

LESSON 1

Introduction to
rice cultures:
How significant is
rice in the cultures
of Southeast Asia?

Subject	History/Social Studies
Topic	Introduction to rice cultures: How significant is rice in the cultures of Southeast Asia?
Level	Lower secondary
Key idea	Rice is central to Southeast Asian food cultures, social relations, village organization, and belief systems.
Key concepts	Domestication of rice Division of labour Staple food Adaptation to topography
No. of periods/lessons	1 period, or 2 periods if the recommended video is screened (1 period is approximately 50 minutes)
Facilities needed	A/V equipment and Internet access to play the video clips (or hard copy with similar content) Sources and handouts for distribution
Prerequisite knowledge	No prerequisite knowledge is required.

Learning objectives

By the end of the lesson, the students will be able to:

KNOWLEDGE	SKILLS	ATTITUDES
<ol style="list-style-type: none"> 1. State the conditions for growing rice. 2. Describe the ecosystems of rice and grain. 	<ol style="list-style-type: none"> 1. Engage in the study of a variety of sources (charts, greetings, sayings, excerpts from books and songs, films) to draw inferences about the significance of rice in Southeast Asian cultures and the nature of rice cultivation in the region. 2. Explain how sources provide evidence of the significance of rice in Southeast Asia and the nature of rice cultivation in the region. 	<ol style="list-style-type: none"> 1. Recognize how rice is entrenched in Southeast Asian culture through exposure to the greetings, sayings and proverbs that are associated with rice. 2. Demonstrate the centrality of rice in Southeast Asian cultures from statements and proverbs associated with rice. 3. Realize how our cultures are connected by the importance of rice. 4. Appreciate the labour, social cooperation, ingenuity and innovation demonstrated in rice cultivation. Provide examples from the sources as evidence that rice cultivation is complex and requires social cooperation to free up the labour necessary to maintain the infrastructures of rice production.

Section	Lesson Development	Resources	Rationale
Introduction [5 minutes]	<p>1. Teacher greeting</p> <p>1.1 Greet students with the phrase ‘Have you eaten rice?’ in the local language.</p> <p>1.2 Show Source 1. Explain that the importance of rice is underscored in many Southeast Asian languages by its synonymous usage with food and eating.</p> <p>1.3 Ask the students if they know of any regional variation to the greeting ‘Have you eaten (rice)?’ Get them to share their knowledge with the class.</p>	<ul style="list-style-type: none"> Source 1: Greetings in Southeast Asia <p>Note: Source 1 could also be turned into a matching activity.</p>	By eliciting knowledge from the students, the teacher sets the context for the unit and establishes linkages between rice and its importance in Southeast Asian cultures.
Development I [15 minutes]	<p>2. Teacher talk</p> <ul style="list-style-type: none"> Using Source 2, explain how important rice is in Southeast Asian culture by the existence of the many sayings and proverbs associated with rice. <p>3. Pair work</p> <p>3.1 The students go through the sayings in Handout 1 briefly with the person next to them.</p> <p>3.2 Students try to infer what the sayings and proverbs mean.</p> <p>3.3 Elicit responses from the students.</p>	<ul style="list-style-type: none"> Source 2: Proverbs associated with rice in Southeast Asia Handout 1: Rice in Southeast Asia – The grain of life 	<p>The use of a source as a supplement enables the students to understand the information better.</p> <p>Pair work encourages collaborative learning and enables students to respond to one another.</p>
Development II [50 minutes with the full video]	<p>4. Video on the life of a rice farmer in the Philippines</p> <p>4.1 Explain that given its centrality, rice informs many aspects of identity, social organization and traditions in rural Southeast Asia. Tell the students that the journey begins with a film that follows a day in the life of a rice farmer in M’lang (the South of the Philippines).</p> <p>4.2 Students read and think about the questions relating to the film in Handout 2.</p> <p>4.3 Students watch the movie.</p> <p>4.4 Students fill in Handout 2. Elicit responses from the students about what they have observed from the film.</p> <p>4.5 Highlight the following key messages:</p> <ul style="list-style-type: none"> Farming rice is a laborious process There are several parties involved in rice cultivation. There is an extensive process involved in rice farming, from cultivation to sale. Rice cultivation requires social coordination and organization. 	<ul style="list-style-type: none"> Handout 2: Video on the life of a rice farmer in the Philippines (22 m 17 s) youtu.be/s_kLk00V3CE 	The use of a video illustrates the process of rice production and sets the context for students’ learning.

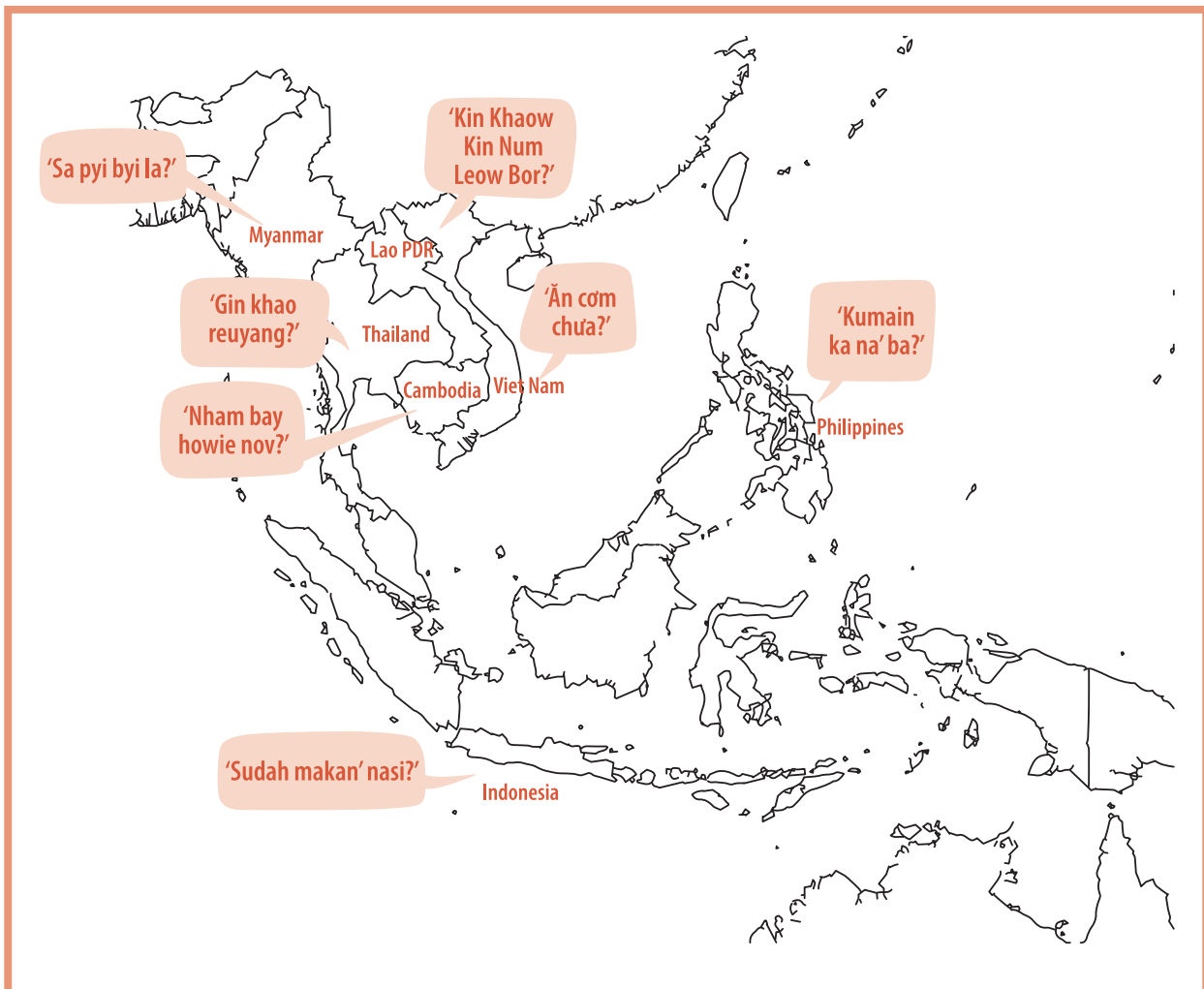
Section	Lesson Development	Resources	Rationale
Development III [25 minutes]	<p>Note: This marks the start of Part 2 of Lesson 1 if the film is not screened.</p> <p>5. Cloze (gap-fill) activity</p> <p>5.1 Distribute Handout 3.</p> <p>5.2 Individually or in pairs, students fill out Handout 3.</p> <p>5.3 Share the answers.</p> <p>6. Teacher talk</p> <p>6.1 Explain the conditions suitable for rice cultivation. Support with Source 3 – Source 5.</p> <p>6.2 Introduce a ‘vocabulary challenge’. Ask students to guess the meanings of the following words: <i>bunded, embankment, topography, undulating, puddling</i></p> <p>6.3 The process of rice planting is very labourious and needs the cooperation and coordination of a community. For instance, bunds, embankments and irrigation systems need to be built. Labour is necessary for preparing the field, weeding, sowing, transplanting, fertilizing, harvesting, threshing, winnowing and milling. Thus the act of rice cultivation unites and binds village communities together in rural Southeast Asia.</p> <p>7. Discussion</p> <p>7.1 Ask the students what they can infer about rice cultivation from each of the source. Explain or elicit the concept of <i>inference</i> here – the fact that we can make an informed guess or deduction rather than the ‘answer’ being clearly stated in the text.</p> <p>7.2 Explain that these sources show how laborious the process of rice cultivation is, how it involves the efforts of whole families and communities due to the intensity of work involved and how people demonstrate innovation and ingenuity in controlling the amount of water in the fields. Support with Sources 6 and 7.</p> <p>7.3 Students refer to Handout 2. Based on the knowledge they have acquired, they consolidate what they have learnt so far about rice cultivation in Southeast Asia.</p> <p>7.4 Elicit responses from the students.</p>	<ul style="list-style-type: none"> Handout 3: Conditions suitable for rice cultivation <p>Note: This can be a substitute for Source 3 and presented as a cloze (gap-fill) activity to encourage students to learn new vocabulary.</p> <ul style="list-style-type: none"> Source 3: Conditions suitable for rice cultivation Source 4: Ecosystems where rice is grown Source 5: Irrigated rice environments in Southeast Asia Source 6: Writer Margaret Visser’s views on rice cultivation Source 7: Traditional methods of water control Handout 2: One day in the life of a rice farmer (a film by Alexander Baumgartner) 	<p>The use of sources as a supplement enables the students to understand the information better.</p> <p>The teacher’s explanation unpacks key knowledge quickly for the students.</p>

Sources and handouts

Glossary

Absentee landlord:	a person who owns and rents out a profit-earning property but does not live within the property's local economic region.
Matrilineal:	inheriting or determining descent through the female line.
Matrilocal:	a term referring to the societal system in which a married couple resides with or near the wife's parents.
Patrilineality:	a system in which one belongs to one's father's lineage; it generally involves the inheritance of property, names, or titles through the male line as well.
Sharecropper:	a tenant farmer who gives part of each crop as rent.
Shifting cultivation:	a form of agriculture in which an area of ground is cleared of vegetation, cultivated for a few years, then abandoned for a new area until its fertility has been naturally restored.
Tenant farmer:	a farmer who rents farmland and does not own it.
Threshing:	the process of loosening the edible part of rice (or other cereal grain) from the inedible casing (chaff) that surrounds it.
Transplanting:	in rice cultivation, rice seedlings grown in special nurseries are pulled and transferred into fields that are levelled and covered with water.
Winnowing:	a process that is performed after threshing to separate the edible grain from the chaff. In its simplest form, it involves throwing the mixture into the air so that the wind blows away the lighter chaff while the heavier grains fall back down for recovery.

Source 1: Greetings in Southeast Asia



Source:

Map: aseanup.com/free-maps-asean-southeast-asia/



While you might not greet your friends this way, do the more senior members of your family (parents, grandparents, aunts and uncles) still greet people this way? What greetings do they use?

Source 2: Proverbs associated with rice in Southeast Asia

<i>'Believing in fortune telling is a waste of rice.'</i>	Burmese proverb
<i>'Cook only as much rice as you have.'</i>	Filipino proverb
<i>'Cold rice given wholeheartedly is better than newly cooked rice.'</i>	Filipino proverb
<i>'Rice has become porridge.'</i>	Indonesian proverb
<i>'Be a smart man, like drooping rice.'</i>	Indonesian proverb
<i>'Don't let an angry man wash dishes; don't let hungry man guard rice.'</i>	Khmer proverb
<i>'The immature rice stalk stands erect, while the mature stalk bends over.'</i>	Khmer proverb
<i>'With water make rivers, with rice make armies.'</i>	Khmer proverb
<i>'Without rice, there is nothing left.'</i>	Malay proverb
<i>'If you plant grass, you won't get rice.'</i>	Malay proverb
<i>'Rice depends on paddy fields, fish depend on water.'</i>	Thai proverb
<i>'Don't buy buffaloes during the planting season, don't buy new clothes during the New Year.'</i>	Thai proverb
<i>'Once the rice is pudding, it's too late to reclaim it.'</i>	Vietnamese proverb
<i>'Try to seize the bowl of rice but forget the whole table of food.'</i>	Vietnamese proverb

Home Extension Activity

Interview your parents and your elders to gather more sayings and proverbs associated with rice. Share them with your class at the beginning of the next lesson.

Source 3: Conditions suitable for rice cultivation

1. Temperature

- Average temperature during the growing season: between 20 °C and 27 °C.
- Abundant sunshine (minimum temperature should not be below 15 °C).

2. Rainfall

- Paddy cultivation is done in areas where minimum rainfall is 115 cm.
- Paddy also needs flooded conditions with the depth of water varying from more than 25 mm at the time of transplanting to as much as 150 mm for ten weeks of the growing period.

3. Fertilizers

Paddy requires three essential plant nutrients: nitrogen, phosphorus, and potassium.



6. Surface

- As paddy needs a level surface to enable the fields to be flooded at least during the growing period, its ideal habitat is in the great alluvial deltas and river basins of the world: the Irrawaddy, Chao Phraya, Mekong, and so on.

5. Soils

- Clay-like loam soil in monsoon land is considered to be the best for rice cultivation (due to its high water retention).
- Rice is also grown in salt-rich (saline) areas of delta regions.

4. Labour

- Labour is necessary for preparing the field, weeding, sowing, transplanting, fertilizing, harvesting, threshing, winnowing, and milling.

Source:

Chand, Smriti. 'Cultivation of Rice: Suitable Conditions Required for the Cultivation of Rice (6 Conditions)'. www.yourarticlelibrary.com/cultivation/cultivation-of-rice-suitable-conditions-required-for-the-cultivation-of-rice-6-conditions/25491/

Photograph: www.gettyimages.com/detail/photo/rice-field-royalty-free-image/537322888

Source 4: Ecosystems where rice is grown

Irrigated rice environment	Rainfed lowland environment	Rainfed upland environment	Flood-prone environment
<ul style="list-style-type: none"> Grown in <u>bunded</u> fields or paddies, which are surrounded by a small <u>embankment</u> that keeps the water in. Water supply is more assured and one or more crops a year can be grown. Found in many varying <u>topographies</u> such as flood plains, valley bottoms and terraced fields. 	<ul style="list-style-type: none"> Grown in bunded fields that are flooded with rainwater for at least part of the cropping season. This environment is characterized by a lack of water control, with floods and drought being potential problems. 	<ul style="list-style-type: none"> Grown in mixed farming systems without irrigation and without <u>puddling</u>. This rice environment can be found in low-lying valley bottoms to <u>undulating</u> and steep sloping lands. In Indonesia and the Philippines, upland rice may be <u>intercropped</u> with maize. 	<ul style="list-style-type: none"> This ecosystem – which includes deepwater and floating rice environments – incorporates special rice varieties that are well suited to flooded environments. Deepwater rice and floating rice are mainly grown on the floodplains and deltas of rivers such as the Irrawaddy of Myanmar, the Mekong of Viet Nam and the Chao Phraya of Thailand.

Source:

'Where is Rice Grown?' *Ricepedia: The Online Authority on Rice*. ricepedia.org/rice-as-a-crop/where-is-rice-grown

Garivait, Savitri. 2011. 'Overview of Rice Production in SEA'. King Mongkut's University of Technology – Thonburi: The Joint Graduate School of Energy and Environment. www.jgsee.kmutt.ac.th/apnproject/Web_Postconference/pdf/4_Overview%20of%20Rice%20production%20in%20SEA.pdf

Vocabulary

- Bund:** mounds or embankments made of earth and designed to contained water in the field.
- Embankment:** a wall of earth or stone built to prevent flooding.
- Intercrop:** to grow one crop between rows of another to maximize the use of the land.
- Puddling:** preparing the rice field for growing crops while it is flooded.
- Topography:** the physical features of an area, such as hills, valleys, rivers.
- Undulating:** a smooth rising and falling form, like a wave.

Source 5: Irrigated rice environments in Southeast Asia

Javanese women planting rice in a rice field near Prambanan, Yogyakarta, Indonesia



Source: Kartapranata, Gunawan. en.wikipedia.org/wiki/Rice_production_in_Indonesia#/media/File:Rice_plantation_in_Java.jpg

- ➔ What structures can you see here?
- ➔ Would a single person be able to build all of these? Explain your answer.

Rice terraces in Bali, Indonesia



Source: Globe-trotter. commons.wikimedia.org/wiki/File:Rice Terraces in Jatiluwih, Tabanan Regency, Bali, Indonesia.jpg

- ➔ What would happen to these terraces if they were abandoned – left alone – for a year? What does this tell you about the terraces?
- ➔ Are all these terraces likely to belong to one person? Why or why not?

Source 6: Writer Margaret Visser's views on rice cultivation

'It is essential for the irrigated crop (rice) that water has not only to be found, but has also to be stored then brought to the paddies, in a secure and dependable manner. Fields must be made level with a slight enough grade for the water to flow but not too fast. Water must also be retained in the fields. To keep the water moving in a controlled flow, pipes (usually bamboo), drains, pumps, and sluices had to be devised. In the rainfed and flood-prone ecosystems, people had to understand the seasons and weather fluctuations, and be able to quickly raise dams and find ways to divert but not lose the floodwater.'

Source:

Visser, M. 1986. 'Rice: The Tyrant with a Soul' in *Much Depends on Dinner: The Extraordinary History and Mythology, Allure and Obsessions, Perils and Taboos of an Ordinary Meal*. pp. 155-191. Grove Press, New York.

Source 7: Traditional methods of water control

Simple brushwood dam constructed across a stream to raise the water, which was then divided directly toward the paddy fields or fed into short distribution canals. Located in Negeri Sembilan, Malaysia.



Source:

Jackson, James C. 1972. 'Rice Cultivation in West Malaysia: Relations Relationships between Culture History, Customary Practices and Recent Developments'. *Journal of the Malaysian Branch of the Royal Asiatic Society* Vol. 45, No. 2 (222) (1972), pp. 76-96. Photograph taken in Negeri Sembilan, c. 1950. From the D.I.D. Library.

Handout 1: Rice in Southeast Asia – The grain of life

Rice is the chief staple for 80 per cent of Southeast Asians. You can see the importance of rice underscored in many Southeast Asian languages by its synonymous usage with food and eating. Welcome extended to visitors is often framed with the question 'have you eaten rice?' which speaks to the social importance both of food sharing and of rice. There are also many sayings and proverbs in Southeast Asia that are associated with rice.

Here are some examples:

<i>'Believing in fortune telling is a waste of rice.'</i>	Burmese proverb
<i>'Cook only as much rice as you have.'</i>	Filipino proverb
<i>'Cold rice given wholeheartedly is better than newly cooked rice.'</i>	Filipino proverb
<i>'Rice has become porridge.'</i>	Indonesian proverb
<i>'Be a smart man, like drooping rice.'</i>	Indonesian proverb
<i>'Don't let an angry man wash dishes; don't let hungry man guard rice.'</i>	Khmer proverb
<i>'The immature rice stalk stands erect, while the mature stalk bends over.'</i>	Khmer proverb.
<i>'With water make rivers, with rice make armies.'</i>	Khmer proverb.
<i>'Without rice, there is nothing left.'</i>	Malay proverb
<i>'If you plant grass, you won't get rice.'</i>	Malay proverb
<i>'Rice depends on paddy fields, fish depend on water.'</i>	Thai proverb
<i>'Don't buy buffaloes during the planting season, don't buy new clothes during the New Year.'</i>	Thai proverb
<i>'You eat slowly, that is good for stomach; you plough deeply, that is food for fields.'</i>	Vietnamese proverb
<i>'Try to seize the bowl of rice but forget the whole table of food.'</i>	Vietnamese proverb

Have you heard these sayings and proverbs before? Do you know what they mean? Are there any more you can add to this list?

Handout 2: Video on the life of a rice farmer in the Philippines

One Day in the Life of a Rice Farmer

Video clip (22 m 17 s)

youtu.be/s_kLkOOV3CE

Director: Alexander Baumgartner

For many, a bowl of rice is a simple trip to the supermarket, a prepared meal either at or outside of the home. Rarely do we think about the production of this staple food. Given its centrality, rice informs many aspects of identity, social organization and traditions in rural Southeast Asia. This lesson seeks to introduce some of these features.

This film follows a day in the life of a rice farmer in M'Lang (the South of the Philippines). As you watch the documentary, what do you see? Write your observations in the table below. Use the guiding questions to help you.

1. How would you describe the process of planting rice? (03:00-07:40)	
2. What happens to the rice after harvest? (11:24-15:40)	
3. Does the rice farmer work alone or are there others involved in farming rice? (15:42-end)	
4. How would you describe the environment where the rice is grown?	



Exercise: Based on what you have learned about the conditions suitable for rice cultivation, the four ecosystems where rice is grown, and the video you have watched, what can you infer about the nature of rice cultivation?

Handout 3: Conditions suitable for rice cultivation

The conditions suitable for rice cultivation are described in the six boxes below. Identify and insert each of the following key words in the corresponding text box.

Fertilizer

Soil

Labour

Rainfall

Surface

Temperature

1. _____

- Average temperature during the growing season: between 20 °C and 27 °C.
- Abundant sunshine (minimum temperature should not be below 15 °C).

2. _____

- Paddy cultivation is done in areas where minimum rainfall is 115 cm.
- Paddy also needs flooded conditions with the depth of water varying from more than 25 mm at the time of transplanting to as much as 150 mm for ten weeks of the growing period.

3. _____

Paddy requires three essential plant nutrients: nitrogen, phosphorus, and potassium.



6. _____

- As paddy needs a level surface to enable the fields to be flooded at least during the growing period, its ideal habitat is in the great alluvial deltas and river basins of the world: the Irrawaddy, Chao Phraya, Mekong, and so on.

5. _____

- Clay-like loam soil in monsoon land is considered to be the best for rice cultivation (due to its high water retention).
- Rice is also grown in salt-rich (saline) areas of delta regions.

4. _____

- Labour is necessary for preparing the field, weeding, sowing, transplanting, fertilizing, harvesting, threshing, winnowing, and milling.

Handout 4: Reflection

Writer Margaret Visser says, 'paddy rice requires hard and incessant work, and a fiendishly difficult combination of both flexibility and organization. It succeeds only if it is controlled by a society of people ready to pull together, to synchronize with nature, to obey the rules they have invested, and above all to keep at it: everything must be in good repair and in good supply, always. Large-scale works (canals, terraces, reservoirs) have to be planned with the future in mind and with technological expertise. Then they must be built with labor freed, through the cooperation of everyone, from day-to-day farming. Everything has subsequently to be maintained in good order. Intensive rice cultivation needs many hands.'

Vocabulary

Fiendishly: cruelly.

Intensive cultivation: an agricultural system using the maximum labour and resources to raise the yield and harvest more products.

Synchronize: to work at the same time.

Terrace: flat steps dug into a mountain slope to make cultivation easier.

Read the three statements in the boxes below. Which best summarizes what Margaret Visser is explaining above?

Statement 1

Growing rice is hard work but is very simple. In a village system, individual cultivators will focus all of their work on the land that belongs to them, because their land is their responsibility.

Statement 2

Growing rice is easy as long as everyone cooperates and works together to build large-scale works. Once canals, terraces and reservoirs have been built, not much labour is required.

Statement 3

Growing rice is complex and requires understanding of nature, forward planning and clever solutions, with people cooperating to build and maintain large-scale works.

Based on what you have learnt about rice cultivation so far would you agree with what she says? Support your response with the information acquired from the lessons.

Home Extension Activity 1

Interview your parents and elders and collect more sayings associated with rice. Add them to the list and share them with your class at the beginning of the next lesson.

Home Extension Activity 2

A. Do you have relatives who are involved in rice cultivation? If so, interview them:

Interview Questions	Response
1. What types of rice do you plant?	
2. How long does it take for rice to grow?	
3. How many crops of rice do you plant in one year?	
4. What is the process of planting rice?	
5. What happens after the harvest?	
6. What difficulties do you face when planting rice?	

B. If you do not have relatives who are involved in rice cultivation, you have two options:

1. Look for a classmate who has relatives involved in rice cultivation and interview his/her relatives together. In that case, you will fill out the table in Part A.
2. Check out the following website: ricepedia.org/ for more information about rice cultivation. Write down your findings in the table below. There is a lot of information on this website. Be selective about the information you include in the table.

Research Questions	Response
1. What types of rice are planted in Southeast Asia?	
2. How long does it take for rice to grow?	
4. How is rice grown?	
5. What happens after the harvest?	
6. What is one challenge that rice cultivators face?	