

LESSON 2

Food cultures and the cuisines of Southeast Asia:
What is the significance of spices and fermented fish products in Southeast Asian cuisines?

Subject	History/Social Studies
Topic	The significance of spices and fermented fish products in Southeast Asian cuisines
Level	Lower secondary
Key idea	Spices and fermented fish products are part of the shared culinary traditions of Southeast Asia. Spices and fermentation are also important for the preservation of food products.
Key concepts	Colonialism and colonisation Cultural influence Food culture Globalisation Relationship between cuisine and class/geography/gender Staples
No. of periods/lessons	1 period (1 period is approximately 50 minutes)
Facilities needed	Sources and handouts for distribution
Prerequisite knowledge	No prerequisite knowledge 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 major spices used in Southeast Asian cuisine. 2. State some of the fermented fish products produced in Southeast Asia. 3. Describe how they are produced and how they are used. 	<ol style="list-style-type: none"> 1. Engage in the analysis of various sources about the fermented fish products produced and used in various countries in Southeast Asia to infer how significant they are to the region's cuisines. 	<ol style="list-style-type: none"> 1. Appreciate the shared history and identity that led variations of fermented fish to be common throughout the region and realize that the popularity of this product stemmed from a rice-eating culture. 2. Recognize the shared ingenuity in using fermentation as a preservation technique that added protein to our diets and utilized small fish that would otherwise have had little value for consumption.

Section	Lesson Development	Resources	Rationale
Introduction [10 minutes]	<p>1. Hook activity</p> <p>1.1 Show Source 1 to students and point out that the ingredients for the two dishes featured (stir-fried water spinach and <i>gai yang</i>) are found in Handout 1.</p> <p>1.2 Students imagine that seasonings such as ginger, chilli peppers, lemongrass, coriander roots and fish sauce are removed from the lists. How would these dishes taste?</p> <p>1.3 Elicit responses from the students on how these seasonings (herbs, spices and fermented fish products) are used to flavour our meals and how the dishes that are familiar to us would be very different (and very bland) without them.</p> <p>1.4 Students think about what they had for dinner the night before. What were some of the spices that were used? Were the dishes prepared with some sort of fermented fish or shellfish products such as fish sauce, fish paste, or shrimp paste? Ask the students to write down the seasonings that were used and share the list with the student next to them.</p> <p>1.5 Elicit responses from the students to illustrate how popular and widely used these fermented fish products are in Southeast Asia.</p>	<ul style="list-style-type: none"> • Source 1: Stir-fried morning glory and <i>gai yang</i>, Lao-style grilled chicken • Handout 1: How would our meals taste without spices and fermented fish products? • Fermented fish products such as fish sauce, fish paste or shrimp paste can be brought into class to enhance students' understanding of this key ingredient in Southeast Asian cuisine through sight, smell and taste. 	The Hook activity helps to engage students, draw their attention to the topic and realize how relevant the topic is to their daily lives.
Development [35 minutes]	<p>2. Teacher talk</p> <ul style="list-style-type: none"> • Fermented fish products such as fish sauces, fish paste, or salted fish have been consumed since ancient times. One of the earliest records of fermented fish sauce was <i>garum</i>, a condiment that was used in the cuisines of ancient Greece, Roman and Byzantium. Support explanation with Source 2 and Source 3. • Due to limitations in transportation, the provision of fresh fish to inland dwellers was impossible. This encouraged fermentation as a preservation technique. • In Southeast Asian countries, a sauce or paste made from fermented fish or shellfish accompanies most rice meals. The fish are salted, dried, pounded and packed with toasted rice and rice husk in jars for a month or more. Fish products that are fermented become 'cooked' and are no longer considered raw. 	<ul style="list-style-type: none"> • Source 2: Ingredients used in making <i>garum</i> (fermented fish sauce) • Source 3: An ancient recipe for <i>garum</i> 	

Section	Lesson Development	Resources	Rationale
Closure [5 minutes]	<p>4. Conclusion</p> <p>4.1 Use Source 18 to illustrate how fermented fish products are a shared element in culinary history and culture among all countries in Southeast Asia – almost every country in the region has a local variation and the countries that do not produce their own variation of the product use them in cooking as well.</p> <p>4.2 Go through the instructions for the reflection on the Home Extension Activity. Ask the students to complete it. Encourage the students to use the reflection activity to communicate with their elders in the family and learn about the heritage of their communities. In this task, students interview senior members of their family and write a report about the fermented fish products in their culinary culture.</p> <p>5. Suggestions for follow-up activities</p> <p>5.1 Field trip (possible collaboration with parents and the community): Students can be taken to a traditional market to learn about the key ingredients (herbs, spices, fermented fish products) in Southeast Asian cuisine. Parents or members of the community can be invited to help introduce the various ingredients, their characteristics or properties and how they are used in local cuisine.</p> <p>5.2 Cooking lesson (possible collaboration with the Home Economics Department): Students can be asked to create a recipe featuring at least two ingredients they have learned about from this lesson and prepare them during a cooking class.</p>	<ul style="list-style-type: none"> • Source 18: Types of fermented foods in Southeast Asia • Home Extension Activity 	<p>The report enables the teacher to check if the students recognize the significance of spices and fermented fish products in their culinary culture.</p> <p>The interviews with senior members of the family and community also encourage inter-generational dialogue.</p>

Sources and handouts

Glossary

- Nonya*: Straits-born Chinese person. The woman is referred to as *nonya* while the man is referred to as *baba*.
- Pho*: A type of Vietnamese soup typically made from beef stock and spices to which noodles and thinly sliced beef or chicken are added.
- Rellenos*: a Filipino dish where meat and vegetables are braised in a soy-based sauce and their own liquid.
- Rendang*: a dish of meat stewed in coconut milk and spices, commonly found in Malaysia, Singapore and Indonesia.

**Source 1: Stir-fried morning glory and *gai yang*,
Lao-style grilled chicken**



Sources:

(Left) Takeaway. commons.wikimedia.org/wiki/File:Kai_yang_and_nam_chim.jpg

(Right) Cegoh. pixabay.com/photos/water-spinach-kangkong-sambal-chilli-1628620/

Source 2: Ingredients used in making *garum* (fermented fish sauce)



Source:

Terrana, F. www.rogastroνομico.it/food-cibo-curiosita/il-garum-in-sicilia/

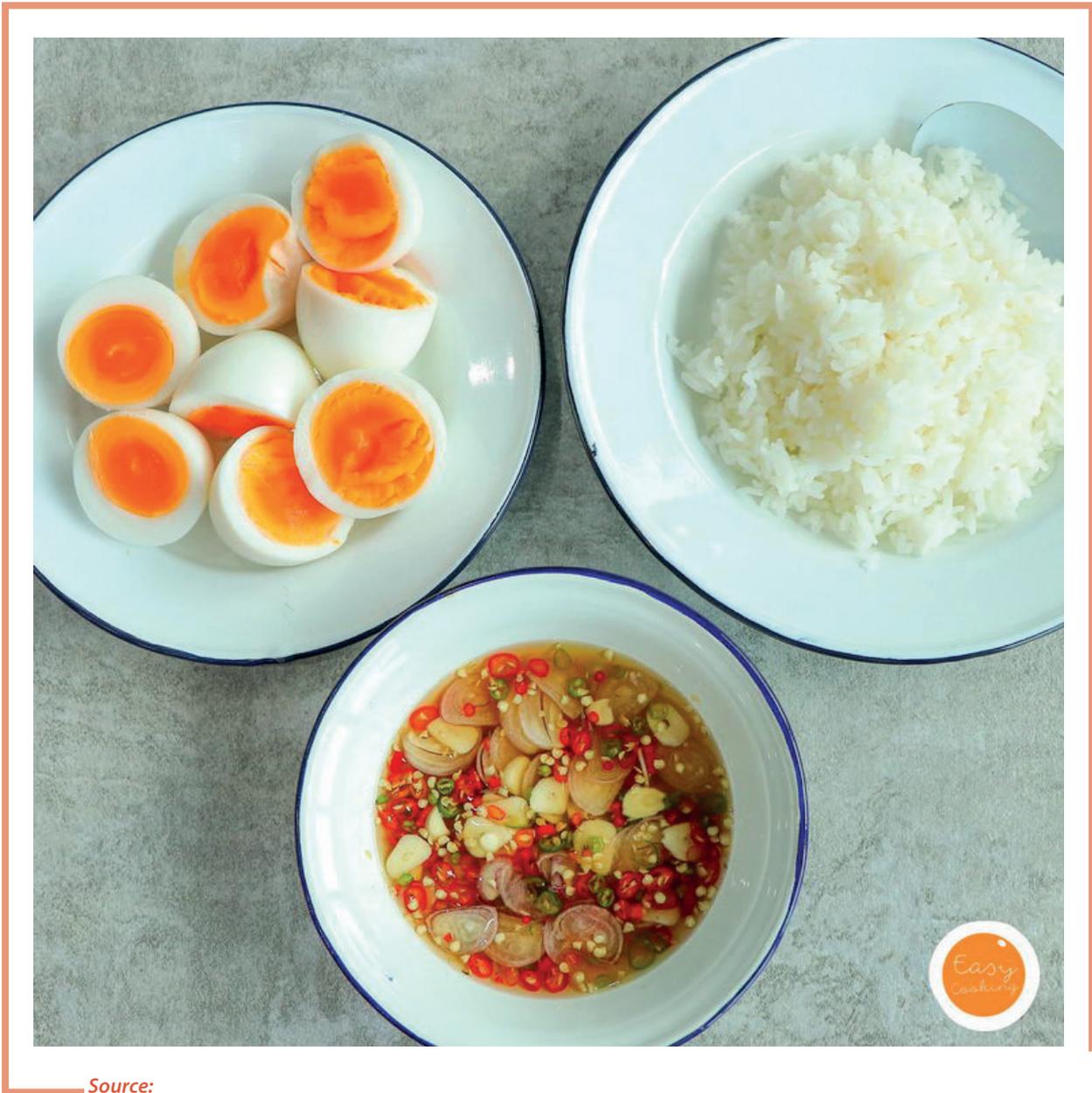
Source 3: An ancient recipe for *garum*

Use fatty fish, for example, sardines, and a well-sealed [closed] container with a 25-33 liter capacity. Add dried, aromatic herbs possessing a strong flavour, such as dill, coriander, fennel, celery, mint, oregano, and others, making a layer on the bottom of the container; then put down a layer of fish (if small, leave them whole, if large, use pieces) and over this, add a layer of salt two fingers high. Repeat these layers until the container is filled. Let it rest for seven days in the sun. Then mix the sauce daily for 20 days. After that, it becomes a liquid.

Source:

Gargilius Martialis, *De medicina et de virtute herbarum*, reprinted from Gozzini Giacosa, I. and Herklotz, A. (translator). 1994. *A Taste of Ancient Rome*. University of Chicago Press.

Source 4: A meal accompanied by *nam pla prik* (fish sauce and Thai chillies)



Source:

EasyCooking. www.easycookingmenu.com/index.php/review/fish-sauce-review

Source 5: A description of how *nam pla* is produced

In Thailand, fish sauce is called *nam pla* and it literally means 'fish water' as genuine fish sauce is the liquid in the flesh of fish that is extracted in the process of prolonged salting and fermentation. It is made from small fish that would otherwise have little value for consumption. Anchovies and related species of small schooling fish from two to five inches in length are commonly used, as they can be found in bountiful supply in the coastal waters of the Gulf of Thailand and the South China Sea.

For fish sauce to develop a pleasant, fragrant aroma and taste, the fish must be very fresh. As soon as fishing boats return with their catch, the fish are rinsed and drained, then mixed with sea salt – two to three parts fish to one part salt by weight. They are then filled into large earthenware jars, lined on the bottom with a layer of salt, and topped with a layer of salt. A woven bamboo mat is placed over the fish and weighted down with heavy rocks to keep the fish from floating when water inside them are extracted out by the salt and fermentation process.

The jars are covered and left in a sunny location for nine months to a year. From time to time, they are uncovered to air out and to let the fish be exposed to direct, hot sunshine, which helps break down the fish and turn them into fluid. The periodic 'sunning' produces a fish sauce of superior quality, giving it a fragrant aroma and a clear, reddish brown colour.

Source:

Adapted from www.thaifoodandtravel.com/features/fishsauce1.html

Vocabulary

Bountiful:	large in quantity; a lot of.
Earthenware:	a type of pot made of clay that has been heated in a kiln (a very hot oven).
Genuine:	real, authentic.
Prolonged:	continuing for a long time.

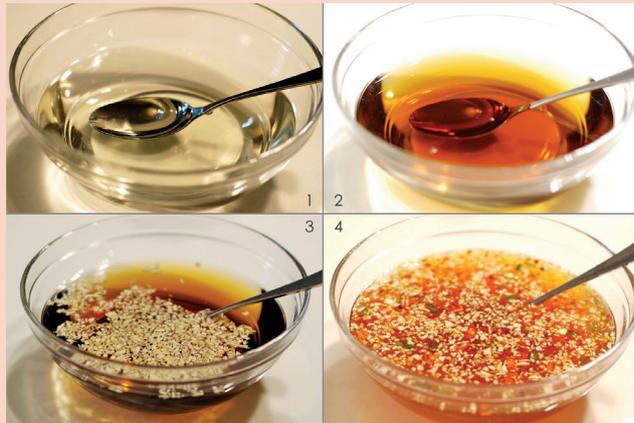
Source 6: Nước mắm, Vietnamese version of fish sauce



Source:
Thuisanghean, commons.wikimedia.org/wiki/File:Nước_mắm_Cửa_Hối.jpg

Source 7: Recipe for a basic dipping sauce or dressing

The recipe is used as a sauce for spring rolls or as a dressing for salads in Vietnamese cuisine.



Ingredients

- 1 cup sugar
- 2 cups water (warmed)
- $\frac{3}{4}$ cup fish sauce
- Juice from two lemons
- 3-4 cloves of garlic (minced)
- 2 tablespoons chilli garlic sauce
- 1-2 fresh Thai chilli(s) (sliced)

Directions

1. Add sugar to the warm water and mix well.
2. Add fish sauce, minced garlic and lemon juice.
3. Add chilli garlic sauce and Thai chilli pepper (adjust the amount according to your preference)

Source:

haonoah.blogspot.kr/2012/07/nuoc-mam-mixed-fish-sauce.html

Source 8: *Padek* (fish paste)

Padek is seen in many stages of fermentation at a stall in Phousy Market, Luang Prabang, Lao PDR.



Source:
Kirk K. padaek.com/tag/padek

Source 9: A recipe for *padek*

- 3 kg of fish/3 portions of fish
- 1 kg of salt/1 portion of salt
- 1/2 kg of rice bran (half the amount of salt)

Scale, gut, wash and drain the fish. Put the drained fish in a large bowl and add the salt. Mix together and then leave to sit, covered, for 12 hours.

After 12 hours, add the rice bran and mix again. Shift the mixture into a pottery or glass jar. Use your hand to press down the contents. A boiled rock may be used to maintain pressure on the fish. Do not fill the jar completely; leave 7 to 8 cm at the top as there will be expansion with fermentation.

Cover the jar and then leave it for at least six months. A year is preferable. During the fermentation, check the mixture. Use a large spoon to turn it and press it down again. It will keep two years in the jar. Store carefully to keep the flies out.

Source:

www.foodfromnorthernlaos.com/2010/08/04/fermented-fish-sauce/

Source 10: *Prahok* (fermented fish paste)

Prahok is seen wrapped in banana leaves and grilled and served with fresh green vegetables and steamed rice. A Cambodian saying goes, 'No *prahok*, no salt', referring to a dish that is of poor flavour or bland thus highlighting its essentiality in Cambodian cuisine.



Source:

en.wikipedia.org/wiki/Prahok#/media/File:Fried_Prahok_meal.jpg

Source 11: An excerpt from an article about the *prahok* season in Cambodia

With a deft flick of his knife, Yos Kim, a *prahok* maker slowly works through the 300 kilograms of tiny fish piled high around him and his family on the banks of Cambodia's Tonle Sap river, slicing off their heads while his children crush their bodies underfoot in woven baskets.

The grey pulp will be set out to dry for 24 hours before being salted down and packed into bags or plastic jars to sit for weeks, if not months, to ferment. The result is a spicy pungent mash that, while challenging the senses of even the most adventurous foreigner, is considered by Cambodians to be the soul of their rich culinary culture.

Source:

Suy Se. 2007. 'Got Fish? It's *prahok* season in Cambodia.' *Things Asian Press*. [thingsasian.com/story/got-fish-its-Prahok-season-cambodia](https://thingsasian.com/story/got-fish-its-prahok-season-cambodia)

Vocabulary

Deft:	neat, skillful and quick.
Pulp:	soft, wet, mashed material.
Pungent:	very strong smelling.

Source 12: *Ngapi* (a paste made of fish and/or shrimp)

Ngapi is seen for sale at a market stall in Mandalay, Myanmar.



Source:

Lichinga. it.m.wikipedia.org/wiki/File:Ngapi.JPG

Source 13: An incident that occurred in Nyaungdon, Myanmar in 1880

Nyaungdon is a town in the Ayeyarwady Region of southern Myanmar.

Nyaungdon was the largest production centre of *Ngapi* and *nganpyaye* (fish sauce) in the delta region of Myanmar and in 1880, an episode in conjunction with an outbreak of cholera occurred. The Deputy Commission of Nyaungdon, an English officer, announced that the outbreak of cholera was due to the unwholesomeness of *Ngapi* and *nganpyaye* and ordered its production and sale closed down. Because these delicacies were the ones most relished in Myanmar, the whole town boiled up and a riot was inevitable. The townspeople marched to the Deputy Commissioner's office and claimed that *Ngapi* and *nganpyaye* had nothing to do with the cholera outbreak and demanded that he withdraw his order. The Deputy Commissioner had to consent; the product and sale of *Ngapi* and *nganpyaye* were then resumed. Within a few days, luckily, the cholera also died down, proving the wholesomeness of *Ngapi* and *nganpyaye*.

Source:

Steinkraus, Keith. 2004. *Industrialization of Indigenous Fermented Foods, Revised and Expanded*. CRC Press.

Vocabulary

Cholera:	a diarrheal disease that can kill within hours if left untreated.
In conjunction:	at the same time.
Unwholesomeness:	dirtiness.
Wholesomeness:	hygienic condition.

Source 14: An anthropologist's description of fermented fish products common in Southeast Asian cuisines

For the Burman, the prized accompanying dish of fermented anchovies is called *Ngapi*. This product can be made from different types of dried fish. After drying the fish or shrimp in the sun, it is mashed up with salt and packed into jars. The resultant material is pungent and a highly prized condiment for rice. The Thais call a similar product of fermented salted shrimp *kapi* and the product is usually mixed with chilli peppers. It is also used in Malay and Indonesian dishes. The English colonists of the Malay Straits Settlements adopted the Malay word, *balacan*, for this dish made from small fish or shrimp, along with salt and spices.

Source:

Van Esterik, Penny. 2008. *Food Culture in Southeast Asia*, Greenwood Press, Westport, Connecticut.

Vocabulary

Pungent: very strong smelling.

Source 15: Blocks of *belachan* (sun-dried fermented shrimp paste) ready for wrapping

Terasi or *belachan* seen at a cottage industry producer's house in Malaysia



Source:

Yong, Yun Huang. www.flickr.com/photos/goosmurf/1386261838

Source 16: *Bagoong* (fermented shrimp or fish paste)

Bagoong is popularly paired with green mangoes in the Philippines.



Source:
tofuprod. www.flickr.com/photos/tofuprod/10323606746

Source 17: *Guinamos* (fermented fish/oysters/shrimp)

An array of *Guinamos* at a market stall in Cebu City, Philippines.



Source:

flongology.wordpress.com/2015/03/16/where-do-danggit-and-dried-fish-fans-go-in-cebu-city

Source 18: Types of fermented foods in Southeast Asia

Country	Fermented Food Product Category			
	Shrimp Paste	Fish Paste	Fish Sauce	Shrimp Sauce
Cambodia	<i>kapi</i>	<i>Prahok</i>	<i>tuk Trey</i>	
Indonesia	<i>terasi udang</i>	<i>terasi ikan</i>	<i>kecap ikan</i>	
Lao PDR		<i>pa dek</i>	<i>nam paa</i>	
Malaysia	<i>balacan or belachan</i>		<i>budu</i>	
Myanmar	<i>ngapi seinsa</i>	<i>ngapitaungtha</i>	<i>ngagampyaye</i>	<i>pazungampyaye</i>
Philippines	<i>Bagoong</i> <i>alamarang</i> <i>dinailan</i> <i>guinamos</i>		<i>patis</i>	<i>alamarang patis</i>
Thailand	<i>kapi</i>		<i>nam pla</i> <i>budu</i> <i>tai pla</i>	<i>nam kapi</i>
Viet Nam	<i>mắm ruốc</i> <i>mắm tôm</i>	<i>mắm nêm</i>	<i>nước mắm</i>	

Source:

Ruddle, Kenneth and Ishige, Naomichi. 2010. 'On the Origins, Diffusion and Cultural Context of Fermented Fish in Southeast Asia', *Globalization, Food and Social Identities in the Asia Pacific Region*, ed. James Farrer. Tokyo: Sophia University Institute of Comparative Culture.

Vocabulary

- Bagoong*: fermented shrimp or fish paste in the Philippines.
- Balacan*: Malaysian fermented salted shrimp paste.
- Gai Yang*: Lao-style grilled chicken.
- Garum*: fermented fish sauce in ancient Rome.
- Guinamos*: fermented fish/oysters/shrimp in the Philippines.
- Kapi*: Thai fermented salted shrimp paste.
- Nam pla prik*: *nam pla* refers to fish sauce and *prik* refers to Thai chillies.
- Nganpyaye*: Burmese fish sauce.
- Ngapi*: Burmese fermented fish/shrimp paste.
- Nước mắm*: Vietnamese fish sauce.
- Padek*: Lao fermented fish paste.
- Prahok*: Cambodian fermented fish paste.
- Terasi*: Indonesian fermented shrimp paste.

Handout 2: How important are fermented fish products in Southeast Asian cuisines?

Fermentation is a natural process involving the chemical breakdown of a food by bacteria or yeasts. While this may sound disgusting or dangerous, this process has long been used by people in cultures all over the world. You almost certainly eat many fermented foods!

1. How many fermented foods can you list?

2. Fill in the blanks with the six words below

- staple
- preservation
- cooked
- ingenuity
- fermentation
- facilitates

Fermented fish products such as fish sauces, fish paste, or salted fish have been consumed since ancient times. Due to limitations in transportation, the provision of fresh fish to inland customers was impossible and this encouraged _____ as a preservation technique.

In Southeast Asian countries, a sauce or paste made from fermented fish or shellfish accompany most rice meals. The fish are salted, dried, pounded and packed with toasted rice and rice husk in jars for a month or more. Fish products that are fermented become ' _____ ' and are no longer considered raw.

While it is not known if the concept of fermenting fish as a _____ technique spread from ancient Rome and Greece to Southeast Asia through trade links, the centrality of fermented fish products in the region demonstrates the _____ of the local people in preserving much of the seasonally available fish so that they could add as much protein as possible to their diets. The popularity of fermented products also reinforces how rice is a _____ food in the region. As eating large quantities of rice is a cheap source of amino acids and energy, hence a vital individual foodstuff is either a salty side dish or a condiment that _____ rice consumption. It may be interesting to observe that the main regions where fermented fish products are consumed overlap with the main regions of irrigated cultivation.

Fermented fish products are widely used in Southeast Asian cooking and almost every country in the region has its own version. Let's find out more about the various fermented fish product from the countries in Southeast Asia.

Handout 3a: Fermented fish products in Southeast Asia – Gallery walk

1. You will follow the instructions from your facilitator and go through the gallery of sources. As you look at the sources, think about the following:

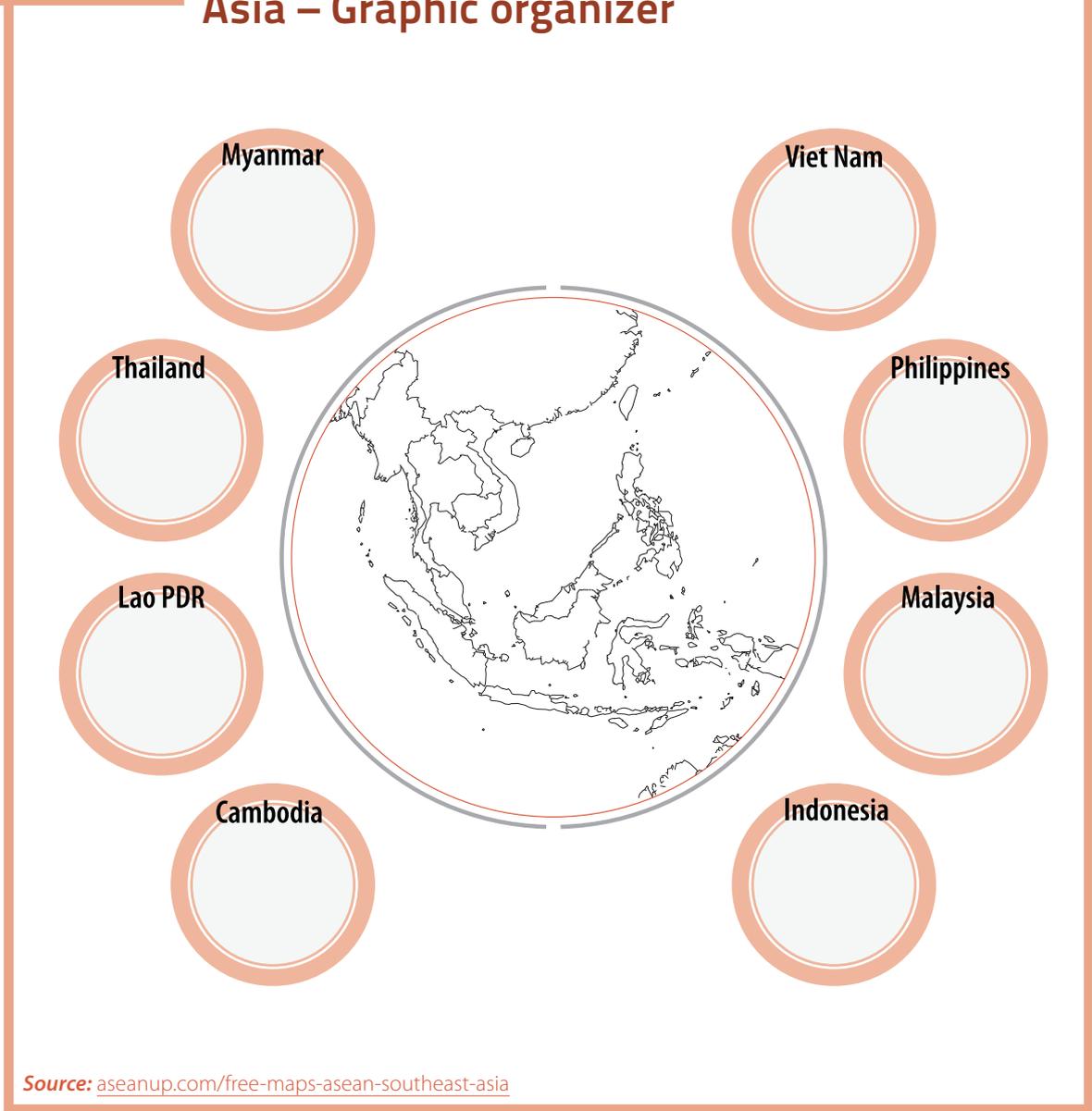
- a. What is the fermented fish product called locally?*
- b. How is it produced?*
- c. How is it used in cooking?*
- d. How do we know that these products are important?*

2. Remember to proceed in an orderly manner.

3. Note your findings in the graphic organizer.

4. After completing the gallery walk, share your findings with your group members. Make sure to add any points you might have missed when you did your gallery walk.

Handout 3b: Fermented fish products in Southeast Asia – Graphic organizer



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

Home Extension Activity: Reflection – Rice, Spice, the Taste of Life

- Interview a member of your family for a favourite recipe of the family. What is the name of the dish and what do you eat this dish with?
- Write down all of the ingredients required to make the dish.
- Go through this ingredient list with your family member and identify the herbs, spices and fermented fish products used. (*There is a list of popular herbs and spices in Southeast Asian cuisines on the next page for reference.*)
- Ask your family member if the herbs, spices and fermented fish products can be substituted or left out of the dish.
- Note his/her response and reaction.
- Ask why these herbs, spices and fermented fish products are important to this dish and other dishes in your cuisine.
- Write a report to reflect on how important spices and fermented fish products are to Southeast Asian cuisines.

My family's favourite dish is:

The ingredients required are:

Additional information on this dish:

Popular Seasonings in Southeast Asia

Basil, including Asian basil, lemon basil and holy basil – is a variety of sweet basil, and widely used in salads and stir-fry dishes throughout the region.

Cardamom, a relative of ginger, is widely used in Cambodia and Viet Nam.

Cinnamon or cassia bark is usually sold in sticks or ground to a powder and used in Malay and Indonesian dishes.

Cloves are small black flower buds of a plant found in the Spice Islands, the Moluccas, and have medicinal properties. They are common in Malay and Indonesian food.

Coriander leaves, stems, seeds and roots are all used. The seeds are usually ground, while the leaves and stems are popular in a wide range of dishes. The roots are important in Thai-Lao cooking. A long-leafed version with a serrated edge is used in Vietnamese and Cambodian soups and eaten raw in north-eastern Thai and Lao dishes.

Galangal is a relative of ginger used in Thai, Lao, Khmer, Vietnamese and Indonesian cooking (where it is known as *laos*). It is used in soups and curries.

Garlic is used in most regional cuisines as part of the flavour paste.

Ginger is a tuber grown throughout Southeast Asia. Ginger has medicinal properties and is often used to make a healing hot drink, ginger tea.

Lemongrass is an herb native to Malaysia. The tough stalks provide a popular flavour in soups and are ground to make Thai, Lao, Khmer, Vietnamese, Malay and Indonesian flavour pastes.

Mace is the membrane on the nutmeg, usually sold in the form of a powder.

Mint leaves are used fresh in Lao and Vietnamese salads and in meat dishes.

Nutmeg comes from the Spice Islands, the Moluccas. It is grated into many Malay and Indonesian dishes.

Pandan leaves add flavour to steamed dishes and are used as wrappers and plates.

Sakhan is an aromatic wood used in Luang Prabang, Lao PDR to provide a distinctive bitter taste to stews.

Star anise is important in Vietnamese cooking, particularly for making *phở* soup.

Tamarind is often used in the form of paste made from the tamarind pod dissolved in water. It gives a sour taste to soups and stews.

Turmeric root is related to ginger, and gives a yellow colour to dishes.

Wild lime and **wild lime leaves** are used to flavour stews and soups.