

## Lesson 8: "A Trip to the Rain Forest"

(associated with EiE® story *Juan Daniel's Fútbol Frog*, Chapter 5)

**Lesson Topic:** Juan Daniel takes a trip to the rain forest to learn from nature how he might solve his frog problem.

### DESIRED RESULTS (教学目标)

#### Academic Content Objectives: Students can...

##### *Chinese Language Arts*

- Discriminate between Chapter 4 event statements as true or false
- Rewrite false statements to be true
- Co-construct questions about what might happen in Chapter 5
- Use listening and reading comprehension skills to comprehend main events from Chapter 5
  - Use context and character structure analysis to infer meaning of unfamiliar words
- Use glossaries to understand meaning of new words
- Generate and answer literal and inferential story questions

##### *Science and Engineering*

- Analyze role of the five senses as tools for identifying characteristics of rain forests
- Acquire vocabulary associated with a particular ecosystem (rain forest)
- Analyze the role of the five senses as tools for solving everyday problems
- Recognize how observation of natural environments can inform human-made biotechnologies
- Distinguish water as friend or foe of living organisms

##### *Math*

- Calculate the relative percentage or fraction of El Salvador and of China that is rain forest

##### *Social Studies and Culture*

- Identify the national birds of El Salvador, the US and China

**Learning Strategies: Students can...**

- Make predictions or ask questions about a story
- Confirm/disconfirm predictions
- Work cooperatively with a group
- Use graphic organizers to organize information
- Listen selectively for key information

**Chinese Language Objectives: Students can...*****Functions and Forms*****Content-obligatory (CO)**

- Construct characters to form words and phrases adhering to character structure rules and stroke order guidelines
- Use a developing understanding of basic units of word formation in Chinese to infer and construct meaning with written text
- Recount events using action verbs and dependent time phrase/clause in complex sentence
- Ask and answer questions using resultative complements
- Describe attributes of person/place/thing using modifying phrases
- Give emphasis to the specific direct object by using 把 or 让/使 construction and placing the direct object before the verb
- Support ideas/opinions using compound sentences with adverb 因此
- Predict degree of probability of something using auxiliary "helping" verb
- Ask and answer questions using question words
- State approximate amount of a country's land area that is rain forest using fractions with units of measurement or relative percentages
- Order a series of events using sequencing adverbs
- Give reasons for actions/choices/preferences using preposition 为了

**Content-compatible (CC)**

- Negotiate turn-taking
- Express a personal opinion and request agreement
- Make inferences based on visual clues
- Express agreement/disagreement
- Negotiate to reach consensus

**Vocabulary**

	了解 Recognize	识记 Produce
<b>Content-obligatory</b>	<p><b>Math Vocabulary</b>            大约的 approximate (adj), 百分比 percentage, 最简单的形式 simplest form, 面积 area, 平方公里 km<sup>2</sup> (square kilometer), 平均降雨量 average rainfall: mm 毫米, 计算 to calculate</p> <p><b>Parts of Speech</b>            名词 noun, 形容词 adjective, 修饰语 modifying phrase</p> <p><b>Parts of a Rain Forest</b>            露生层 emergent layer, 树冠层 canopy layer, 幼树层 understory layer, 木层 immature layer</p>	<p><b>Math Vocabulary</b>            长方形 rectangle, 长 length, 宽 width, 高 height, 测量 to measure, 乘 to multiply, 估计 to estimate, 分数 fraction, 小数 decimal, 公里 kilometer</p> <p><b>Rain Forest Vocabulary</b>            热带雨林 rain forest, 瀑布 waterfall, 水 water, 雨 rain, 一个水滴 a drop of water, 特征 feature/characteristic (as in feature of the rain forest)</p> <p><b>Other Key Words</b>            青蛙的皮肤 frog skin, 湿润的 moist</p>

	了解 Recognize	识记 Produce
Content-compatible	<p><b>Instructional Activities</b>            荧光笔 highlighter marker, 泡泡图 Bubble Map®, 双泡泡图 Double Bubble Map®, 索引卡 index cards, 思考-配对-分享, Think-Pair-Share, 全班 whole class, 小组 small, 水: 朋友还是敌人 water: friend or foe, 组 group, 伙伴 partner</p> <p><b>Rain Forest Features</b>            茂密的华盖 leafy canopy, 一片绿色的叶子 a green leaf, 微弱的阳光 faint rays of sun, 斑斑点点的图案 spotty pattern on the ground, 绿色的油光发亮的 waxy green leaf</p> <p><b>Water-Related Vocabulary</b>            急促 rushing, 一泄千尺 cascading, 一闪一闪地, 像一颗小宝石 shine...tiny jewel</p> <p><b>Story Words Related to Five Senses</b>            直视 looked straight up, 瞥视 caught a glimpse of, 映入眼帘 to come into view, 看见 saw, 余光所视 noticed out of the corner of his eye, 近看 looked closer, 观察 watched, 听见 heard, 侧耳倾听 tilted his head to listen, 急促的流水声 rushing sound, 擦 rubbed, 抓住掉落的东西 reached out to catch a drop</p> <p><b>National Birds</b>            海喜鹊 motmot, 橘红色的脖子和蓝色翅膀 orange throat and blue wings, 白头鹰 bald eagle, 丹顶鹤 red-crowned crane</p>	<p><b>Five Senses</b>            视觉(看) seeing, 听觉(听) hearing, 嗅觉(闻) smelling, 味觉(尝) tasting, 触觉(摸) touching</p> <p><b>Instructional Activities</b>            真 true, 假 false</p> <p><b>Literacy Words</b>            问题 problem, 解决方案 solution, 预览 preview/to preview, 预测 prediction/ to predict, 概要 summary/to summarize</p> <p><b>Job Cards/Roles</b>            中文督察员 Chinese Champion, 材料管理员 Magnificent Materials Manager, 记录员 Remarkable Recorder, 工作管理员 Terrific Taskmaster, 演示质检员 Polished Presenter</p> <p><b>Cross Cultural Chart</b>            国鸟 national bird</p>

**Note:** In the *Language Function-Form-Vocabulary Connection* section you will find additional vocabulary that is directly supportive of the various language functions. The particular words and phrases you choose to target for this lesson will depend on your students' proficiency levels. Because of this, we have not included all vocabulary here. Also, at the end of this lesson you will find a table that provides more detailed information about the lesson vocabulary identified above.

**PREPARATION (教学准备)****Materials Needed for Instruction**

- MMIC *Juan Daniel* CH: Mandarin Chinese version of the *Juan Daniel* story
- Interactive whiteboard pages for Lesson 8
- Blank 4" x 6" index cards, one per pair
- Blank sheets of paper for Bubble Map, one per group
- 2 highlighter markers (two different colors, matching the colors used by Teacher on the interactive whiteboard in Activity 3)
- Cross-cultural wall chart
- Maps of El Salvador and China with rain forest area marked -- *Use online resources for finding good maps for your class for this activity*
- Handouts:
  - a. MMIC 8-1: *Chapter 4 True-False*, one copy per pair
  - b. MMIC 8-1 TG: *Chapter 4 True-False*, Teacher Guide
  - c. MMIC 8-2 TG: *Bubble Map*, Teacher Guide

## LEARNING ACTIVITIES (教学活动)

### Preview Phase— "Intro" Activities

Students will review the main events of *Juan Daniel*, Chapter 4 and predict what might happen next in the story. The teacher will activate prior knowledge about key concepts (rain forests, five senses, water as "friend" or "foe" of living organisms) before reading.

**Time:** Learning Activity 1—30 minutes

Learning Activity 2—30 minutes





Learning Activity 3—40 minutes

### Learning Activity 1

1. To review the events from *Juan Daniel*, Chapter 4, put students in pairs and distribute MMIC 8-1: *Chapter 4 True-False*, one copy per pair.
2. Review the words "对 (true)" and "错 (false)" to ensure all students remember the distinction between them.
3. Display page 1 of MMIC 8-IWB, ask pairs to read (out loud to each other) through a series of true-false statements about the events in the chapter and mark whether each statement is true or false. If a statement is false, ask students to rewrite it to make it true.

**Note:** *Students may either choose one of the pair to be the recorder (and the other the reader), or they may alternate number-by-number through the worksheet. Regardless, both students should actively participate in speaking and writing.*

4. Invite pairs to share answers to the true-false questions with the whole class. Use MMIC 8-1-TG: *Chapter 4 True-False, Teacher Guide* as a reference to check answers for the true-false statements.

Language Function-Form-Vocabulary Connections (Activity 1)		
<b>CO LP 8.1.1</b>	<b>Construct characters to form words and phrases adhering to character structure rules and stroke order guidelines</b>	
For example: Left-right: 叫、场 Top-bottom: 吉、只 Left, middle, right: 树、谁 Top, middle, bottom: 复、常 One-part, totally enclosed: 国、回 Partially enclosed: 用, 原		
Approaching	Attaining	Expanding
<b>One- and two-part characters</b>  One-part character 我、生 One-part, totally enclosed 国、回  Two-part characters Left-right: 叫、场 Top-bottom: 吉、只	<b>Three-part characters</b>  Left, middle, right: 树、谁 Top, middle, bottom: 复、常 Left, top-right, bottom-right: 锋、纷 Top-left, bottom-left, right: 部、剂、劲 Left-top, right-top, bottom: 然、赞 Top, left-bottom, right-top: 死、前	<b>Four + part characters</b>  Left-top, right-top, left-bottom, right bottom: 能、舒 Left, top-right, middle-right, bottom-right: 慢、镜 Left, middle, top-right, bottom-right: 游 Left, middle-top, middle-bottom, right: 湖
Form focus: Formation of Chinese characters		
1. Character structure rules		
Chinese characters are called "square" characters because no matter how simple or complex, each character fits inside a square. Characters can usually be divided into different parts. These parts form character structures. There are four main structures: one-part structure, two-part structure, three-part structure, and four-part structure. These structures can be further divided into sub-parts.		
For example,		
Two-part structures:  (top/bottom),  (left/right)		
Three-part structures:  (left, top-right, bottom-right),  (top-left, bottom-left, right), etc.		



## 2. Stroke order guidelines

General rules for writing Chinese characters are:

1. Horizontal first, then vertical.
2. Top first, then bottom.
3. Left first, then right.
4. Left-slanted first, then right-slanted.
5. Outside first, then inside.
6. Center first, then both sides.
7. With "closed" characters, enter character first, then close it up.

<b>CO LP 8.1.2</b>	<b>Use a developing understanding of basic units of word formation in Chinese to infer and construct meaning with written text</b>
<b>Form focus: radical → character → compound/word</b>	
1. radical	
<p>A radical is the smallest meaningful orthographic unit in compound characters, for example, 虫 (insect) is used in the character 蛙 (frog). 虫 (insect) can also be a stand-alone character. There are three types of radicals: semantic (give information about character meaning) [手 (hand)], phonetic (give information about character pronunciation) [分 (fen) in the compound 纷 (one after another)], and perceptual (do not give information about character meaning or pronunciation, instead function as visual fillers) [此 (this, these in classical Chinese), however, in the compound 嘴 (mouth) the radical 此 functions as a perceptual radical providing information about neither meaning nor pronunciation].</p>	
2. character	
<p>A Chinese character is a meaningful orthographic unit that is always pronounced as one syllable. Chinese characters have evolved as a writing system over millennia and have developed in various ways.</p> <p>Some characters are <b>pictographs</b> that were originally drawings of concrete objects, for example, 雨 (rain), the four dots depicting the rain coming down from the sky; others are better described as <b>ideographs</b> because they were created as graphic representations of more abstract ideas such as the notion of "above", 上, the stroke above the horizontal line indicating the idea of "above" or "up." Another way to create characters was to combine two or more pictographs or ideographs to portray a new meaning, for example, 休 (to rest), a combination of the pictographs for person, 人, and a person leaning against a tree, 木. These types of characters are referred to as <b>ideogrammatic characters</b>.</p> <p>Over 90% of Chinese characters were created as <b>phono-semantic compound characters</b> and are made up of a combination of semantic and phonetic radicals. For example, 控 (to control), the semantic radical on the left side, 手 (hand), indicates that the word meaning will include an</p>	

action with a hand, and the phonetic radical on the right side 空 (kōng), helps the reader with character pronunciation "kòng."

### 3. compound

Compounds consist of at least two characters, neither of which is an affix, a character that on its own lacks meaning but when added to other characters becomes a meaningful unit. Most Chinese words are compounds. Compounds have various types of syntactic relationships.

A few compound types:

*Verb-Object*: 踢足球 (to kick soccer ball)、开球 (to kick of)、发誓 (to pledge)

*Verb-Complement*: 摔倒 (to fall down)、改进 (to improve and get better)、进来 (to come in)

*Subject-Predicate*: 天亮 (bright [sky is bright])

*Number-Classifier*: 各种 (various kinds)、一道 (a ray of...)、一片 (a patch of...)

*Adverb-Verb*: 慢跑 (to jog [to run slowly])、快走 (to hurry [to walk fast])

*Verb-Verb-Noun*: 栖息地 (habitat [to stay and rest at a place])

*Adjective-Adjective-Noun*: 浅桃色 (light peach color)、吉祥物 (mascot [happy and auspicious object])

### 4. word

A word is written with one or more Chinese characters. A word can consist of a single character (脚, foot), a compound (幸运, lucky), a duplicate (招招手, to wave), or an affixed form (第一, first, 第二, second, etc.).

CO LP 8.1.3	Recount events using action verbs and dependent time phrase/clause in complex sentence	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
Juan Daniel 在家里遇见了两位科学家和一位生物工程师。  Juan Daniel met two scientists and one bioengineer at home.	赢了足球赛以后, Juan Daniel 在家里遇见了两位科学家和一位生物工程师。  After winning the soccer game, Juan Daniel met two scientists and one bioengineer at home.	Juan Daniel 赢了足球赛以后, 在家里遇见了两位科学家和一位生物工程师。  After Juan Daniel won the soccer game, he met two scientists and one bioengineer at home.
Simple past time using action verb with temporal marker 了	Use of dependent time phrase in complex sentence and temporal marker 了	Use of dependent time clause in complex sentence and temporal marker 了

Form focus
1. Use of 了 as temporal marker
Simple past time can be communicated using 了 (temporal marker), e.g., action verb + 了 (temporal marker). The temporal marker “了” is positioned either immediately after the main verb or at the end of the sentence/clause.
2. Use of dependent time phrase/clause in complex sentence
Mandarin uses adverbs of time and adverb of time phrases to connect two clauses and form one complex sentence. The first clause may consist of <ul style="list-style-type: none"> <li>An adverb of time placed at the end of the first clause [noun + adverb of time 的时候], e.g., 足球比赛的时候, ..... (While at the soccer game, ...)</li> <li>or an adverb of time phrase that is separated into two parts [当 (part 1) + simple SVO sentence + 的时候 (part 2)], e.g., 当我们测试尼龙纱窗布的时候, ..... (When we tested the nylon screen,...).</li> </ul> For example, Noun/simple SVO sentence + adverb of time phrase 以后.....后 (after), + main clause. Noun/simple SVO sentence + adverb of time 以前 (before), + main clause. Noun/simple SVO sentence + adverb of time phrase 当.....的时候 (when/while at), + main clause.

CC LP 8.1.4	Negotiate turn-taking	
For example:		
Approaching	Attaining	Expanding
该我了! My turn!	下一个该轮到谁了? Who is the next?	如果你不赶紧, 我们都不能往下进行。 If you don't hurry, none of us can move on to the next.
到你了! Your turn!	我觉得该你了。 I think it's your turn.	
下一个是谁? Who's next?	大家都在等你呢! All of us are waiting for you!	
下一个是你吗? Are you the next one?		

CC LP 8.1.5	Express a personal opinion and request agreement	
For example:		
Approaching	Attaining	Expanding
我觉得／想 ....., 你呢? I feel like/think....., and you?  也许／可能, 你呢? Maybe/perhaps....., and you?	在我看来..... ....., 你也同意吗? It seems to me like..., do you agree?  对我来说, ....., 你也同意吗? In my opinion, ....., do you agree?  我认为....., 你也同意吗? I believe/think ..., do you agree?	我建议....., 你也是这么想的吗? /吧? I suggest..., do you think so?  我的看法是....., 你也是这么想的吗? /吧? My thoughts are....., do you think so?  我是说....., 你也是这么想的吗? /吧? What I mean is....., do you think so?
<b>Noticing and awareness spotlight:</b> Use of 吗? 吧? 呢?		
<p>A few particles are commonly used at the end of questions.</p> <p>吧? is used to invite agreement.</p> <p>呢? is a tag question meaning “, and you?”</p> <p>吗? is a question particle that is used when one expects a “yes” or “no” response.</p>		

## **Learning Activity 2**

1. Distribute one 4" x 6" index card to each pair (same pairs). Ask students to work together to form two questions that could ask about what will happen next in the story. For example: "Juan Daniel 到热带雨林的时候先看到了什么?" (What did Juan Daniel first see when he arrived the rain forest?); "Juan Daniel 看到了哪些动物?" (What animal did Juan Daniel see?)
2. Each pair should write their two questions on the index card and put the card into a box.
3. Once all cards have been submitted, invite a student to choose a card from the box and read one of the questions aloud to the class. Ask students to engage with the questions—what might the answers be?

**Teacher Tip:** *Allow the student who reads questions to call on peers. This may encourage class participation.*

4. Continue to invite students to choose cards from the box and read several more questions (not repeating those that have already been asked) to pique student interest in the story.
5. Write the questions on a whiteboard page to refer to later in the lesson, when the class will look at the questions again and see if they are answered in Chapter 5.

**Learning Activity 3**

1. Show the illustration on page 25 (page 32 of the Chinese version) of *Juan Daniel* on page 2 of MMIC 8-IWB. Invite the students to brainstorm where they think Juan Daniel might be.
2. Next, display a photo of a rain forest on page 3 of MMIC 8-IWB to review the main parts of the rain forest with the whole class.
3. Place students in groups of four. Distribute job cards:

**Chinese Champion (中文督察员)**

**Remarkable Recorder (记录员)**

**Magnificent Materials Manager (材料管理员)**

**Terrific Taskmaster (工作管理员)**

4. Next, explain to the class that in this activity, each group will complete a Bubble Map, example is displayed on page 4 of MMIC 8-IWB, writing down everything they know about rain forests in descriptive words or nouns inside the circles. Display a Bubble Map on the whiteboard and write the word "rain forest" in the center bubble. See MMIC 8-2-TG for a beginning example.
5. To prepare them for this group activity, remind students to consider their five senses: Seeing 视觉 (看), hearing 听觉 (听), smelling 嗅觉 (闻), tasting 味觉 (尝) touching 触觉 (摸). As you discuss each sense, write it in one of the five bubbles. Then, invite students to orally brainstorm a few words and phrases that they associate with rain forests in response to the following questions:

中文	English
我们在热带雨林里能看见什么?	What do we see in the rain forest?
我们在热带雨林里能听到什么?	What do we hear in the rain forest?
我们在热带雨林里能闻到什么?	What do we smell in the rain forest?
我们在热带雨林里能摸到什么?	What do we touch in the rain forest?
我们在热带雨林里能尝到什么?	What do we taste in the rain forest?

6. Ask the **材料管理员 (Magnificent Materials Manager)** to pick up a blank sheet of paper for the activity.
7. Invite the **记录员 (Remarkable Recorder)** to copy the word "热带雨林 (rain forest)" from the whiteboard onto the center bubble of their Bubble Map and to add the words for the five senses in the surrounding five bubbles. Explain that the **记录员 (Remarkable Recorder)** in each group will write down the words and phrases that the group suggests as they work together to describe a rain forest.
8. The **工作管理员 (Terrific Taskmaster)** will share his/her understanding of the task with the group.
9. Invite one (or more) **工作管理员 (Terrific Taskmaster)** to stand and state their understanding of the task to the entire class.

10. Ask the 材料管理员 (**Magnificent Materials Manager**) what resources they might use to assist them with finding vocabulary. List these on the board and call attention to where they are in the classroom (e.g., dictionary, word walls, science notebooks). It will be their job to get these resources for the group during the activity, if they are needed.
11. Ask the 中文督察员 (**Chinese Champion**) to use resources (e.g., dictionary, word walls, science notebooks) to help the group find any necessary vocabulary as they work, and to ensure that all communication is in Chinese during group work.

**Note:** *Be sure to circulate during the activity in case students need additional vocabulary or character writing support.*

12. Groups will now work together to complete their Bubble Maps about rain forests. Remind students to do their jobs according to their job card description and refer to the sentence starters as needed.
13. When students have finished, ask groups to share their ideas. As they do, write their ideas on the Bubble Map displayed on the whiteboard and encourage students to add new words to their Bubble Maps as well.

**Note:** *Write nouns in one color and modifying phrases in another color on the whiteboard.*

14. Once the class Bubble Map is complete, invite students to state what they notice about the words in one color vs. those in the other. How are they different? The same? (Students should identify the words as nouns or modifying phrases and then briefly discuss what each part of speech does). Ask students to suggest possible adjective + 的 + noun phrases and call attention to accurate construction of modifying phrases in Chinese.

**Note:** “水 (water)” or “雨 (rain)” is probably one of the words that groups shared. Use this word to link to the next step.

15. **Water: Friend or Foe?** 水：朋友还是敌人？ Show a series of images on the whiteboard (page 5-12 of MMIC 8-IWB), depicting water as “friend” and water as “foe.” Have the class look at each image and decide if it shows water as “friend” or “foe” (e.g., 小雨落在花园里对洪水 [gentle rain falling on a garden vs. a picture of a flood]).
16. Invite students to suggest synonyms or give other examples of a “friend” vs. a “foe.”
17. Ask the class to think about Juan Daniel’s frog, and whether water is a friend or a foe for the frog. Have them first stop and **think** individually, then **share** their ideas with a **partner** and finally call on a few students to **share** their responses with the whole group (Think, Pair, Share). Write responses on page 13 of MMIC 8-IWB. Draw a Double Bubble Thinking Map with “Juan Daniel’s Frog and Water” as the title, and “water as friend” and “water as foe” as the two categories that are being compared and contrasted and fill it in with student responses.

**Teacher Tip:** *Your school district likely uses Thinking Maps and therefore you have examples of Double Bubble maps. If not, an Internet search will provide many examples of these maps.*





18. Ask students to predict what Juan Daniel might learn about water as nature's "friend" and "foe" by visiting the rain forest and observing in the next chapter. Write student responses on page 14 of MMIC 8-IWB.



Language Function-Form-Vocabulary Connections (Activity 2-3)		
CO LP 8.2-3.1	Ask and answer questions using resultative complements	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
Juan Daniel 看到了什么动物? Juan Daniel 看到了海喜鹊。	Juan Daniel 在热带雨林里看到了什么动物? Juan Daniel 在热带雨林里看到了海喜鹊。	Juan Daniel 到热带雨林的时候先看到了什么? Juan Daniel 到热带雨林的时候先看到了海喜鹊。
What animal did Juan Daniel see?  Juan Daniel saw a Motmot.	What animal did Juan Daniel see in the rain forest?  Juan Daniel saw a Motmot in the rain forest.	What did Juan Daniel first see when he arrived at the rain forest?  Juan Daniel first saw a Motmot when he arrived at the rain forest.
Subj. + Verb <sub>1</sub> + resultative complement [Verb <sub>2</sub> + Object].	Subj. + locative phrase (在.....里) + Verb <sub>1</sub> + resultative complement [Verb <sub>2</sub> + Object].	Adverbial time clause [Subj. + Verb + Object + 的时候] + adv. + Verb <sub>1</sub> + resultative complement [Verb <sub>2</sub> + Object].
<b>Form focus: verb<sub>1</sub> + verb<sub>2</sub> (resultative complement)</b>		
<p>In Chinese, each action verb communicates one specific action. For example, 看 (look) simply refers to the act of looking. To communicate that the looking resulted in seeing something, one needs to use a "verb + resultative complement" structure that will consist of an additional verb or adjective. For example, 看 (look) + 见 (perceive) = to see something. Other examples are 听 (listen) + 懂 (perceive) = to understand by listening, 打 (hit) + 倒 (down) = to push down.</p> <p>"Verb + resultative complement" structures are always composed of two elements. The second element indicates action resulting from the action or process communicated by the first element. For example: 拉 (1. to pull) 开 (2. to open) 了。[他把门拉开了。He pulled the door open.]</p> <p>There are several kinds of results that can be expressed by a "verb + resultative complement" structure. These include cause (我把茶杯打破了。[I broke the teacup.]), achievement (我把那个字写清楚了。[I wrote that character clearly.]), and direction (她跳过去了。[She jumped across.]).</p>		

<b>Noticing and awareness spotlight:</b>	
1. Use of temporal marker “了” with “verb + verb complement” structure	
When a two-character “verb + verb complement” structure is used, the temporal marker “了” must be placed after the verb complement.	
For example, [我] 看到了。(I saw.)	
However, if the verb complement consists of two characters instead of just one, then “了” can be placed either after the one-character first main verb or after the two-character verb complement.	
For example, 他走了出来。(He walked out of there.) 他走出来了。(He walked out of there.)	
2. Placement of adverb of time/place phrase	
In contrast to English, adverbial phrases that indicate time/place are placed directly after the subject and in front of the main verb.	
For example, Juan Daniel 在热带雨林里看到了海喜鹊。(Juan Daniel saw a Motmot in the rain forest.) Juan Daniel 到热带雨林的时候先看到了海喜鹊。(Juan Daniel first saw a Motmot when he arrived at the rain forest.)	

CO LP 8.2-3.2	Construct characters to form words and phrases adhering to character structure rules and stroke order guidelines
For example: Left-right: 叫、场 Top-bottom: 吉、只 Left, middle, right: 树、谁 Top, middle, bottom: 复、常 One-part, totally enclosed: 国、回 Partially enclosed: 用、原	

Approaching	Attaining	Expanding
<p><b>One- and two-part characters</b></p> <p>One-part character 我、生</p> <p>One-part, totally enclosed 国、回</p> <p>Two-part characters Left-right: 叫、场 Top-bottom: 吉、只</p>	<p><b>Three-part characters</b></p> <p>Left, middle, right: 树、谁 Top, middle, bottom: 复、常 Left, top-right, bottom-right: 锋、纷 Top-left, bottom-left, right: 部、剂、劲 Left-top, right-top, bottom: 然、赞 Top, left-bottom, right-top: 死、前</p>	<p><b>Four + part characters</b></p> <p>Left-top, right-top, left-bottom, right bottom: 能、舒 Left, top-right, middle-right, bottom-right: 慢、镜 Left, middle, top-right, bottom-right: 游 Left, middle-top, middle-bottom, right: 湖</p>
<b>Form focus:</b> Formation of Chinese characters		
1. Character structure rules		
<p>Chinese characters are called "square" characters because no matter how simple or complex, each character fits inside a square. Characters can usually be divided into different parts. These parts form character structures. There are four main structures: one-part structure, two-part structure, three-part structure, and four-part structure. These structures can be further divided into sub-parts.</p> <p>For example,</p> <p>Two-part structures:  (top/bottom),  (left/right)</p> <p>Three-part structures:  (left, top-right, bottom-right),  (top-left, bottom-left, right), etc.</p>		
2. Stroke order guidelines		
<p>General rules for writing Chinese characters are:</p> <ol style="list-style-type: none"> <li>1. Horizontal first, then vertical.</li> <li>2. Top first, then bottom.</li> <li>3. Left first, then right.</li> <li>4. Left-slanted first, then right-slanted.</li> <li>5. Outside first, then inside.</li> <li>6. Center first, then both sides.</li> <li>7. With "closed" characters, enter character first, then close it up.</li> </ol>		

CO LP 8.2-3.3	Use a developing understanding of basic units of word formation in Chinese to infer and construct meaning with written text
<b>Form focus:</b> radical → character → compound/word	
1. radical	
<p>A radical is the smallest meaningful orthographic unit in compound characters, for example, 虫 (insect) is used in the character 蛙 (frog). 虫 (insect) can also be a stand-alone character. There are three types of radicals: semantic (give information about character meaning) [手 (hand)], phonetic (give information about character pronunciation) [分 (fen) in the compound 纷 (one after another)], and perceptual (do not give information about character meaning or pronunciation, instead function as visual fillers) [此 (this, these in classical Chinese), however, in the compound 嘴 (mouth) the radical 此 functions as a perceptual radical providing information about neither meaning nor pronunciation].</p>	
2. character	
<p>A Chinese character is a meaningful orthographic unit that is always pronounced as one syllable. Chinese characters have evolved as a writing system over millennia and have developed in various ways.</p> <p>Some characters are <b>pictographs</b> that were originally drawings of concrete objects, for example, 雨 (rain), the four dots depicting the rain coming down from the sky; others are better described as <b>ideographs</b> because they were created as graphic representations of more abstract ideas such as the notion of "above", 上, the stroke above the horizontal line indicating the idea of "above" or "up." Another way to create characters was to combine two or more pictographs or ideographs to portray a new meaning, for example, 休 (to rest), a combination of the pictographs for person, 人, and a person leaning against a tree, 木. These types of characters are referred to as <b>ideogrammatic characters</b>.</p> <p>Over 90% of Chinese characters were created as <b>phono-semantic compound characters</b> and are made up of a combination of semantic and phonetic radicals. For example, 控 (to control), the semantic radical on the left side, 手 (hand), indicates that the word meaning will include an action with a hand, and the phonetic radical on the right side 空 (kōng), helps the reader with character pronunciation "kòng."</p>	
3. compound	
<p>Compounds consist of at least two characters, neither of which is an affix, a character that on its own lacks meaning but when added to other characters becomes a meaningful unit. Most Chinese words are compounds. Compounds have various types of syntactic relationships.</p> <p>A few compound types:</p> <p><i>Verb-Object:</i> 踢足球 (to kick soccer ball)、开球 (to kick of)、发誓 (to pledge)</p> <p><i>Verb-Complement:</i> 摔倒 (to fall down)、改进 (to improve and get better)、进来 (to come in)</p> <p><i>Subject-Predicate:</i> 天亮 (bright [sky is bright])</p> <p><i>Number-Classifier:</i> 各种 (various kinds)、一道 (a ray of...)、一片 (a patch of...)</p> <p><i>Adverb-Verb:</i> 慢跑 (to jog [to run slowly])、快走 (to hurry [to walk fast])</p>	

**Verb-Verb-Noun:** 栖息地 (habitat [to stay and rest at a place])  
**Adjective-Adjective-Noun:** 浅桃色 (light peach color)、吉祥物 (mascot [happy and auspicious object])

## 4. word

A word is written with one or more Chinese characters. A word can consist of a single character (脚, foot), a compound (幸运, lucky), a duplicate (招招手, to wave), or an affixed form (第一, first, 第二, second, etc.).

CO LP 8.2-3.4	Describe attributes of person/place/thing using modifying phrases		
For example: 有很多植物的热带雨林 (the rain forest that has lots of plants) 绿色的、提供栖息地的热带雨林 (the rain forest that is green and provides shelter)			
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>	
热的 (hot) 多雨的 (rainy) 绿色的 (green) 湿的 (wet) 好 (good/nice) 坏 (bad/mean) 热心 (warmhearted) 高 (tall) 矮 (short)	有很多植物的 (that has lots of plants) 有很少植物的 (that has few plants) (没)有帮助的 (that is helpful/not helpful)	提供栖息地的 (that provides shelter) 踢足球踢得好的 (that is good at soccer) 跑得快的 (that runs fast)	
Attributive adjective [adj. + 的] + Head noun	Relative clause [(没)有 + noun + 的] + Head noun	Relative clause [verb + noun + 的] + Head noun	
<b>Form focus:</b> Relative clause [verb + noun + 的] + Head noun			
Modifying phrases can be either attributive adjectives, e.g., 多雨的 (rainy) or relative clauses, e.g., 有 (have) 很多植物 (lots of plants) + 的 (that has lots of plants). Modifying phrases are placed in front of the head noun (e.g., 提供栖息地的热带雨林).			
<b>Noticing and awareness spotlight</b>			
1. The negation of 有 (have) is 没有			
The negative particle 没 (méi), not 不 (bù), must be used to negate 有 (yǒu) [have]. 没 can be used by itself to express 没有 (méi yǒu). If 没 is used by itself, 有 is assumed such that 没 = 没有.			

## 2. Adjective repetition

Adjective repetition occurs frequently in Chinese. There are different ways to do this:

1. "aa" form, e.g., 长长 (very long), 厚厚 (thick)、薄薄 (thin)\*;
2. "abb" form, e.g., 白皑皑 (snow-white, pure white, as very white as snow), 毛茸茸 or 毛茸茸 (hairy or downy), 亮晶晶 (glistening, sparkling, shining), 湿漉漉 (wet, moist);
3. "aabb" form, e.g., 清清楚楚 (clear), 恍恍惚惚 (in a trance, absent-minded), 红红火火 (as very red/warm as fire).
  - Use of double adjectives is typical for young children.

## 3. The "monosyllabic" rule and use of 的

When describing persons, places and things, the use of 的 between adj. and noun will occur if the adjective is made up of more than one syllable, for example, 两只有蹼的脚 (two webbed feet).

However, use of 的 between the adjective and noun is omitted if the adjective is only one syllable. For example, 两只大眼睛 (two big eyes).

CO LP 8.2-3.5	Support ideas/opinions using compound sentences with adverb 因此		
For example:			
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>	
我们写..., 因为水是人类的 朋友。	水是人类的朋友, 因此, 我们把.....放/写在这里。	由于水是人类的朋友, 因此, 我们把.....放/写在这里。	
We wrote ..., because water is a human's friend.	Water is a human's friend, as a result, we put/wrote ... here.	Due to water being a human's friend, as a result we put/wrote ... here.	
....., 因为 (because)..... 因为 (because)....., 所以 (so) + simple SVO (Subj-verb-direct object)	....., 因此 (as a result, therefore), subj +把 + direct object noun phrase + verb + locative phrase as complement	由于 (due to)....., 因此 (as a result, therefore), subj +把 + direct object noun phrase + verb + locative phrase as complement	
<b>Noticing and awareness spotlight:</b>			
Use of 由于 (due to) and 因此 (as a result, therefore), .....			
“由于 (due to)....., and 因此 (as a result, therefore), .....” reflect a more formal register and are more likely to be used in written communication.			

CO LP 8.2-3.6	Give emphasis to the specific direct object by using 把 or 让/使 construction and placing the direct object before the verb	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
我们写..., 因为水是人类的 朋友。	水是人类的朋友, 因此, 我们把.....放/写在这里。	由于水是人类的朋友, 因此, 我们把.....放/写在这里。
We wrote ..., because water is a human's friend.	Water is a human's friend, as a result, we put/wrote ... here.	Due to water being a human's friend, as a result we put/wrote ... here.
....., 因为 (because)..... 因为 (because)....., 所以 (so) + simple SVO (Subj-verb- direct object)	....., 因此 (as a result, therefore), subj +把 + direct object noun phrase + verb + locative phrase as complement	由于 (due to)....., 因此 (as a result, therefore), subj +把 + direct object noun phrase + verb + locative phrase as complement
<b>Form focus</b>		
1. Use of 把-construction vs. simply SVO (subject-verb-object) sentence		
<p>A 把-construction (including 把 + direct object + verb + complement) will typically reference something specific that the speaker thinks the hearer knows about, not something unknown to the hearer.</p> <p>If a sentence <i>communicates something that happens to the direct object</i>, then use of the 把-construction is appropriate.</p> <p>For example,</p> <ul style="list-style-type: none"> <li>• Juan Daniel 把球踢进了。(Subj +把 + direct object noun phrase + verb + directional complement + past tense marker.) Juan Daniel kicked the soccer ball in.</li> <li>• 我们把这个想法放/写在这个部分。(Subj +把 + direct object noun phrase + verb + locative phrase as complement.) We wrote/put our ideas in this section.</li> </ul> <p>However, if there is <i>no additional information given as to what has happened to the direct object</i>, use of a 把-construction is incorrect. For example, in the sentence below, the 把-construction is not allowed:</p> <p>Juan Daniel 想他的青蛙。(Subj. + verb + direct object noun phrase.) Juan Daniel misses his frog.</p>		
2. Placement of locative phrase		
Unlike in English, a locative phrase is placed either at the beginning of the sentence or before the main verb, NOT at the end of the sentence.		

A locative phrase, e.g., “在 zài + concrete noun +locative particle,” can be placed in a sentence as follows:

1. Directly before the main verb. (Typical placement)

我们在咖啡过滤纸上放了一块海绵。We put a sponge on the coffee filter.

(Subj + locative phrase + verb + past tense marker + object.)

2. At the beginning of the sentence and set off by a comma. (for emphasis)

在咖啡过滤纸上，我们放了一块海绵。On the coffee filter, we put a sponge.

(Locative phrase, subj + verb + past tense marker + object.)

3. After main verb in a 把-construction (giving emphasis to the direct object)

我们把一块海绵放在咖啡过滤纸上了。We placed a sponge on the coffee filter.

(Subj + 把-construction [把 + object + verb + locative phrase as complement] + past tense marker.)

CO LP 8.2-3.7	Predict degree of probability of something using auxiliary “helping” verb		
For example:			
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>	
我想 Juan Daniel 可能学到热带雨林里下很多雨。  I think Juan Daniel is likely to learn that it rains a lot in a rain forest.	我觉得／想 Juan Daniel 会看到或大或小的瀑布。  I feel like/think Juan Daniel will see that water falls in small and large amounts.	在我看来，Juan Daniel 接下来要看到有的瀑布涓涓细流，有的瀑布一泄千尺。  It seems to me that Juan Daniel will see that water can drip in small amounts or fall in large amounts.	
Use of adverb “可能” to express future possibility.	Use of auxiliary 会 + main verb 设计	Use of adverb of time 接下来 (next) + auxiliary 要 + main verb 设计	
<b>Form focus</b>			
1. Auxiliary “helping verbs”			
In Mandarin, auxiliary “helping verbs” indicate the ability, possibility, intention or desire to carry out an action. The following are examples of auxiliary “helping verbs”: 会 ‘will likely + verb’, 会 ‘will know + verb’, 能/可以 ‘able to + verb’, 要/应该 ‘ought to + verb’, 要/想 ‘want to + verb’, 可以 ‘allow to + verb’, 不可以 ‘prohibited to + verb’.			
2. How auxiliary “helping verbs” are same/different from other verbs			
Like other verbs, auxiliary verbs... <ol style="list-style-type: none"> <li>1. occur as the A element in A-not-A questions, for example, 薄膜的孔应该不应该很小? (Should the holes of a membrane be small?);</li> <li>2. can be negated, or example: 薄膜的孔不应该很大。 (The holes of a membrane should not be big.)</li> </ol>			



Unlike other verbs, auxiliary verbs ...

- a. must co-occur with a verb or an assumed verb;  
For example, 薄膜的孔应该不应该很小? (Should the holes of a membrane be small?)
- b. does not take aspect markers such as 了(le), 过(guò), 着 zhe;
- c. cannot be modified by intensifiers, such as 很 (very) or 更 (even more);
- d. cannot be nominalized;
- e. cannot occur before the subject;
- f. cannot take a direct object.

### Noticing and awareness spotlight

#### 1. Three uses of character 会

- a. 会 as a verb (to know). For example: 我会中文。(I know Chinese.)
- b. 会 as an auxiliary + verb (specifies a learned, acquired and usually mental ability: "know how to" or "to learn how"). For example: 我会踢足球。(I know how to play soccer.)
- c. 会 as an auxiliary + verb (refers to the likelihood of the occurrence of an event: "will", "most likely"). For example: 冠军赛明年会在这里举行。(The championship game will be held here next year.)

#### 2. The difference between 能 and 会

能 and 会 are both auxiliary verbs meaning "can" or "may." They are used interchangeably.

However, there is a difference between them:

会 (huì) specifies a learned, acquired skill or a mental ability;

能 (néng) means having the physical ability or opportunity to do something unless a condition prevents it. It is always followed by an action verb (or an action verb is understood).

For example:

我会设计薄膜模型，但是我现在不能，因为我没有合适的材料。

I can design a model membrane, but I cannot do it right now, because I don't have the right materials.

### Focused Learning Phase-- "Through" activities

The teacher will read *Juan Daniel*, Chapter 5 to the students as they follow along in their packets. The teacher will use visuals, context and character/sentence structure analysis to guide students to make inferences about the meaning of new vocabulary and cultural concepts. Students will identify the feature of the rain forest that Juan Daniel discovers in each paragraph of this chapter and the ways he uses his senses to do so.

**Time:** Learning Activity 4—40 minutes

#### Learning Activity 4

1. Have students open their *Juan Daniel* story packets to Chapter 5. Allow them to preview the pictures of the chapter and share ideas with the class about what they think will happen in this chapter.
2. Have students stay in their same groups as in Activity 3, but change the 工作管理员 (**Terrific Taskmaster**) role to 演示质检员 (**Polished Presenter**) for this activity.
3. Invite the 材料管理员 (**Magnificent Materials Manager**) to get two highlighter markers (same colors that the teacher used in Activity 3 on the whiteboard to distinguish between nouns and modifying phrases) and one pencil for their group.
4. Introduce the activity to the students: Ask students to listen and read along as you read the chapter to them. Encourage students to listen especially for the ways Juan Daniel uses his senses: seeing 视觉 (看), hearing 听觉 (听), smelling 嗅觉 (闻), tasting 味觉 (尝) touching 触觉 (摸) to learn from the natural world. Tell students that you will stop at the end of each paragraph and ask them to work in their groups to do the following task.

中文	English
用荧光笔在 Juan Daniel 学习的这段中确定热带雨林的 一个特征 (所用荧光笔的颜色用来标名词)。	Use (one color) highlighter to identify <b>one</b> feature of the rain forest that Juan Daniel studies in this paragraph (Remind students that <u>one color</u> of highlighters are used to mark <u>nouns</u> ).
然后用铅笔在段落中把那个词画出来, 这样会帮助你了解 Juan Daniel 用的是哪种感觉。	Then, use a pencil to underline words in the paragraph that help you to know which of his senses Juan Daniel is using.

The 记录员 (**Remarkable Recorder**) will record information for the group, and the 中文督察员 (**Chinese Champion**) will help the group to use Mandarin only during the activity.

5. When groups have finished highlighting and underlining for Paragraph 1, invite the 演示质检员 (**Polished Presenter**) to share the rain forest feature that they chose for that paragraph.
6. Show a picture on page 15 of MMIC 8-IWB of the feature that is the focus of this paragraph (Paragraph 1 = 绿色的华盖 leafy canopy). On a document camera or by holding a student

book up to the class, show a correct student example: 绿色的华盖 **Leafy canopy** is highlighted.

- Ask students to do the same for Paragraphs 2-5. (Paragraph 2 = 国鸟 national bird [page 16 of MMIC 8-IWB]; Paragraph 3 = 瀑布 waterfall [page 17 of MMIC 8-IWB]; Paragraph 4 = 一片绿色的叶子 a green leaf [page 18 of MMIC 8-IWB]; Paragraph 5 = 一个水滴 drop of water [page 19 of MMIC 8-IWB]).

**Cultural note:** When presenting the national bird of El Salvador, also ask students if they know what the national bird of the US is 白头鹰 (bald eagle) and the national bird of China 丹顶鹤 (red-crowned crane). Show a picture of each on page 20 of MMIC 8-IWB. **Add this information to the class cross-cultural wall chart.**

- Ask the Polished Presenters to also share some of the words in the paragraph that they underlined that indicate which senses Juan Daniel was using.
- Present the next step to the class:

中文	English
用另一颜色的荧光笔标出有关那个特征的描述性的词或词组(这个荧光笔的颜色用来标形容词)。	Use (the other colored) highlighter to highlight descriptive words or phrases in the paragraph that tell more about that feature of the rain forest (Remind students that these highlighters are used to mark <u>modifying phrases</u> ).

- Invite the 演示质检员 (**Polished Presenters**) to share their group's descriptive modifying phrases for each paragraph:





Paragraph Number	Rain Forest Feature	Descriptive Words/Phrases to be highlighted (Chinese)	Descriptive Words/Phrases to be highlighted (English)
Paragraph 1	绿色的华盖 leafy canopy	微弱的阳光 斑斑点点的图案	faint rays of sun spotty pattern on the ground
Paragraph 2	国鸟 national bird	橘红色的脖子和蓝色 翅膀	orange throat and blue wings
Paragraph 3	瀑布 waterfall	急促的流水声 一泄千尺	rushing sound cascading
Paragraph 4	一片绿色的叶子 leaf	绿色的油光发亮的	waxy, green
Paragraph 5	一个水滴 bead of water	一闪一闪地, 像一颗 小宝石	shine...tiny jewel

**Note:** If students have difficulty with some of the vocabulary, use images, character structure analysis, paraphrases or gestures to illustrate the meaning.

11. Ask students to go back to their Bubble Maps of the rain forest and highlight all of the rain forest features from the story that they also included in their Bubble Map. Have them add new words/phrases from the story that describe the rain forest to their Bubble Maps. Model this on the whiteboard.
12. Next, ask:

中文	English
<p>五个热带雨林特色中, 哪一个最能帮助 Juan Daniel 解决他青蛙的问题?</p> <p>[瀑布, 是一个不同小水滴特征的例子, 比如树叶上的水珠。]</p>	<p>Which of the five features of the rain forest are most helpful to Juan Daniel as he thinks of a solution to his frog's problem?</p> <p>[The waterfall, as an example of what not to do, and the leaf + the drop of water, as an example of how nature distributes water in small doses.]</p>
<p>在 Juan Daniel 探索的过程中, 哪一个感觉给 Juan Daniel 提供最多的帮助来学习自然世界?</p> <p>[•视觉: 直视, 瞥视, 映入眼帘, 看见, 余光所视, 近看, 观察 •听觉: 听见, 侧耳倾听 •触觉: 摩擦, 抓住掉落的东西。]</p>	<p>Which of his five senses were most helpful to Juan Daniel in his quest to learn from the natural world?</p> <p>[•Seeing: looked straight up, caught a glimpse of, to come into view, saw, noticed out of the corner of his eye, looked closer, watched •Hearing: heard, tilted his head to listen, rushing sound •Touching: rubbed, reached out to catch a drop]</p>
<p>Juan Daniel 在这趟热带雨林之后, 学到了什么来帮助他解决青蛙皮肤的湿润问题?</p>	<p>What did Juan Daniel learn from his visit to the rain forest that will help him to keep his frog's skin moist?</p>
<p>在本章的结尾, Juan Daniel 说他下一步要做什么?</p>	<p>At the end of the chapter, what does he say he will do next?</p>

13. Together with the students, return to the questions that they asked before reading this chapter (Activity 3) and see if they can answer any yet. Ask the relevant questions one by one and see if this chapter answered any of them.
14. Ask students to make predictions about what Juan Daniel might do in Chapter 6 on page 21 of MMIC 8-IWB.

Language Function-Form-Vocabulary Connections (Activity 4)		
<b>CO LP 8.4.1</b>	<b>Construct characters to form words and phrases adhering to character structure rules and stroke order guidelines</b>	
For example: Left-right: 叫、场 Top-bottom: 吉、只 Left, middle, right: 树、谁 Top, middle, bottom: 复、常 One-part, totally enclosed: 国、回 Partially enclosed: 用, 原		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
<b>One- and two-part characters</b>  One-part character 我、生 One-part, totally enclosed 国、回  Two-part characters Left-right: 叫、场 Top-bottom: 吉、只	<b>Three-part characters</b>  Left, middle, right: 树、谁 Top, middle, bottom: 复、常 Left, top-right, bottom-right: 锋、纷 Top-left, bottom-left, right: 部、剂、劲 Left-top, right-top, bottom: 然、赞 Top, left-bottom, right-top: 死、前	<b>Four + part characters</b>  Left-top, right-top, left-bottom, right bottom: 能、舒 Left, top-right, middle-right, bottom-right: 慢、镜 Left, middle, top-right, bottom-right: 游 Left, middle-top, middle-bottom, right: 湖
<b>Form focus: Formation of Chinese characters</b>		
1. Character structure rules		
<p>Chinese characters are called "square" characters because no matter how simple or complex, each character fits inside a square. Characters can usually be divided into different parts. These parts form character structures. There are four main structures: one-part structure, two-part structure, three-part structure, and four-part structure. These structures can be further divided into sub-parts.</p> <p>For example,</p> <p>Two-part structures:  (top/bottom),  (left/right)</p> <p>Three-part structures:  (left, top-right, bottom-right),  (top-left, bottom-left, right), etc.</p>		

## 2. Stroke order guidelines

General rules for writing Chinese characters are:

1. Horizontal first, then vertical.
2. Top first, then bottom.
3. Left first, then right.
4. Left-slanted first, then right-slanted.
5. Outside first, then inside.
6. Center first, then both sides.
7. With "closed" characters, enter character first, then close it up.

<b>CO LP 8.4.2</b>	<b>Use a developing understanding of basic units of word formation in Chinese to infer and construct meaning with written text</b>
<b>Form focus: radical → character → compound/word</b>	
1. radical	
<p>A radical is the smallest meaningful orthographic unit in compound characters, for example, 虫 (insect) is used in the character 蛙 (frog). 虫 (insect) can also be a stand-alone character. There are three types of radicals: semantic (give information about character meaning) [手 (hand)], phonetic (give information about character pronunciation) [分 (fen) in the compound 纷 (one after another)], and perceptual (do not give information about character meaning or pronunciation, instead function as visual fillers) [此 (this, these in classical Chinese), however, in the compound 嘴 (mouth) the radical 此 functions as a perceptual radical providing information about neither meaning nor pronunciation].</p>	
2. character	
<p>A Chinese character is a meaningful orthographic unit that is always pronounced as one syllable. Chinese characters have evolved as a writing system over millennia and have developed in various ways.</p> <p>Some characters are <b>pictographs</b> that were originally drawings of concrete objects, for example, 雨 (rain), the four dots depicting the rain coming down from the sky; others are better described as <b>ideographs</b> because they were created as graphic representations of more abstract ideas such as the notion of "above", 上, the stroke above the horizontal line indicating the idea of "above" or "up." Another way to create characters was to combine two or more pictographs or ideographs to portray a new meaning, for example, 休 (to rest), a combination of the pictographs for person, 人, and a person leaning against a tree, 木. These types of characters are referred to as <b>ideogrammatic characters</b>.</p> <p>Over 90% of Chinese characters were created as <b>phono-semantic compound characters</b> and are made up of a combination of semantic and phonetic radicals. For example, 控 (to control), the semantic radical on the left side, 手 (hand), indicates that the word meaning will include an action with a hand, and the phonetic radical on the right side 空 (kōng), helps the reader with character pronunciation "kòng."</p>	

<b>3. compound</b>
Compounds consist of at least two characters, neither of which is an affix, a character that on its own lacks meaning but when added to other characters becomes a meaningful unit. Most Chinese words are compounds. Compounds have various types of syntactic relationships.
A few compound types:
<i>Verb-Object</i> : 踢足球 (to kick soccer ball)、开球 (to kick of)、发誓 (to pledge)
<i>Verb-Complement</i> : 摔倒 (to fall down)、改进 (to improve and get better)、进来 (to come in)
<i>Subject-Predicate</i> : 天亮 (bright [sky is bright])
<i>Number-Classifier</i> : 各种 (various kinds)、一道 (a ray of...)、一片 (a patch of...)
<i>Adverb-Verb</i> : 慢跑 (to jog [to run slowly])、快走 (to hurry [to walk fast])
<i>Verb-Verb-Noun</i> : 栖息地 (habitat [to stay and rest at a place])
<i>Adjective-Adjective-Noun</i> : 浅桃色 (light peach color)、吉祥物 (mascot [happy and auspicious object])
<b>4. word</b>
A word is written with one or more Chinese characters. A word can consist of a single character (脚, foot), a compound (幸运, lucky), a duplicate (招招手, to wave), or an affixed form (第一, first, 第二, second, etc.).

<b>CO LP 8.4.3</b>	<b>Describe attributes of person/place/thing using modifying phrases</b>	
For example:		
有很多植物的热带雨林 (the rain forest that has lots of plants)		
绿色的、提供栖息地的热带雨林 (the rain forest that is green and provides shelter)		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
热的 (hot) 多雨的 (rainy) 绿色的 (green) 湿的 (wet) 好 (good/nice) 坏 (bad/mean) 热心 (warmhearted) 高 (tall) 矮 (short)	有很多植物的 (that has lots of plants) 有很少植物的 (that has few plants) (没)有帮助的 (that is helpful/not helpful)	提供栖息地的 (that provides shelter) 踢足球踢得好的 (that is good at soccer) 跑得快的 (that runs fast)
Attributive adjective [adj. + 的] + Head noun	Relative clause [(没)有 + noun + 的] + Head noun	Relative clause [verb + noun + 的] + Head noun

<b>Form focus: Relative clause [verb + noun + 的] + Head noun</b>
Modifying phrases can be either attributive adjectives, e.g., 多雨的(rainy) or relative clauses, e.g., 有 (have) 很多植物 (lots of plants) + 的 (that has lots of plants). Modifying phrases are placed in front of the head noun (e.g., 提供栖息地的热带雨林).
<b>Noticing and awareness spotlight</b>
1. The negation of 有 (have) is 没有
The negative particle 没 (méi), not 不 (bù), must be used to negate 有 (yǒu) [have]. 没 can be used by itself to express 没有 (méi yǒu). If 没 is used by itself, 有 is assumed such that 没 = 没有.
2. Adjective repetition
Adjective repetition occurs frequently in Chinese. There are different ways to do this: <ul style="list-style-type: none"> <li>4. "aa" form, e.g., 长长 (very long), 厚厚 (thick)、薄薄 (thin)*;</li> <li>5. "abb" form, e.g., 白皑皑 (snow-white, pure white, as very white as snow), 毛茸茸 or 毛茸茸 (hairy or downy), 亮晶晶 (glistening, sparkling, shining), 湿漉漉 (wet, moist);</li> <li>6. "aabb" form, e.g., 清清楚楚 (clear), 恍恍惚惚 (in a trance, absent-minded), 红红火火 (as very red/warm as fire). <ul style="list-style-type: none"> <li>• Use of double adjectives is typical for young children.</li> </ul> </li> </ul>
3. The "monosyllabic" rule and use of 的
When describing persons, places and things, the use of 的 between adj. and noun will occur if the adjective is made up of more than one syllable, for example, 两只有蹼的脚 (two webbed feet).
However, use of 的 between the adjective and noun is omitted if the adjective is only one syllable. For example, 两只大眼睛 (two big eyes).

<b>CO LP 8.4.4</b>	<b>Ask and answer questions using question words</b>	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
..... 吗? Use of ma ..... 是不是.....? Is or is not?	谁.....? (Who) 什么.....? (What) 哪里.....? (Where) 什么时候.....? (When) 怎么.....? (How) 为什么.....? (Why)	几/多少? (How many) 哪(些).....? (Which)



<b>Form focus: Placement of question words</b>
<p>Most question words in English occur at the beginning of a sentence. However, question words in Chinese occur in a variety of positions. Generally, question words appear in the same position as the grammatical function they serve in the sentence.</p> <p>For example:            它的首都是什么? (What is the capital city? ["What" occurs in predicate position])            萨尔瓦多的北边有几个国家? (How many countries are north of El Salvador? ["How many" is in the # position of the noun phrase [# + classifier + noun])</p>
<b>Noticing and awareness spotlight: Use of 吗? 吧? 呢?</b>
<p>A few particles are commonly used at the end of questions.</p> <p>吧? is used to invite agreement.            呢? is a tag question meaning ", and you?"            吗? is a question particle that is used when one expects a "yes" or "no" response.</p>

<b>CO LP 8.4.5</b>	<b>Predict degree of probability of something using auxiliary "helping" verb</b>	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
我想 Juan Daniel 可能设计一个薄膜模型。	我觉得/想 Juan Daniel 会设计一个薄膜模型。	在我看来, Juan Daniel 接下来要设计一个薄膜模型。
I think Juan Daniel is likely to design a model membrane.	I feel like/think Juan Daniel will design a model membrane.	It seems to me that Juan Daniel will design a model membrane next.
Use of adverb "可能" to express future possibility.	Use of auxiliary 会 + main verb 设计	Use of adverb of time 接下来 (next) + auxiliary 要 + main verb 设计
<b>Form focus</b>		
1. Auxiliary "helping verbs"		
<p>In Mandarin, auxiliary "helping verbs" indicate the ability, possibility, intention or desire to carry out an action. The following are examples of auxiliary "helping verbs":            会 'will likely + verb', 会 'will know + verb', 能/可以 'able to + verb', 要/应该 'ought to + verb', 要/想 'want to + verb', 可以 'allow to + verb', 不可以 'prohibited to + verb'.</p>		
2. How auxiliary "helping verbs" are same/different from other verbs		
Like other verbs, auxiliary verbs...		
<p>1. occur as the A element in A-not-A questions, for example, 薄膜的孔应该不应该很小? (Should the holes of a membrane be small?);</p>		

2. be negated, or example: 薄膜的孔不应该很大。(The holes of a membrane should not be big.)

Unlike other verbs, auxiliary verbs ...

- a. must co-occur with a verb or an assumed verb;  
For example, 薄膜的孔应该不应该很小? (Should the holes of a membrane be small?)
- b. does not take aspect markers such as 了(le), 过(guò), 着 zhe;
- c. cannot be modified by intensifiers, such as 很 (very) or 更 (even more);
- d. cannot be nominalized;
- e. cannot occur before the subject;
- f. cannot take a direct object.

### Noticing and awareness spotlight

#### 1. three uses of character 会

- a. 会 as a verb (to know). For example: 我会中文。(I know Chinese.)
- b. 会 as an auxiliary + verb (specifies a learned, acquired and usually mental ability: "know how to" or "to learn how"). For example: 我会踢足球。(I know how to play soccer.)
- c. 会 as an auxiliary + verb (refers to the likelihood of the occurrence of an event: "will", "most likely"). For example: 冠军赛明年会在这里举行。(The championship game will be held here next year.)

#### 2. the difference between 能 and 会

能 and 会 are both auxiliary verbs meaning "can" or "may." They are used interchangeably. However, there is a difference between them:

会 (huì) specifies a learned, acquired skill or a mental ability;

能 (néng) means having the physical ability or opportunity to do something unless a condition prevents it. It is always followed by an action verb (or an action verb is understood).

For example:

我会设计薄膜模型，但是我现在不能，因为我没有合适的材料。

I can design a model membrane, but I cannot do it right now, because I don't have the right materials.

CC LP 8.4.6	Make inferences based on visual clues		
For example:			
	Approaching	Attaining	Expanding
	我猜/想 I guess /think  也许/可能..... Maybe/ Perhaps...  在我看来..... It seems to me that .../In my opinion, ...	我敢肯定..... I bet that...  图中的.....告诉我们..... The ... in the picture tells us that...	我估计/推断/猜测..... I expect/deduce/suppose that ...  似乎..... It seems as if...  从第七章中可以看到...../如第七章所示..... As is seen from chapter 7...

CC LP 8.4.7	Express a personal opinion and request agreement		
For example:			
	Approaching	Attaining	Expanding
	我觉得/想 ....., 你呢? I feel like/think....., and you?  也许/可能, 你呢? Maybe/perhaps....., and you?	在我看来....., 你也同意吗? It seems to me like..., do you agree?  对我来说, ....., 你也同意吗? In my opinion, ....., do you agree?  我认为....., 你也同意吗? I believe/think ..., do you agree?	我建议....., 你也是这么想的吗? /吧? I suggest..., do you think so?  我的看法是....., 你也是这么想的吗? /吧? My thoughts are....., do you think so?  我是说....., 你也是这么想的吗? /吧? What I mean is....., do you think so?
<b>Noticing and awareness spotlight:</b> Use of 吗? 吧? 呢?			
A few particles are commonly used at the end of questions. 吧? is used to invite agreement. 呢? is a tag question meaning “, and you?” 吗? is a question particle that is used when one expects a “yes” or “no” response.			

**Expansion Phase-- "Beyond" activities**

The teacher will lead students in a math and social studies activity, calculating area and percentage or fraction of area on a map.

**Time:** Learning Activity 5--20 minutes

**Learning Activity 5**

**Note: Before beginning the activity, use online sources to find a good map of El Salvador and a good map of China that shows the rain forest area clearly and includes a map scale.**

1. Ask students to find a partner. Distribute the maps of El Salvador and China, one copy per pair.
2. Review with the class their answer to the challenge question from the end of Lesson 2, where they calculated the approximate land area of El Salvador and China. Tell them that they will use that information to complete today's task.
3. Introduce the task to students (display page 22 of MMIC 8 IWB):

中文	English
大致计算热带雨林在萨尔瓦多的比例或百分数。	Calculate the approximate fraction or percentage of land area in El Salvador that is rain forest.
大致计算热带雨林在中国的比例或百分数。	Then calculate the approximate fraction or percentage of land area in China that is rain forest.

**Note:** The area of El Imposible rain forest is 38.20 km<sup>2</sup>.

[http://en.wikipedia.org/wiki/El\\_Imposible\\_National\\_Park](http://en.wikipedia.org/wiki/El_Imposible_National_Park)

The area of the tropical rainforest in Xishuangbanna 西双版纳面积 is about 815 km<sup>2</sup> (there are 5 patches of rain forest in the region; the total area of Xishuangbanna is over 19,000 km<sup>2</sup>).

<http://www.yunnantrip.com/xishuangbanna/xishuangbanna.htm>

4. Invite pairs to share their answers.
5. Ask student pairs to explain how they arrived at their answers.

**Note:** Depending on students' math skills with calculating fractions, you may opt to first model how to solve this calculation problem using information about El Salvador. Then, ask students to work in pairs to complete the calculation for China.

6. **Optional:** Show some images or video of the rain forest in El Salvador and the rain forest in China (see below for possible websites that have pictures of each), and invite students to orally describe what they see, using the vocabulary that they included on their Bubble Maps in Activity 3.

- [http://www.salvanatura.org/index.php?option=com\\_content&task=view&id=51&Itemid=195](http://www.salvanatura.org/index.php?option=com_content&task=view&id=51&Itemid=195) (Video of *El Imposible* rain forest features. It is in Spanish, but can be viewed without the sound)
- <http://scenery.cultural-china.com/en/113Scenery1914.html> and <http://baike.baidu.com/view/310088.htm>  
(Photos of the Xishuangbanna 西双版纳面积 rain forest in China)

**Note:** The following instructions for calculating land area may be useful.

**Instructions: Calculating Land Area**

[http://www.ehow.com/how\\_4924590\\_calculate-area-piece-land.html](http://www.ehow.com/how_4924590_calculate-area-piece-land.html)

1. Measure and record the width and height of the land. If the land is not a clean square or rectangle, measure the largest square or rectangular lengths possible within the boundary of the land.
2. Divide the excess land, beyond the rectangular or square measurement, into triangles, and record the height and the base of the triangles. Try to measure the largest triangles possible, within the boundary of the land, to reduce the amount of area calculations.
3. Multiply the width by the height of the square piece of land to get the area of the square. Record this number.
4. For the area of the triangles, multiply the base by .5 by the height of each triangle. Record all of the triangle areas.
5. Add the area of the square or rectangular land and the area of the triangle or triangles. The total will equal the total area of the piece of land.

Language Function-Form-Vocabulary Connections (Activity 5)	
<b>CO LP 8.5.1</b>	<b>State approximate amount of a country's land area that is rain forest using fractions with units of measurement or relative percentages</b>
For example: 二分之一 (1/2) 四分之三 (three quarters) 百分之五十 (50 percent)  根据我们的计算, 中国土地面积的百分之 X 大约是热带雨林。 Based on our calculations, approximately X percent of China's land is rain forest.	
<b>Focus on form: Fractions/decimals</b>	
Fractions begin with the denominator, followed by 分之 (parts of), and the numerator, e.g., # (denominator) + 分之 + # (numerator).	

<b>CO LP 8.5.2</b>	<b>Order a series of events using sequencing adverb</b>		
	<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
	第一、第二、第三..... Ordinals: first, second, third...  首先, ....., 然后, ....., 最后, ....., First, ..., later, ..., finally, ...  开始 in the beginning  .....先....., .....后..... ...before..., ...after...	首先, ....., 然后, ....., 接下来, ....., Initially, ..., then, ..., next, ...  后来 later on  那以后 after that  结束 at the end	起先、起初 in the beginning  稍后 afterwards, a moment later  最终 at the end  最后 lastly
For example:			
	第一步是.....。在第一步里, 我们.....。 第二步是.....。在第二步里, 我们.....。 第三步是.....。在第三步的时候, 我们打算用.....。	首先, 我们用了一个最大的近似的正方形或者长方形来代表热带雨林, 然后, 我们用了很多三角形来代表余下的热带雨林, 接下来, 我们计算了每个形状的面积, 最后, 我们把每个形状的面积加了起来来估计整个热带雨林的面积。	昨天开始的时候, 我们用了一个最大的近似的正方形或者长方形来代表热带雨林, 接下来, 我们用了很多三角形来代表余下的热带雨林, 稍后, 我们计算了每个形状的面积, 最后, 我们把每个形状的面积加了起来来估计整个热带雨林的面积。

The first step was _____. In the first step, we _____. The second step was _____. In the second step, we _____. The third step is _____. In the third step, we plan to use _____.	Initially, we used the biggest proximate square or rectangle to represent the rainforest, then we used many triangles to represent the remaining rainforest, next, we calculated the area for each shape, finally, we added the area of each shape together and estimated the total rainforest area.	In the beginning of yesterday, we used the biggest proximate square or rectangle to represent the rainforest, then we used many triangles to represent the remaining rainforest, afterwards, we calculated the area for each shape, lastly, we added the area of each shape together and estimated the total rainforest area.
No temporal marker, no adverb of time	Temporal marker 了 used	Temporal marker 了 and adverb of time used
<b>Form focus</b>		
<b>1. Placement of sequencing adverbs</b>		
Sequencing adverbs are usually placed at the beginning of the sentence and set off with a comma.		
<b>2. Action verb + 了 (temporal marker) + adverb of time</b>		
Past time can be communicated using “了”, adverbs of time or both.		
<b>Noticing and awareness spotlight: Position of temporal marker “了”</b>		
The temporal marker “了” is positioned either immediately after the main verb or at the end of the sentence/clause.		

<b>CO LP 8.5.3</b>	<b>Give reasons for actions/choices/preferences using preposition 为了</b>	
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
我们用了....., 因为这些形状在测量土地面积的时候最合适。	为了让/使土地面积测量得更容易, 我们用了大小和形状各异的三角形。	我们选择.....的原因是.....
We used....., because these shapes best fit the land area we were measuring.	In order to make the measurement of the land area easier, we used triangles of various shapes and sizes.	The reason that we chose ....was....

....., 因为 (because).....	Preposition/coverb (为了/for the purpose of) + 让/使- <b>construction</b> [让/使+ object + V + adv. phrase [得 (adv. marker) + adv.]], Subj. + V + adjective phrase + object.	Adjective phrase [Subj. pronoun + V + object + 的] + Noun/Subject (原因)+ V(是)
<b>Form focus:</b> Use of 让/使-construction		
Similar to “把-sentence,” the “让/使-construction” allows one to place the direct object in front of the main verb, which is not typical word order in Chinese. This draws more attention to what is happening to the object itself.		
<b>Noticing and awareness spotlight</b>		
1. Placement of preposition/coverb		
Prepositions/coverbs such as 为了 (for the purpose of) introduce a noun phrase. Together, the preposition + noun phrase combination are typically placed before the main SVO in the sentence. In sentence initial position they add emphasis.		
2. Difference between 的 (de) and 得 (de)		
的 is used to modify a noun. 的 precedes the noun it modifies, e.g., adjective + 的 + noun; 得 is used to modify a verb. 得 follows the verb it modifies, e.g., V + 得 + adverb		

CC LP 8.5.4	Express agreement/disagreement		
Approaching	Attaining	Expanding	
好。 Good.	你说得对。 You are correct.	我的想法跟你的一样。 I share your thoughts.	
我同意。 I agree.	你完全正确。 You're absolutely right.	我赞成。 I agree (more formal).	
我也是/同意。 I also + verb (am/agree).	我也是这么认为的。 I think so too.	我完全赞同。 I agree with you entirely.	
对。 Exactly/Correct.	我也不这么认为。 I don't think so either.		



不。 No.	我不是这么认为的。 I don't think so.	我的意见跟你的不同。 My suggestions are different from yours.
不好。 Not good.	是，可是你不觉得.....? Yes, but don't you think...	我想和你讨论讨论..... I must take issue with you on that.
不同意。 I don't agree with you.	我觉得我不同意。 I'm afraid I have to disagree.	然而 However
不对。 Not exactly.		
<b>Noticing and awareness spotlight: Repetition of verb</b>		
Repetition of a verb, e.g., 讨论讨论 (to discuss), can be used to soften the tone of voice.		

<b>CC LP 8.5.5</b>	<b>Negotiate to reach consensus</b>	
For example:		
<b>Approaching</b>	<b>Attaining</b>	<b>Expanding</b>
好吧。 OK.	我同意你的想法。 I agree with your idea.	不约而同。 We reach the consensus without consulting with each other.
我同意。 I agree.	我也一样。 Same here.	
<b>Noticing and awareness spotlight: Use of 吗? 吧? 呢?</b>		
A few particles are commonly used at the end of questions.		
吧? is used to invite agreement.		
呢? is a tag question meaning “, and you?”		
吗? is a question particle that is used when one expects a “yes” or “no” response.		

**Evidence of learning**

- Completed handouts:
  - MMIC 8-1: *Chapter 4 True-False*
  - Student-created Bubble Map about the rain forest
- Prediction questions for *Juan Daniel*, Chapter 5, written on index cards
- Oral contributions to the "Water: Friend or foe?" Double Bubble Map
- Color-coded words and phrases highlighted in each paragraph of Chapter 5, identifying the feature of the rain forest (noun) that is the focus of the paragraph, the words and phrases that tell more about the feature of the rain forest (modifying phrases), and the senses-related words that are in the paragraph
- Informal observation of cross-cultural chart discussion
- Written additions to cross-cultural chart (national birds)
- Calculation of percentage/fraction of land area in El Salvador and China that is rain forest

## Vocabulary List

## Content-obligatory (CO)

了解 Recognize			
Pīnyīn	Characters	English meaning	Parts of speech
bǎi fēn bǐ	百分比	percentage	noun
dà yuē de	大约的	approximate	adjective
guàn mù céng	灌木层	immature layer	noun
háo mǐ	毫米	mm	noun
jì suàn	计算	to calculate	verb
lù shēng céng	露生层	emergent layer	noun
miàn jí	面积	area	noun
míng cí	名词	noun	noun
píng fāng gōng lǐ	平方公里	square kilometers	noun
píng jūn jiàng yǔ liàng	平均降雨量	average rainfall	noun
shù guān céng	树冠层	canopy layer	noun
xíng róng cí	形容词	adjective	noun
xiū shì yǔ	修饰语	modifying phrase	noun
yòu shù céng	幼树层	understory layer	noun
zuì jiǎn dān de xíng shì	最简单的形式	Simplest form	noun phrase
识记 Produce			
Pīnyīn	Characters	English meaning	Parts of speech
cè liáng	测量	to measure	verb
cháng	长	length	noun
cháng fāng xíng	长方形	rectangle	noun
chéng	乘	to multiply	verb
fēn shù	分数	fraction	noun
gāo	高	height	noun
gōng lǐ	公里	kilometer	noun
gū jì	估计	to estimate	verb
kuān	宽	width	noun
pù bù	瀑布	waterfall	noun
qīng wā de pí fū	青蛙的皮肤	frog skin	noun
rè dài yǔ lín	热带雨林	rain forest	noun
shī rùn de	湿润的	moist	adjective
shuǐ	水	water	noun
tè zhēng	特征	feature/characteristics	noun

		(as in feature of the rain forest)	
xiǎo shù	小数	decimal	noun
yí gè shuǐ dī	一个水滴	a drop of water	noun phrase
yǔ	雨	rain	noun

**Content-compatible (CC)**

了解 Recognize			
Pīnyīn	Characters	English meaning	Parts of speech
bái tóu yīng	白头鹰	bald eagle	noun
bān bān diǎn diǎn de tú àn	斑斑点点的图案	spotty pattern on the ground	noun phrase
cā	擦	rubbed	verb
cè ěr qīng tīng	侧耳倾听	tilted his head to listen	verb
dān dǐng hè	丹顶鹤	red-crowned crane	noun
guān chá	观察	watched	verb
hǎi xǐ què	海喜鹊	motmot	noun
huǒ bàn	伙伴	partner	noun
jí cù	急促	rushing	adjective
jí cù de liú shuǐ shēng	急促的流水声	rushing sound	noun phrase
jìn kàn	近看	looked closer	verb
jú hóng sè de bó zi hé lán sè chì bǎng	橘红色的脖子和蓝色翅膀	orange throat and blue wings	noun phrase
kàn jiàn	看见	saw	verb
lǜ sè de yóu guāng fā liàng de	绿色的油光发亮的	waxy green leaf	adjective phrase
mào mì de huá gài	茂密的华盖	leafy canopy	noun
pào pào tú	泡泡图	Bubble Map	noun
péng yǒu hái shì dí rén	朋友还是敌人	friend or foe	noun phrase
piē shì	瞥视	caught a glimpse of	verb
quán bān	全班	whole class	noun
shuāng pào pào tú	双泡泡图	Double Bubble Map	noun
shuǐ	水	water	noun
sī kǎo-pèi duì-fēn xiǎng	思考—配对—分享	Think-Pair-Share	verb
suǒ yīn kǎ	索引卡	index cards	noun
tīng jiàn	听见	heard	verb

wēi ruò de yang guāng	微弱的阳光	faint rays of sun	noun phrase
xiǎo zǔ	小组	small group	noun
yí piàn lǜ sè de yè zi	一片绿色的叶子	a green leaf	noun phrase
yī shǎn yī shǎn dì xiàng yī kē xiǎo bǎo shí	一闪一闪地像一颗小宝石	shine...tiny jewel	verbal phrase
yí xiè qiān chǐ	一泄千尺	cascading	verb
yíng guāng bǐ	荧光笔	highlighter marker	noun
yìng rù yǎn lián	映入眼帘	to come into view	verb
yú guāng suǒ jiàn	余光所视	noticed out of the corner of his eye	verb
zhí shì	直视	looked straight up	verb
zhuā zhù diào luò de dōng xi	抓住掉落的东西	reached out to catch a drop	verbal phrase
zǔ	组	group	noun
<b>识记 Produce</b>			
<b>Pīnyīn</b>	<b>Characters</b>	<b>English meaning</b>	<b>Parts of speech</b>
cái liào guǎn lǐ yuán	材料管理员	Magnificent Materials Manager	noun
cháng	尝	tasting	verb
chù jué	触觉	touching	noun
gài yào	概要	summary/to summarize	noun/verb
gōng zuò guǎn lǐ yuán	工作管理员	Terrific Taskmaster	noun
guó niǎo	国鸟	national bird	noun
jì lù yuán	记录员	Remarkable Recorder	noun
jiǎ	假	false	adjective
jiě jué fāng àn	解决方案	solution	noun
kàn	看	seeing	verb
mó	摸	touching	verb
shì jué	视觉	seeing	noun
tīng jué	听觉	hearing	noun
wèi jué	味觉	tasting	noun
wén	闻	smelling	verb
wèn tí	问题	problem	noun
xiù jué	嗅觉	smelling	noun
yǎn shì zhì jiǎn yuán	演示质检员	Polished Presenter	noun
yù cè	预测	prediction/to	noun/verb

		predict	
yù lǎn	预览	preview/to preview	noun/verb
zhēn	真	true	adjective
zhōng wén dū chá yuán	中文督察员	Chinese Champion	noun

姓名: \_\_\_\_\_ 日期: \_\_\_\_\_

说明: 下面这些在第四章有关 Juan Daniel 的描述是对还是错? 在你的答案前画 ✓。如果选错为答案, 请把句子改写为正确。

1. Juan Daniel 赢了足球赛后, 他在家里遇见三位科学家。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

2. Peters 女士和她的同事正从事 *El Imposible* 热带雨林青蛙的研究。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

3. Peters 女士叮嘱 Juan Daniel 要给青蛙一碗水喝。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

4. Juan Daniel 告诉 Peters 女士他现在遇到如何在足球比赛时遮盖青蛙的难题。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

5. 青蛙的皮肤是一种膜, 但人的皮肤不是。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

6. Peters 女士建议 Juan Daniel 到外面走走, 看看是否能找到解决办法。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

7. Juan Daniel 决定回到足球场去研究, 寻找解决的办法。

\_\_\_\_\_ 对 \_\_\_\_\_ 错 \_\_\_\_\_

Names: \_\_\_\_\_ Date: \_\_\_\_\_

**Are the following statements about "Juan Daniel" Chapter 4 *True* or *False*? Place a ✓ in the box next to your answer. If you check *False*, rewrite the statement to make it true.**

1. After his soccer victory, Juan Daniel met three scientists in his family's *pupusería*.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

2. Ms. Peters and her colleagues were studying frogs in the *El Imposible* rain forest.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

3. Ms. Peters told Juan Daniel to be sure to give his frog a bowl of water to drink.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

4. Juan Daniel explained his problem to Ms. Peters: He needed to find a way to keep his frog covered during his soccer games.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

5. Frog skin is a membrane, but human skin is not.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

6. Ms. Peters suggested that Juan Daniel take a walk outside to see if he could find a solution to his problem.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_

7. Juan Daniel decided to go back to the soccer field to study it and search for a solution to his problem.

\_\_\_\_\_ **True**    \_\_\_\_\_ **False**    \_\_\_\_\_



## 第四章 对与错：教师手册

1. Juan Daniel 赢了足球赛后，他在家裡遇见三位科学家。(错：他在家裡遇见两位科学家和一位生物工程师—Peters 女士。)
2. Peters 女士和她的同事正从事 *El Imposible* 热带雨林青蛙的研究。(对)
3. Peters 女士叮嘱 Juan Daniel 要给青蛙一碗水喝。(错：她告诉 Juan Daniel 要让青蛙的保持皮肤湿润；青蛙不用嘴喝水，而是用皮肤。)
4. Juan Daniel 告诉 Peters 女士他现在遇到如何在足球比赛时遮盖青蛙的难题。(错：他需要找到一种让青蛙的保持皮肤湿润的方法。)
5. 青蛙的皮肤是一种膜，但人的皮肤不是。(错：青蛙和人的皮肤都是一种膜。)

注：复习上节课有关膜的定义，可以把它贴在教室或白板上。

6. Peters 女士建议 Juan Daniel 到外面走走，看看是否能找到解决办法。(对：生物工程师们用自然界的启发来发明新技术去解决难题。)

注：联系第七课学生比较自然物和技术的内容。

7. Juan Daniel 决定回到足球场去研究，寻找解决的办法。(错：他决定去热带雨林。)

## **Chapter 4 True-False Activity: Teacher Guide (with Key)**

1. After his soccer victory, Juan Daniel met three scientists in his family's *pupusería*.  
(F: He met 2 scientists and 1 bioengineer—Ms. Peters.)
2. Ms. Peters and her colleagues were studying frogs in the *El Imposible* rain forest.  
(T)
3. Ms. Peters told Juan Daniel to be sure to give his frog a bowl of water to drink.  
(F: She told him to keep his frog's skin moist; frogs do not only drink water through their mouths; they drink through their skin.)
4. Juan Daniel explained his problem to Ms. Peters: He needed to find a way to keep his frog covered during his soccer games.  
(F: He needed to find a way to keep his frog moist during his soccer games.)
5. Frog skin is a membrane, but human skin is not.  
(F: Both frog skin and human skin are membranes.)

**Note:** Review the definition of a membrane that the class wrote during the last lesson; it may be posted in the room or on a whiteboard page.

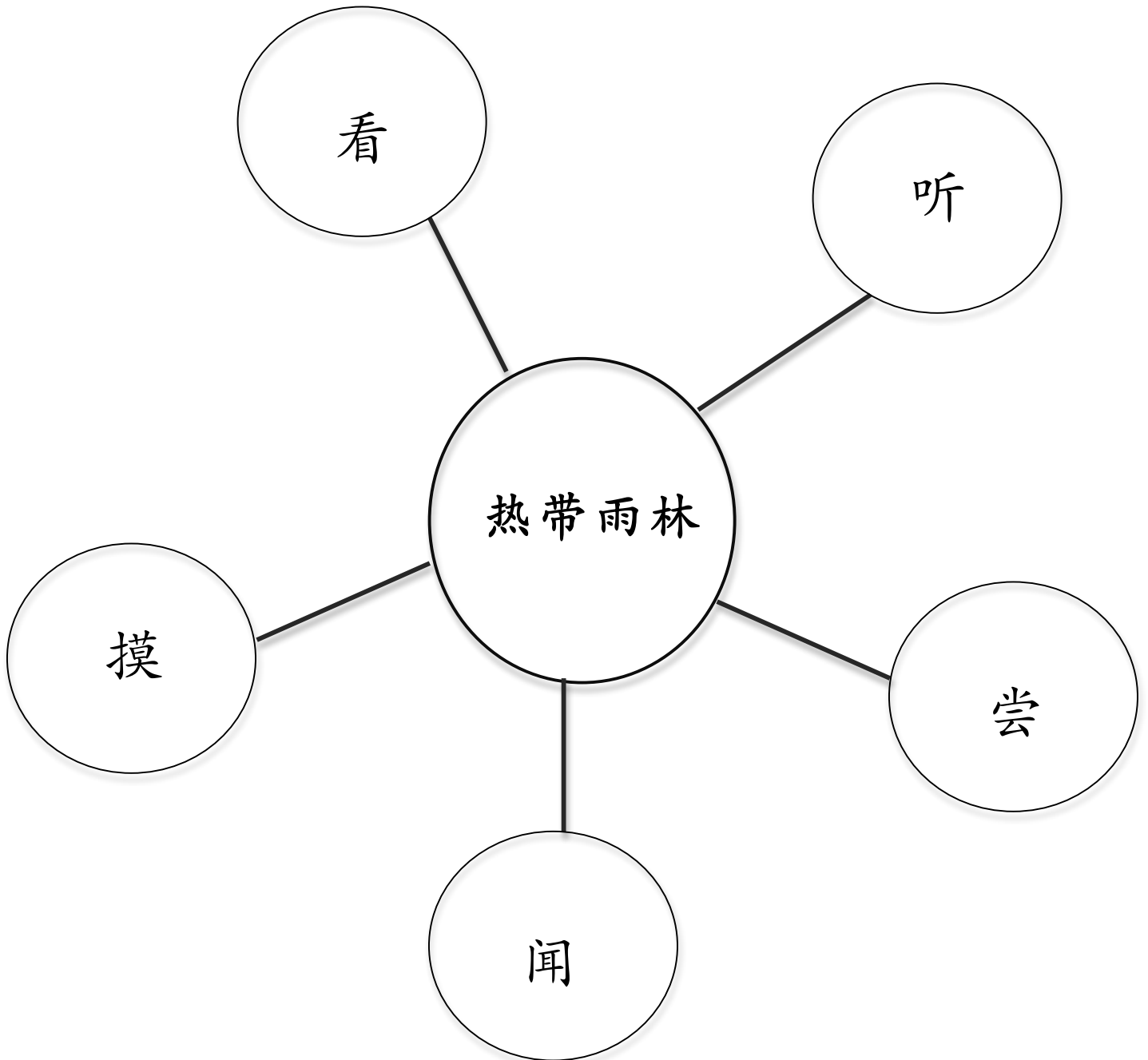
6. Ms. Peters suggested that Juan Daniel take a walk outside to see if he could find a solution to his problem  
(T: Bioengineers look at how nature works to get ideas for creating technologies to solve problems.)

**Note:** Connect to Lesson 7, when students compared natural objects and technologies.

7. Juan Daniel decided to go back to the soccer field to study it and search for a solution to his problem.  
(F: He decided to go to the rain forest.)

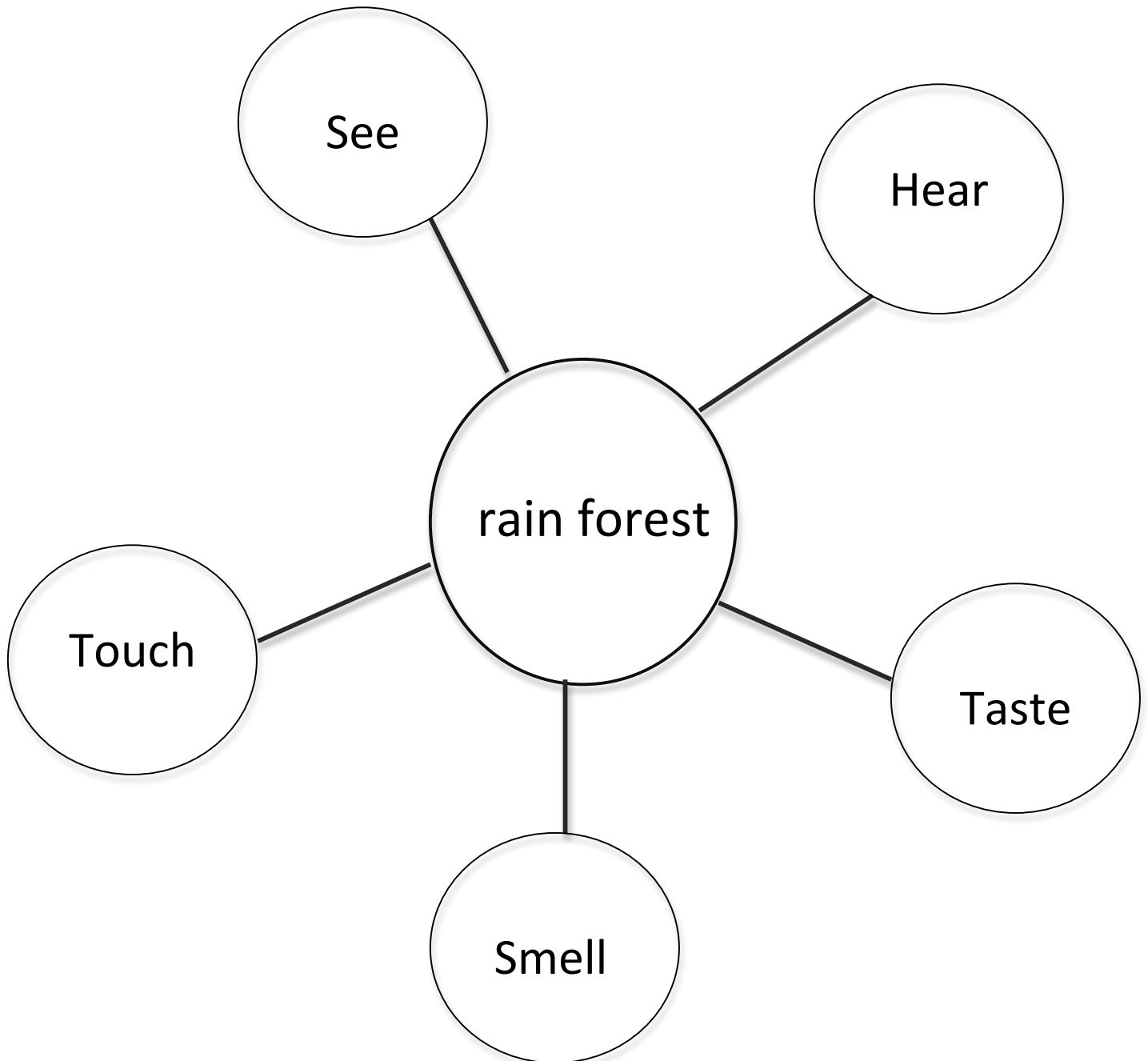
## 泡泡图例子: 热带雨林

**说明:** 给学生做一个如何开始泡泡地图的示范: 在中间的位置写出主题, 并圈在泡泡里。然后分别写出不同的特征, 也圈在各自不同的泡泡里。用线把特征泡泡与主题泡泡连起来。



## Bubble Map example: Rain forest

**Directions:** Model for students how to begin a Bubble Map: Write the topic in a center "bubble" and then write as many features of the topic, each in a separate bubble surrounding the topic. Connect the bubbles with lines to the center bubble.



## 对不对？

1. Juan Daniel赢了足球赛后，他在家里遇见三位科学家。
2. Peters女士和她的同事正从事*El Imposible* 热带雨林青蛙的研究。
3. Peters女士叮嘱Juan Daniel要给青蛙一碗水喝。
4. Juan Daniel告诉Peters女士他现在遇到如何在足球比赛时遮盖青蛙的难题。
5. 青蛙的皮肤是一种膜，但人的皮肤不是。
6. Peters女士建议Juan Daniel到外面走走，看看是否能找到解决办法。
7. Juan Daniel决定回到足球场去研究，寻找解决的办法。



## 我在雨林里...



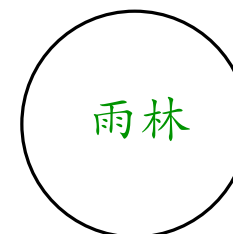
看见:

听见:

尝到:

闻到:

摸到:



水是“朋友”还是“敌人”？



[http://www.supercoloring.com/images/print.php?img\\_src=http://www.supercoloring.com/wp-content/original/2009/05/rain-in-the-garden-1-coloring-page.jpg](http://www.supercoloring.com/images/print.php?img_src=http://www.supercoloring.com/wp-content/original/2009/05/rain-in-the-garden-1-coloring-page.jpg)

水是“朋友”还是“敌人”？



水是“朋友”还是“敌人”？



[http://healthlifestyletips.com/wp-content/uploads/2011/03/woman\\_drinking\\_water.jpg](http://healthlifestyletips.com/wp-content/uploads/2011/03/woman_drinking_water.jpg)

水是“朋友”还是“敌人”？



[http://www.softpedia.com/Screenshots/Ocean-Life-Photo-Screensaver\\_1111.jpg](http://www.softpedia.com/Screenshots/Ocean-Life-Photo-Screensaver_1111.jpg)

水是“朋友”还是“敌人”？



<http://www.startribune.com/blogsColumns/118577514.html>

水是“朋友”还是“敌人”？



水是“朋友”还是“敌人”？



水是“朋友”还是“敌人”？



<http://kicknews.com/?p=1522>

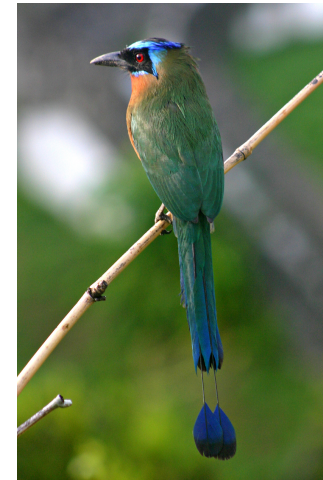
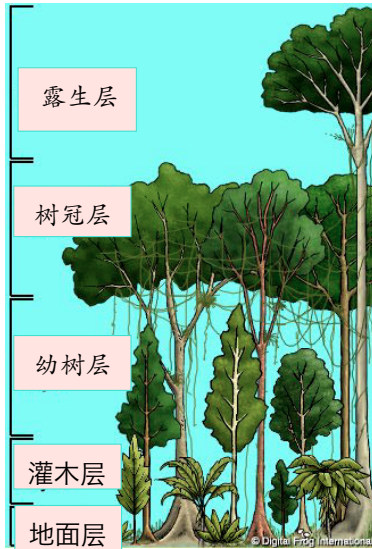
Juan Daniel的青蛙和水

水是朋友

水是敌人

推测第五章：

想一想Juan Daniel会学到什么：水是大自然的朋友还是敌人？







**推测第六章：**

想一想Juan Daniel接下来会怎么做？