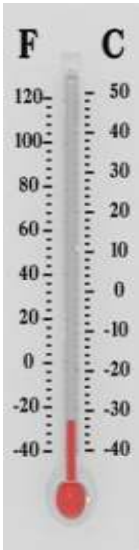
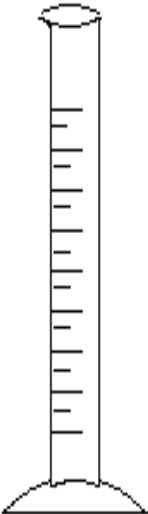
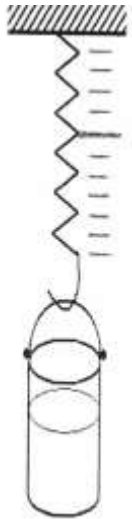
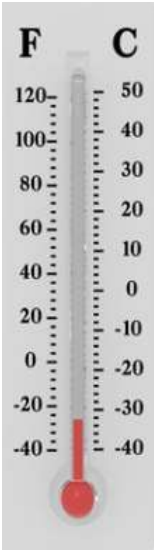
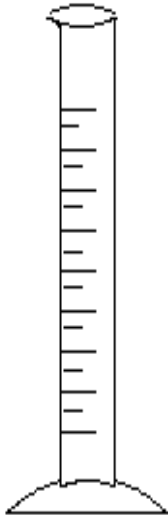
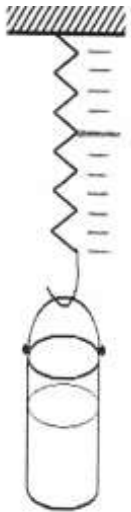



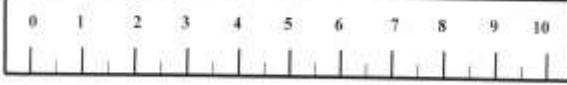


<p>单元一：物质</p>	<p>Unit 1: Matter</p>
<p>主要观念:</p> <p>1.1：测量，比较以及记录物质的性质；使用 *标准（公制）以及非标准单位 *适当的工具</p> <p>1.2：描述及比较物质的性质（大小，形状，质量/重量，体积，颜色，质地，味道，等等。）</p>	<p>Key Ideas:</p> <p>1.1: Measure, compare and record physical properties of objects using: *Standard(metric) and nonstandard units *Appropriate tools</p> <p>1.2: Describe and compare the physical properties of matter (size, shape, mass/weight, volume, color, texture, odor, etc.)</p>
<p>单元大纲</p>	<p>Unit Overview</p>
<p>量长度，水量及体积都有不同的工具。温度计量气温。天平量质量。弹簧秤量重量。标准单位是一个大家都接受的度量单位。科学家一般都用公制。</p> <p>什么叫做物质？所有占据空间的都叫物质。物质不但占据空间并且有质量。质量就是一个东西里所包含的物质有多少。一个物质有不同的性质。你用感觉去探究物质的性质。不同的物质有不同的性质。</p>	<p>There are different tools to measure length, volume of a liquid or a solid. A thermometer measures temperature. A pan balance measures mass. A spring scale measures forces. A standard measure is an accepted measurement. Scientists use the International System of measurements. It is called the metric system.</p> <p>What is matter? Everything that takes up space is matter. Matter not only takes up space but also has mass. Mass is the amount of matter something contains. There are physical properties of matter. You use your senses to detect physical properties. You can tell one object from another by their physical properties.</p>

<p>单元一：物质</p>	<p>Unit 1: Matter</p>
<p>关键问题：物质的性质是什么？</p>	<p>Essential Question: What are some of the properties of matter?</p>
<p>主要观念 1.1：测量，比较以及记录物质的性质；使用 *标准（公制）以及非标准单位 *适当的工具</p>	<p>Key Idea 1.1: Measure, compare and record physical properties of objects using: *Standard(metric) and nonstandard units *Appropriate tools</p>
<p>科学名词：1. 特性 2. 质量</p>	<p>Scientific Terms: 1. property 2. mass</p>
<p>内容：</p> <p>全世界的科学家都用同样的度量系统，这样可以互相了解别人所作的实验。</p> <p>在教室中做实验的时候所需的六种工具： *公制尺：测量高度，长度，及宽度 *弹簧秤：测量重量 *天平：测量质量 *温度计（华氏及摄氏）：测量温度 *量筒及量杯：测量体积 *烧杯：</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>温度计</p>  </div> <div style="text-align: center;"> <p>量筒</p>  </div> <div style="text-align: center;"> <p>弹簧秤</p>  </div> </div>	<p>Content:</p> <p>Scientists throughout the world use the same measuring systems so they can understand each other's experiments.</p> <p>6 tools you might use in a classroom experiment: * metric ruler: to find height, length, width * spring scale: to find weight * pan balance: to find mass * Fahrenheit(F) and Celsius (C) thermometers: to find temperatures * graduated cylinders and measuring cups: to find volume * beakers:</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>thermometer</p>  </div> <div style="text-align: center;"> <p>graduated cylinder</p>  </div> <div style="text-align: center;"> <p>spring scale</p>  </div> </div>

<p style="text-align: center;">量杯 天平</p>   <p>公制尺</p> <p>科学家把他们在观察中所收集的资料作成图表。把资料作成图表可以很容易看到一个规律。科学家看到规律以后就可以解释，或了解他们的资料。</p> <p>科学家把他们做实验所用的材料，步骤及观察写在笔记里。这个笔记可以帮助别的科学家做同样的实验，验证实验的结果。</p>	<p style="text-align: center;">measuring cup pan balance</p>   <p>metric ruler</p> <p>Scientists plot their data (the information gathered from their observations) on graphs. Graphing the data helps to show patterns. Finding patterns helps scientists interpret, or understand, their data.</p> <p>Scientists keep journals to record observations, the materials they used in the experiment and the steps they followed. The recorded information helps the other scientists repeat the experiment, so they can check the results themselves.</p>
<p>复习：</p> <ol style="list-style-type: none"> 1. 為什麼全世界的科学家都用同样的度量系统？ 2. 你在教室里做实验需要那六种工具？ 3. 从图表可以看到资料的什么东西？ 	<p>Review:</p> <ol style="list-style-type: none"> 0. Why do scientists around the world use the same measuring systems? 1. What are six tools you might use in a classroom experiment? 2. What do graphs help to show about data?

单元一：物质	Unit 1: Matter
关键问题：物质的性质是什么？	Essential Question: What are some of the properties of matter?
主要观念 1.2: 描述及比较物质的性质（大小，形状，质量/重量，体积，颜色，质地，味道，等等。）	Key Idea 1.2: Describe and compare the physical properties of matter (size, shape, mass/weight, volume, color, texture, odor, etc.)
科学名词：1. 物质	Scientific Terms: 1. matter
<p>内容：</p> <p>特性：一种可以被观察到的东西就叫性质。大小，形状，颜色，硬度，味道，重量都是一样东西的性质。</p> <p>物质：凡是占据空间以及有质量的就是物质。物质由微粒组成，这些微粒的特性可以由我们的感官观察得到。物质包括：你，你的衣服，你脚下的人行道。几乎所有的东西都是物质。只要你可以尝到，闻到，或触摸到的东西都是物质。就算一阵微风也是物质，因为空气也占有空间。你吹了一个气球，你吹到气球里的空气把气球涨大，在气球里的空气占据了空间。</p> <p>什么不是物质？热，光，以及想法都是非物质的例子。它们虽然存在但是不占据空间。</p> <p>什么是质量？物质不但占据空间而且有质量。质量就是一个一个东西所含有的物质。质量可以由天平测量出来。质量的单位是公克。一个东西的质量越多，它就越重。一个东西的质量也是它的一种特性。其它的特性包括外形和组织结构。</p> <p>体积：一个物质所占据的空间就是体积。</p>	<p>Content:</p> <p>Property: A property is what can be observed about an object. Size, shape, color, hardness, taste and weight are properties of an object.</p> <p>What is matter? Everything that takes up space and has mass is matter. Matter is made up of particles that have properties that can be observed through our senses. This includes you, your clothes and the sidewalk under you. Just about everything is matter. If you can taste, smell, or touch something, it is matter. Even a breeze is matter because air takes up space. You prove that when you blow up a balloon. The air you blow into the balloon pushes out its sides. The air inside the balloon takes up space.</p> <p>What is not matter? Heat, light, and ideas are examples of things that are not matter. Even though they exist, they don't take up any space.</p> <p>What is mass? Matter not only takes up space but also has mass. Mass is the amount of matter something contains. Mass is measured with a balance. Mass is measured in grams. The more mass it has, the heavier it is. The mass of an object is one of its physical properties. Other physical properties include an object's look and texture.</p> <p>Volume: It is the amount of space that</p>

<p>顏色，形狀，及質地：你用你的感覺去找出這些性質。</p> <p>長度，寬度，體積，大小，形狀，質量或重量，及溫度都是物質的性質，這些性質可以幫助我們描述一樣東西。</p> <p>一個橘子的性質： *表皮凹凸，是軟的一去觸摸時 *圓球狀，是橘色的一去看的時候 *聽到清脆剝落的聲音—去剝開時 *聞到橘子的味道—去聞的時候 *甜的還是酸的—去吃的時候</p>	<p>matter takes up.</p> <p>Color, shape, and texture: You use your senses to detect these physical properties.</p> <p>Length, width, volume, size, shape, mass or weight, and temperature are also properties that help us describe an object.</p> <p>Properties of an orange: * bumpy texture, feels soft – when you touch it * round or spherical, an orange color – when you look at it * hear a crisp, ripping sound – when you peel it * smells like an orange – when you smell it *tastes sweet or sour – when you taste it</p>
<p>复习：</p> <ol style="list-style-type: none"> 1. 什么叫做物质，举三个例子。 2. 什么叫做质量，举两个例子，一个有很多质量一个很少质量。 3. 试描述一根香蕉，一个桌子的性质。 	<p>Review:</p> <ol style="list-style-type: none"> 1. What is matter? Give three examples. 2. What is mass? Name one object with a lot of mass and one with little mass. 3. What physical properties could you use to describe a banana, a desk?

答案:	Answer Key
<p>单元一:</p> <p>1.1</p> <ol style="list-style-type: none"> 1. 全世界的科学家都用同样的度量系统，这样可以互相了解别人所作的实验。 2. 这六种工具是：公制尺，弹簧秤，天平，温度计（华氏及摄氏），量筒及量杯，烧杯。 3. 把资料作成图表可以很容易看到一个规律。科学家看到规律以后就可以解释，或了解他们的资料。 <p>1.2</p> <ol style="list-style-type: none"> 1. 凡是占据空间以及有质量的就是物质。物质可以由我们的感官观察得到。只要你可以尝到，闻到，或触摸到的东西都是物质。你的衣服，一阵微风，你脚下的人行道，都是物质的例子。 2. 物质占据空间而且有质量。质量是一个东西含有的物质。质量可以由天平测量出来，它的单位是公克。一个东西的质量越多它就越重。一个高尔夫球的质量很多，一个桌球的质量很少。 3. 香蕉的性质：去触摸时，表皮光华；去看时，是条形，黄色；去闻的时候，闻到香蕉的味道；去吃的时候，很甜很软。一个桌子的性质：去触摸时，是凉的，很硬但是平滑；去看时，有不同的形状，有高有矮；去推时，有些重。 	<p>Unit 1:</p> <p>1.1</p> <ol style="list-style-type: none"> 1. Scientists throughout the world use the same measuring systems so they can understand each other's experiments. 2. The six tools are: metric ruler, spring scale, pan balance, Fahrenheit and Celsius thermometers, graduated cylinders and measuring cups, and beakers. 3. Graphing the data helps to show patterns. Finding patterns helps scientists interpret, or understand, their data. <p>1.2</p> <ol style="list-style-type: none"> 1. Everything that takes up space and has mass is matter. Matter can be observed through our senses. If you can taste, smell, or touch something, it is matter. Your clothes, a breeze, and the sidewalk under you, are examples of matter. 2. Matter takes up space and has mass. Mass is the amount of matter something contains. Mass is measured with a balance, in grams. The more mass something has, the heavier it is. A golf ball has more mass; a table tennis ball has little mass. 3. A banana: When you touch it- smooth texture; when you look at it- long and yellow; when you smell it- smells like a banana; when you taste it- tastes sweet and soft. A desk: When you touch it- it's cool, hard but flat and smooth; when you look at it- it has different shapes, some high and some low; when you push it- it has some weight.