

World Language-STEM MODULE COVERSHEET

From Seeds to Table

从种子到桌子

Target Language: Chinese	Grade Level: 2 and 3
Proficiency Level: Junior Novice Low – Junior Novice Mid	
Context and Storyline: <p>One day, the teacher brings in seed packets for common ingredients for salad. (i.e. Onion, carrot, green beans, celery, spinach, lettuce, sunflowers, corn, radishes, cucumber, tomato and so on. Teachers will choose 4-5 kinds, depending on the time when this module is taught and the availability of these seeds in a supermarket.) Students will select a plant and grow these seeds while they keep a log recording how they take care of the plant and the progress of the plant's growth. They will understand that it takes a long time for seeds to grow into mature plants because they have to turn water, sunlight, air, and soil into nutrients.</p> <p>Meanwhile, students will study the conditions for different plants to grow. They will discover that plants have differing needs for water, sunlight, air/temperature, and type of soil, so the environment in which they live is important for them. They will understand that plants and other living things interact with one another and also with the environment to form a food chain, in which each plays an important role.</p> <p>At the end, students will make their own salad/dish by using different parts of plants and telling their audience in what kind of environment the selected items of their salad live. They will report on the growth of their own plants. Before they take home their plants, students will make a pledge to take care of the plant.</p>	
Enduring Understanding: Living things and their environment form a system, in which they need each other.	
Essential Questions: What are the living things in our environment? How does environment affect living things?	
Module Duration and Lessons: Depending on the length and frequency of classes per week, we suggest the five lessons in this module could be taught during the period of three to five weeks. On the average, each lesson may be taught over a week, with 30 minutes classes three to five times per week. Lesson 1 –沙拉從哪裡來？(Engagement stage or introduction) Lesson 2 –我们来种种子。(Exploration stage for main events and practice) Lesson 3 –小實驗！(Explanation stage for main events and practice) Lesson 4 –植物有什麼？(Elaboration stage for summary and review) Lesson 5 –做沙拉和我对我的植物的誓言。(Evaluation stage for assessing student learning outcomes)	

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Standards Targeted	
5C – World Language Standards	5E – STEM Standards
<p>Communication</p> <ul style="list-style-type: none">• Students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions while learning about plants and their environment. (1.1)• Students understand and interpret written and spoken language on a variety of topics related to this module.(1.2)• Students present information, concepts, and ideas to an audience of listeners or readers on topics related to this module. (1.3) <p>Cultures</p> <ul style="list-style-type: none">• Students demonstrate an understanding of the relationship between the products of the culture and environment (e.g., salads of different cultures). (2.1) <p>Connections</p> <ul style="list-style-type: none">• Students reinforce and further their knowledge of ecology and plants through the study of a foreign language. (3.1) <p>Comparisons</p> <ul style="list-style-type: none">• Students demonstrate understanding of the nature of language through comparisons of the language studied and English. (4.1)• Students demonstrate understanding of the concept of culture through comparisons of the culture studied and their own. (4.2) <p>Communities</p> <ul style="list-style-type: none">• Students use the language both within and beyond the school setting (5.1)• Students use their target language and cultural knowledge to enrich their life (5.2)	<p>2. Interdependence of Organisms and Their Surroundings</p> <ul style="list-style-type: none">a. Construct a representation in which plants and animals depend on their environment to meet their needs.c. Plan and carry out investigations to test whether plants from different settings have different needs for water, sunlight and type of soil.

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Knowledge: Students will know...	Skills: Students can...
<p>Vocabulary (both linguistic and content areas)</p> <p>Needs: 食物, 营养, 水, 空气, 氧气, 家</p> <p>Verbs: 吃, 喝, 成长, 需要, 有</p> <p>Plant parts: 种子, 叶, 根茎, 花, 果实</p> <p>Expressions and patterns</p> <p>多少</p> <p>很多</p> <p>热, 不热</p> <p>喜欢 (不喜欢)</p> <p>需要 (不需要)</p> <p>不同</p> <p>谁, 哪儿</p> <p>前, 后</p>	<p>Students can:</p> <ul style="list-style-type: none">• Identify and name the basic needs of living things.• State that plants need soil, water, air and sun.• Name different parts of a plant.• Explain how the environment affects living things.

Performance Assessment
<p>Interpretive Task: Shop for a Salad 買沙拉</p> <p>Students walk up to a basket filled with small brown bags of cut-out fruit or vegetable. Each student will pick out one bag and tell the class what he/she has (e.g., I have tomatoes. Tomatoes are fruits).</p>
<p>Interpersonal Task: Let's Make a Salad 我們來做沙拉</p> <p>Students will go around the room to look for salad partners. In each salad, there must be at least one part of plants (e.g., leaves, fruits, seeds, roots, and stems). Students cannot tell people what they have until they are asked appropriate questions. They must ask other students to identify partners for their salad. Continue until all salad groups are formed. Each group of students will make a salad by mixing the content of their bags into a big bowl.</p>
<p>Presentational Task: This is Our Salad 這是我們做的沙拉</p> <p>Each group presents their salad. Students will each talk about their own contributions and provide a brief description of the ingredient used (such as the name, which part of a plant it is.)</p> <p>Presentational Task: My Pledge to My Plant 對我植物的誓言</p> <p>Students will each present the plant they have chosen. They will tell the class how they planted it and how they will take care of it.</p> <p>After everyone has presented their plants, the class will read the pledge together.</p>

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Materials/Resources

Poster or display board for model, markers, magazines, glue, cutouts of universal symbols for water/sun light, two pieces of plain paper 8 ½" x 11, Informational chart on different seeds, timer, examples of seed packets.

Useful Articles:

- Kids Gardening: <http://www.burpee.com/vegetables/kid-s-gardening-article10196.html>
- Video: how to plant-grow-lettuce: <http://www.burpee.com/heinz/lettuce/how-to-plant-grow-lettuce-article10469.html>
- http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/science/s_plants/index.htm
- <http://www.firstschoolyears.com/science/living/interactive/growing-plants.swf>
- Parts of Plants We Eat http://pubs.ext.vt.edu/348/348-823/348-823_pdf.pdf
- http://www.bbc.co.uk/schools/scienceclips/ages/9_10/changing_state.shtml
- <http://www.tutorvista.com/biology/parts-of-a-plant-for-kids>
Germination times for seeds
- <http://www.heirloomseeds.com/germination.html>
- <http://www.plantingseedsblog.com/2011/07/seed-germinating-times-and-tips/>

Additional Resources

- Maryland Department of Agriculture: <http://www.mda.state.md.us/mdfarmtoschool/index.php>
- National Farm-to-School Network: www.farmtoschool.org
- Healthy Foods for Healthy Kids: www.healthyfoodsforhealthykids.org/
- College of Agriculture & Natural Resources <http://growit.umd.edu/>

Note: See lesson plans for specific materials needed for the particular lesson

Worksheet M.1 – Game: Red Light, Green Light

STEM Background for teachers:

Ecology

Ecology is the study of how living things relate to one another and to the world around them. Scientists who study ecology are called ecologists.

Many different things live in the world. Each living thing depends on other living and nonliving things in its environment, or surroundings. For example, a moose eats certain plants for food. If the plants in its surroundings were destroyed, the moose would have to move to another area, or it would starve to death. Plants also depend on animals. Wastes from animals provide many of the nutrients, or nourishing substances, that plants need to live. Ecologists study how these different things depend on one another.

General Plant Organization Facts

Scientists believe there are over 260,000 species of plants. Some plants are so small they can barely be seen. Others are taller than people or animals. Some of the largest living plants on the earth are the sequoia trees of California. Some stand over 290 feet (88 meters) high and measure over 30 feet (9 meters) wide.

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Plants play the most important part in the cycle of nature. Without plants, there could be no life on Earth. They are the primary producers that sustain all other life forms. This is so because plants are the only organisms that can make their own food. Unlike animal cells, plants have an additional cell wall made from cellulose. The cellulose enables plants to stand upright without the aid of an internal or external skeleton. Animals, incapable of making their own food, depend directly or indirectly on plants for their supply of food. All animals and the foods they eat can be traced back to plants.

The Shoot and Root Systems

Plants have two organ systems (groups of organs that perform related functions), the shoot system and the root system. The shoot system is above ground and includes the organs such as leaves, buds, stems, flowers, and fruits (if the plant has them). The root system includes those parts of the plant below ground, such as the roots, tubers (swollen underground stems in plants that store food, such as the potato), and rhizomes (a horizontal stem with upright leaves containing specialized tissues for transporting fluids and nutrients in plants).

Vascular plants have systems of tubes (xylem and phloem) for the transport of nutrients and water. There is a wide variety of plants on Earth and even a whole group that doesn't have vascular systems. Mosses and liverworts may still have photosynthesis, but they do not have the typical plant structure. The tip (terminal bud) of the main stem has a specialized structure that is the source of new growth for plants. You will find the apical meristem that develops into young leaves. There are other points of growth at each node where leaves and branches develop on the stems. Those branching points are home to axillary buds that can also develop into new branches.

Roots are designed to pull water and minerals from whatever material the plant sits on. For water plants, the roots may be in the water. For trees, the roots go deep into the soil. There are even plants called epiphytes that live in trees and their root system clings to branches. Humans often rely on the roots of plants for food. Carrots are just one big orange root.

Root systems also provide support for plants in the form of an anchor in the soil. If the wind blows hard, those roots keep the plant from falling over. Some plant species have roots above ground that provide support for the entire plant. Roots are further broken down into the primary root and lateral roots that each has apical meristem at their tips. Root hairs are also a common structure on roots. They make the roots look fuzzy and help in the absorption of water and nutrients.

Plants and Their Environment

Plants require a reasonable level of heat to grow. The most favorable temperature at which photosynthesis takes place ranges from near freezing to 20 to 25° C (70 to 80° F). The rates of photosynthesis and respiration increase with rising temperatures, temperatures above or below these levels limit plant growth. The climate of a region determines what types of plants can survive in that region.

A plant's environment is made up of many factors. One of the most important is the weather – sunlight, temperature, and precipitation (rain, melted snow, and other moisture). Soil and other plants and animals that live in the same area are also included in the environment of a plant. All these factors form what is called a natural community.

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No two natural communities are exactly alike, but many resemble one another more than they differ. Botanists divide the world into biomes – natural communities of plants, animals, and other organisms.

Parts of Plant:

Root: Roots originate from the lower portion of a plant and they are in the soil. Their functions are to absorb nutrients and moisture, anchor the plant in the soil, support the stem, and store food, as with carrots. In some plants, they can be used for propagation.

Stem: The stem is the upper part of the plant and bears branches, leaves, flowers and fruits. The stem is generally green when young and later often become woody and dark brown. It conducts water and minerals from the roots to the leaves. Some stems perform the function of storage of food, for example potato, ginger, turmeric

Leaves: Leaves provide trees with all their food because they turn sunlight and carbon dioxide into food energy through photosynthesis. Leaves also return oxygen to the air that we breathe as a product of photosynthesis.

Flowers: Flowers generally are the showiest part of a plant. Their beauty and fragrance attract pollinators (insects or birds) that play an important role in the reproductive process.

Fruit: Fruit is the fleshy structure of certain plants that may be sweet and edible in the raw state, such as apples, oranges, grapes etc. It also consists of seeds used for propagation of the plant. The seed contain food that supplies energy and materials for growth until the plant grows its first leaves above the ground.

Information compiled from World Book Encyclopedia, National Geographic, and Maryland at a Glance State Symbols.

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Lesson 1 – Where Does Salad Come from?

沙拉從哪裡來？

Lesson 1 of 5 – <i>Where Do Salads Come from?</i>		Duration: 30 Minutes
<i>Objectives</i>	<p>I Can:</p> <p>Oral language:</p> <ul style="list-style-type: none"> Name the things we need: 植物, 营养, 水, 空气, 家 Name the things plants need: 种子, 土, 水, 空气, 阳光 <p>Literacy:</p> <ul style="list-style-type: none"> Recognize the words: 种子, 土, 水, 空气, 阳光, 家 <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> Identify the needs of living things. Identify the needs of plants 	
<i>Vocabulary and Expressions</i>	<p>Previously learned: Students know the difference between living and non-living things. Students know color words.</p> <p>Content obligatory language: 沙拉, 红萝卜, 生菜, 西红柿, 芹菜, 黄瓜 需要, 成长, 吃, 喝, 空气, 土, 种子, 植物, 水, 阳光, 养分,</p> <p>Content compatible language : 帮忙, 哪里, 可以, 自己, 图片, 市场, 菜园(果园), 农场 飞, 石头, 沙漠, 河岸, 好吃, 也, 从, 还是 又。。。又</p>	
<i>Materials/ Resources</i>	<ul style="list-style-type: none"> Realia: glass, water, various fruits and vegetables (apple, orange, grapes, lettuce, berry, carrot, cucumber, broccoli), rock, flower Pictures of fruits, vegetables, and plants (apple, apple tree, grape vine, berry bush, cucumber, broccoli,..) ,sun, plant, flower Plastic Bag to hold vegetable pictures Seeds packages Copy of “Seed Song” (refrain) on chart paper. M.1 – Game “Red Light, Green Light” Worksheet 1a -- Vegetables and fruits Worksheet 1b– Various Salads (maybe enlarge those pictures) Worksheet 1c – Supermarket , Garden, and Farm Worksheet 1d -- Little Seed Finds a Home Worksheet 1e – What Little Seed Needs (chant /hand emotions) Ppt – Little Seeds Finds Home 	

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<p><i>Lesson Storyline and Core Text</i></p>	<p>At the beginning, the teacher tells students that she/he is planning a meal for a friend who loves salad and wants some help from the class. The teacher will show pictures and have students pick and choose what ingredients to use in their salad. (Teaching vocabulary). Teacher poses a question: Where do these salad ingredients come from? (From a supermarket or someone will have to grow them?) (Reading the story of Little Seeds, and identify what seeds need to grow. As a preview, tell students that they will plant and grow their own seeds later.)</p> <p>Core Text :</p> <p>大家好！今天我需要你们来帮忙做沙拉 蔬菜，水果沙拉 我有一些照片。 这是一份沙拉或是。。。 你喜欢沙拉吗？ 你能告诉我们沙拉里有什么呢？ 沙拉里有红萝卜吗？ 请把红萝卜放入沙拉碗里。 沙拉里的东西从在哪里来呢？ - 从超市，菜园，还是来自农场？ 我们可以自己种蔬菜（水果）吗？ 我们种蔬菜（水果）。</p> <p>这些是种子。 种子长大变成植物。 让我们来看看种子怎么长大。 种子需要什么才能长大？ 它需要土壤吗？ 种子成长需要阳光，空气，土和水。</p>
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<p>Key Elements</p>	<p>Lesson 1 Procedures – <i>Where Do Salad Come from?</i></p>
<p><i>Engagement</i></p> <ul style="list-style-type: none"> ● <i>Object, event or question used to engage students.</i> ● <i>Connections facilitated</i> 	<p>Plan a salad (Show pictures of different salads. Also show pictures of various produce. e.g., vegetable, fruit; both as produce and as living plants) Worksheet 1a As class begins, place a variety of cutout pictures of salad ingredients on the floor or on a desk, so students can choose them later. T: 大家好。我需要你们帮忙。我想请我的朋友吃饭，他很喜欢吃沙拉。你能帮我做沙拉吗？</p>

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<i>between what students know and can do</i>	<p>Students respond.</p> <p>T: 这儿有些照片。你们说这是沙拉或热狗/比萨/汉堡？</p> <p>Ss: 热狗/比萨/汉堡</p> <p>T: 对了，这是沙拉。</p> <p>Teacher sets all pictures of salads together in front of the class. Worksheet 1b</p> <p>T: 你喜欢吃沙拉吗？你喜欢这沙拉吗？</p> <p>Ask different students to respond. (like, not like, eat)</p> <p>Teacher with a picture of a salad.</p> <p>T: 沙拉里有什么？</p> <p>T: (showing picture of a carrot or a plastic carrot.) 这是红萝卜。沙拉里有红萝卜吗？(Students pick out or point at carrots in the salad pictures.)</p> <p>T: 那是红萝卜吗？它是什么？</p> <p>Ss: 红萝卜</p> <p>T: (models) 现在，我把红萝卜放入沙拉碗里。</p> <p>T: (calls on another student) 请把红萝卜也在沙拉碗里。</p> <p>Student chooses from among pictures on the floor or desk.</p> <p>Repeat with procedure for carrots and then 生菜，西红柿，芹菜，黄瓜，or any choices that teacher decides to put in the salad (or the picture shows). To vary the procedure, mix up ingredients and ask students to put in a vegetable that had been added earlier.</p> <p>Note: make sure your choices can be found in seed packages sold in a grocery store or ordered online. Additionally, the selection must include using leaves, stems, fruits, and roots of vegetable or fruit. If health concern is taken care of, you may include seeds such as sunflower seeds or other kinds of seeds.</p> <p>T: 哇！这沙拉看起来很好吃，对不对？Worksheet 1b</p> <p>Ss: 是的，好吃。</p> <p>T: 你喜欢不喜欢沙拉？</p> <p>Ss: 是！我喜欢(不！我不喜欢。)</p> <p>T: 沙拉里的东西从哪里来的呢？(Showing a picture of a supermarket) 从超市吗？</p> <p>S: 是的，从超市</p> <p>T: 嗯，从超市。超市里种蔬菜或水果吗？</p> <p>S: 对/不对。</p> <p>T: 超市不种蔬菜/水果。蔬菜/水果是种在农场里。(showing a picture of a farm)</p> <p>T: 谁家有农场？(Waits for a show of hands, and then names the children, saying: ____ lives on a farm, and ____ lives on a farm, etc.)</p> <p>T: (Show pictures of home gardens.)</p> <p>T: 谁家有菜园？(Waits for a show of hands, and then names the children,</p>

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	<p>saying: ____ has a garden. ____ has a garden, etc.) 我们也可以种植蔬菜和水果吗？</p> <p>Students respond.</p> <p>T: 我們要學兩樣，一是要學習怎么做沙拉，第二是學習植物的成長。</p>
<p><i>Exploration</i></p> <ul style="list-style-type: none"> • <i>Objects and phenomena are explored.</i> • <i>Hands-on activities, with guidance.</i> 	<p>Introduce Seeds</p> <p>T: (Shows a seed package, opens it, and shows seeds) 这是种子。种子长大变成植物。沙拉中的东西大部分来自种子。</p> <p>(Distribute a seed packet for students to look. Model as they pass the packet from one student to another.) 看，这是一包种子。</p> <p>Students repeat the utterances as they pass along the seed packet.</p> <p>Note: Use the “Red Light, Green Light” game, Worksheet M.1. Give one packet to a student, saying: “This is a packet of seeds.” Call “Green Light” and motion the student to pass it along, telling the next student as they pass it, “This is a packet of seeds.” After several passes call “Red Light” and the student who holds the packet must name it. Once class is comfortable playing this game, add more packets to pass around.</p> <p>S: 这是一包番茄种子等...。</p> <p>T: 我们来种这些种子，看看种子怎么长大。</p> <p>T: (Pick up a book) 哦，我这儿有一本小种子的故事。我们听听小种子的故事，它告诉我们它怎么样找到它的家。</p>
<p><i>Explanation</i></p> <ul style="list-style-type: none"> • <i>Students explain their understanding of concepts and processes.</i> • <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i> 	<p>Story of Little Seed</p> <p>Teacher reads the story of “小种子找到了它的家”。 Worksheet 1d</p> <p>While reading it, make sure students understand the storyline and the concepts of plants needing air, water, sun, and soil to grow.</p> <p>Students chant “种子需要什么？” with hand motions. Worksheet 1e</p> <p>Instructions: Use the hand motions below when singing the refrain to the story.</p> <p>(You may also find a tune appropriate for your language.)</p> <p style="text-align: center;">阳光，空气，土和水， 这些都是我需要的东西。 我的家需要他们。 这些都是我需要的东西。</p> <p>阳光- (Make circle shape with two hands held over head)</p>

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	<p>空气-(Hand up, palm facing left, move hand in fan motion from side to side) 土- (Palm of hand facing down, sweep hand from left to right) 水- (Make wave motion with hand from left to right-palm down) 这些都是我需要的东西。(Point to self) 我需要他们- (Palms up, side by side in front of body, move hands apart.) 在我家- (Make triangle house shape in front of face).</p> <p>If time the students can retell the story to each other or practice sing the song together.</p>
<p><i>Elaboration</i></p> <ul style="list-style-type: none"> • <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i> 	<p>Teacher conducts a comprehension check about the story of Little Seed Make sure to provide the language and ensure students’ learning of the concept about needing soil, water, air, and sun. Worksheet 1d</p> <p><i>Sample questions might be:</i></p> <p style="padding-left: 40px;">T: 小种子需要什么? T: 小种子需要土吗? T: 土在石头/沙漠/河边 里吗? T: 小种子需要空气/阳光/水吗?</p> <p>Students respond. Conclude with the following utterance: T: 没错，种子需要在阳光，空气，土和水下成长。</p> <p>Review Salad, vegetable and fruits, make sure students can tell where these things come from.</p>
<p><i>Evaluation</i></p> <ul style="list-style-type: none"> • <i>Students assess their knowledge, skills and abilities.</i> 	<p>Assessment:</p> <ol style="list-style-type: none"> 1. Show pictures of different salads. Students pick what they want to talk about and name common ingredients of their chosen salad. 2. Using pictures, students retell the story of Little Seed. 3. Students perform the chant about Little Seed and name things that plants need to grow.

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<i>Teacher Reflection Lesson 1- Where Do Salad Come from?</i>	
<i>What worked well?</i>	
<i>What did not work well?</i>	
<i>What would I do differently?</i>	
<i>Other comments or notes</i>	

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Lesson 2 – Let’s Plant Seeds

让我们来种种子

Lesson 2 of 5 – <i>Let’s Plant Seeds</i>		Duration: 30 Minutes
<i>Objectives</i>	<p>I Can:</p> <p>Oral language:</p> <ul style="list-style-type: none"> Name the parts of plants: 种子，生长，植物，花盆，浇水，它（它们） <p>Literacy:</p> <ul style="list-style-type: none"> Recognize and write: 种子，生长，植物，花盆，东西 <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> Identify the needs of plants Describe what do we need to plant and how to plant seeds 	
<i>Vocabulary and Expressions</i>	<p>Content obligatory language: 种子，生长，植物，花盆，东西，浇水，它（它们），照顾，长大</p> <p>Content compatible language: 放入，一个，一些，一天天</p>	
<i>Materials/ Resources</i>	<ul style="list-style-type: none"> A big calendar for the class to use daily Seeds packages and pots – enough for all students Choose seeds that will germinate fairly quickly, such as lettuce, spinach, onion, sunflowers, beans (green beans are seeds in a protective pod) Set up a planting area in the front or at a corner of the classroom. Cover the floor with newspaper or shower curtain so the dirt will not soil the classroom. Make sure there are enough seeds and pots for each student. Necessary tools for planting seeds A potted plant Picture cards: water, sun, air, soil, stem, leaves, roots, fruit, seeds, plants (plain, flower, tree from previous lesson) Worksheet 2a – Planting Seeds Chant Worksheet 2b – Matching for Literacy Worksheet 2c – Planting Seeds mini book 	
<i>Lesson Storyline and Core Text</i>	<p>Students plant seeds and learn a “Planting Seeds” chant. Every day they observe the growth of their plants. They check the soil and water if the soil is dry.</p> <p>Core Text:</p> <p>让我们一起种这些种子。 我们需要什么？ 我们需要一个花盆和一些土。</p>	

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	<p>Planting Seeds Chant:</p> <p>我有一个花盆。 我有一些土。 我把土放进花盆里。 我有一些种子。 我把种子放入土里。 我把花盆放在阳光下。 我把水浇在花盆里。 我每天照顾它。 我看它一天天地长大。</p>
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Key Elements	Lesson 2 Procedures – <i>Let's Plant Seeds</i>
<p><i>Engagement</i></p> <ul style="list-style-type: none"> • <i>Object, event or question used to engage students.</i> • <i>Connections facilitated between what students know and can do</i> 	<p>Review the story of Little Seeds and what it needs to grow. Begin the day with calendar work. Repeat this activity daily. Using pictures, invite students to retell the story of Little Seed. Review what plants need. Lead students in the Little Seed chant.</p> <p>T: (Show seed packages.)我们有一些种子，让我们一起种这些种子。 T: (Teacher models how to plant seeds) 我们需要什么？ (Show a plant pot) 我们要一个花盆。 _____ (Student name), 请给我一个花盆。</p> <p>Repeat with the 土, 水, and 种子... enlisting student help to hold each item.</p> <p>Open one seed package and show students how to plant it. While planting each step, recite with actions the “Planting Seeds Chant” Worksheet 2a</p> <p>Planting Seeds: Use Gouin series Instructions: Use the hand motions below when singing the refrain to the story.</p> <p>我有一个花盆。(Cup left hand as if holding a pot, then sets it down.) 我有一些土。(shows some soil on the right hand) 我把土放进花盆里。(Right hand shovels soils into the pot) 我有一些种子。(extend left arm to show the seeds in your palm) 我把种子放入土里。(Left hand puts seeds into the pot and both hands pat them down gently.) 我把花盆放在阳光下。(Make circle with the hand and put down the pot, then look up the sky with right hand over the eyes) 我把水浇在花盆里。(One hand tilted as if watering the plant)</p>

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Key Elements	Lesson 2 Procedures – <i>Let's Plant Seeds</i>
	<p>我每天照顾它。(Two arms fold over the heart and rock sideways) 我看它一天天地长大。(two hands motioning as if the plant is growing)</p> <p>Lead students first to pantomime while the teacher recites. Then have them repeat each line after the teacher while they do the actions.</p>
<p><i>Exploration</i></p> <ul style="list-style-type: none"> • <i>Objects and phenomena are explored.</i> • <i>Hands-on activities, with guidance.</i> 	<p>Practice first in whole class, then in pairs or small groups. Call on volunteer pairs or groups to perform.</p> <p>Students planting their own plants from seeds Formative assessment: Recite Planting Seeds chant Before students plant their seeds, have them recite the chant with you.</p> <p>Tell students that the groups that can recite can come to the gardening area. Call on each group one by one. Distribute a pot and soil to each student, and let them choose the type of seed they wish to plant. The group will plant while the rest of class recites the chant. At the end, recite one more time in chorus.</p>
<p><i>Explanation</i></p> <ul style="list-style-type: none"> • <i>Students explain their understanding of concepts and processes.</i> • <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i> 	<p>Students recite and act out the “Planting Seeds” Gouin Series chant. Using their own language, tell the class how they plant their seeds. This can be done by groups. Teacher models how to write the essential vocabulary: 种子，长大，植物，土，水，空气，阳光</p> <p>Have students practice writing key vocabulary. Ask them to make their own flash cards, drawing pictures in the back.</p> <p>Peer Review: Have students exchange their flash cards and double check accuracy of the writing. Return to the original students for correction. Make new flash cards if necessary. Ensure all flash cards are accurate</p>
<p><i>Elaboration</i></p> <ul style="list-style-type: none"> • <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i> 	<p>Play the Red Light-Green Light game, Worksheet 1a, with student-made flash cards as a review of literacy.</p> <p>Using the Planting Seeds worksheet, students draw pictures and explain the sequence of planting seeds in writing. Worksheet 2a – Potting Seeds</p> <p>我有一个花盆。 我有一些土。 我把土放进花盆里。 我有一些种子。 我把种子放入土里。 我把花盆放在阳光下。</p>

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Key Elements	Lesson 2 Procedures – <i>Let's Plant Seeds</i>
	<p>我把水浇在花盆里。 我每天照顾它。 我看它一天天地长大。</p> <p>Peer review: Students exchange their worksheet to review accuracy. Make corrections. They can also perform the chant as preparation for performance assessment next day.</p>
<p><i>Evaluation</i></p> <ul style="list-style-type: none"> • <i>Students assess their knowledge, skills and abilities.</i> 	<p>Performance Assessment:</p> <ol style="list-style-type: none"> Chant the Gouin series for Planting Seeds. Students display their scientific illustration and writing of how to plant seeds. Worksheet 2b Make oral presentations as individuals or in groups. Observe and record changes to their own seedlings. Worksheet 2c

Teacher Reflections on Lesson 2 – <i>Let's Plant Seeds</i>	
<i>What worked well?</i>	
<i>What did not work well?</i>	
<i>What would I do differently?</i>	
<i>Other comments or notes</i>	

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Lesson 3 – Let’s Conduct an Experiment to Change the Environment

改變植物環境的實驗！

Lesson 3 of 5 – <i>Let’s Conduct an Experiment to Change the Environment</i>		Duration: 30 Minutes
<i>Objectives</i>	<p>I can:</p> <p>Oral language:</p> <ul style="list-style-type: none">Name 食物，枯萎，死，今天，明天，昨天 <p>Literacy:</p> <ul style="list-style-type: none">Recognize the words 食物，枯干，枯萎，死，今天，明天，昨天 <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none">Each living thing depends on other living and nonliving things in its environment, or surroundings.	
<i>Vocabulary and Expressions</i>	<p>Content obligatory language:</p> <p>會枯干，枯萎，死，今天，明天，昨天，环境</p> <p>Content compatible language:</p> <p>發生变化，把...，黑暗，当... 會</p>	
<i>Materials/ Resources</i>	<ul style="list-style-type: none">Pencil, paper, worksheets, a video presenter, computers, map of the world,visuals of fruit and plants from the previous lessonActual plant that is dried, yellow, dying, or dead. (If necessary, this could be a picture)Plastic bag, brown bagsNewsprint for teacherPoster for groups to predict their experiments and share with othersWorksheet 3a – Changes in the Environment	
<i>Lesson Storyline and Core Text</i>	<p>Students will conduct an experiment to find out what happens to a plant if the environment changes. They will predict what happens to a plant when the environment has not enough soil, water, air, and sun. They will also report on the experiments they conducted.</p> <p>Students will continue to observe and care for their own seedlings/plants.</p> <p>Core Text:</p> <p>让我们来看看当环境变时，植物会怎么样？ 植物会有什么变化？ 环境没有空气/水/土/阳光时，植物会怎么样？ 当环境中有没有水，植物会生长/枯萎/死吗？ 当环境中有没有水，植物会生长/枯萎/死亡。</p>	

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	<p>让我们看看如果植物没有土会发生什么。</p> <p>No-Soil Group: 当植物没有土，植物的变化？ 让我们来看看植物会发生什么变化。</p> <p>No-Water Group: 当植物没有水，植物的变化？ 让我们来看看植物会发生什么变化。</p> <p>No-Sun Group: 当植物没有阳光，植物环境发生变化？ 让我们来看看植物会发生什么变化。</p>
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Key Elements	Lesson 3 Procedures – <i>Let’s Conduct an Experiment to Change the Environment</i>
<p><i>Engagement</i></p> <ul style="list-style-type: none"> ● <i>Object, event or question used to engage students.</i> ● <i>Connections facilitated between what students know and can do</i> 	<p>What happens when the environment does not have air/ water/soil/sun? Teacher asks and led students to talk about what they did in Lesson 2: planting seeds; recite the chant, talk about their own seedlings. Show students a real herb/flower plant, and ask various students to identify the four elements (soil, water, air, and sun) for plants to grow.</p> <p>T: (Bring out another plant that has died (or pictures, if necessary). 同学们，你们看看，发生了什么事？这个植物怎么了？ (Provide language as needed for students to respond: <i>dry, dead, yellow, brown, etc.</i>)</p> <p>T: 让我们来看看当环境发生变化，植物没有得到它所需要的食物，植物会怎么样？</p> <p>Show pictures of plants that are dried, yellow, dying, or dead. Provide language for students to respond.</p> <p>T: (Provide students with the language so they can predict.) 同学们，当环境没有空气/水/土/阳光时，会发生什么情况？ For example: 当环境没有水，植物生长/枯萎/死吗？ 当环境没有土，植物生长/枯萎/死吗？ 当环境没有空气，植物枯萎/死吗？ 当环境没有阳光，植物会枯萎/死吗？</p> <p>Guide students to sum up their predictions in chorus. 当环境中有没有水，植物将长大/枯萎/死亡。 当环境中有没有土，植物会枯萎/死亡。</p>

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Key Elements	Lesson 3 Procedures – <i>Let’s Conduct an Experiment to Change the Environment</i>
	<p>当环境没有空气，植物会枯萎/死亡。</p> <p>当环境没有阳光，植物会将枯萎/死亡。</p> <p>Have students observe and record the changes in their own seedlings.</p>
<p><i>Exploration</i></p> <ul style="list-style-type: none"> • <i>Objects and phenomena are explored.</i> • <i>Hands-on activities, with guidance.</i> 	<p>Review and facilitate students to make their own predictions about would happen to a plant if the environment lacks <i>soil, water, air, and sun.</i></p> <p>T: (Bring out the plant that was shown to students in the Engagement stage.) 让我们来看看如果环境发生变化，如果是没有空气/水/土/阳光，植物会怎么样？ Students respond. T: 我们来做一个改变植物环境的实验。</p> <p>T: (Use NO-Soil as a model for the class.) 如果植物没有土，让我们看看会发生什么？(Dump the soil onto newspaper on the ground. Put the plant back into the empty pot; encourage students to discuss what will happen to it over the next few days. Refer back to the calendar so students can record the changes.) 这个植物的环境发生变化。它没有土了。让我们来看看它会有什么变化。 As students discuss what happens to a plant, write down key vocabulary on a poster for the No-soil group. Worksheet 3a</p> <p>Continue encouraging students to discuss how they can take away elements from a plant.</p> <p>No-Water Group: Ask students to suggest how to take water from the plant. (Our suggestion: How about not watering it?). Ss: 这个植物的环境发生了变化，我们不给它水。我们来看看它会发生什么变化。</p> <p>No-Air: Tell the students that there is no good way to take away air from the plant, because air is everywhere. We won’t make air as part of the experiment.</p> <p>No-Sun Group: Ask students to suggest what they can do to take away the sun (students might suggest putting it in a dark place. Find a dark place to hide the plant. Or put it in a brown bag.) Our suggestion: put it in double brown bags Ss: 这个植物的环境发生了变化。我们不给它阳光。我们来看看它会发生什么变化。</p> <p>Reading and summary: Pointing at the posters, lead students to read their predictions. Students post their prediction on a poster.</p>
<p><i>Explanation</i></p> <ul style="list-style-type: none"> • <i>Students</i> 	<p>Students conduct their experiment</p> <p>Divide the class into three groups: No-Soil, No-Water, and No-Sun groups, and</p>

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Key Elements	Lesson 3 Procedures – <i>Let’s Conduct an Experiment to Change the Environment</i>
<p><i>explain their understanding of concepts and processes.</i></p> <ul style="list-style-type: none"> • <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i> 	<p>another group that will be responsible for taking care of a plant that has everything. (In fact, there could be groups for too much sun, too much water.)</p> <p>Each group will conduct their experiment and report back to the class orally about their experiment (what they did with the plant). Worksheet 3a</p>
<p><i>Elaboration</i></p> <ul style="list-style-type: none"> • <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i> 	<p>Students discuss what they did to the plant.</p> <p>Model how to make the observations and enter them into the log. Use the “Plant Log” Worksheet 3b, to record the change in the plant.</p> <p>Use the experiment log from the worksheet, each group illustrates and records what they did. They will continue the observation and recording during the next lesson. They will also continue to observe and care for their own seedlings.</p> <p>Note: Make sure each group will have the time to observe and record the changes each day during Lesson 4.</p>
<p><i>Evaluation</i></p> <ul style="list-style-type: none"> • <i>Students assess their knowledge, skills and abilities. Activities permit evaluation of student development and lesson effectiveness.</i> 	<p>Students can:</p> <ul style="list-style-type: none"> • Predict what happens if the environment changes and a plant does not have one of its essential elements to live. • Talk about their experiments: what they did to change the environment of a plant and what they did to observe and keep a record. <p>Performance assessment Tasks:</p> <ul style="list-style-type: none"> • Presentational mode: Using the posters the class made, in small groups, students talk about their predictions. • Interpersonal mode: Exchanging the environment logs, Worksheet 3a, students ask questions about other groups’ experiments. (But not the results that will be reported in Lesson 4.)

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Teacher Reflections on Lesson 3 – <i>Let's Conduct an Experiment about Changes in the Environments</i>	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	

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Lesson 4 – 植物的各个部分

Lesson 4 of 5 – Hello, parts of the plant!		Duration: 30 Minutes
<i>Objectives</i>	<p>I Can:</p> <p>Oral language:</p> <ul style="list-style-type: none"> • New vocabulary: 营养, 氧气, 二氧化碳, 光合作用 • Name parts of the plant: 根, 茎, 叶, 果实, <p>Literacy:</p> <ul style="list-style-type: none"> • Recognize the words that describe different parts of the plant. <p>STEM and Other Subject Areas:</p> <ul style="list-style-type: none"> • Name conditions different plants need in order to live and grow. 	
<i>Vocabulary and Expressions,</i>	<p>Content obligatory language:</p> <p>根, 茎, 叶, 果实, 地上, 地下, 吸收, 氧气, 二氧化碳, 光合作用</p> <p>脚, 成长, 养分, 运送</p> <p>Content compatible language:</p> <p>墨西哥, 巴勒斯坦, 伊朗, 站立, 躺下, 吸管,</p> <p>碗, 调味汁, 葱, 蒜, 盐, 醋, 糖, 高大, 强壮, 武器, 猫, 狗, 鸟。</p>	
<i>Materials/ Resources</i>	<ul style="list-style-type: none"> ○ Pencil, paper, worksheets, a video presenter/document camera/Elmo device ○ A plant or poster of a plant (with roots) ○ Prepare many cut out pictures of the following items (grocery stores usually have lots of flyers advertising them): Use Worksheet 1 to prepare cut out pictures. <ul style="list-style-type: none"> Leaf: lettuce, spinach Fruit: tomato, cucumber, apple, orange, grapes Seeds: sunflower seeds Stem: celery, asparagus Roots: carrots, beets ○ Adopted “Brown bear, brown bear, what do you see” http://www.youtube.com/watch?v=ek7j3huAApc ○ Mexican Salad http://allrecipes.com/recipe/mexican-salad-2/ ○ Tomato and Cucumber Salad: Arabic (Palestinian and Iranian) salad: http://www.food.com/recipe/arabic-salad-90140 ○ Chinese salad: http://chinesefood.about.com/od/salads/a/chinese_salad.htm ○ Worksheet 4a – What Do Living Things Eat ○ Worksheet 4b – Little Seed, Little Seed, What do You See? ○ Worksheet 4c – Parts of a Plant ○ Worksheet 4d – What Do Parts Do for a Plant? ○ Worksheet 4e – Chant: Making Salad 	

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<p><i>Lesson Storyline and Core Text</i></p>	<p>In this lesson, students will learn about different parts of a plant and what these parts do to help a plant grow. They will make a connection between parts of plants and the environment, and understand why environmental changes will affect plants. When they report the results of their <i>No-Water/Air/Soil/Sun</i> experiments, they will include the information about what happened to parts of a plant.</p> <p>While learning parts of a plant, student will identify which parts of plants that we use for making salad. They will review names of vegetables and fruits commonly used in salad.</p> <p>Students will continue to observe and record the changes of their own seedlings/plants.</p> <p>Core Text:</p> <p>植物需要吃食物吗？ 他们不需要吃食物。他们从土壤中吸收养分。 他们的养分是从土壤，空气，水和阳光来的。 我们需要植物需要的养分吗？</p> <p>Little Seeds, Little Seeds, What do you see? Worksheet 4b (Chant: Plant's Body Part Chant)</p> <p>小种子，小种子，你看到了什么？ 我看到我的根长成我的脚。 小种子，小种子，你看到了什么？ 我看到我一天天长大。 小种子，小种子，你看到了什么？ 我看到我的茎长成我的身体。 小种子，小种子，你看到了什么？ 我看到了我的叶子长成我的手。 小种子，小种子，你看到了什么？ 我看到我结果实给大家食用。</p> <p>What do Parts do for a Plant? Worksheet 4c</p> <p>这些是根。 根长在植物的脚下或手上？ 根住在地下或地上？ 根住在地下。 根做什么？ 根能帮助植物站起来。 根能帮助水分和养分。 一个植物有很多根。</p>
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	<p>茎有什么作用？ 它帮助植物站起来或躺？ 是的，茎帮助植物站立。 茎就像是一根吸管。 把水和营养物从茎运送到植物的各部位。</p> <p>叶采取的空气和阳光。 植物利用阳光和二氧化碳进行光合作用。 植物给我们呼吸的氧气。因此，植物对我们是有益的。 有些植物有果实，但有些植物没有果实。</p> <p>Making a Salad Chant: 我有生菜，我用生菜叶做沙拉， 我把生菜叶切好，并把它们放入沙拉碗。 我有芹菜，我用它的茎做沙拉， 我把芹菜切好，并把它们放入沙拉碗。 （重复与所有其他成分。） 我把沙拉放入碗里，我把它们混合在一起。 我加调味料。真好吃，我爱吃我们做的沙拉！</p>
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Key Elements	Lesson 4 Procedures -- <i>Hello, parts of the plant!</i>
<p><i>Engagement</i></p> <ul style="list-style-type: none"> ● <i>Object, event or question used to engage students.</i> ● <i>Connections facilitated between what students know and can do</i> 	<p>What do living things need?</p> <p>Do calendar work. Sing “What a Plant Needs” Song.</p> <p>T: 种子成长需要什么？ Students respond. T: 我们需要吃东西，它们也需要吃东西吗？ Students respond. T: 他们不需要。他们的根吸收土中的养份。他们从土中吸收养份和水，从空气吸入二氧化碳和阳光。他们放出氧气给我们。</p> <p>人与动物需要食物中得到养份，我们需要空气中的氧气，我们也需要水和地方住才能生存</p> <p>Work with students to talk about and compare what different living things (animals vs. plants) need. Use Worksheet 4a.</p> <p>T: (Teacher models and ask student in pairs or small groups to do a Venn Diagram to ensure students’ understanding. Lead students to conclude that people and other animals need to eat food and get oxygen from the air; plants need to have the four essential elements to live: carbon dioxide from the air, nutrients from the soil, water,</p>

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Key Elements	Lesson 4 Procedures -- <i>Hello, parts of the plant!</i>
	and sun.) Observe and record students' No-Soil/No-Water/No-Sun experiments, Worksheet 3a
<p><i>Exploration</i></p> <ul style="list-style-type: none"> • <i>Objects and phenomena are explored.</i> • <i>Hands-on activities, with guidance.</i> 	<p>Identify different parts of a plant: 根，茎，叶，果实和种子。 Bring out a plant with that has some kind of fruit and take the plant out of its pot. Dump all the soil to show roots. (Or use pictures.) Invite students to point out parts of the plant as you mention them.</p> <p>根，植物在土壤中的水分和养分。同学们！哪儿是根？ 茎，茎帮助植物站立，并运送养分和水到树叶。同学们！哪儿是茎？ 叶子从空气中吸收阳光和二氧化碳。 有些植物长大后会结果实。 同学们！ 哪儿是果实？</p> <p>Using the “Brown Bear, Brown Bear, What Do You See?” song, teach new vocabulary, pointing at the specific part and miming. Worksheet 4b (http://www.youtube.com/watch?v=ek7j3huAApc)</p> <p>Note: If weather permits and there is grass or small flowers or plants (e.g., dandelions) outside, you may take the students to pick their own grass or plants. Return to the classroom. Later, the grass or plants can be pressed into an art project. T: 让我们来一起念植物的成长。我们假装都是从小种子，长成植物。大家跟我一起做动作</p> <p>小种子，小种子，你看到了什么？ 我看到我的根长成我的脚。(moving legs and wiggle toes) 小种子，小种子，你看到了什么？ 我看到我一天天的长大。(stretching arts upward and straiten the body) 小种子，小种子，你看到了什么？ 我看到我的茎长成我的身體。 小种子，小种子，你看到了什么？ 我看到了我的叶子长成我的手。(moving fingers) 小种子，小种子，你看到了什么？ 我看到我结果实(Stretching an arm to pick fruits and put them into an imaginary basket.)</p> <p>Literacy practice: Model for students how to write the words for Parts of a Plant. Worksheet 4c and Worksheet 4d spend 2-3 minutes per day to engage in literacy practice.</p> <p>Observe and record students' No-Soil/No-Water/ No-Sun experiments, Worksheet 3b</p>
<i>Explanation</i>	How does each part help plants grow?

World Language-STEM MODULE COVERSHEET

From Seeds to Table

从种子到桌子

Key Elements	Lesson 4 Procedures -- <i>Hello, parts of the plant!</i>
<ul style="list-style-type: none"> • <i>Students explain their understanding of concepts and processes.</i> • <i>New concepts and skills are introduced as conceptual clarity and cohesion are sought.</i> 	<p>Sing the “Little Seed What do You See?” song. Review different parts of a plant. http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/science/s_plants/index.htm Click on parts of a plant to show students first.</p> <p>T: (Take the plant that is out of its pot, pointing at the root or use Worksheet 4c) 这些是根。还记得“小种子，小种子，你看到了什么”的歌吗？根是什么？大家想想根是植物的脚还是手？</p> <p>S: 脚。</p> <p>T: 根是長在地下或地上？(use hand gesture to help students understand words underground and above ground)</p> <p>Ss: 長在地下</p> <p>T: 是的，根長在地下。根怎么来帮助植物？</p> <p>Ss: (Answers varies.)</p> <p>T: 根帮助植物站起来。它们帮助植物吸收土里水分和养分。</p> <p>T: 植物有很多根。根帮助植物吸收土里水分和养分。</p> <p>T: (Pointing at stem and bring a straw to simulate a stem.) 谁知道植物的茎是做什么？茎帮助植物站着还是躺着？</p> <p>S: (Answers varies.)</p> <p>T: 是的，茎帮助植物站着。</p> <p><i>Students’ responses.</i></p> <p>T: 茎，茎帮助植物站立，并运送养分和水到树叶。</p> <p>T: (Pointing at leaves) 叶空气吸取在阳光和二氧化碳。将阳光和水和二氧化碳转化为食物中的能量。这就是光合作用。他们给人和动物氧气。</p> <p>T: 人们和动物需要氧气来呼吸。因此，植物对我们是有益的。人与植物的光合作用是相互需要的。</p> <p>T: (Pointing at fruits) 有些植物有果实，但有些植物没有。谁能告诉我哪些食物有果实？</p> <p>Students might respond: 苹果，橘子，葡萄... and so on.</p> <p>T: 那黄瓜，番茄呢？(Other examples of fruit that are vegetables)? 它们也有种子，它们种子成长变成什么了呢？</p> <p>Ss: 更多的苹果树，更多的葡萄。。。。</p> <p>T: 对，小小的种子长成一个大的植物，结出果实。果实里的种子再一次又一次地的长大變成一个植物。</p> <p>Worksheet 4d- What Do Parts Do for a Plant?</p> <p>Divided students into 3 groups, lead students to do a dramatic demonstration. Students can perform and compete by group to make it more fun.</p>

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From Seeds to Table

从种子到桌子

Key Elements	Lesson 4 Procedures -- <i>Hello, parts of the plant!</i>
	<p>What do Parts do for a Plant?</p> <p>我们是根。 我们是植物的脚。 我们生活在地下。 我们帮助植物站起来。 我们帮助植物吸取水分和养分。</p> <p>我们是茎。 我们是植物的身体。 我们生活在地上。 我们帮助植物站起来。 我们运送水分和养分到植物的各个部位。</p> <p>我们是叶。 我们是植物的手。 我们帮助植物取得空气和阳光。 我们做的光合作用。 我们提供氧气和食物的所有生命的东西。</p> <p>Observe and record students' No-Soil/No-Water/ No-Sun experiments, Worksheet 3b</p>
<p><i>Elaboration</i> <i>Activities allow students to apply concepts in contexts, and build on or extend understanding and skill.</i></p>	<p>Review or learn names of fruit or vegetable that can add into a salad. Identify which part of a plant the edible bites belong.</p> <p>Review parts of the plants Worksheet 4c and parts of the plant chant. Worksheet 4d</p> <p>What can we use for making a salad? As in a cooking show, teacher models how to make a salad. Ask students to pantomime mime as teacher does the salad chant: Worksheet 4e –Making a Salad</p> <p>Making a Salad: 我有生菜，我用生菜叶做沙拉， 我把生菜叶切好，并把它们放入沙拉碗。 我有芹菜，我用它的茎做沙拉， 我把芹菜切好，并把它们放入沙拉碗。 (重复与所有其他成分。)</p> <p>我在沙拉放入碗里，我把它们混合在一起。 我加了调味料。 真好吃，我爱吃我们做的沙拉！</p> <p>Invite volunteers to come up to pick out pictures from the basket. Lead the class to help the volunteers to do the salad chant.</p>

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From Seeds to Table

从种子到桌子

Key Elements	Lesson 4 Procedures -- <i>Hello, parts of the plant!</i>
	<p>Salads from the World: Worksheet 1b</p> <p>Show pictures of different salads such as Black bean salad (Mexican), tomato and cucumber salad (Arabic), and cucumber and carrot (Chinese). Invite students to identify what ingredients are used to make those salads. Show pictures of basic and additional ingredients such as onions, garlic, salt, vinegar, oil, and sugar.</p> <p>Divide the class into small groups and ask the groups to decide what kind of salad they will make. Have the groups practice doing a cooking show with the salad chant.</p> <p>Each group will perform for the class with their own cooking show and salad chant. Lead the whole class to do the cooking show and salad chant as the big finish.</p>
<p><i>Evaluation</i></p> <ul style="list-style-type: none"> ● <i>Students assess their knowledge, skills and abilities.</i> 	<p>Review</p> <p>Recite the salad chant together. Invite a few volunteers to perform. Ask the class to talk about their (1) No-Soil/No-Water/ No-Sun experiments.</p> <p>No-Water/Air/Soil/Sun Experiments:</p> <ul style="list-style-type: none"> ○ Each group will put their “products” on a table. Have students observe and compare each product. ○ Take the original posters with students’ predictions. Compare the results of the experiment with the predictions. See if the predictions were correct. If not, what do the plants look like now? ○ Have students enter the findings onto their logs. ○ Ask students to practice before doing a report to the class.

Teacher Reflections on Lesson 4 – <i>What Do Parts Do for a Plant?</i>	
<i>What worked well?</i>	
<i>What did not work well?</i>	
<i>What would I do differently?</i>	
<i>Other comments or notes</i>	

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Lesson 5 - Assessment Tasks

I can make a salad

Make a pledge to my plant

Lesson 5 of 5		Duration: 30 Minutes
<i>Objectives</i> (core can dos)	Students can: <ol style="list-style-type: none">1. Retell the story of Little Seed2. Identify and name common vegetables and fruits used in salad3. Talk about the sequence of planting seeds into pots4. Tell others what seeds and plants need to live and grow5. Talk about an experiment showing the result of environmental changes on a plant6. Identify parts of a plant and name their functions in supporting the life of a plant7. Make a salad with different parts of various plants, including leaves, fruits, stems, seeds, and roots8. Make a pledge to take care of a plant	
<i>Materials/Resources</i>	<ul style="list-style-type: none">○ Preparation: Cut out pictures of various vegetables or fruits that the class has learned. E.g.,<ul style="list-style-type: none">Leaf: lettuce, spinachFruit: apple, grapes, cucumber, orange, tomatoSeeds: sunflower, cornStem: asparagus, celeryRoots: carrots, onions○ Basket, brown bags, and sandwich bags for vegetables and fruits○ Salad Bowls and utensils – enough for each group.○ Worksheet 5a : What We Need○ Worksheet 5b: Can do Statement○ Worksheet 5c: My pledge to My Plant	
<i>Review</i>	Before assessing students, make sure students have the opportunities to review lesson materials in terms of the Can-do statements listed above.	

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Interpretive Task

Title: **Shop for a Salad** 買沙拉

Task procedures/Instructions:

Students walk up to a basket filled with small brown bags of cut-out fruit or vegetable. Each student picks out one bag and tells the class what he/she has (e.g., I have tomatoes. Tomatoes are fruits).

Preparation: Cut real items or pictures of various vegetables or fruits that the class has learned. E.g.,

Leaf: lettuce, spinach

Fruit: apple, grapes, cucumber, orange, tomato

Seeds: sunflower, corn

Stem: asparagus, celery

Roots: carrots, onions

Interpretive Task:

1. Put all the bagged items or pictures in a basket, randomly go to a student for him/her to pick an item out of the basket.
2. He/she will tell the class what he/she has. For example: I have tomatoes in my salad. Tomatoes are fruits.

Interpersonal Task

Title: **Let's Make a Salad** 我們來做沙拉

Task Procedures/Instructions:

Students will go around the room to look for salad partners. In each salad, there must be at least four (or three, if you prefer) part of plants (e.g., leaves, fruits, seeds, roots, and stems). Students cannot tell people what they have until they are asked. They must ask each other what they have so they can build a salad. Continue until all the salad groups are formed. Each group of students will make a salad by mixing the content of the bags into a bowl.

Task Procedures/Instructions: Jigsaw activity:

1. Students will walk around to find their salad partners.
2. Each group must make sure it has at least four parts of a plant. E.g., leaf, stem, root, and fruit. If not, they have to find more partners.

Presentational Task

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<p>Title: This is our Salad 這是我們做的沙拉</p>
<p>Materials to be used:</p> <p>Poster or display board for model, markers, magazines, glue, cut outs of universal symbols for water/sun light/temperature. Two pieces of plain paper 8 ½" by 11" Informational chart on different seeds, timer, seed packets for examples.</p>
<p>Student expresses his/her preference in the target language.</p> <p>Student provides reason for preference in the target language</p>
<p>Presentational Task</p> <p>Each group presents their salad. Students will talk about their own contribution and provide a brief description of the ingredient used (such as the name, which part of a plant it is.)</p> <p>Task Procedures/Instructions:</p> <ol style="list-style-type: none"> 1. Students will make their salad. Each group will describe how they made the salad and present their final product.
<p>Title: My Pledge to My Plant 對我植物的誓言</p>
<p>Presentational Task</p> <ol style="list-style-type: none"> 1. Each student will present the plant that he/she planted, telling what kind of plant it is. 2. After everyone has presented their plants, the class will read the pledge together. <p>Task Procedures/Instructions:</p> <p>Make my pledge to my plant</p> <ol style="list-style-type: none"> 1. Distribute a template of a pledge. 2. Students fill out the pledge. 3. Groups of students practice to prepare to make the pledge. 4. Each group makes the pledge <p>亲爱的植物：</p> <p>你是一个小小的_____（种子）。我把你种在土里，也会给你空气，水，阳光。 你一天天的长大。现在我要把你带回家。我会好好的照顾你，空气和阳光和水会和你同在。</p> <p>_____</p> <p>学生签名，日期</p>

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Teacher Reflections on Lesson 5 – <i>Assessment Task</i>	
What worked well?	
What did not work well?	
What would I do differently?	
Other comments or notes	