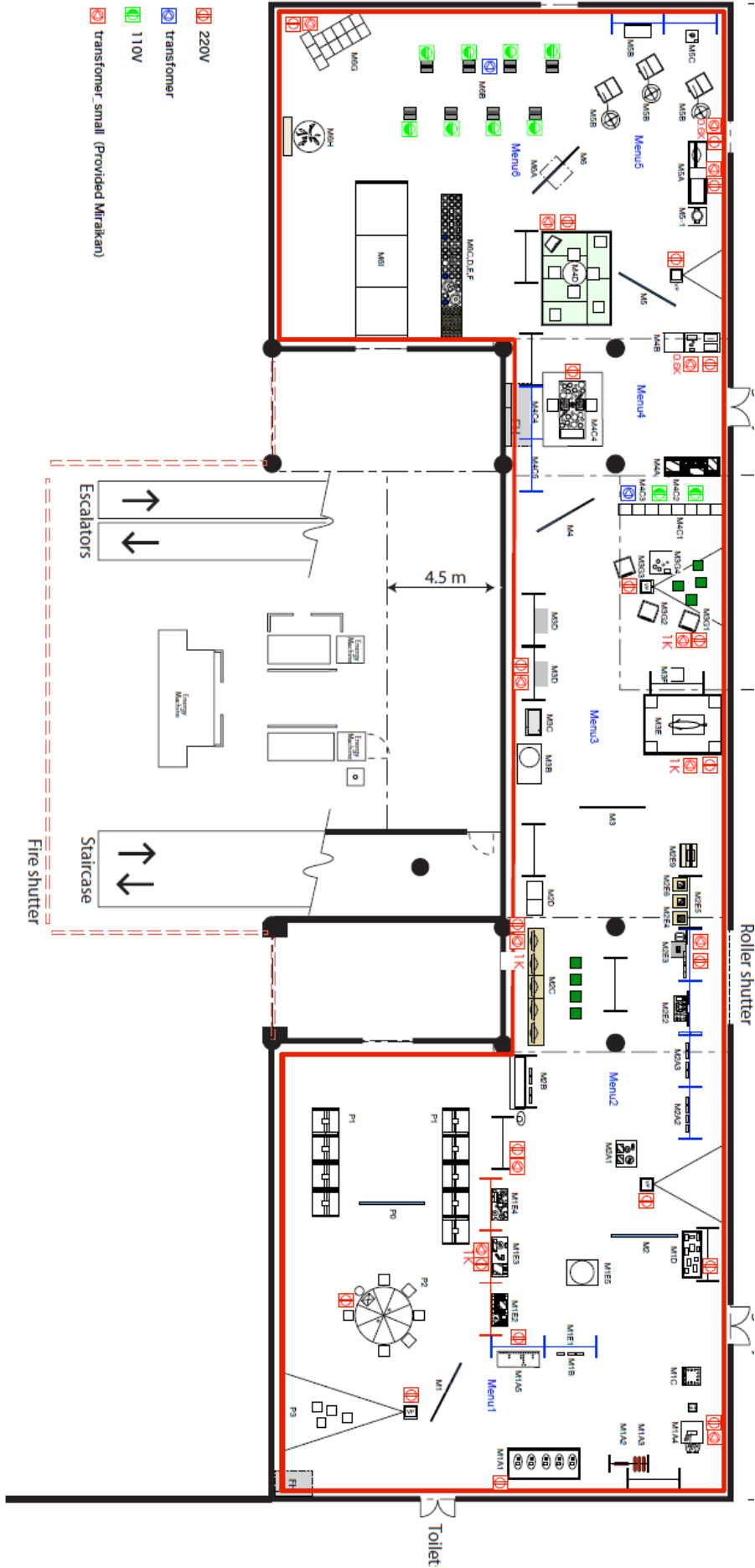


“It’s a Tasty World – Food Science Now!” Exhibition






Teacher Notes









區 Zone	展品 Exhibit ID	名稱 Title	內容 Content	相片 Photo	附註 Remarks
頭盤 Appetiser	P0	菜單名稱 Menu title			
	P1	食物轉盤 Table Roulette	轉動每個內有 9 種不同顏色食物的轉盤，使它們各自最終只顯示一種顏色。  Table roulettes containing 9 colours each: Different colours shown by food and ingredients will merge into one colour only when a table roulette's speed of rotation becomes fast enough.		互動展品 Interactive exhibit
	P2	各國圓桌 Round table	餐桌上展示出一些國家的菜式和調味品，觀眾可接觸及利用嗅覺感受該等調味品，並透過影片了解多個國家的飲食文化。  Dishes and spices of a few countries are displayed on a round table. Visitors can touch and smell these spices. A video programme introducing food culture of various countries is shown.		互動展品及錄像節目 Interactive exhibit and audio-visual programme
	P3	和誰一起進食 With whom?	一個關於聚餐的錄像節目 Footages showing people dining together		錄像節目 Audio-visual programme
菜單 Menu 1	M1	菜單名稱 Menu title	人類只有可分辨5種基本味道的味覺，但這些不同的味道卻對人類的生存有着舉足輕重的影響。  The human sense of taste can recognise 5 basic flavours only. However, these flavours play an important role for human survival.		

M1A1	<p>五味搖籃</p> <p>Cradle of 5 basic tastes</p>	<p>帳棚上貼滿了5種不同味道的標籤，觀眾可透過觀察嬰孩因接觸該些食物而產生的面部表情，認識到這些味道對人類的生存是如何的重要，因為它們有助引導我們進食適當的食物。</p> <p>Labels of the five flavours are attached on the tent. From the babies' facial expressions reacting to these flavours, visitors will learn that such flavours are important to human survival because they are guiding us to eat proper food.</p>		
<p>知多一點：酸味代表食物變壞；甜味代表能量之源的糖；鹹味代表食物含有礦物質；苦味代表食物有毒；鮮味則代表食物含有蛋白質。味覺幫助我們選吃適當的食物，攝取對身體有益的营养素，以及避免進食對身體有害的食物。</p> <p>Knowing more about it: Sour represents the flavours of food turning bad, sweetness food giving energy (i.e. sugar), saltiness food containing minerals, bitter food containing poisonous substance, whereas freshness and savor food containing protein. Tastes help us choose proper food for absorbing nutrients that are beneficial to our body, and avoid intaking harmful food.</p>				
M1A2	<p>舌頭服飾</p> <p>Tongue costume</p>	<p>透過穿上舌頭狀的服裝，認識味覺的運作。</p> <p>Visitors can wear tongue-like costume to learn about the mechanism of tasting.</p>		<p>可穿上身上的道具</p> <p>Props worn by visitors</p>
M1A4	<p>利用大腦感受美味</p> <p>Feel with the brain mannequin</p>	<p>介紹大腦對味覺和快感之間的關係，當中更有一段用老鼠作實驗以解釋當中關係的短片。</p> <p>Brain mechanisms relating to savouriness and pleasant feeling are introduced. An experiment on rat for illustration is depicted through a video footage.</p>		<p>錄像節目</p> <p>Audio-visual programme</p>




M1A5	<p>母乳中的鮮味</p> <p>“Umami” in mother's milk</p>	<p>展品讓觀眾了解母乳的鮮味是源自高含量的穀氨酸。</p> <p>The exhibit explains that the high level of "Umami (glutamic acid)" contained in human breast milk makes it fresh and tasty.</p>		
M1B	<p>虛擬食物</p> <p>Virtual food</p>	<p>虛擬味覺展品介紹了味蕾的運作及有關這方面的研究發展，並介紹一些有趣的知識如布丁配合醬油可得出海膽的味道。味蕾的相關數據分析亦已載列於圖表內。</p> <p>The world of "virtual taste" introduces how taste sensors work and the recent researches in this aspect. Some interesting discoveries are highlighted. For example, the flavours of sea urchin will be tasted when eating pudding and soy sauce at the same time. Data analyses regarding taste sensors are provided via charts.</p>		
M1C	<p>氣味瓶</p> <p>Flavour jars</p>	<p>每個瓶子內的物質的味道各有不同，觀眾可了解有關味覺、滋味感覺與食慾之間的關係。</p> <p>Substances inside the jars have different flavours. Visitors will learn about the relationship among sense of taste, savouriness and appetite.</p>		
M1D	<p>食物與色澤</p> <p>Food &amp; colour fridge</p>	<p>大型雪櫃內同時展出無人工染色食物和經人工染色後的同樣食物的模型，讓觀眾了解是否單憑食物的顏色和色澤便能作出正確的選擇。</p> <p>Models of artificially coloured food and food having no artificial colouring are displayed in the big refrigerator side by side. Visitors will understand whether colour and luster are reliable indicators for choosing good food.</p>		

M1E1	<p>可可</p> <p>Cacao graphics and samples</p>	<p>這裏展出了可可豆莢與可可豆的圖片和解釋，而觀眾更可透過觀察及接觸實物以加深了解。</p> <p>Graphics and explanation on cocoa pod and cocoa beans are displayed. Visitors can even observe and touch the cocoa pod models to enhance their understanding.</p>		
M1E2	<p>巧克力的物理 - 構造</p> <p>Physics of chocolates - structure</p>	<p>這裏展出了構成朱古力的成分包括可可油、糖、奶粉及可可塊等顆粒的放大圖像及說明文本，而觀眾更可透過觸摸磨沙紙以感受甚麼才是粗幼適中的可可粉。</p> <p>Enlarged microscopic images and text explanations on the particles of chocolate components including cocoa butter, sugar, powdered milk and cocoa mass are showcased. Touch the sand papers at different particle levels so as to feel the appropriate size for particles of cocoa powder.</p>		
M1E3	<p>巧克力的物理 - 溫度</p> <p>Physics of Chocolates - temperature</p>	<p>透過觸摸金屬板以感受不同產地的可可油溶點的溫度。</p> <p>Touch the metal plates to feel the differences in melting temperature for two kinds of cocoa butter from different origins, i.e. Brazil and Cote d'voire.</p>		
M1E4	<p>巧克力的物理 - 空氣和質感</p> <p>Physics of Chocolates - air and texture</p>	<p>拉動氣泵抽出空氣，觀察氣球如何膨脹起來。這方法是用於製作日本著名品牌“明治”朱古力棒的。</p> <p>Pull the suction pump, and see how the balloon swells out. The principle of this method is applied to create the airy texture of the chocolate sticks called "Fran", a famous Japanese brand.</p>		<p>互動展品</p> <p>Interactive exhibit</p>
M1E5	<p>巧克力模型</p> <p>Chocolate town</p>	<p>介紹朱古力製作過程的展品</p> <p>An exhibit introducing the process of manufacturing chocolate</p>		




菜單 Menu 2	M2	菜單名稱  Menu title			
	M2A1	日本食物自給自足比率  Food self-sufficient rate in Japan	透過食物模型及數據，認識日本的食物自給自足比率。  Self-sufficient rate of food in Japan is introduced through food replica and data.		
	M2A2	選擇性繁殖  Selective breeding	展品以圖片揭示育種與基因改造的分別。  The difference between breeding and genetic modification is revealed via graphics.		
	M2A3	基因改造技術  Genetic modification	介紹基因改造技術的展品  An exhibit introducing the technology of genetic modification		
	M2B	植物工場  Plant factory	植物工廠的利與弊  Advantages and disadvantages of a plant factory		
	M2C	食品加工機器  Food processing machines	由5部螢幕介紹不同的食品生產及加工機器。  Five monitors are installed to introduce different food production and processing machines.		錄像節目  Audio-visual programme


M2D	7-11 POS系統  7-eleven POS system	<p>透過縮型立體造景和圖片解說，介紹7-Eleven便利店的銷售時點情報系統。</p> <p>The Point of Sale System (POS) used by the convenience stores of 7-Eleven is introduced through diorama setting and explanatory graphics.</p>		
<p>知多一點：銷售時點情報系統 (Point of Sale, 簡稱 POS), 是一種廣泛應用在零售、餐飲服務、酒店等行業的電子系統，主要功能在於統計商品的銷售、庫存與顧客購買行為。經營者可根據此系統所收集的資料，分析市場趨勢和採購策略，藉此更有效地提升營業效率，因此它是現代零售服務業界在營運上非常重要的工具。</p> <p>Knowing more about it: Point of sale (POS) is an electronic system commonly used in retailing catering service and hotel business. The major function of a POS system is to collect data and compile statistics of merchandise, inventory control, and customers' purchasing behaviours for facilitating better preparation of marketing forecast and strategic purchasing analysis. Therefore It is a very important tool to enhance operational efficiency for modern retail and service business.</p>				
M2E1	麥當勞  McDonald banner	<p>觀眾可從麥當奴公司廚房員工的角度，感受該公司的品質控制水平。</p> <p>By adopting the perspective of a member of the kitchen crew under McDonald's Corporation, visitors can experience the company's requirement in respect of quality control.</p>		
M2E2	洗手盤和制服  Mc Sink and uniforms	<p>你把制服翻起後，便會得知長袖與短袖制服之間，哪一種是較佳的選擇。</p> <p>Which is the better choice between uniform of short sleeves and that of long sleeves? Find out the answer by turning the uniforms up one by one.</p>		<p>互動展品</p> <p>Interactive exhibit</p>





	M2E3	清潔工具  Mc Cleaning tools	這是一個有多條關於清潔常識問題的問答遊戲，只要翻起衣服與拖把便可找出答案。  The quiz contains many questions about cleaning tips. Turn up the clothes and mops to find out the answers.		互動展品  Interactive exhibit
	M2E4	品質控制 - 顏色  Mc quality maintenance - colour	檢查生菜的颜色，並找出合適的答案。  Find out the answer by checking the colour of the lettuces.		互動展品  Interactive exhibit
	M2E5	品質控制 - 厚度  Mc quality maintenance - thickness	檢查免治牛肉餅的厚度，並找出合適的答案。  Find out the answer by checking the thickness of the beef patty.		互動展品  Interactive exhibit
	M2E6	品質控制 - 甜度  Mc quality maintenance - sugar degree of corn	檢查玉米的糖分，並找出合適的答案。  Find out the answer by checking the contents of sugar of the corn.		互動展品  Interactive exhibit
	M2E9	即時點即時製  Mc made for you	這是一個關於麥當奴公司最初的煮食系統的錄像節目。  This video shows McDonald's Corporation's original cooking system called "MADE FOR YOU."		錄像節目  Audio-visual programme
菜單 Menu 3	M3	菜單名稱  Menu title			

M3B	罐藏技術 Canning technology	展品包括巨型三文魚罐頭及巨型袋裝即食食品各一份，並附有介紹這類食品的製造技術和發展經過的圖像說明。 Big models of canned food of salmon and packaged instant food are showcased. Introduction about such kinds of technology and their development are provided by graphics.		
M3C	罐的進化 (太空技術) Space Engineering, technology for canning	透過展出真實的罐頭食品，說明有關太空工程技術在商業上的應用。 Real canned food are displayed for illustration about commercial application of space engineering technologies.		
M3D	PET膠瓶技術 PET bottle technology	展出含聚對苯二甲酸乙二酯 (PET/PETE) 的塑膠瓶，並以短片介紹其相關的製作技術。 Real PET/PETE (i.e. Polyethylene terephthalate) plastic bottles are displayed and a video footage about the production technology is shown.		錄像節目 Audio-visual programme
M3E	冷凍技術 Freezing technology	展板介紹有關把金槍魚 (吞拿魚) 急凍的技術。 The technology of making rapid frozen tuna is introduced on the exhibition panels.		
M3F	凍乾技術 Freeze-drying technology	只要計算彈珠 (波子) 的數量，便可計算出一個急凍蘋果的重量。 The weight of a rapid frozen apple can be calculated through counting the number of marbles.		互動展品 Interactive exhibit

	M3G1-3	即食麵歷史、即食麵技術及杯麵的構造  History of Instant Noodles,  Technologies of instant noodles, and  The structure of CUP NOODLES	有關即食麵的製作及發展經過的錄像與及一件杯麵的展品  Video footages showing production and development of instant noodle plus an exhibit of CUP NOODLES		錄像節目  Audio-visual programme
	M3G4	太空食物  Space food	此處展出日本的太空食品（如日式飯糰、拉麵、薄餅等）。展品加入有關日本太空人在國際太空站內進食的錄像。  Japanese space food (including Oinari rice roll, ramen noodle and okonomiyaki crepe, etc) is showcased here. Also, there are video footages showing intake of food by Japanese astronauts inside the International Space Station.		錄像節目  Audio-visual programme
菜單  Menu 4	M4	菜單名稱  Menu title			
	M4A	Nutrients and combinations	展品介紹營養的本質和攝取途徑，以及探討營養組合等問題。  The exhibit presents the facts about the nature and absorption of nutrients, as well as discusses issues about nutrient combinations.		
	M4B	Future food "euglena"	展品介紹及探討把名為“眼蟲藻”的單細胞生物作食用用途的可行性。  The exhibit discusses the possibility of consuming a kind of single-cell organism called "euglena" as food for humans.		

	M4C1	食物色彩箱  Food color box			
	M4C4	均衡遊戲  Balance game	這是一個有關營養均衡的遊戲。首先選擇一日三餐的食物，然後把其放置在桌上，再計算所選食物的熱量單位、營養均衡指數及蛋白質／脂肪／碳水化合物的含量比例。經計算後你會得出什麼結果？  This is a game about balance in nutrition. First of all, select dishes for 3 meals a day, and put them on the table. Then calculate the amount of calories, index of nutritional balance as well as the ratio among protein, fat and carbohydrates contained in the food items selected. What are the results?		互動展品  Interactive exhibit
	M4C5	全球食物指引  World's food guide			
	M4D	傳統習俗  Traditional manners	請先安坐下來，再透過錄像節目以感受日本的傳統文化。  Sit down, relax and enjoy the video programme introducing the traditional culture of Japan.		錄像節目  Audio-visual programme
菜單  Menu 5	M5	菜單名稱  Menu title			

M5-1	日本的食物棄置  Food disposal in Japan	試感受一下每個人在一個月內所產生的廚餘總重量。  Feel the weight of food waste disposed of by an individual in one month.		互動展品  Interactive exhibit
M5A	環保飼料  Eco feed	透過一套在工場實地攝製的錄像節目，探討以回收的廚餘作為動物飼料（俗稱“豬餵”）的問題。  Recycling of food waste to animal feed is described in a video footage which was shot on the spot inside a workshop of its kind.		錄像節目  Audio-visual programme
<p>知多一點：廚餘循環再造合作計劃</p> <p>為推動可持續的良好廚餘管理，及配合日後將廚餘運往“有機資源回收中心”進行循環再造的措施，環境保護署於 2009 年與有關工商業團體共同推行“廚餘循環再造合作計劃”。參與計劃的機構負責廚餘的源頭分類工作，而環境保護署則把所收集的廚餘運送到設在九龍灣的廚餘處理試驗設施，進行循環再造。</p> <p><b>Food Waste Recycling Partnership Scheme</b></p> <p>In order to promote good food waste management practice and prepare for implementation of the future initiative of transporting food waste to the “Organic Waste Treatment Facilities” (OWTF) under the Environmental Protection Department (EPD) for recycling, EPD, together with commercial &amp; industrial (C&amp;I) sectors, launched the “Food Waste Recycling Partnership Scheme” in 2009. The participants will practise source separation of food waste and EPD will collect the separated food waste to the Kowloon Bay Pilot Composting Plant (KBPCP) for recycling.</p> <p>欲了解有關詳情，請參考以下網站 For information, please visit the website at <a href="http://www.foodwaste.org.hk/index.htm">http://www.foodwaste.org.hk/index.htm</a>.</p>				

	M5B	酒精  Ethanol production from food waste	利用多個房屋模型，以比較兩種產生能源的方法： 1. 直接燃燒廚餘以產生電力及熱能；及 2. 利用廚餘生產乙醇並藉以製造再生能源。  House models are used for comparing 2 methods of energy production: 1) Electricity and heat energy can be obtained by burning food waste; and 2) renewable energy can be obtained from ethanol produced by food waste.		互動展品  Interactive exhibit
	M5C	食物銀行  Food bank	這是日本的社會服務機構 Second Harvest Japan 所派發的兩星期食糧包，並由此介紹食物銀行的概念與運作。  A food package for consumption of two weeks distributed to the needies by Second Harvest Japan, a social service agency in Japan, is displayed. The concept and operation of a food bank are introduced therefrom.		
菜單  Menu 6	M6	菜單名稱  Menu title			
	M6A	訊息椅  Message chair	請在閱讀訊息後坐下反思內容。  Sit down and conduct a self-examination after reading the message.		

M6B	<p>追趕食物潮流</p> <p>Food faddism</p>	<p>展板的一面展示了有關食品的謠言，觀眾可從展板的背面找出真相。</p> <p>Rumors about some kinds of food are displayed on the panel. Visitors can find out the real situation by reading the text attached on the other side.</p>		
M6C	<p>「食用日期」之謎</p> <p>Mystery of "use-by-date" and "recommended use-by date"</p>	<p>食物能夠存放多久仍可供食用？如何決定食用期限？對於“此日期前最佳”和“此日期或之前食用”，兩者有何分別？</p> <p>How long can a certain kind of food be stored and remains edible? How is the expiry date determined? What is the difference between "recommended use by date" and "use by date?"</p>		
M6D	<p>「標籤」之謎</p> <p>Questions about "food labelling"</p>	<p>這是日本法例規定的食物標籤模式。由於我們要知道食物背後的真正價值，因此需要可提供準確而詳盡資料的食物標籤。</p> <p>This is the format of food label specified by Japanese legislation. We need accurate and detailed food labelling because we want to identify the true value of food to be consumed.</p>		

知多一點：營養標籤是怎樣的？

營養標籤內有關營養素方面的資料，會採用以下的列表形式標示。你可在食物的包裝上的當眼位置找到營養標籤。

Knowing more about it: How does a nutrition label look like?

Information on nutrients contained in a nutritional label is presented in tabular format as follows. You can find the label at a conspicuous place on the packing of food.

資料來源：食物安全中心

Source: Centre for Food Safety

<b>Nutrition Information 營養資料</b>			
Servings Per Package/每包裝所含食用分量數目: 3			
Serving Size/食用分量: 5 pieces (50g) /5 塊 (50 克)			
	Per Serving 每食用分量	Per 100g 每 100 克	% Chinese NRV Per 100g 每 100 克的 中國營養參 考值
Energy / 熱量	220 kcal/千卡 924 kJ/千焦	440 kcal/千卡 1848 kJ/千焦	22%
Protein / 蛋白質	5.5 g/克	11 g/克	18%
Fat, total / 脂肪總量	8 g/克	16 g/克	27%
- Saturated fat / 飽和脂肪	3.5 g/克	7 g/克	35%
- Trans fat / 反式脂肪	0 g/克	0 g/克	
Carbohydrates / 碳水化合物	31 g/克	62 g/克	23%
- Sugars / 糖	1 g/克	2 g/克	
Sodium / 鈉	365 mg/毫克	730 mg/毫克	37%

牌子 A 餅乾的營養標籤（列表形式）

你會看到“營養標籤”內有“營養資料”或“營養成分”等標題。此外，熱量和七種指定標示的營養素含量會以“每 100 克”（Per 100 g）或“每 100 毫升”（Per 100 ml）、“每食用分量”（Per Serving）或“每包裝”（Per Package）標示。

Nutritional Label of Brand A biscuit (in tabular format)

On such label, you will find titles like "Nutrition Information" or "Nutrition Facts". Furthermore, contents of energy and the 7 nutrients specified for labelling are expressed in "per 100 g" or "per 100 ml" for "per serving" or "per package".

M6E	<p>「添加劑」之謎</p> <p>The mystery of "additive-free"</p>	<p>很多人認為“無添加劑的食物比有人工添加劑的食物更有益”，但實際情況是這樣的嗎？展品就此提供了有關食物添加劑的科學上的數據，讓你可更客觀地分析。</p> <p>It is generally opined that "additive-free products are better for health than products with additives". But is it really true? Relevant scientific data on food additives is provided for your own objective judgement.</p>		
M6F	<p>「產地」之謎</p> <p>The mystery of "production area"</p>	<p>只要拿起碟子，你便可解開碟內食物的產地來源之謎。</p> <p>Take the dishes up and you will know the origins of the food placed on the respective dishes.</p>		<p>互動展品</p> <p>Interactive exhibit</p>
M6G	<p>瘋牛症</p> <p>BSE</p>	<p>從窗口往內看，了解瘋牛症（英文簡稱：BSE）究竟是什麼。</p> <p>There are some questions about bovine spongiform encephalopathy (BSE). Peek in through the windows and find out the answers.</p>		<p>互動展品</p> <p>Interactive exhibit</p>
M6H	<p>基因改造技術</p> <p>Genetic modification technology</p>	<p>有關基因改造食品的安全問題</p> <p>Issues about the safety of genetically modified food</p>		
M6I	<p>環球議題</p> <p>Global issues</p>			