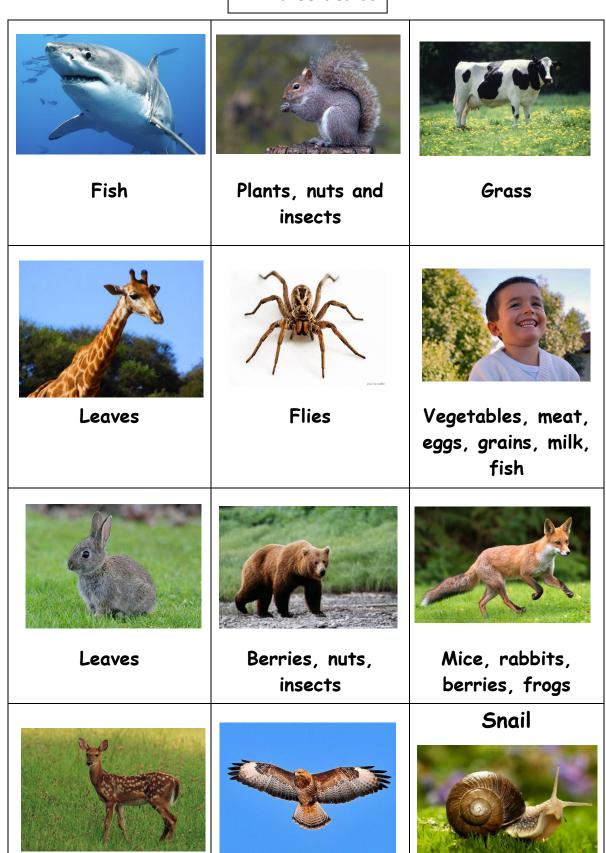
Sunday
Sunday

Name:	Age:	Occupation:
How much exercise do you take eac spend doing it, e.g. Walking 2x a day	•	list each activity and how long you or swimming 1x a week for 45 minutes)

Do you take sugar in tea and coffee? If yes, how many teaspoons in each?

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday					
Tuesday					
Wednesday					
Wednesday					
Thursday					
Friday					
Caturday					
Saturday					
Sunday					
,					
	I	l	<u> </u>	<u> </u>	<u> </u>

Animal Sort Cards



Mice, rats,

rabbits, birds

Plants and fungi

Plants, nuts, berries



Fish



Roots, twigs, grass, bushes, tree bark



Nuts, seeds, worms, berries



Worms, snails, slugs, insects, plants



Grass and other plants



Mice, rats, frogs, toads, nuts, seeds, berries



Antelope, zebra, wart hogs, young crocodiles



Fish, squid, octopus



Bamboo



Fish, insects, worms scavenged human food, berries, seeds



Plants, fish, worms, insects, slugs



Grass and other plants



Grains, fruits, seeds



Plants, shrubs, fruit, grains



Leaves



Grass



Decaying roots and leaves in soil



Grains, fruits, worms, insects

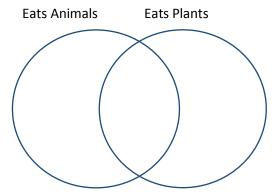
How to Play Diet Riot

You need

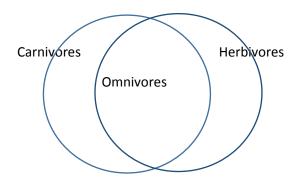
- 2 P.E. hoops for each group
- A set of animal cards for each group (each set printed on a different colour of paper or card and cut up into 30 individual cards)
- A set of 5 Diet Riot labels for each group
- Access to a large space, e.g. hall if possible (for a more active game) but it can also be played in the classroom

How to play

1. Allocate each group a base – a piece of floor around the edge of the playing space (or a table if using the classroom) where they can set out their hoops and label them as below:



- 2. Allocate each group a colour that corresponds to a set of animal cards.
- 3. The groups should now decide where to place their other 3 labels *Carnivores, Herbivores* and *Omnivores* (putting one into each of the sections created). Before continuing with the game the teacher should check that groups have done this correctly:



- 4. The teacher should now scatter all the cards mixed together around the centre of the playing space. It doesn't matter which way up they fall. If playing in the classroom this could be between the tables and chairs or even under them!
- 5. The members of each group should number themselves 1, 2, 3, 4, etc.
- 6. When the teacher gives the signal "123 Diet Riot!" all the children numbered 1 should quickly and carefully tread between the scattered animal cards and retrieve a card of their own colour. They should return to their group and place it in the correct section of their Venn diagram. The other group members can offer suggestions but only the child who picked it up can place it. Once the card is placed, player number 2 may go and retrieve another card and sort it in the same way.
- 7. Each player sorts a card of their colour in turn as described until every member of the group has done so, then player number 1 goes again and so on until all the cards of that group's colour have been placed inside the Venn diagram.

- 8. No player can leave the base to collect a card unless the previous card has been placed.
- 9. If one member of the group thinks that a card has been mistakenly placed in the wrong section they can use their next turn to re-sort that card instead of retrieving a new one.
- 10. Once the group have found and sorted all 30 cards they should sit beside their Venn diagram and shout "Sorted"
- 11. The winning group is the first group to **correctly** sort all 30 cards of their colour.

Variations of the game and alternative games to continue reinforcing the scientific vacabulary

- Try playing again without the "Eats Animals" and "Eats Plants" labels to ensure children are learning the scientific vocabulary.
- Play Diet Riot snap divide the cards between the group members. Take turns to lay cards face up on a pile. Everyone looks to see if that card is a Carnivore, Herbivore or Omnivore. Say "Snap" if 2 consecutive cards are in the same dietary group. The first child to say "snap" wins the whole pile. The player with the most cards at the end of the game is the winner (the teacher will signal –Time's Up).
- Play Diet Riot Pairs. Spread out all the cards face down. Group members take turns to turn over a pair of cards and name each one "Carnivore", Herbivore" or "Omnivore." If the 2 cards are in the same dietary group, that player wins the pair. When there are no more pairs, the player who has won the most, wins the game!

Diet Riot Labels

Eats Animals	Eats Animals
Eats Plants	Eats Plants
Carnivores	Carnivores
Herbivores	Herbivores
Omnivores	Omnivores

How many Teaspoons of Sugar are hidden in the foods we enjoy?

<u>Drinks</u>		Cereals (per serving)	
Small orange juice	3	Corn flakes	1
Small Apple Juice	4	Muesli	2
Small Glass of coke	4	Sweet cereal, e.g. Sugar Puffs	3
Small glass of lemonade	4		
Can of coke	9	Cakes and Snacks	
Can of lemonade	9	Typical chocolate bar	8
Med glass of fruit smoothie	9	Cereal bar	3
Tea and coffee (check the survey for		Flapjack	4
number added)		Muffin	4
Hot chocolate	6	Cupcake	4
Milkshake	8	Medium slice of cake	5
Squash	4	Doughnut	3
		Biscuit, e.g. Oreo	1
<u>Puddings</u>			
Ice cream	5	Spreads per portion	
Yogurt	4	Jam	2
Fruit salad	5	Marmalade	2
Fruit tart	4	Honey	3
Fruit crumble	5		
Banoffee Pie	4	<u>Sweets</u>	
Chocolate pudding	5	Small bag of sweets, e.g. skittles	12
Custard	3	Tube of sweets, e.g. Starburst	8

If you cannot find a food or drink on the list, estimate by finding something that is similar to it.

Client 1

Name: Joe



Age: 22

Gender: Male

Background Information

Joe is a student but in his spare time he belongs to a street dance troop. The troop performs dance routines at events all over the city and Joe loves to take part in these. Street dance needs good muscle strength in arms and legs, all round fitness and very good balance. Recently while rehearsing, Joe injured his knee. He missed the warm up session that day because he arrived late. His doctor has advised that he does not dance for the next 6 weeks to allow his knee to mend.

Advice needed by Joe

- What sort of meals should I eat to help me stay fit and healthy? I need meals that will give me energy, but help me not put on weight.
- Are there any foods I can eat to help my knee joint to mend?
- How can I cut down the risk of an injury like this happening in the future?
- How can I keep my fitness up over the next few weeks whilst not doing street dance?
- Is there anything I can do to improve my balance?

Name: Joe Age: 22 Occupation: Student

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2x a day for 15 minutes or swimming 1x a week for 45 minutes)

Since I injured my knee I haven't been exercising much. I walk to my college 4x a week so altogether that's 8 short walks of 5 minutes each.

Do you take sugar in tea and coffee? *Yes* If yes, how many teaspoons in each? *2 sugars in coffee and 1 in tea*

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday	Corn flakes Toast and Jam	Sausage roll apple	Chicken curry Rice Naan bread	Chocolate bar	4 coffee 1 tea Orange juice Can of coke
Tuesday	Corn flakes Toast and Jam	Cornish Pasty Banana	Beef lasagne Garlic bread, Peas	Crisps Apple	3 coffee 2 tea Orange juice Can of Iemonade
Wednesday	Corn flakes Toast and Jam	2 Pizza slices	Sausages, mash and baked beans	Cup cake	4 coffee 1 tea Apple juice Can of coke
Thursday	Corn flakes Toast and Jam	Cheese sandwich Banana	Meat pie, chips, peas	Apple Doughnut	3 coffee 2 tea Orange juice Can of coke
Friday	Corn flakes Toast and Jam	Sausage roll Crisps	Macaroni Cheese salad	2 biscuits Banana	4 coffee 1 tea Orange juice Mineral water
Saturday	Corn flakes Toast and Jam	Chicken pie chips	Pizza Salad	Chocolate bar	3 coffee 1 tea Orange juice 2 glasses of coke
Sunday	Sausage, bacon, egg, beans, toast	Tuna sandwich Apple	Roast Chicken Potatoes Carrots Broccoli Plum crumble and custard	Choc chip Muffin	4 coffee 1 tea Orange juice Can of Lemonade

Client 2



Name: Kim

Age: 26

Gender: Female

Background Information

Kim is a singer. She sings with a band called "Spirit" and also performs as a solo artist. If Kim gets a cough or cold it affects her voice and sometimes she is unable to perform. She needs to stand up for long periods of time whilst on stage which can make her tired and give her back ache. Kim often needs to sing long phrases without a breath and sometimes needs to hold a very long note.

Advice needed by Kim

- What sort of meals will give me plenty of energy for my busy lifestyle but help me avoid putting on weight?
- What foods should I eat to help me avoid catching coughs and colds?
- What can I do to improve my general fitness and avoid getting back ache on stage?
- How can I improve my breath control and lung capacity so that I can hold very long notes whilst singing?

Name: *Kim* Age: 26 Occupation: Singer

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2x a day for 15 minutes or swimming 1x a week for 45 minutes)

Dance class 1x a week 60 minutes I walk my friend's dog every Sunday for 45 minutes

Do you take sugar in tea and coffee? *Yes* If yes, how many teaspoons in each? *1 sugar in coffee and 1 in tea*

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday	Sugar puffs Toast and honey	Ham Sandwich Tangerine	Fish, chips, peas	Cup cake banana	3 coffee 2 tea Orange juice squash
Tuesday	Sugar puffs Toast and honey	Egg Sandwich Banana	Spaghetti Bolognaise Garlic bread, Peas	Crisps Apple	3 coffee 2 tea Orange juice squash
Wednesday	Sugar puffs Toast and honey	Tuna Sandwich Crisps	Pasta bake with grated cheese salad	Muffin	3 coffee 2 tea Apple juice Can of coke
Thursday	Sugar puffs Toast and honey	Cheese sandwich flapjack	Lamb curry Rice Naan bread	2 biscuits Banana	2 coffee 3 tea Orange juice Glass of coke
Friday	Sugar puffs Toast and honey	Sausage roll Crisps	Sausages, mash and baked beans	Apple Chocolate bar	2 coffee 1 tea Orange juice squash
Saturday	Porridge with sugar Toast and marmalade	Pizza Slice Apple	Pizza Salad	Chocolate bar	3 coffee 3 tea Orange juice Can of coke
Sunday	Porridge with sugar Toast and marmalade	Roast Chicken Potatoes Carrots Broccoli Chocolate Pudding	Tomato Soup Toast Cup cake	Choc chip muffin	3 coffee 2 tea Orange juice 2 glasses of Lemonade

Client Profile 3



Name: Rosa

Age: 19

Gender: Female

Background Information

Rosa is a student and she has recently joined a wheelchair users' basketball team. She loves team games and has good ball skills but she feels her general fitness could improve. At the moment she gets puffed out quite quickly at basketball training sessions. It is more than 2 years since she played sport regularly. Rosa tries to eat healthily but she has a fondness for chocolate and sweets!

Advice needed by Rosa

- What sort of meals will give me plenty of energy for my busy lifestyle but help me avoid putting on weight?
- Can I still eat chocolate and sweets if I want to get fit?
- What can I do to improve my general fitness and stop me getting out of breath so quickly?
- What should I do to build up strength in my shoulder muscles to help me manoeuvre more quickly around the court?
- Are there any particular foods that help to build up muscle strength?

Name: Rosa Age: 19 Occupation: Student

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2X a day for 15 minutes or swimming 1X a week for 45 minutes)

Basketball training 60 minutes per week

coffee but none in tea

Do you take sugar in tea and coffee? Yes If yes, how many teaspoons in each? 1 sugar in

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday	muesli Toast and Jam	Tuna and sweetcorn Sandwich apple	Chicken curry Rice Naan bread	Chocolate bar Pear	3 coffee 2 tea Orange juice
Tuesday	muesli Toast and Jam	Tomato Soup Bread Banana	Spanish omelette Garlic bread, Peas	Tube of sweets Crisps Apple	3 coffee 2 tea Orange juice
Wednesday	muesli Toast and Jam	Leek and potato soup Bread Tangerine	Macaroni Cheese salad	Chocolate bar Pear	3 coffee 1 tea Apple juice
Thursday	muesli Toast and Jam	Cheese sandwich Banana	Fish cakes, mash and sweetcorn and peas	Chocolate bar Apple	3 coffee 2 tea Orange juice
Friday	muesli Toast and Jam	Vegetable soup Bread apple	Fish, Chips peas	Chocolate bar Banana	3 coffee 1 tea Orange juice Can of Lemonade
Saturday	Croissant with jam	Lentil Soup chips	Pizza Garlic bread Salad Fruit salad	2 Chocolate bars	3 coffee 1 tea Orange juice 2 glasses of coke
Sunday	Croissant with jam	cheese sandwich Apple	Nut roast Potatoes Carrots Green beans Banoffee Pie	Chocolate bar Bag of sweets	3 coffee 1 tea Orange juice Can of Lemonade

Client 4



Name: Elsa

Age: 31

Gender: Female

Background Information

Elsa is a sales assistant in a local clothes shop. She has always enjoyed swimming but recently she has joined a free divers' group. Free divers learn how to swim underwater without oxygen tanks. Elsa finds that she can't swim as fast as some of the more experienced divers and can't hold her breath underwater for as long. She really enjoys

this new sport and would like to improve her fitness and skill.

Advice needed by Elsa

- What sort of meals will give me plenty of energy for my busy lifestyle but help me avoid putting on weight?
- What can I do to improve my general fitness and stop me getting out of breath so quickly?
- What should I do to build up strength in my arm and leg muscles to help me become a stronger swimmer?
- Are there any particular foods that help to build up muscle strength?
- Is there anything I can do to help improve my lung capacity and breath control?

Name: Elsa Age: 31 Occupation: Sales Assistant

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2x a day for 15 minutes or swimming 1x a week for 45 minutes)

60 minutes a week at Free Divers' training in the local swimming pool

I walk to the bus stop and back 5 days a week – 5 minutes each way

Do you take sugar in tea and coffee? *Yes* If yes, how many teaspoons in each? *2 sugars in coffee and none in tea*

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday Tuesday	Yoghurt Muesli Yoghurt	Vegetable soup Cereal bar apple Tuna	Spaghetti bolognaise Garlic bread, Peas Pasta with	2 biscuits Crisps	2 coffee 2 tea Orange juice 3 coffee
,	Muesli	Sandwich flapjack Banana	Pesto Salad	Apple	2 tea Orange juice
Wednesday	Yoghurt Muesli	Tomato soup Bread grapes	Sausages, mash and baked beans	Cup cake	2 coffee 2 tea Apple juice
Thursday	Yoghurt Muesli	Cheese sandwich Banana	Ham Omelette, chips, peas	Apple	3 coffee 2 tea Orange juice Hot Chocolate
Friday	Yoghurt Muesli	Chicken soup Crisps Apple	Pasta Bake with grated Cheese salad	2 biscuits Banana	3 coffee 1 tea Orange juice Mineral water
Saturday	Sausage, bacon, egg, beans, toast	Egg and lettuce baguette	Chicken curry Rice Naan bread	Apple	2 coffee 2 tea Apple Juice Milk shake
Sunday	Corn flakes Toast and Jam	Roast Chicken Potatoes Carrots Broccoli	Scones cream and Jam Slice of cake	grapes	3 coffee 2 tea Orange juice Can of Lemonade

Client Profile 5



Name: Jamal

Age: 43

Gender: Male

Background Information

Jamal is a primary school teacher. He and his wife are also carers for Jamal's father Rajeev who is old and unwell. Jamal is worried about catching coughs and colds at school, as it would be dangerous for Rajeev's health. Jamal drives 2km to school and back each day. He finds his neck aches at the end of the day or when he has spent too long working at his laptop. He does not have much time and often skips lunch. He usually eats a few snack bars to keep him going. He wants to improve his general fitness

Advice needed by Jamal

- I need some good advice on healthy meals and snacks that will fit in with my busy life style
- What sort of foods should I eat to help protect me from catching every cough and cold that goes round at school?
- How can I improve my general level of fitness?
- Is there anything I can do to prevent neck ache when I use my laptop?

Name: Jamal Age: 43 Occupation: Teacher

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2x a day for 15 minutes or swimming 1x a week for 45 minutes)

I try to go for a cycle ride every Sunday for about 60 minutes

Do you take sugar in tea and coffee? *Yes* If yes, how many teaspoons in each? *2 sugars in coffee and 1 in tea*

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday	Fruit Yoghurt Toast and Jam	Cereal bar	Chicken curry Rice Naan bread	Chocolate bar	4 coffee 1 tea Orange juice Hot Chocolate
Tuesday	Corn flakes Toast and Jam	Chocolate bar	Vegetable stir fry Rice	Crisps Apple	3 coffee 2 tea Orange juice lemonade Hot Chocolate
Wednesday	Corn flakes Toast and Jam	Cereal bar	Seafood Paella Salad bread	Chocolate bar	4 coffee 1 tea Apple juice Hot Chocolate
Thursday	Fruit Yoghurt Toast and Jam	Chocolate bar	Vegetable curry Rice samosas	Cereal bar Apple	3 coffee 2 tea Orange juice Hot Chocolate
Friday	Corn flakes Toast and Jam	Chocolate bar	Fishcakes Rice and peas	Choc chip muffin	4 coffee 1 tea Orange juice Hot Chocolate
Saturday	Corn flakes Toast and Jam	Cheese and tomato Baguette Crisps grapes	Pizza Salad Garlic bread	Chocolate bar	3 coffee 1 tea Orange juice Hot chocolate

Sunday	Fruit	Tuna	Lamb curry	2 biscuits	4 coffee
	Yoghurt	sandwich	Rice, naan	Banana	1 tea
	Toast and Jam	Cereal bar	Bargees		Orange juice
		Apple			Mineral water

Client 6



Name: Will

Age: 13

Gender: Male

Background Information

Will has recently started at a gymnastics club. He loves the sessions and is learning lots of new skills. His teacher says he will soon be ready to do an award but he will need to build up his balance, strength and fitness. Will's mum thinks he drinks too many sweet fizzy drinks. Will's friend Kieran has had to drop out of the gym club for 2 months because of an injury to his shoulder.

Advice needed by Will

- What sort of meals should I eat to help me build up more strength in my muscles?
- Is my mum right that fizzy drinks will affect my health and fitness?
- How can I improve my balance and general fitness?
- What can I do to avoid getting an injury like my friend Kieran?

Name: Will Age: 13 Occupation: School Pupil

How much exercise do you take each week? (Please list each activity and how long you spend doing it, e.g. Walking 2x a day for 15 minutes or swimming 1x a week for 45 minutes)

1 session a week of gymnastics lasting 60 minutes and 2 school PE lessons each lasting 1 hour

Do you take sugar in tea and coffee? *No, I don't like tea or coffee* If yes, how many teaspoons in each

	Breakfast	Lunch	Evening Meal	Snacks	Drinks
Monday	Corn flakes Toast and Jam	Sausage roll Baked beans Apple tart	Chicken curry Rice Naan bread	Chocolate bar	Orange juice 2 glasses of coke Hot chocolate
Tuesday	Corn flakes Toast and Jam	Jacket potato with cheese and salad Fresh fruit salad	Beef lasagne Garlic bread, Peas	Crisps Apple	Orange juice 2 glasses of lemonade Hot chocolate
Wednesday	Corn flakes Toast and Jam	Sausage mashed potato Carrots Gravy Ice cream	Macaroni Cheese salad	3 biscuits	Apple juice 2 glasses of coke Hot chocolate
Thursday	Corn flakes Toast and Jam	Pizza slice Salad Crumble and custard	Seafood Stir fry Herb bread Salad	Apple Cereal bar	Orange juice 2 glasses of coke Hot chocolate
Friday	Corn flakes Toast and Jam	Pasty Potato wedges Salad Slice of cake	Fish Chips Peas	2 biscuits Banana	Orange juice 2 glasses of lemonade Hot chocolate
Saturday	Sausage, bacon, egg, beans, toast	Steak pie Chips peas	Pizza Salad	Chocolate bar	Orange juice 2 glasses of coke Hot chocolate
Sunday	Corn flakes Toast and Jam	Roast Chicken Potatoes Carrots Broccoli	Chicken sandwiches Cake	Choc chip muffin	Orange juice 3 glasses of coke Hot chocolate

Client's name					
Researcher's names					
Number of portions of Fruit and Vegetables eaten per day during the survey week					
Day	Fruit and Vegetable Portions Eaten	Total Number of Portions			
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					

Researcher's Notes

Sunday

Our research shows that

Task Sheet Tables for Data

Client's name					
Researcher's names					
Number of teaspoons of sugar eaten per day during the survey week					
Day	Sweetened food and drinks	Total Teaspoons of sugar			
Monday					
Tuesday					
Wednesday					
Thursday					
Friday					
Saturday					

Researcher's Notes

Sunday

Our research shows that

Task Sheet Tables for Data

Teacher's Notes on Managing Session 1 of Keeping Healthy

Children in role as personal trainers

During this Science block the children will become personal trainers for a client who is in need of dietary, health and training advice. The children will be introduced to the task during Session 1 when they will "meet" their client and learn about that person's background, health and training issues. Throughout the block, session by session, the children will gather the knowledge, skills and understanding needed to become "Health and Fitness Experts." Their work will include conducting some of their own research, so that by Session 6 they will be ready to give a Health and Fitness presentation tailored to their client's individual needs.

Real or Imaginary Clients?

Taking on the role of a personal trainer will be highly motivating and give purpose to the learning of the block, not just in the topic objectives (Animals including Humans) but also in many aspects of Working Scientifically. It will also give a tangible outcome at the end of the block for assessment purposes (a group presentation). To get optimum motivational value, it would be desirable to arrange for "real" clients. These could be 6 parents, governors, friends, staff, siblings, etc. prepared to take on a few minutes of role play (about 30 minutes during Session 1 and about an hour during Session 6). Complete profiles of 6 imaginary clients are provided in the session resources that include background information, health questions and a week's dietary survey. With a small amount of tweaking (e.g. changes to name, age, gender and the change or removal of photographs), you could match these to your 6 volunteers. If you are feeling brave however, you could make your own profiles, questions and food surveys (a blank survey form is included for this purpose). If using real clients is not possible, you have all the resources needed to run the block with imaginary clients (see profile provided in the Session 1 resources).

Groups

It is suggested that you divide the class into 6 mixed ability groups who will each be allocated their own client. Ideally the groups should have 4-6 pupils. If your class is small enough, you could decide to have fewer groups (and clients).

Tasks

In Session 1, there are 2 tasks to be completed by the group, both of which will provide important information for their client. These tasks are also aimed at building up the children's skills in Working Scientifically. The task on calculating the portions of fruit and vegetables is easier than the task on calculating the number of teaspoons of sugar (see below).

Fruit and Veg task:

- Counting individual items (from survey)
- Bar chart will not require a scale

Sugar Task:

- Calculation required
- Cross referencing sugar values using a chart
- Bar Chart will need a scale in the vertical axis

You will be able to further differentiate the level of each task to your pupils by choosing to use, or not use the task sheets (blank tables and bar charts). There are 3 different bar chart templates or you could ask children to draw their own or use a data-handling program.