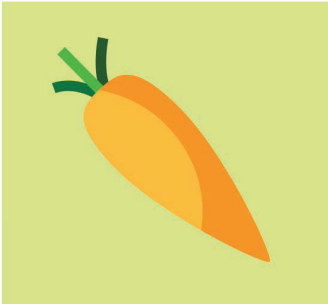
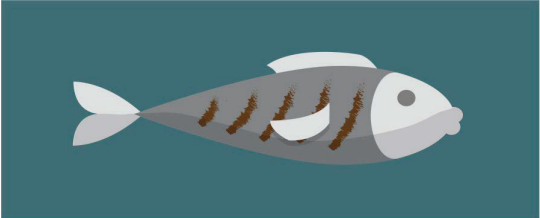


# GUIDELINES AND REQUIREMENTS FOR FOOD & NUTRITION I SCHOOLS IN DUBAI

FOOD SAFETY DEPARTMENT • DUBAI MUNICIPALITY



## MESSAGE FROM THE DIRECTOR

Childhood obesity is one of the most serious public health challenges of the 21st century and its prevalence has increased at an alarming rate in the past two decades. According to the World Health Organization (2014) there are around 2 billion adults overweight, of those 670 million are considered to be obese. The World Obesity Federation estimates show that around 224 million school children are overweight and the number could rise to over 267 million by 2025. These children are likely to stay obese into adulthood and are more likely to develop chronic non-communicable diseases like diabetes and cardiovascular diseases at a younger age. Studies show that more than 34% of the school-going children in the United Arab Emirates are either obese or overweight, and this weight gain is largely attributed to sedentary lifestyle, easy availability and selection of cheap and high calorific foods and poor nutrition education.

As the relation between diet, health, and disease prevention have become clearer, there has been an increased attention and focus on nutrition education and the promotion of healthy eating behaviors and lifestyle. Momentum around formulation of policies that are centered on nutrition has been steadily building with governments and stakeholders around the world acknowledging nutrition as a key component of human development. The National Agenda 2021 for UAE emphasizes on the reduction of lifestyle diseases such as diabetes and cardiovascular diseases among the residents and the citizens and there is an increased focus on obesity reduction, particularly among children. The goal of the government is to reduce childhood obesity rates from 19.3% in 2015 down to 16.28% by 2021.

Understanding the current situation and learning from the experience of other countries, we are strengthening children-centered and school-based intervention measures to curb obesity rate among children. The emphasis of our interventions will not only be on regulatory measures that ensure availability of nutritious and healthy foods in schools, but also on educational and behavior-based strategies designed to facilitate adoption of food choices. I sincerely believe that this document will facilitate the ability of all the stakeholders including the school management, food suppliers and the government to collaborate and to promote more supportive environments, policies, and system changes that have an impact on health and well-being of school children.

Iman Al Bastaki  
Director of Food Safety Department  
Dubai Municipality

## INTRODUCTION

Dubai Municipality recognizes that healthy environment in school profoundly influences attitudes, preferences, and behaviors and enhances social and emotional well-being of children. Schools are one of the main social contexts where children develop healthy eating habits and lifestyles and a great platform to impart nutrition education. Keeping in mind the importance of food provided in schools and the role of food environment in preventing childhood obesity, the newly established Nutrition Unit of the Food Safety Department developed the Guidelines and Requirements for Food and Nutrition in Schools in 2016 to ensure that children have access to nutritious, safe and wholesome food during their school time. The guidelines and requirements in the document will help school management and food suppliers make healthier food and beverage choices for school canteens and also reduce or eliminate the provision of nutritionally inadequate food and beverages that are available and promoted in schools every day.

While the document has been designed specifically for use in school canteens, it may also be used in context to other school activities where food is provided or sold. This could include events, parties and promotions held in the school. The document also includes valuable resources that could be used by the school management, food suppliers, educators and parents to make informed food choices. This guideline also summarizes information on nutrition and strategies most likely to be effective in promoting healthy eating among school children. It also includes appropriate instructions for school management and food suppliers, resources for teachers, parents and community along with the details of how the effectiveness of the implementation can be evaluated.

## PURPOSE

Both Section 1 and 2 of the document are intended to standardize and streamline the efforts of various regulatory authorities. Both the sections aims to provide all stakeholders with an overview of the health status, nutrition information, information about the nature and effects of foods provided in schools, and common set of nutritional guidelines that would help promote healthy eating in schools in the emirate of Dubai.

These sections also provide necessary information and scientific reference for school management to develop policies related to supply of food, promotion of healthy foods and, reduction or elimination of less healthier foods. These recommendations will replace the documents published by Dubai Municipality in the past and complement publications from other organizations such as Dubai Health Authority and the Ministry of Health in UAE.

Section 1 of the document is specifically aimed at helping food businesses that supply food to schools, to meet Dubai's health objectives by implementing school-based nutrition policies and programs. It provides nutritional information and ways and means to ensure schools are supplied with foods that are nutritionally adequate for children's consumption.

Section 2 also provides useful information to personnel involved in supporting nutrition programs in schools and food businesses such as consultants, trainers etc., and to parents who are the most important influence on children, and some useful tips and recommendations for packing lunch boxes for children who are not dependent of food provided in schools.

## TERMS AND CONDITIONS

**Recommended Dietary allowance (RDA):** It is the average daily level of intake of nutrients that is sufficient to meet the nutrient requirements of nearly all (97%-98%) healthy people.

**Recommended Amount Customarily Consumed (RACC):** The value represents the amount of the edible portion customarily consumed per eating occasion.

**Portion Size:** Portion size can be defined as the amount of food you choose to eat during a single eating occasion (whether it is a meal out, at home, or even the amount offered within a pre-packaged snack).

**Serving Size:** A serving size is a standardized measurement of food or drink.

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FOOD AND NUTRITION  
GUIDELINES FOR SCHOOL  
CHILDREN

# SECTION 1

## FOOD AND NUTRITION GUIDELINES FOR SCHOOL CHILDREN

This section aims to provide information relevant to food and nutrition that is important to help children develop healthy eating habits and ensure that they get adequate nutrition throughout the school day. It aims to give a broader context to nutritional guidelines, intended to educate school management, food suppliers and parents to provide healthy and nutritious food to support the children growth.

### 1.1 EFFECT OF DIET ON HEALTH OF CHILDREN

Poor eating habits are major risk factors for chronic diseases. Poor diet can have both long-term and short-term effects on children. Some of the significant health impacts are discussed below.

#### OVERWEIGHT AND OBESITY

The number of children who are either overweight or obese is increasing in Dubai and in the United Arab Emirates. According to Dubai Health Authority (2014), nearly 19% of the school-going children are overweight and 15% are

obese in Dubai. Being overweight during childhood has been associated with increased risk of diseases later in the life. Furthermore, obese children are often excluded from peer groups and discriminated against by the society, they experience psychological stress, tend to have a poor body image and low self-esteem. Increased physical activity and appropriate caloric intake are recommended for preventing and reducing obesity.

#### DIABETES

Type 2 Diabetes is non-insulin-dependent condition that affects other important body functions like vision, immunity and organs such as kidneys. Non-insulin-dependent diabetes mellitus, which affects approximately 90% of people is often associated with obesity. Diabetes is one of the main health concerns in the UAE amongst children. In the last decade, the rate of diabetes amongst growing kids has doubled. Though sugar directly does not cause diabetes, consuming sugar rich foods pre disposes the children to type-2 diabetes.

Maintaining a desirable body weight through physical activity and modest caloric restriction is important in preventing diabetes and related complications.

#### UNDER NUTRITION

Even moderate levels of under nutrition can have lasting effects on children's cognitive development and school performance. It can severely interfere with their academic performance, and children may have difficulty resisting infection and therefore are more likely to become sick, and miss school, and perhaps may find it difficult to cope up with the class progress. Under-nourished children also have low energy, which can limit their physical activities.

#### ANEMIA

Anemia is a condition characterized by inadequate red blood cell volume and a low concentration of hemoglobin in the blood. Commonly, anemia is the final outcome of a nutritional deficiency of iron, folate, and vitamin B12. Anemia due to iron deficiency, is recognized as a major public health problem across the globe, and it is highly prevalent among UAE population, especially among women, and children.

According to World Health Organization (2011), 26% of non-pregnant women of reproductive age suffer from anemia, and 29 % of pre-school children are anemic.

Iron-deficiency anemia in children is associated with impaired cognitive performance, language development, increased fatigue, and reduced resistance to infection.

#### UNSAFE WEIGHT-LOSS METHODS AND EATING DISORDERS

Children and teenagers, who are overweight, may tend to use unsafe methods to lose weight, which could affect their overall health. Different types of eating disorders may emerge during the teenage amongst school children, such as Binge Eating, Anorexia Nervosa, and Bulimia Nervosa. A research conducted in the UAE revealed that one-fourth of the secondary school girls has wrong eating practices and behavior (Health Authority - Abu Dhabi, 2016). It is important that school children get a reliable nutrition education to adopt safe weight loss practices, and get the most recommended nutrients and energy to support their body growth, and cognitive development during the growing years.

### 1.2 EFFECTS OF CHILDHOOD EATING HABITS AND ITS IMPACT ON CHRONIC DISEASES DURING ADULTHOOD

Children and adolescents who are obese are likely to be obese as adults and are therefore more at risk for health problems such as heart disease, type-2 diabetes, stroke, several types of cancer, and osteoarthritis. One study showed that children who became obese as early as age 2 were more likely to be obese as adults. Intervention strategies to improve nutrition should not only address health issues that impact individuals during childhood, it should also focus on preventing children from developing chronic diseases during adulthood. The most important

risk factor for stroke is high blood pressure, which often can be controlled or prevented by adopting a healthy diet and maintaining a healthy weight. Unhealthy food choices and eating practices that contribute to chronic disease are established early in life; thus, it is efficacious to teach healthy eating habits right from childhood. Extremely poor and unhealthy eating behaviors and related physiological risk factors are difficult to change once they are established during early stages of life.

Interventions that promote healthy eating habits and physical activity during childhood may not only prevent some of the leading causes of illness and death but also decrease direct healthcare costs and improve quality of life. The risk of some types of cancer such as breast cancer, colon cancer, prostate cancer, thyroid cancer as well as multiple myeloma and Hodgkin's lymphoma can be reduced by maintaining a healthy weight; limiting consumption of sugar, fat, and salt-cured, or smoked foods.

### 1.3 GUIDELINES FOR HEALTHY EATING

Children should eat nutritionally adequate foods specially during their formative years. The food they consume should be balanced with physical activity and their growth should be checked regularly. Recommendations for "healthy eating" vary slightly between countries. However, the general recommendations for foods that provide the nutrients required to feel good, maintain good health and support optimum growth for children are:

-  Consume a variety of nutritious foods from the different food groups
-  Eat with moderation to maintain a healthy weight
-  Increase the consumption of fiber through higher intakes of fruits, vegetables, legumes/pulses, wholegrain cereals and whole grain bread
-  Prefer lean white meats over red ones and limit the consumption of processed meats (sausages, nuggets)
-  Consume more fresh fish
-  Limit the consumption of foods that are high in sugar, salt and saturated fat. To know more about the permissible limits, refer to [APPENDIX 1, TABLE 8](#).
-  Prefer home-made fresh foods prepared steaming, boiling, baking or grilling, rather than frying.
-  Limit the consumption of salty foods and processed foods with high content of salt

-  Consume meals around the table and turn off electronic devices (TV, tablets, mobile phones) to avoid overeating
-  Drink plenty of water and avoid sweetened beverages including energy drinks and flavored drinks
-  Balance the food you eat with physical activity and an active lifestyle
-  Apart from the food, get enough rest and sleep as a part of a balanced lifestyle, and enjoy the benefits of sunlight in moderation

### 1.4 UNDERSTANDING FOOD GROUPS

The food we should eat is categorized into six different groups based on their nutrition composition and functions. An additional seventh group of 'restricted foods' has been included in this document listing those foods that have to be consumed less or eliminated from the diets of children. For a healthy and optimum nutrient intake it is necessary to include items from each food group in your daily diet. Refer to [APPENDIX 1](#).

#### 1.4.1 GRAINS AND STARCH

This group mainly consists of whole grains like corn, rice, wheat, cereals like corn flakes, oats, and millets. This group also includes starch such as potatoes, yams, sweet potato, and cassava etc.

**Recommendation:** It is recommended that at least fifty percent of your cereal intake should come from whole grains and cereals high in fiber such as brown rice, whole wheat breads, and whole-wheat pastas. The main nutrients provided by this group are carbohydrates, B vitamins, and fibers.

#### 1.4.2 FRUITS AND VEGETABLES

This group comprises of all the fruits and vegetables including leafy vegetables such as lettuce, spinach, rocket leaves, parsley, cabbage, kale etc. Roots and tubers like carrots and onion also come under this category.

**Recommendation:** It is recommended to choose whole and freshly cut fruits and vegetables over canned fruits in syrups. The main nutrients provided by this group are essential vitamins and minerals. This group is also often a good source of fiber.

#### 1.4.3 MEAT, EGGS AND LEGUMES

This group consists of meat (chicken and red meat), eggs, seafood such as fish (especially oily fish) and shellfish. This group also consists of all the legumes, pulses and beans such as kidney beans, green beans, soybeans, lentils, and chickpeas.



**Recommendation:** Choose boiled, grilled and lean meats over fried or highly processed meat products such as canned meats, and deli meats.

The main nutrients provided by this group of foods are proteins, and iron mainly from meat.

**1.4.4 MILK AND MILK PRODUCTS**  
This group comprises of different types of milk and milk products such as , goat cheese, cottage cheese, yoghurt, laban, labneh, etc.

**Recommendation:** Low fat milk and milk products are preferred over full fat milk. Processed cheese slices and spreads, and creams etc should be limited. The main nutrients provided by this group of foods are protein and calcium and Vitamin D.

**1.4.5 NUTS, OILS AND OILSEEDS**  
This group includes all the food items that provide fats and oil. Olive oil, butter, vegetable oil, lard, ghee, nuts and oilseeds are under this category. Healthier sources of fat are sunflower oil, olive oil, canola oil, and other plant-based oils.

**Recommendation:** Consume at least one fistful of nuts and oilseeds every day to ensure good intake of healthy fats. Avoid excess consumption of foods cooked in partially hydrogenated or saturated fats.

The main nutrients provided by this group are essential fatty acids.

**1.4.6 WATER AND FLUIDS**

Human body consists of 60% of water. Therefore, it is important to keep the body hydrated at all times.

**Recommendation:** Best sources of fluids are plain water, low fat milk, and fresh fruit and vegetable juices. Children should avoid drinks with added sugar such as flavored drinks, and vitamin waters, sports drinks, energy drinks etc. Fresh fruit juices should be preferred over canned and bottled juices.

**1.4.7 RESTRICTED FOOD GROUP**

Foods from this group are often high in energy (calories), saturated fats, trans fats, salt, and added sugar. Thus, intake of such foods should be restricted. High calorie intake is linked to weight gain and obesity. Mentioned below are some examples of how these foods can affect the health of the children

- Saturated fats increase the risk of heart diseases and reducing saturated fat intake can help both in lowering overall calorie intake as well as the risk of heart disease.
- Too much salt in the daily diet can encourage a taste for salty foods, potentially leading to high blood pressure in later life.
- High sugar intake provides unnecessary calories and can lead to weight gain and tooth decay.
- Products that have partially hydrogenated fat, or flavor enhancers that are mostly available in nutrient poor foods are also in this category.

For more information on what to eat and what to avoid, see the summary infographic for food groups

For more information refer to [APPENDIX 1, TABLE 1](#)

**FOOD GROUPS**

**GRAINS**  
CEREAL & STARCH

**CHOOSE FROM**  
WHOLE GRAIN PRODUCTS  
OATS, BROWN RICE  
SWEET POTATO, POTATOES,  
WHEAT PASTA, CASSAVA,  
WHOLE WHEAT BREAD, QUINOA

**PROVIDES ESSENTIAL**  
CARBOHYDRATES  
FIBER, VIT B

**AVOID**  
REFINED GRAIN PRODUCTS LIKE  
SUGAR COCAINOLA, BICARBONATE,  
BREADCRUMBS, DONUTS AND

**FRUITS & VEGETABLES**

**CHOOSE FROM**  
ALL FRUITS AND VEGETABLES,  
GREEN LEAFY VEGETABLES  
SALADS, FRUIT CUTS,  
FRESH FRUITS AND  
VEGETABLE JUICES

**PROVIDES ESSENTIAL**  
VITAMINS & MINERALS  
& FIBER

**AVOID**  
DEEP FRIED VEGETABLES, CANDIED FRUIT OR  
DRINKS WITH SUGAR, CANDIED VEGETABLES OR  
SALT BRINE, DRY BEANS AND POTATOES

**LEGUMES**  
EGGS & MEAT

**CHOOSE FROM**  
LEAN MEAT CUTS, FISH,  
WHOLE EGGS, WHITES,  
BEANS, SPROUTS, CHICKEN  
PARTS, CHICKEN BREASTS,  
CHICKEN BREASTS

**PROVIDE IRON & PROTEIN**

**AVOID**  
FRIED EGGS, BE FRIED BEANS,  
SHELL MEATS, BACON, BIRD MEAT,  
SAUSAGES AND HOT DOGS

**MILK AND MILK PRODUCTS**

**CHOOSE FROM**  
LOW FAT MILK, YOGHURT  
LEBAN, LOW FAT CHEESE,  
LABANEH, COTTAGE CHEESE

**PROVIDE PROTEIN**  
CALCIUM & VITAMIN D

**AVOID**  
PROCESSED SLICE CHEESE, CHEDDAR  
CHEESE, FRIED CHEESE STRIKE, WHIP  
CREAM SPREAD, FLAVORED YOGHURT

**NUTS & FATS, AND OILSEEDS**

**CHOOSE FROM**  
CANOLA OIL, FOR COOKING  
LOW FAT CREAM FOR DESSERTS  
PLAIN WHOLE NUTS, PEANUT  
BUTTER, OLIVE OIL  
FOR SALAD DRESSINGS

**PROVIDE ESSENTIAL**  
FATTY ACIDS

**AVOID**  
DEEP FRIED FOODS, MARGARINE,  
BUTTER, FOODS COOKED IN LARD,  
FULL CREAM ICING, FRIED  
NUTS, SUGAR COATED NUTS

**WATER AND FLUIDS**

**CHOOSE FROM**  
NATURAL WATER  
HOME MADE SOUPS,  
FRESH JUICES

**PROVIDE MINERALS & ELECTROLYTES**

**AVOID**  
SOFT DRINKS, FLAVORED WATER,  
SWEETENED, FLAVORED BEVERAGE,  
ENERGY DRINKS

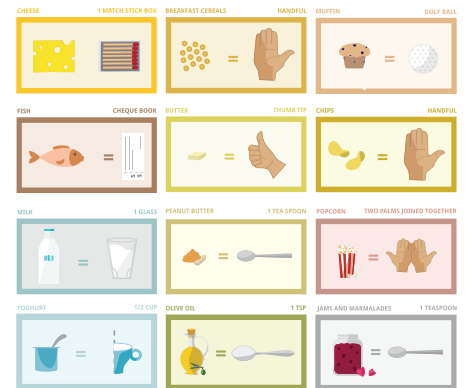
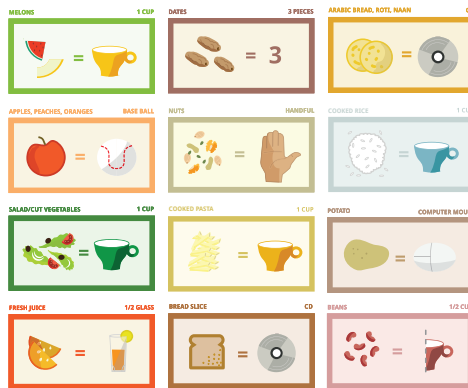
### 1.5 ROLE OF PORTION SIZE

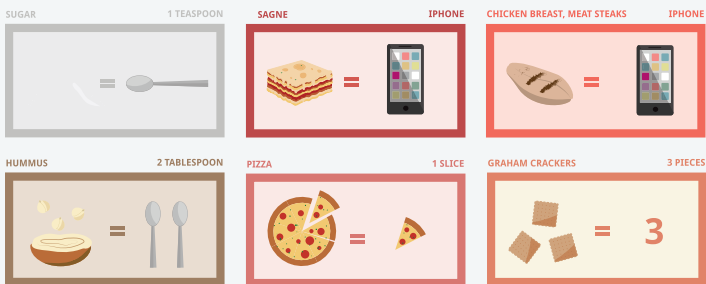
One of the key factors of eating healthy and eating right is consuming correct portion sizes from each of the above food groups to ensure optimum intake of best nutrients. For more detailed information on portion sizes, and food exchange list for each food group, refer to [APPENDIX 1, TABLE 1 AND 2](#).

**Recommended Amounts Customarily Consumed:** Most often referred to as (RACC), this portion size guide is designed mainly for the final cooked products. Refer to [APPENDIX 1, TABLE 2](#) for more detailed information. The food exchange list as described in [TABLE 1](#) is mainly for the raw, uncooked ingredients from each food group.

## PORTION SIZES

Here is a quick guide on how to measure the most commonly consumed food items.





### 1.6 IMPORTANCE OF PROVIDING BALANCED NUTRITION IN SCHOOL

Schools that prioritize well-being of children by offering a healthy and positive learning environment, balanced foods and adequate physical activity, contribute to the early development of good habits that can last for life, and help children to perform satisfactorily in academics. Habits formed during childhood go a long way in life. Healthy eating practices right from childhood reduce the risk of developing any chronic diseases. Therefore, it is more important and effective to acquire healthy behaviors during childhood than trying to change the behavior during adulthood.

There is strong scientific evidence supporting the link between healthy eating, physical activity and success in school:

- Children who are more physically fit tend to have better grades and achieve higher overall test scores.
- School-based programs that encourage healthy eating and physically activity have a positive impact on children's behavior and are associated with decreases in disciplinary incidents, absenteeism and tardiness.
- Children who consume healthier food options and are physically active tend to be more focused during classes and have better memory;

Educating children about healthy eating is not effective if it is taught only in the classroom and not put to practice in schools. Schools should actively promote a good food

culture and have sufficient and accurate information to establish a good food policy that would help them to ensure supply of healthy foods through their caterer/ supplier. Schools should also provide an environment that educates children and encourages healthy eating habits that would influence the learning and behavior of students positively so that those habits stay with the students for a life time and influence their food choice in the future.

Several students rely on the food served in schools and the food supplied in schools can contribute to up to two thirds of their daily nutritional requirements. For the same reasons, schools should ensure that there is a balanced supply of nutrients essential for children and have less of products and ingredients that are less healthy.

### 1.7 ROLES AND RESPONSIBILITIES OF SCHOOLS IN PROMOTING HEALTHY EATING

Food plays a major role in ensuring proper health and development of children. Since children spent a major part of their day in the school, it is necessary to provide them with nutritionally balanced meals.

Schools have a critical role in helping students to learn and develop healthy eating habits. Schools are also ideal settings for nutrition education because:

- Schools can reach almost all children.
- Schools can teach children how to resist social

pressures. Eating is a socially learned behavior that is influenced by social pressures. School-based programs can directly address peer pressure that discourages healthy eating and harness the power of peer pressure to reinforce healthy eating habits.

- After appropriate training, teachers can use their instructional skills and food service personnel can utilize their expertise for nutrition education programs.
- Research evaluations suggest that school-based nutrition education can improve the healthy eating behaviors of young children.
- Healthy eating habits developed during childhood go a long way in life.
- School-based programs help counter the effect of advertisement and promotions on children's eating habits.
- School-based nutrition programs and policies involve participation from food vendors, school management, parents and students. The role of each party makes the great impact as a team

#### Schools can also

- Develop policies that support healthy school nutrition environments and provide a comprehensive approach to physical activity in schools
- Inform and encourage families to send their children to school prepared for the day with an adequate breakfast and a good night sleep
- Inform and support parents in making healthy choices when preparing packed lunches, and role model healthy eating behaviors

- Encourage children to be more physically active during recess to shorten snacking time and avoid overeating
- Ensure kids have enough time to consume meals
- Ensure school premises have enough and easily accessible water supply points for students.
- Ensure to allow enough break time to children to eat their meals and snacks during breaks.
- Provide professional development to school staff on the importance of healthy eating and physical activity and their connection to learning.

### 1.8 WHAT CAN SCHOOLS DO TO MOTIVATE CHILDREN TO MODIFY THEIR EATING BEHAVIOR?

School management should actively encourage children to have a healthy food culture. Some of the strategies that could be used to encourage healthy food environment are listed below.

#### 1.8.1 SCHOOL CANTEEN COMMITTEE

Schools can form a health and nutrition department/ committee which will look into daily affairs of food service, spread awareness, and educate children on principles of healthy eating as well as food safety. The committee can conduct small-scale activities promoting healthy eating within school and evaluate the school nutrition policy.

#### 1.8.2 PROMOTE HEALTHY EATING

Children may lack knowledge and awareness about how to make healthy choices. Make sure healthy options are more visible and kept on the top or in the front at the food display area. For example, the school can encourage and promote healthy eating by offering fresh fruits and salads at the front counter in the canteens, or next to the cashier.

#### 1.8.3 EDUCATE HOW TO READ FOOD LABELS

Children should be taught to read food labels. Reading labels can help children compare foods and make better decisions of what to eat and develop greater understanding of salt, sugar and saturated fats in the foods. Children can also be taught about serving sizes so they can make better decisions on how much to eat.

#### 1.8.4 EAT HEALTHY POINTS™ FOR SCHOOL CHILDREN

In order to encourage the school children to eat healthy, the school can assign points to each meal/item sold in the canteen. Healthier the item, more the points should the food have. Every time the student buys a food item, he or she would earn the assigned points. Certainly, higher the points, better the nutrition score.

#### 1.8.5 ACTIVE INTERACTION WITH CHILDREN DURING BREAK TIME

Canteen supervisors and teachers have an important role in encouraging children to make healthy choices while eating in school either from the canteens or when they bring food from home. Encourage and motivate children to pick healthy options Show appreciation or provide simple incentives to encourage healthy eating.

# HOW TO READ LABELS

## WHAT IS A SERVING SIZE?

AMOUNT OF FOOD OR DRINK GENERALLY SERVED AND TO BE CONSUMED AT ONE TIME



IF YOU EAT MORE THAN 1 SERVING AT A TIME IN A DAY YOU ARE GETTING MORE KCALS

**100 KCAL** PER SERVING IS MODERATE

**400 KCAL** PER SERVING IS HIGH



IF YOU CONSUME MORE CALORIES THAN YOU BURN, YOU GAIN WEIGHT

## 1 WHAT IS THIS % DV?

IT IS THE % OF NUTRIENTS PROVIDED BY 1 SERVING FROM YOUR RECOMMENDED DAILY ALLOWANCE

5% DV OR LESS PER SERVING IS LOW

20% DV OR MORE PER SERVING IS HIGH

## 2 GET LESS

CHOOSE FOODS **LOW** IN THESE NUTRIENTS

## 3 GET MORE

CHOOSE FOODS **HIGH** IN THESE NUTRIENTS

## NUTRITION FACTS

8 servings per container  
Serving size **2/3 cup (55g)**

Amount per serving  
**Calories 230**

**% Daily Value \***

<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	5%
Trans Fat 0g	0%
<b>Cholesterol</b> 0 mg	<b>0%</b>
<b>Sodium</b> 160 mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	14%
Total Sugars 12g	20%
Includes 10g Added Sugars	20%
<b>Proteins</b> 3g	

Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

\*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.



ALL VALUES IN THE LABEL ARE ALWAYS FOR 1 SERVING



ONE PACKET MAY CONTAIN MORE THAN 1 SERVING

**AVOID EATING MORE THAN 1 SERVING AT A TIME**

## CHOOSE A RANGE OF CALORIES

**FOR SNACK**  
100 - 200

**FOR MEALS**  
300 - 500

## WHERE DO YOU FIND NUTRITION LABEL

- ON ALL FOOD PACKETS
- ASK FOR INFORMATION IN RESTAURANTS

## WHAT CAN SCHOOLS DO

### BE ROLE MODEL

Teachers can be a role model and eat healthy along with the children and influence their eating habits

### MAKE HEALTHY OPTIONS MORE VISIBLE

Place fruits and salads in the front of the display, preferably in front of the cash register

### ACTIVELY INVOLVED

Talk to the children and encourage them to pick healthy foods from the canteen

### REWARD THE CHILD

With a star or a badge every time they eat healthy

### ACTIVITY IS THE KEY

Make sure children get enough options to pursue their choice of sports or game in the school

### SPREAD AWARENESS AND EDUCATE

Children about the benefits of healthy eating



## 1.9 THE LUNCH BOX

Due to lack of proper awareness and guidance and hectic unpredictable nature of the daily routine, preparing a healthy lunch box for children can be a difficult task. Here is a quick guide to prepare a healthy lunch box for children.

# HOW TO PACK A LUNCH BOX

### COLORFUL LUNCH BOX

Include different varieties of fruits and vegetables. Colors make children happy.

### CHOOSE WHOLE GRAINS

Type of carbohydrates is more important than the amount of carbohydrates.

### HEALTHY CHOICES

Swap the unhealthy foods with healthy options. Swap a cupcake for berries and yogurt. Swap sugar coated breakfast cereals with plain cereals with dried fruits.

### SIZE DOES MATTER

Pay close attention to portion sizes for different foods. Cheese cube can be the size of your thumb while milk can be a glass full.

### KEEP SUGAR AWAY

Keep sugar away. Items like biscuits, most cereals, flavored yogurt and milk, contains added sugar.

### WATER

Keep your body hydrated. Drink plenty of fluids.

Include at least 4 out of the 6 major food group to make choices. Avoid repeating items from same group.

### 40% HEALTHY CARBOHYDRATES



Choose from whole wheat or multigrain bread, oats, tortilla wraps and even sweet potatoes

### 20% GOOD QUALITY PROTEINS



Like eggs, milk, yoghurt, lean meat, salmon, tuna, red kidney beans, chick peas, cottage cheese etc.

### 25% FRESH FRUITS AND VEGETABLES



Choose from a wide variety fruits such as berries, bananas, oranges, and vegetables like spinach, carrots, squash, mushrooms

### 15% HEALTHY FATS



Choose from walnuts, olive oil, avocados etc

### FLUIDS

Choose from either fresh water, fresh fruit juice, coconut water etc

# THE LUNCH BOX

It is important that children take in enough fluids during the day. If they do not drink enough, they may become dehydrated, thirsty, tired and weak. Drinks should always be included in your child's healthy lunchbox.

## LUNCH BOX SAFETY



**KEEP REFRIGERATED**  
High risk food items, like tuna sandwiches, should be refrigerated.

**SMALL ICE PACK**  
Use small ice pack or alternatively include a frozen fruit juice carton to help keep lunches cool, especially if you included cooked items such as chicken sandwich.

**DO NOT KEEP THE LUNCH BOX IN HIGH TEMPERATURE**  
Areas such as inside the car, direct under the sun to prevent spoilage of food.

**DISCARD ANY PERISHABLE FOOD**  
that hasn't been eaten at the end of the day.



**WASH YOUR HANDS**  
Remember to wash your hands before preparing your child's meal.

**WASH AND DRY**  
Reusable water bottles, lids and lunchboxes every day in warm soapy water.

**FRUITS AND VEGETABLES**  
Should be washed properly.

# ALWAYS REMEMBER








**WATER AND MILK**  
are the most suitable drinks for children

**GO FOR 100% JUICE**  
and avoid sugary drinks and nectars. (In packed juices)






**CHECK THE INGREDIENTS LIST**  
If you are unsure about whether a drink contains added sugar, Less common terms of sugar that may appear on the ingredients list are **sucrose, fructose, glucose, maltose, dextrose** and **syrup**.

# 5 DAY PLANNER






## BREAKFAST

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
<ul style="list-style-type: none"> <li>• 1 slice bread with low fat cheese spread</li> <li>• Low fat yogurt with berries</li> </ul> 	<ul style="list-style-type: none"> <li>• Avocado cucumber sandwich</li> <li>• 3 apple slices</li> <li>• 1 small leban</li> </ul> 	<ul style="list-style-type: none"> <li>• Chicken lettuce sandwich in pita bread</li> <li>• 4-5 orange peels</li> </ul> 	<ul style="list-style-type: none"> <li>• Cottage cheese sandwich in multigrain bread</li> <li>• 1 small banana</li> </ul> 	<ul style="list-style-type: none"> <li>• Oats porridge</li> <li>• 1/2 banana and low fat milk</li> </ul> 

## LUNCH

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
<ul style="list-style-type: none"> <li>• Rice with sautéed vegetables and beans</li> <li>• 1 whole banana</li> <li>• Laban</li> </ul> 	<ul style="list-style-type: none"> <li>• Chicken lettuce tortilla wrap</li> <li>• Low fat home made fruit yoghurt</li> </ul> 	<ul style="list-style-type: none"> <li>• Whole wheat pasta with chicken or vegetables with tomato sauce and some low fat cheese</li> <li>• Orange juice</li> </ul> 	<ul style="list-style-type: none"> <li>• Small pita bread sandwich with tuna and corn</li> <li>• Fresh orange juice</li> </ul> 	<ul style="list-style-type: none"> <li>• Steamed rice and lightly sauteed mix vegetables or chicken</li> <li>• 1 med apple</li> <li>• Lemonade</li> </ul> 

## SNACKS

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY
<ul style="list-style-type: none"> <li>• Baby carrots and hummus</li> </ul> 	<ul style="list-style-type: none"> <li>• Low fat yogurt with fresh cut fruits</li> <li>• Some raw nuts</li> </ul> 	<ul style="list-style-type: none"> <li>• Small zip bag of home made popcorn</li> </ul> 	<ul style="list-style-type: none"> <li>• Mixed raw nuts with dried fruits</li> </ul> 	<ul style="list-style-type: none"> <li>• Whole grain crackers + bean dip</li> </ul> 



FOOD AND NUTRITION GUIDELINES  
FOR PREPARATION, DISPLAY AND  
SALE OF FOODS IN SCHOOLS

## SECTION 2

### FOOD AND NUTRITION GUIDELINES FOR PREPARATION, DISPLAY AND SALE OF FOODS IN SCHOOLS

The requirements listed in this section of the document are intended for school management and food businesses that supply food to schools. The word 'shall' or 'must' has been used throughout this document to denote mandatory requirements and the word 'should' has been used when the requirements are 'strongly recommended' but not mandatory.

#### 2.1 SCOPE

The requirements listed in this section of the document applies to:

- All schools in Dubai
- Food Businesses that supply food or ingredients to schools or supplier of schools
- All foods sold, or made available in the school settings in Dubai and that may cover and not limited to food sold, displayed or distributed in cafeteria or stores, or vending machines; meetings, promotional event; fundraising or

special events accessible to children. Providers of such foods will be referred to as "food suppliers" in this document.

Although the safety of meals served in schools are important, this document does not provide specific food safety recommendations related to sourcing and preparation of food for school meals. Detailed information on this topic is available on Dubai's Food Code downloadable from our website [www.foodsafe.ae](http://www.foodsafe.ae).

#### 2.2 GENERAL REQUIREMENTS FOR SCHOOLS AND FOOD SUPPLIERS

School management and the food suppliers have the main responsibility to ensure that the food provided to children meet the requirements and recommendations of this guideline. Refer to [APPENDIX 4, FIGURES 1, 2, AND 3](#) for details about the approval process of food suppliers

#### 2.2.1 ROLES AND RESPONSIBILITIES OF THE SCHOOLS

- Schools should provide nutritious and appealing foods and beverages in all food venues in schools, including school meal programs, vending machines, school stores, kiosks, promotional stands, fundraisers on school grounds, classroom-based activities, staff and parent meetings, and after-school programs.
- Schools should ensure that food procurement is done only from food facilities that have a valid trade license with the relevant business activity (such as catering services) listed in the license.
- The food business in Dubai that supply food to schools should have a green or white inspection card. Red and Yellow inspection card indicates serious food safety failure and such food establishments should not supply food to schools.
- The school management should verify with the Food Inspection Section of the Food Safety Department the details of the food inspection when the supplier is not able to provide the details.
- Where there are canteens the school management should ensure that there is a person in charge in the facility, who has been formally trained on the nutritional and food safety requirements.
- The school management should ensure that the supplier has all facilities to transport and store foods appropriately (Refer to the Food Code on [www.foodsafe.ae](http://www.foodsafe.ae) for more details).
- All food items should be labeled clearly and legibly with the

necessary information. Refer to [SECTION 2.9](#) for sample label.

- Schools should have nutrition values and information (Refer to [CLAUSE 2.9 NUTRITION LABELLING](#)) of food sold in the school provided by food suppliers for records and documentation. Schools should be able to provide nutrition values to the Food Safety Department upon request.
- School management must ensure that the food supplier has the relevant and valid permit from Dubai Municipality Food Safety Department to supply foods and beverages to schools and only the foods listed in the permit are sold. Any change in the approved menu requires another approval from Dubai Municipality
- School management should periodically verify that the products comply with the nutritional requirements listed in these guidelines. School should seek expertise when necessary, either internally or externally, or from the Food Safety Department to ensure that food suppliers meet the regulations.
- Due consideration for vegetarian options for children who are vegetarians.
- School managements should make canteen menu available for parents.

#### 2.2.2 ROLES AND RESPONSIBILITY OF THE FOOD SUPPLIERS

- Food businesses that supply food to schools shall obtain a valid permit from the Food Safety Department to supply food to schools.

- The food supplier shall not provide any other foods other than the foods that have been approved by the Food Safety Department.
- The food suppliers must carry out nutritional assessment of all their products based on the recipe and ingredients and should provide the information to the Food Safety Department, school or any authorized regulatory authority when necessary.
- Evaluation of nutrients should be carried out in a scientifically valid method. Refer to [APPENDIX 1, TABLE 1](#) to know the macro-nutrient values of each food.
- When products, ingredients, proportions or portions sizes are altered, the nutrition information should be re-validated and approved.

## 2.3 GUIDELINES TO PREPARE MEALS

### 2.3.1

- The requirements listed below will cover preparation of two major meals of the day, namely breakfast and lunch and where relevant, dinner. Suppliers should aim to provide healthy meals, regulate the nutritional value of the meals offered by the schools and offer correct portion sizes. The following are measures to ensure healthy meals at schools:
- Each meal must meet minimum calorie requirement, and not exceed the maximum limit for different age groups as listed in the [APPENDIX 1, TABLE 10](#).
  - Portion size of meals must be controlled. Refer to [APPENDIX 1, TABLE 1 AND 2](#) for portion size control.
  - Each meal must include at least 3 of the following food

- groups (Grains, fruits and vegetables, meats and pulses, dairy products, and nuts and oil). Refer to [APPENDIX 1, TABLE 9](#) to understand more about food group distribution per day.
- Make water available to ensure adequate fluid intake during breaks
  - Each meal should contain 50% of carbohydrates coming from whole grains
  - Each meal should have at least one source of fiber daily such as fruits and vegetables.
  - Fruits should be available as an option for all age groups and during all breaks. Fruits that are fresh, frozen, or canned in 100% juice can be served.
  - Selection of food items for meals should consider the restrictions on food items as specified in [APPENDIX 1, TABLE 4](#).
  - Meals must contain at least one source of protein like meat (such as chicken), or fish (such as tuna), or dairy products (such as labneh), or beans and pulses to supply optimum protein in lunch.
  - Fried food should not be served with meals.
  - It is recommended that breakfast should provide at least 20% of macronutrients (RDA) for children per day. Refer to [APPENDIX 1, TABLE 5](#).
  - It is recommended that lunch should provide at least 30% of the macronutrients (RDA) for children per day. Refer to [APPENDIX 1, TABLE 5](#).
  - It is recommended that each meal/snack should provide at least 10% of the RDA values of any three micronutrients such as Vit C, Vit B+, Iron, Vit A, and Calcium. These nutrients are selected on the basis of their importance during growing years. Refer [APPENDIX 1, TABLE 6 AND 7](#) to know about the RDA values of micronutrients.

## 2.4 GUIDELINES TO PREPARE SNACKS

- Eating regular and healthy snacks is also very important during childhood. Suitable, balanced and timely snacking will decrease hunger pangs, regulate blood glucose, and provide optimum nutrition. To ensure that snacks are healthy, food suppliers should:
- Limit the availability of sugar dense and high calorie snacks e.g. croissants, cookies, confectionary etc. Refer to [APPENDIX 1, TABLE 4](#) for the list of restricted food in school and their frequency of availability, and [APPENDIX 2](#) for the list of restricted confectionary food items.
  - Provide correct portion sizes of the available snacks whether freshly prepared in the premises or sold from external vendors. Refer to [APPENDIX 1, TABLE 1 AND 2](#) for portion sizes). Refer to [APPENDIX 3](#) for sample menus for breakfast, lunch and snack.

## 2.5 VEGETARIAN DIET

Vegetarian students need protein from a variety of foods not only to supply adequate protein, but also other vitamins and minerals. Vegetarian sources of protein should be varied over the week. Ensure that a range of vegetarian meals and food options are available for both breakfast and lunch.

Good sources of protein for vegetarians include pulses, nuts and oil seeds, soya products (tofu, soya milk and textured soya protein such as soya mince), wheat, oats, and rice, eggs and some milk products (milk, cheese and yoghurt). Reliance on cheese and eggs makes the diet too high in energy and fat, especially saturated fats.

Note that pulses count as vegetables. (However, if you are serving pulses as a non-dairy protein for vegetarians, you will need a separate vegetable serving as well).

All schools must offer at least one vegetarian option for all types of meals sold.

## 2.6 ALLERGENS

All the meals must contain indication for any kind of allergens present as the main ingredient; compound ingredient, additive or processing aid. Allergens must be labeled or declared on the menu no matter how small the amount ([FOOD CODE 2013](#)). The Food Safety Department, Dubai Municipality recognizes the below listed as allergen.

- 🦀 Crustaceans and their products (e.g. prawns)
- 🥜 Peanuts and their products
- 🌱 Soybeans and their products
- 🌰 Tree nuts and their products
- 🌱 Sesame seeds and their products
- 🐟 Fish and fish products
- 🥚 Egg and egg products
- 🥛 Milk and milk products
- 🌾 Gluten and cereals containing gluten (wheat, rye, oats, barley and spelt).

Food prepared and sold on site is exempted from labeling, thus required allergen information must either be displayed on, or provided to the inspector and consumer upon request.

## 2.7 NUTRIENTS OF CONCERN

Recent studies related to lifestyle and health has shown that the three major nutrients of concern in our diets are SALT, SUGAR, SATURATED FATS AND TRANS-FAT and not just the calories. Over consumption of these nutrients for a long term can be associated to lifestyle diseases and conditions like hypertension, diabetes, and blood cholesterol and others. Thus, it is necessary to regulate the over consumption of these nutrients to ensure safer and healthier food practices.

### 2.7.1 SALT

Sodium is an essential nutrient, but Sodium intake of different populations around the world became a concern after several research studies showed a positive straight-line relationship of dietary sodium intake to prevalence of hypertension. Salt in the diet can come from processed foods, either because they are particularly high in salt (such as ready meals, processed and cured meats, cheese, potato chips and instant noodles, among others) or because they are consumed frequently in large amounts (such as bread and processed cereal products). Salt is also added to food during cooking (stock cubes) or at the table (soy sauce, fish sauce and table salt).

### 2.7.2 SUGAR

Sugar has always been a concern for children since it provides empty calories. Excess of sugar is often stored

as fats in the body. Besides, consuming sugar-rich foods make the children more lethargic and hungrier. Carbonated and non-carbonated soft drinks, popsicles, candies, bakery products, chocolates, sugar-sweetened drinks, and many other processed foods contain sugar.

### 2.7.3 SATURATED FATS

Though fats is one of the important nutrient during childhood, the quality and type of fat is more of a concern. Foods high in saturated fats or cooked in oils high in saturated fats leads to various health problems in later stages. Examples of sources of foods that contain saturated fats are full fat dairy, red meats, butter, ghee, high fat cheeses, cheese and cream spreads, dairy desserts, grain-based dessert, sausages, and French fries.

### 2.7.4 TRANS-FATS

Trans-fat or trans-fatty acids are formed during the chemical process known as partial hydrogenation of oils. It makes liquid cooking oils into stable semi-solids, such as vegetable shortening, and helps increase shelf life. Trans-fats are bad for heart health and should be replaced with mono or polyunsaturated fat in order to reduce heart disease risks. Examples of sources of trans-fats are shortening, margarine, baked products, biscuits, doughnuts, cookies, readymade frosting, and partially hydrogenated oils.

Refer to APPENDIX 1, TABLE 8 for more details on the reference values for the nutrients of concern.

## 2.8 LIST OF FOODS RESTRICTED IN SCHOOLS

Foods listed in the APPENDIX 1, TABLE 4 should either be completely eliminated or restricted as per the details provided in the table. Restricted food items shall not be displayed, sold, nor promoted in schools unless there are exceptions allowed.

For any food categories or food items not mentioned in the food listed among the restricted foods list APPENDIX 1, TABLE 4, refer to TABLE 8 to compare the permissible range for nutrients of concern.

## 2.9 NUTRITION LABELLING

Each food item sold in the school premises must be verified and labeled for salt, sugar and saturated fats along with other nutrients as mentioned in the sample nutrition label below. The information of nutrients mentioned below should be provided for all food items provided in schools including meals, snacks, and beverages.

Name of the product:		
Net weight:		
Serving size:		
	Per serving	Per 100gm
Kcal		
Carbohydrates		
Total Sugars		
Added Sugars		
Fiber		
Proteins		
Total Fats		
Saturated Fats		
Sodium		

## 2.10 CALCULATION OF NUTRIENT VALUES

The legislation allows for various methods of calculating the nutrient values. It does not necessarily require laboratory analysis and it may be possible for a food business operator to calculate the values themselves depending on the type of product. The declared values in the nutrition table are average values and must be based on:

- The manufacturer's analysis of the food.
- A calculation from the known or actual average values of the ingredients used; or
- A calculation from generally established and accepted data.

Other Methods of Calculating and Evaluating Nutrient Values:

- Nutrient analysis software approved by the Food Safety Department, or
- Laboratory analytic tests from laboratories that are approved by the Food Safety Department, or
- Manual calculation can be carried out by qualified professional (nutritionist/dietitian) using recommended references by Dubai Municipality. Refer to portion size table APPENDIX 1, TABLE 1 to calculate the macro nutrients of foods.

## 2.11 TRAINING OF EMPLOYEES AND SCHOOL MANAGEMENT

Food business managers, school management representatives and food handlers should obtain appropriate formal training in nutritional aspects relevant to their business.

### 2.12 INSPECTION

- Suppliers of ready to eat high risk foods to schools should be considered as 'high risk' food establishment in the inspection system and should be routinely inspected at least once in six months.
- The inspection process should cover aspects of food safety and nutrition and any other relevant requirements.
- Inspections should assess any change in supplier, process, product change.

### 2.13 EVALUATION

The effectiveness of the implementation of the guidelines and requirements listed in this document has to be evaluated for its effectiveness periodically.

Schools have to evaluate the effectiveness by:

- Evaluating the consumption rate of healthy food items among children over the time (total consumption data of each food in portions)
- Evaluate the knowledge and attitude change among teachers and children
- Evaluate the weight, activity range of children

APPENDIX 1: REFERENCE TABLES

TABLE 1: PORTION SIZE OF FOOD GROUPS

GRAINS, CEREALS, STARCHES	
1 serving = 15gm carbohydrates, 3gm proteins, 0-1gm fat, 80kcal	
ITEM	IDEAL 1 SERVING SIZE
Biscuit	1 disc (2.5 inches)
Bread	
• Reduced calorie	2 slices about 1.5 oz
• White	1 medium slice
• Buns	1/2 (1oz)
Flat breads (Chapatti, Paratha)	1 (6 inches diameter)
English muffin	1.5oz
Flour(any), corn meal	1.5oz
Indian Bread ( Naan, Plain Kulcha)	1 (8 inches diameter)
Pancake	1 (1.5oz)
Pita Bread	1.5oz
Taco Shell	2 small crisps shells
Tortilla	1 medium size (1.5oz)
Waffle	1 (4 inch square)
Bulgur, cooked	1/2 cup
Oats, cooked	1/2 cup

Unsweetened ready to eat cereals	3/4 cup
Granola (low fat)	1/4 cup
Kasha	1/2 cup
Muesli	1/4 cup
Pasta, spaghetti cooked (plain boiled)	1/3 cup
Quinoa (cooked)	1/3 cup
Rice (white or brown, cooked)	1/3 cup
Tabbouleh (prepared)	1/2 cup
Cassava	1/3 cup
Corn (boiled, frozen, raw)	1/2 cup
Corn cob	5 oz (1/2 cob)
Plantain, Ripe	1/3 cup
Potato	
• Baked with skin	3 oz
• Boiled	3oz
• Mashed with milk	1/2 cup
• Wedges, French chips (oven baked)	2oz
Yam	1/2 cup

FRUITS AND FRUIT JUICES	
1 serving = 15gm carbohydrates, 0gm proteins, 0gm fat, 60kcal	
ITEM	IDEAL 1 SERVING SIZE
Cantaloupe	11oz (1 cup)
Dates	3 no
Dried fruits	2tbsp
Figs	2 med
Mixed fresh fruit cut	1/2 cup
Orange, nectarine, small	1 (6 1/2oz)
Grapes (black, red, green)	3oz
Honey Dew	1 slice
Kiwi	1 (3 1/2oz)
Mango	1/2 Fruit or 1/2 cup
Papaya	8oz
Peach, plumps, fresh	4oz
Pineapple, fresh	3/4 cup or 2 med disc

	1 cup
	1/2 glass

VEGETABLES	
1 serving = 5gm carbohydrates, 2gm proteins, 0gm fat, 25kcal	
IDEAL 1 SERVING SIZE	
1/2 cup cooked / 1 cup raw / 1/2 cup juice	
ITEM	ITEM
Amaranth	Okra
Artichoke	Onions
Asparagus	Radish
Baby Corn	Snow Peas
Bamboo shoots	Bell peppers
Fresh beans (green, wax, French)	All types of Squash
Bean sprouts	Tomato
Beetroot	Turnips
Bok Choy	Water chesnuts
Broccoli	Zucchini
Brussels Sprouts	Baby corn
Cabbage	Gourds (bitter, snake, ridge, bottle)

Carrots	Leafy greens (kale, collard, turnip, mustard, spinach)
Cauliflower	Leeks
Celery	Mix cut vegetables (fresh and frozen)
Coleslaw (no dressing)	Mushrooms
Cucumber	Eggplant

MEAT AND MEAT SUBSTITUTES (UNCOOKED)	
1 serving = 0gm carbohydrates, 7gm proteins, 0-3gm fat, 45kcal (* Contains 75kcal)	
ITEM	IDEAL 1 SERVING SIZE
Beef (ground, roast, rib, steak)	1oz
Whole Egg	1
Egg whites	2
Poultry(chicken, turkey, skinless)	1oz
Tuna, canned in water or oil, drained	1oz
Poultry cutlets*	1oz

LENTILS AND LEGUMES (COOKED)	
1 serving = 15gm carbohydrates, 7gm proteins, 0-3gm fat, 125 kcals	
ITEM	IDEAL 1 SERVING SIZE
Baked Beans	1/3 cup
Beans (black, garbanzo, kidney, lima, pinto, white)	1/2 cup
Lentils (brown, green, yellow)	1/2 cup
Peas ( black eyed)	1/2 cup
Lentil and bean sprouts	1/2 cup
Edemame	1/2 cup
Falafel	3 no
Hummus (snack)	1/3 cup
Tofu	4oz
Soya based chicken nuggets	2 nuggets



1 serving = 15gm carbohydrates, 8gm proteins, 5gm fat, 120 - 150kcal	
ITEM	IDEAL 1 SERVING SIZE
Yoghurt, Plain, Low fat or fat free	8oz
Natural fruit yoghurt	8oz
Milk, whole	250ml
Low fat Milk	250ml
Laban, whole	250ml
Laban, low fat	250 ml
Whole milk yoghurt	8oz -
Goat milk	250ml
Chocolate Milk	250ml
Smoothies, flavored	10oz
Soy Milk, regular	250ml
Cottage Cheese	1.4 cup
Reduced fat cheese	1oz
Ricotta Cheese	2oz
Mozzarella	1oz
Feta	1oz
Cheese Regular (american, cheddar, swiss, hard goat, jack)	1oz

FATS, NUTS AND OILSEEDS	
1 serving = 0 gm carbohydrates, 0 gm proteins, 5 gm fat, 45 kcal	
ITEM	IDEAL 1 SERVING SIZE
Avocado	1tbsp
Nut butters , trans fat free ( peanut, almond, cashew)	1 1/2tsp
Olive oil, canola oil, peanut oil	1tsp
Olives	8-10
Oils (flax seed, corn, cotton seed, sunflower, safflower)	1tsp
Margerines with plant sterols	2tsp
Flax seeds, pumpkin seeds, sesame seeds	2tbsp
Nuts	
• Almonds, cashews	6 no
• Macademia	3 no
• Peanuts	10 no
• Pecans	4 halves
• Pistachios	16 no
Tahini, sesame paste	2tsp
Butter	
• Reduced fat	2tbsp
• StickWater chestnuts	1tsp
• Whipped	2tsp

Coconut shreds	2tbsp
Cream	
• Heavy	1tbsp
• Whipped	2tbsp
Cream cheese	1tbsp
Sour cream	2tbsp

Source: National Heart, Lung and Blood Institute, Department of Health and Human Services, USA. USDA Food Composition Database

ITEM	METRIC CONVERSION
1oz	28gm
1tbsp (table spoon)	15gm
1tsp (teaspoon)	5gm
<p><b>Note: The gram conversion of cups is not provided because every item (dry, wet, powder, granules) will weight different in a cup. Thus use only the Cup size as a reference</b></p>	

TABLE 2: RACC TABLE FOR COOKED PRODUCT

	FOOD ITEM	1 PORTION SIZE / RACC
	Mini bagels, mini pizzas, breaded mozzarella, egg rolls, mini sandwiches, mini quesadillas, Manakish, Fatayer	85gms, add 35gm more for items with gravy sauce toppings
	Casseroles, macaroni and cheese, pot pies	1 cup
	Vegetable stuffed Paratha	55gm
	Idlis	85gms cooked
	Burritos, enchiladas, pizzas, all types of sandwiches ,crepes – cooked	140gm, add 55 gm for products with gravy sauce topping e.g. enchiladas
	Biscuits, tortillas, soft bread sticks, pretzels, corn bread, scones, crumpets, English muffin	35gm
	Breads, rolls	50gm
	Angel cake, chiffon /sponge cake without icing	55gm
	Crackers for snacking	30gm
	Hard bread sticks,	15 gm
	Croutons	7gm
	Bread crumbs	30gm

	French toast, crepes, pancakes,	110gm prepared, 40 gm dry mix
	Cereal bars, granola bars, rice cereal bars (without coating)	40gm
	Pizza Crust( whole wheat/ white flour)	55gm
	Tacco shells, hard	30gm
	Breakfast cereals, ready to eat, plain puffed	40gm
	Bran or wheat germ	15gm
	Flours and Cornmeal	30gm
	Rice, barley, millets	140gm cooked, 45 gm dry
	Pastas, noodles, dumplings, ravioli	140gm cooked, 55 gm dry
	Starches (potatoes, tapioca, corn starch)	10gm
	Mashed potatoes	120gm
	Baked potatoes/hash browns	70gm
	Fruit/vegetable/nut cakes (with = or more than 35% of the final weight as fruit/vegetable/nuts)	80gm
	Vegetables cooked in sauces or gravies	180gm
	Vegetables, steamed, boiled, grilled, frozen, canned	85gm
Salads (without dressing) as main dish	120gm	

	Sun dried vegetables like mushrooms, tomatoes	5gm
	Vegetable paste	30gm
	Vegetable puree	60gm
	Vegetable as a main ingredient	85gm
	Vegetables used as garnish like parsley, coriander	5gm
	Vegetable juice	240ml
	Berries, all types	85gm
	Whole fruits like banana, apple, nectarines	110gm

	Tofu	85gm
	Sprouts (fresh and canned)	1/4 cup
	Whole beans and legumes like kidney beans, chick peas, fava beans	130gm cooked in sauce or canned liquids, 90gm for other prepared, 35gm raw
	Split dals	130gms cooked in sauce, 35gm raw
	Pie fillings	85gm
	Egg mixtures, scrambled, omelets	110gm
	Whole eggs, raw	50gm
	Fish, poultry meat and substitutes	85gm
	Main dish with sauce, fish with creamy sauce	140gms cooked
	Chicken, plain, grilled, shredded	85gm
	Chicken, breast casserole	140gm
	Main dish without sauce like plain or shellfish cake	85gm
	Fish, shellfish, game meat, smoked fish	100gm cooked

	Main dish with sauce, fish with creamy sauce	140gms cooked
	Chicken, plain, grilled, shredded Cottage cheese	85gm
	Chicken, breast casserole	140gm
	Main dish without sauce like plain or shellfish cake	85gm
	Fish, shellfish, game meat, smoked fish	100gm cooked
	Any grated hard cheese , parmesan, Romano, mozzarella	5gm
	Cottage cheese	55gm
	Cheese slice	1 slice
	Cheese cube	1 cube
	All other cheese like feta, haloumi	30gm
	Cream or cream substitute ( liquid)	15ml
	Cream or cream substitute (powder)	2gm
	Milk as main food ( full cream, low fat)	200ml
	Milk based beverages like instant breakfast, meal replacement, soy beverage	240ml
	Milk, evaporated	30gm
	Milk shakes, dairy based smoothies	240ml

	Sour Cream	30ml
	Yoghurt, plain, flavored fruit based	170gm
	Custard, gelatin or milk based puddin	1/2 cup, prepared
	Butter, oil	1tbsp
	Dressings for salads	30gm
	Seasoning oils	1tbsp
	Whole nuts, roasted, flavored, coated, mixtures, sliced, chopped	30gm
	Coconut, grated whole, powder	15gm
	Nuts and seed flours	15gm
<b>SAUCES, DIPS, GRAVIES</b>	BBQ sauce, tomato chili sauce, ketchup, mustard sauce, all types of dips like bean dip, guacamole, salsa dips to be mainly used as a dip or topping	1tbp for sauces, 2tbp for dips
	Main dish sauce for pasta or spaghetti	100gm
	Flavoring sauce (for small size dish) like cream sauce, pesto sauce, alfredo sauce, cheese sauce	1/4 cup
	Vinegar, marinades	1tbsp

<b>DRY SNACKS</b>	Baked chips, pretzels, popcorn, fruit and vegetable based chips, grain based snacks mixes	35gm
<b>SOUPS</b>	All varieties	245gm
<b>SUGAR</b>	Jams, jellies, fruit pastes, fruit chutneys	1tbsp
	Sugar	8gm
	Baking decorations like sprinkles for cookies, cake decorations	1tsp
<b>SALT</b>	Salt, salt substitutes, seasoning salts	1/4 tsp
	Baking soda, baking powder, pectin	0.6gm
<b>MISCELLANEOUS</b>	Cocoa powder	1tbsp

\*Adopted from Department of Health and Human Services, Food and Drugs Administration, USA

TABLE 3: THE FOOD GROUPS

FOOD GROUP	MAIN NUTRIENT	ITEMS IN THE GROUP	BEST CHOICES	AVOID
	Carbohydrate Fiber B complex	Grains like rice, wheat, barley, corn, oats, muesli, all grain flours. Starch like potatoes, yams, cassava, Grain flour products like granola bars, cakes, croissants, pastries, biscuits, pita bread, tortilla, corn chips, popcorn, muffins	Whole grain products, oats, brown rice, quinoa, couscous, whole wheat bread, wheat pasta, muesli, sweet potatoes	Refined flour products like biscuits, croissants, pizza, white rice, French fries
	Vitamins Minerals Fiber	Juicy fruits like grapes, pineapple, oranges, pulpy fruits like mango, banana, custard apple, berries like blue berry, strawberry, black berry and all types of melons. Leafy vegetables like spinach, kale, and lettuce. Other vegetables like cabbage, eggplant, okra, and fresh beans like French beans. Roots like beet root, carrots etc.	Green leafy vegetables like kale, spinach, lettuce, salads, fruit cuts, steamed and grilled vegetables,	Canned fruits in sugar syrups, salted canned vegetables, pickled vegetables, deep fried vegetables,
MEAT, EGGS AND LEGUMES	Protein Iron	Whole eggs and products	Whole egg whites	Fried eggs
		Legumes like kidney beans, fava beans, chickpeas, and all types of dals.	Beans, sprouts,	Refried beans, canned beans
		All types of meat like chicken, red meat, turkey, beef, sea food and fish like salmon, tuna	Steamed baked and grilled meat, lean meat cuts, chicken breasts	Deli meat, ham, fried chicken

FOOD GROUP	MAIN NUTRIENT	ITEMS IN THE GROUP	BEST CHOICES	AVOID
	Protein, Calcium, Vitamin D	All types of milk obtained from animals, cheese, cottage cheese, yoghurt, cheese spread, greek yoghurt, Laban	low fat milk, low fat cheese, low fat yoghurt, cheese, feta cheese, Laban	Full fat milkshakes, flavored yoghurt, processed cheese slice, fried cheese sticks
	Essential fatty acids	Nuts like walnuts, almonds, pistachio, and peanuts. Oil seeds like sunflower seed, flax seeds. Plant based oils like canola oil, sunflower	Olive oil for salad dressings, canola oil for cooking, low fat cream for desserts, plain whole nuts, peanut butter	Sugar-coated nuts, salted nuts, saturated fats like butter, margarine, fried foods, vegetables cooked with lard or animal fat
	Electrolytes	Natural water, juices, coconut water, soups, vegetable juices	Natural water, 100% fruit Juices, fresh fruit and vegetable juices, coconut water	Carbonated drinks, energy drinks, sports drinks, sugary beverages, soft drinks

TABLE 4: LIST OF RESTRICTED FOODS IN SCHOOLS

RESTRICTED FOOD GROUPS	FOOD PRODUCTS THAT CANNOT BE SUPPLIED TO SCHOOLS	FOOD PRODUCTS IN THE GROUP THAT CAN BE SUPPLIED BASED ON CERTAIN CONDITIONS		
		EXEMPTED FOOD PRODUCT	CRITERIA TO MEET THE PRODUCT EXEMPTION	FREQUENCY AT WHICH THE EXEMPTED PRODUCT CAN BE SUPPLIED
CARBONATED DRINKS	All types of sodas, fizzy drinks, soft drinks.	N/A	N/A	N/A
NON-CARBONATED DRINKS	All type of sugar sweetened drinks, energy drinks, flavored vitamin and mineral water or drinks, sports water, fruit flavored drinks	No added sugar or honey.  Fruit juices with 30% or more fruit pulp/ juice	The portion size of the drink should not exceed 250ml*. Natural sugar content should not exceed medium range in nutrient of concern (APPENDIX 1, TABLE 8)	All days
FOODS WITH FLAVOR ENHANCERS SUCH AS MONOSODIUM GLUTAMATE	Flavor enhancers can cover poor nutritional quality of certain food and also contribute to the sodium intake.	N/A	N/A	N/A

RESTRICTED FOOD GROUPS	FOOD PRODUCTS THAT CANNOT BE SUPPLIED TO SCHOOLS	FOOD PRODUCTS IN THE GROUP THAT CAN BE SUPPLIED BASED ON CERTAIN CONDITIONS		
		EXEMPTED FOOD PRODUCT	CRITERIA TO MEET THE PRODUCT EXEMPTION	FREQUENCY AT WHICH THE EXEMPTED PRODUCT CAN BE SUPPLIED
CONFECTIONARY*	See APPENDIX 2 for the list of Confectionary	Wafer biscuits or any biscuits that are plain or coated with a thin layer of chocolate	Should not exceed the medium range for salt, sugar and saturated fats. Refer to APPENDIX 1, TABLE 8 Should not exceed the portion size mentioned in APPENDIX 1, TABLE 1 AND 2 as applicable	2/week
DEEP FRIED FOODS	French fries, falafel, spring rolls, samosa, chicken nuggets or any food item that is deep-fried to be served as snacks or main meal	If the restricted fried food items are baked instead of deeply fried	Should not exceed the medium range for salt, saturated fats, and sugar. Refer to APPENDIX 1, TABLE 8	All days



<b>SAVORY SNACKS</b>	Ready to eat noodles, heat and eat packet foods, Bafak, any kind of chips like potato chips or similar products, corn chips, pretzels	Only if the savory items are packed in mini packs of net weight not more than 40gm	Should not exceed the medium range for salt, sugar and fats. Refer to <a href="#">APPENDIX 1, TABLE 8</a>	2/week-
<b>MILK AND MILK BASED PRODUCTS</b>	Ice Cream, artificially flavored yoghurt, frozen yoghurt, yoghurt sticks, and chocolate-based shakes, biscuit-based shakes artificially flavored milk	Naturally flavored yoghurt, yoghurt with fruit pieces, Laban	Should not exceed the medium range for salt, sugar and fats. Refer to <a href="#">APPENDIX 1, TABLE 8</a>	2 / week

RESTRICTED FOOD GROUPS	FOOD PRODUCTS THAT CANNOT BE SUPPLIED TO SCHOOLS	FOOD PRODUCTS IN THE GROUP THAT CAN BE SUPPLIED BASED ON CERTAIN CONDITIONS		
		EXEMPTED FOOD PRODUCT	CRITERIA TO MEET THE PRODUCT EXEMPTION	FREQUENCY AT WHICH THE EXEMPTED PRODUCT CAN BE SUPPLIED
<b>BAKERY PRODUCTS</b>	Cakes, muffins, pastries, cake slices, sweet bread, donuts, cream-filled buns, short cookies, and other grain-based and dairy-based dessert	Cake slices, and mini muffins without frosting	Should not exceed the medium range for salt, sugar and fats. Refer to <a href="#">APPENDIX 1, TABLE 8</a> and portion size mentioned in <a href="#">APPENDIX 1, TABLE 1 AND 2</a>	2/week
<b>SAUCES, AND DIPS</b>	Mayonnaise, any chocolate-based dips, cream-based dips, and salt over the table must not be available	Low fat salad dressings	Sauces, dips, mayonnaise, and condiments to be served in mini sachets only. Refer to <a href="#">APPENDIX 1, TABLE 2</a> for the portion size	All days

RESTRICTED FOOD GROUPS	FOOD PRODUCTS THAT CANNOT BE SUPPLIED TO SCHOOLS	FOOD PRODUCTS IN THE GROUP THAT CAN BE SUPPLIED BASED ON CERTAIN CONDITIONS		
		EXEMPTED FOOD PRODUCT	CRITERIA TO MEET THE PRODUCT EXEMPTION	FREQUENCY AT WHICH THE EXEMPTED PRODUCT CAN BE SUPPLIED
ARTIFICIAL SWEETENERS	All artificial sweeteners are restricted	N/A	N/A	N/A
OTHERS: HIGH SALT CONTENT FOOD ITEMS AND HIGHLY PROCESSED FOODS	Pickled vegetables and Deli meats like, hot dog, salami, mortadella, sausages, and pepperoni and commercially processed burgers	N/A	N/A	N/A

\*By 2018, the target would be to reduce the portion size to a maximum of (150ml)

TABLE 5: RECOMMENDED DIETARY ALLOWANCE (RDA) - ENERGY MACRONUTRIENTS REQUIREMENTS ACCORDING TO CHILDREN'S AGE GROUP AND GENDER

ENERGY AND MACRONUTRIENTS				
Age Group	Energy (Kcal/day)	Carbohydrates (g/day)	Proteins (g/day)	Fats (g/day)
<b>Children</b>				
4-8yrs	1400-1600	130-140	19	39 - 62
<b>Boys (max)</b>				
9 -13yrs	2000	225-275	34	62 - 85
14-18yrs	2600	300-350	46	61 - 95
<b>Girls (min)</b>				
9-13yrs	1800	200-225	34	62 - 85
14-18yrs	2000	225-275	52	55 - 78

\*Adopted from RDA Table, published by Food and Drug Administration, USA

TABLE 6: RECOMMENDED DIETARY ALLOWANCE (RDA) - MICRONUTRIENT REQUIREMENTS ACCORDING TO CHILDREN'S AGE GROUP AND GENDER - VITAMINS

VITAMINS									
Age Group	FAT SOLUBLE			WATER SOLUBLE					
	Vit A (µg/day)	Vit D (µg/day)	Vit E (mg/day)	Vit C (mg/day)	Thiamin (mg/day)	Riboflavin (mg/day)	Niacin (mg/day)	Folate (mg/day)	Vit B12 (mg/day)
<b>Children</b>									
4-8yrs	400	15	7	25	0.6	0.6	8	200	1.2
<b>Boys</b>									
9-13yrs	600	15	11	45	0.9	0.9	12	300	1.8
14-18yrs	900	15	15	75	1.2	1.3	16	400	2.4
<b>Girls</b>									
9-13yrs	600	15	11	45	0.9	0.9	12	300	1.8
14-18yrs	700	15	15	65	1	1	14	400	2.4

\*Source: RDA Table published by Food and Drug Administration, USA

TABLE 7: RECOMMENDED DIETARY ALLOWANCE (RDA) - MICRONUTRIENT REQUIREMENTS ACCORDING TO CHILDREN'S AGE GROUP AND GENDER - MINERALS

MINERALS									
Age Group	Copper (µg/day)	Iodine (µg/day)	Iron (mg/day)	Magnesium (mg/day)	Molybdenum (µg/day)	Phosphorus (mg/day)	Selenium (µg/day)	Zinc (mg/day)	Calcium (mg/day)
<b>Children</b>									
8-4yrs	440	90	4.1	110	22	500	30	5	1000
<b>Boys</b>									
13-9yrs	700	120	5.9	200	34	1250	40	8	1300
18-14yrs	890	150	7.7	340	43	1250	55	11	1300
<b>Girls</b>									
13-9yrs	700	73	5.7	120	34	1250	40	8	1300
18-14yrs	890	95	7.9	150	43	1250	55	9	1300

\*Source: RDA Table published by Food and Drug Administration, USA

TABLE 8: NUTRIENTS OF CONCERNS LIMITS

NUTRIENT	WHAT IS LOW	WHAT IS MEDIUM	WHAT IS HIGH
<b>CRITERIA FOR FOOD (PER 100GM)</b>			
TOTAL FAT	3.0g or less	3.0 – 17.5g	More than 17.5g
SATURATED FAT	1.5g or less	1.5 – 5.0g	More than 5.0g
SUGAR	5.0g or less	5.0 – 22.5g	More than 22.5g
SALT	0.3g or less	0.3 – 1.5g	More than 1.5g
<b>CRITERIA FOR BEVERAGES (PER100ML)</b>			
TOTAL FAT	1.5g or less	1.5 – 8.75g	More than 8.75g
SATURATED FAT	0.75g or less	0.75 – 2.5g	More than 2.5g
SUGAR	0.75g-2.5g	2.5g-11.25g	More than 11.25g
SALT	0.3g or less	0.3 – 0.75g	More than 0.75g
<b>*SODIUM FROM ALL SOURCES EXPRESSED AS SALT (1G SODIUM = 2.2G SALT)</b>			

\*Source: School Food Standards, United Kingdom

TABLE 9: FOOD GROUP DISTRIBUTION PER DAY FOR CHILDREN (AGE 3 - 18 YRS)

FOOD GROUP	1 SERVING SIZE	SERVINGS/DAY				
		3-5 YEARS	6 -10 YEARS		11 - 18 YEARS	
			MIN	MAX	MIN	MAX
GRAIN, CEREALS AND STARCH	Refer to TABLE 1	6	6	7	8	10
FRUITS AND VEGETABLES	Refer to TABLE 1	4	4	5	6	7
MEAT, EGGS AND LEGUMES	Refer to TABLE 1	2.5	2.5	2.5	2.5	3.5
MILK AND MILD PRODUCTS	Refer to TABLE 1	5 to 6	5 to 6	6 to 7	7 to 8	8 to 9
NUTS, OILS AND OILSEEDS	Refer to APPENDIX 1, TABLE 1	5 to 6	5 to 6	6 to 7	7 to 8	8 to 9

TABLE 10: CALORIE DISTRIBUTION BY MEAL TYPE

MEAL TYPE	ELEMENTARY	MID SCHOOL		SECONDARY LEVEL	
	3 - 5 YRS	6 - 10 YRS		11 - 18 YRS	
		MIN	MAX	MIN	MAX
Breakfast	320	320	360	400	480
Mid-Morning	240	240	270	300	360
Lunch	480	480	540	600	720
Snacks	160	160	180	200	240
Dinner	400	450	450	500	600

APPENDIX 2: EXAMPLES OF FOODS CONSIDERED TO BE CONFECTIONERY

LIST OF RESTRICTED CONFECTIONARY FOOD ITEMS	
Bubble gum	Crystallized or glazed fruit and ginger
Candy bars	Eucalyptus and honey drops
Caramel	Fondant
Carob	Fruit balls with added sugar
Cookies	Fruit flakes with added sugar
Chewing gum	Fruit straps that are ether not
Chewy Lollies	95-100% dried fruit or that have added sugar
Chocolate	Fudge
Chocolate bars	Gums/gelatin candies
Chocolate chips, bits and buttons	Fruit juice lollies
Chocolate compound	Gummies
Chocolate/nut spreads (consumed other than as a spread)	jelly Babies
Chocolate-coated nuts and fruit	jelly beans
Cotton candy/fairy floss	Marshmallows

Sherbet and sour lollies (e.g. choc malt treats)	Turkish delight
Fruit / Ice Shushes	Halva
Small compressed drink powder lollies (e.g. choc malt treats)	Hard and soft icings, frostings and glazes
Small containers/tubes of jelly	Hard/boiled candy
Sugar-coated choc bits	candy canes
Sugar-coated nuts	Gobstoppers
Sweetmeats	Lollipops
Toffee	Sugar sprinkles
Mints	Jellies
Nougat	Liquorice
Nut or seed brittle or 'snaps'	Marzipan
Praline	Medicated cough lozenges

Small amounts of confectionery products (for example, icing, glazes, choc chips and glace fruit) can be used as a thin layer, topping or ingredient on or in a nutritious baked item/product.

#### APPENDIX 3: SAMPLE MEALS (BREAKFAST AND LUNCH)

SAMPLE BREAKFAST	
KINDERGARTEN	1/2 whole meal bread sandwich with Haloumi cheese and vegetables
	1/2 cup cereals (non-sugar frosted) with 1 cup low fat milk
	1 cup fruit yoghurt + 1 small Zaatar
ELEMENTARY	1 whole meal egg/cheese and vegetable sandwich
	1 cup cereals + 1 cup low fat milk + fresh berries
	1 small size Zaatar with vegetables + small box nuts
	1 egg omelet + 1 slice wheat bread + small apple
MID SCHOOL	1 med baked falafel sandwich + 1 apple
	1 bowl cereals + 1 cup milk + 1 banana
	1 med chicken lettuce sandwich + 1 orange
	1 cheese Zaatar with vegetables + 250ml fruit juice
	1 whole egg omelet + 2 slice wheat bread + 250ml fruit juice
HIGH SCHOOL	1.5 cups cereals + 250ml milk + 1 whole fruit
	2 whole egg sandwich in wheat bread + 2 slices of melon
	1 falafel sandwich with vegetables + 1 apple
	1 medium cheese Zaatar + 250ml fruit juice

SAMPLE LUNCH	
ELEMENTARY	2/1 vegetable wrap with cheese + 1 cup yoghurt + 1 orange
	1 small cup rice + chicken + 1 orange + 1 cup salad
	2 small Paratha + 1 cup vegetables/cottage cheese + 1 banana
	Chicken sandwich with vegetables or salad on the side + 250ml juice
MID SCHOOL	1 cup rice + chicken + vegetables + 1 whole fruit
	1 med bowl vegetable/chicken pasta in tomato sauce + 1 apple
	1 tuna sandwich + 1 bowl salad + 1 apple
	1 cup vegetables/cottage cheese + 2 small Paratha + 1 cup yoghurt
	1 medium cottage cheese wrap with vegetables + banana yoghurt
HIGH SCHOOL	5. 1 cups rice + chicken + 1 banana + 250ml Laban
	1.5 cups rice + vegetable curry + 1 cup yoghurt or 250ml Laban
	1 vegetable and cheese/chicken/cottage cheese wrap + 1 whole fruit
	2 cups vegetables + 2 med Paratha + 250ml Laban + 1 orange

SAMPLE SNACKS	
KINDERGARTEN	1 cup fruit yoghurt
	1 small banana/2 small melon slices
	Trail mix
ELEMENTARY	Trail mix
	Mix fruit bowl with nuts or yoghurt
	1 small Haloumi cucumber sandwich
	Humus dip with cucumber and carrot slices
MID SCHOOL	1 cup fruit salad
	Humus dip with carrot and cucumber slices
	Mix fruit cup with yoghurt + nuts
HIGH SCHOOL	Small size vegetable wrap with carrot mayo/yoghurt dip
	Mix fruit cut with yoghurt
	1 cup fruit salad
	Humus dip with whole wheat pita

APPENDIX 4: FIGURES

FIGURE 1: TYPES OF SCHOOL CANTEENS

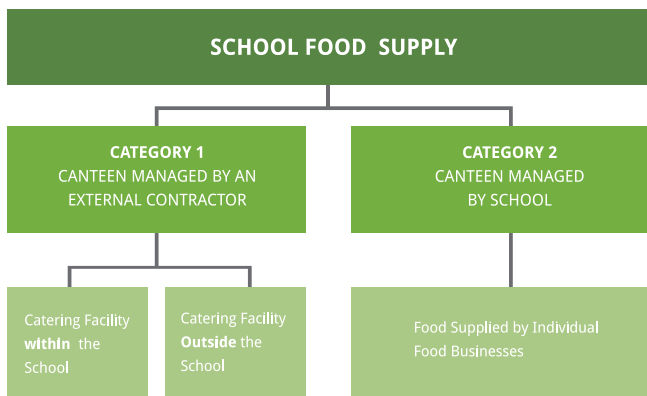


FIGURE 2: PERMIT APPROVAL PROCESS FOR CATEGORY 1

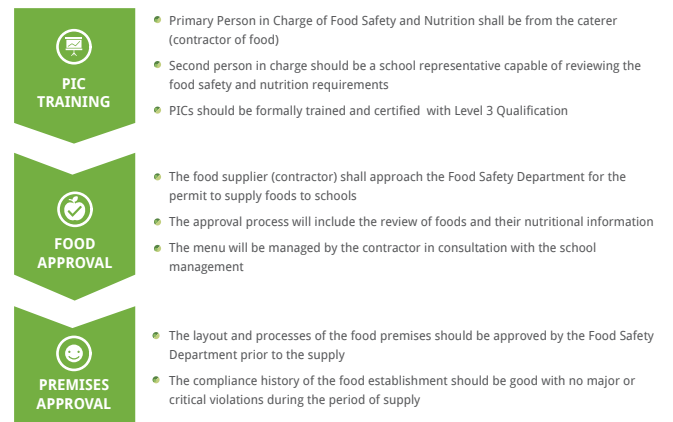
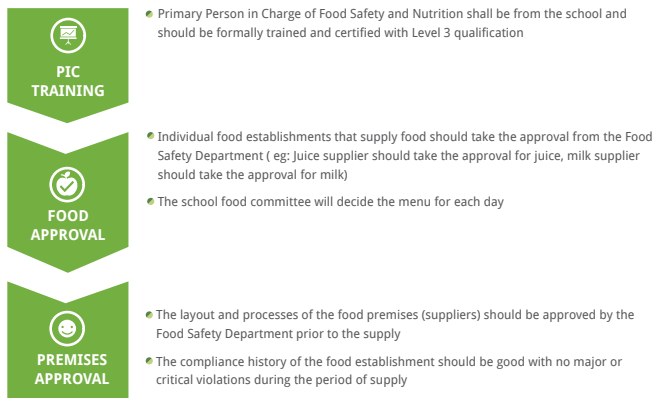




FIGURE 2: PERMIT APPROVAL PROCESS FOR CATEGORY 2



## ACKNOWLEDGEMENT

The contents of this document are developed by the Food Safety Department of Dubai Municipality based on a review of research and best practices from across the globe. We have used scientific and regulatory documents on school food and nutrition published by the World Health Organization, US Department of Agriculture, American Dietetic Association, American Heart Association, Center for Disease Control, Health Canada and Food Standards Agency of UK as our primary reference.

The food and nutrition tables have been developed based on the publications from the United States Food and Drug Administration, United States Department of Agriculture, United States Department of Health and Human Services and United Kingdom's School Food Plan Alliance.

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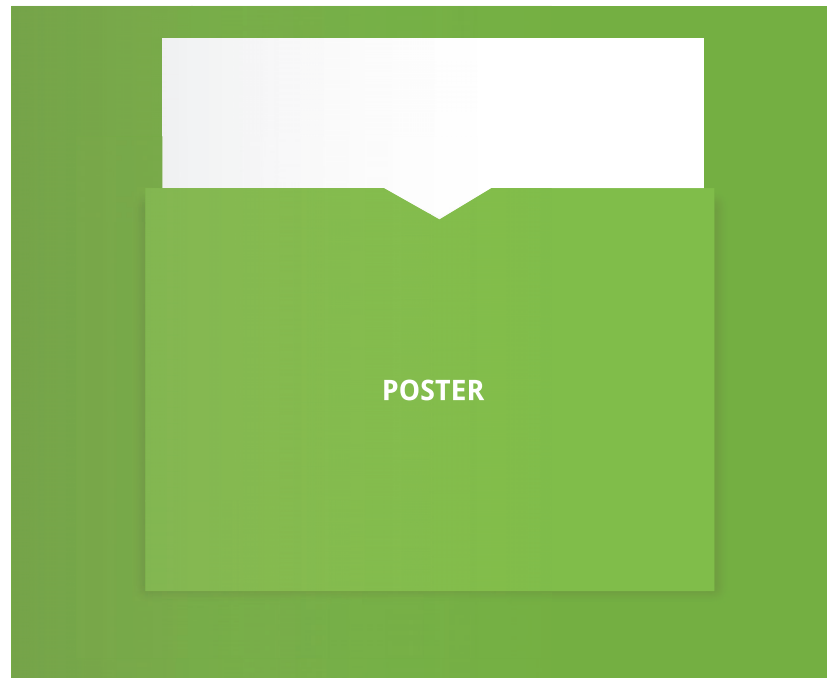
### Special Contributors from Dubai Municipality:

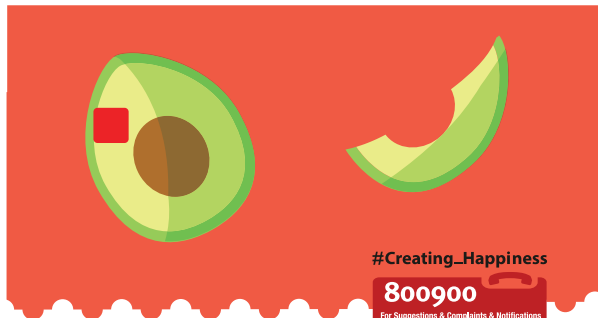
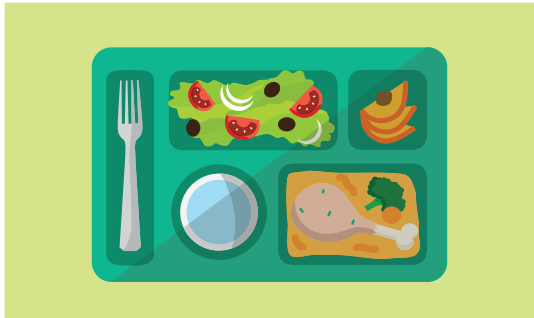
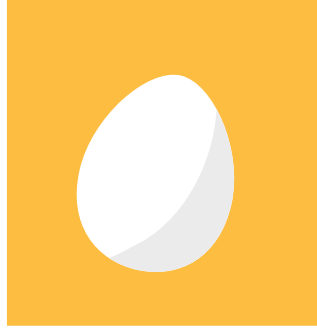
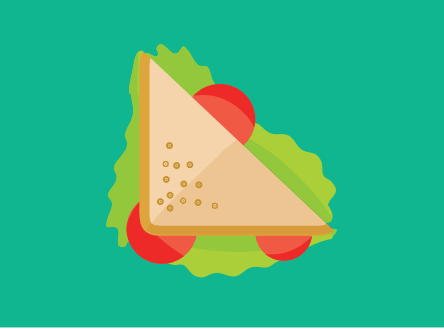
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