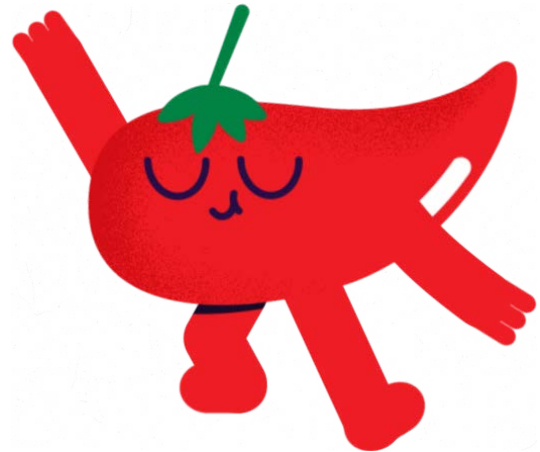


Take Me with You

Year 4 – Science

Year 5 – Technologies

Year 6 – Humanities and Social Sciences



(Science; Yr 5, ACSSU043)

Living things have structural features and adaptations that help them to survive in their environment

(Science; Yr 5, ACSHE083)

Scientific knowledge is used to solve problems and inform personal and community decisions

(Science; Yr 6, ACSHE100)

Scientific knowledge is used to solve problems and inform personal and community decisions

(Technologies; Yr 3&4, ACTDEK012)

Investigate food and fibre production and food technologies used in modern and traditional societies

(Technologies; Yr 5&6, ACTDEK021)

Investigate how and why food and fibre are produced in managed environments and prepared to enable people to grow and be healthy

(HASS, Geography; Yr 4, ACHASSK087)

The main characteristics of the continents of Africa and South America and the location of their major countries in relation to Australia

(HASS, Geography; Yr 4, ACHASSK088)

The importance of environments, including natural vegetation, to animals and people

(HASS; Yr 6, ACHASSK137)

The contribution of individuals and groups to the development of Australian society since Federation

Cross-curriculum priority

Asia and Australia's engagement with Asia

Take Me with You

How foods move around the world

It seems like familiar foods have always been around, right? It might surprise students to learn that, in the scheme of things, some foods are remarkably recent inventions. Others – the world travellers – have come a long way and look very different to the way they did originally.

Equipment:

A large map of the world

Internet access for looking up locations referenced in the game

Post-it notes or similar markers that can be placed temporarily on the map

A set of six-sided dice

Duration:

45 minutes plus time for student projects in additional sessions

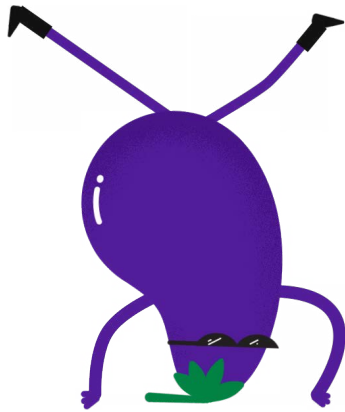
Location:

The classroom

Notes:

Before the class

- Print and cut apart the cards on the following page.



Introducing the game

- Tell students you're going to play a hypothetical game about some of the ways foods move around the world.
- The aim of the game is for your food to take over as much of the world as possible.
- As an example, show the class a photo of a white Asian eggplant (it'll look small, oblong, and white – a lot more like their namesake) and a dark purple large eggplant that is common today.

(Links to images are in Resources.)

Playing the game

👁 Watch **The One with the Nightshades**



- Divide the class into five or six groups.
- Give each group one of the cards in the top row on the next page (e.g. eggplant).
- Tell them their starting position. One student from the group places a post-it note on the map with their vegetable name and its date of origin.
- Tell students it's difficult to be exact about where and when a vegetable was first domesticated (farmed) but the starting points we have given them are a pretty close guess. Archaeologists, who find clues such as seeds, make good estimates. Often they're looking at clues from thousands of years ago. (Ask a student to calculate how many times their own age makes a thousand years.)
- Have a student roll the die.
- Each card is numbered. Read the card with the number corresponding to the die roll and give it to the relevant team. They write the detail and the date on post-it notes and place these on the map. Some teams will place several notes per round, and this shows the wide expansion of some foods such as rice.
- Read the cards until each team has placed markers with their plant, notes and the date.
- Roll the dice to repeat this for each round until the end.
- If you like, devise a way to use the dates to show the passage of time (they are not all moving at the same pace, e.g. potatoes, which stayed in Peru and the surrounding area for nearly 11,000 years before exploding across the world in the last 300 years!)

After the game

? Discuss what they learned about how foods might move and be adopted by as many people as possible.

- Which plants went quickest?
- Which plants went furthest?
- Which plants modified easily?

? Have students develop a list of reasons why people carry plants across large distances – ideas could include:

- ◇ The food is very nutritious/useful
- ◇ The food is easy to grow
- ◇ The food is easy to store/dry and then grow again from seed years later
- ◇ The food plant can adapt to different climate zones
- ◇ Trade
- ◇ Exploration
- ◇ Invasion
- ◇ Migration
- ◇ Natural disasters such as floods

This is your Plant Life

After playing the game, students become experts in the history of their team's plant. They investigate its history and prepare responses to these questions, in oral, print or digital form:

- ? Has this vegetable/grain got bigger over time? How?**
- ? Has this vegetable/grain got more nutritious over time?**
- ? In good storage conditions, how long can this plant's seeds remain viable? (Alive.)**
- ? Roughly how many varieties of this plant exist today?**
- ? What family does this plant belong to?**
- ? What are some other plants in the same family?**
- ? Did this plant appear in ancient times in wild forms in more than one place?**
- ? Which societies were the main groups of people to domesticate (farm) this plant?**
- ? Where did they live?**
- ? What happened to them? (Are they still there or did another society take over?)**
- Students use the resources listed for their food type, plus other resources of their own finding online, in books, magazines and cookbooks.

Critical Literacy Alert!

As much of this field can be contested, students should be wary of authenticity in the sources they use. It's a good idea to cross-reference and look for recent scientific archaeology that helps establish genetic origins of plants. (For example, direct them to ask who owns this website? Is it a university or research facility, or is it a promotional board intending to sell this food item? Why would I place more trust in a university site?)



Resources

- ◇ **Carrot:** The Carrot Museum – History of Carrots: <http://www.carrotmuseum.co.uk/history.html>
- ◇ **Chilli:** Bioweb – The Life History of Hot Peppers (chillies): http://bioweb.uwlax.edu/bio203/2011/shook_john/reproduction.htm
- ◇ **Chilli:** Aji – Chilli Peppers in Peru: <http://www.limaeasy.com/peruvian-food-guide/typical-aji-chilli-peppers>
- ◇ **Chilli:** Time – Chilli Peppers: Global Warming: http://content.time.com/time/specials/2007/article/0,28804,1628191_1626317_1632291,00.html
- ◇ **Eggplant:** Thought.co – Domestication History and Geneology Eggplant: <https://www.thoughtco.com/eggplant-history-solanum-melongena-170820>
- ◇ **Eggplant:** Wikipedia – See History: <https://en.wikipedia.org/wiki/Eggplant>
- ◇ **Potato:** Smithsonian – How the Potato Changed the World (for older students): <https://www.smithsonianmag.com/history/how-the-potato-changed-the-world-108470605/>
- ◇ **Potato:** The Incas: History of Andean Empire: <https://www.livescience.com/41346-the-incas-history-of-andean-empire.html>
- ◇ **Potato:** Wikipedia – History of the Potato: https://en.wikipedia.org/wiki/History_of_the_potato
- ◇ **Rice:** Wikipedia – Ricepedia – History of Rice Cultivation: <http://ricepedia.org/culture/history-of-rice-cultivation>
- ◇ **Rice:** Wikipedia – Huai River: https://en.wikipedia.org/wiki/Huai_River
- ◇ **Rice:** Indian Campaign of Alexander the Great: https://en.wikipedia.org/wiki/Indian_campaign_of_Alexander_the_Great
- ◇ **Tomatoes:** Smithsonian – Why Is This Wild Tomato So Important?: <https://www.smithsonianmag.com/travel/why-wild-tiny-pimp-tomato-so-important-180955911/>

Team 1: Egg-cellent Eggplants

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>TEAM 1</p> <p>Your Team is...</p> <p>Egg-cellent Eggplants</p> <p>Your starting place is:</p> <p>Bangladesh</p> <p>CARD 1</p>	<p>TEAM 1</p> <p>Unsure, 300 BCE?</p> <p>MEDICINE</p> <p>The exact origin of eggplant is disputed but the first ones were probably a small, light green, round, bitter fruit, used in Indian medicine.</p> <p>CARD 2</p>
<p>TEAM 1</p> <p>344 BCE</p> <p>INVASION</p> <p>Alexander the Great takes an army to India, and returns to Greece with eggplant seeds. A few are grown and documented in Greece and Rome.</p> <p>CARD 3</p>	<p>TEAM 1</p> <p>100 – 700 CE</p> <p>TRADE</p> <p>Chinese farmers receive seeds and develop eggplant into white, purple and long-necked varieties. They concentrate on reducing the bitter taste.</p> <p>CARD 4</p>
<p>TEAM 1</p> <p>500 CE</p> <p>TRADE</p> <p>Traders along the Silk Road bring seeds and fruit of the eggplant from Asia to Europe.</p> <p>CARD 5</p>	<p>TEAM 1</p> <p>1000–1200 CE</p> <p>TRADE and INVASION</p> <p>Arab expansion and conquest of territory in Spain, Sicily and North Africa introduces eggplant. It grows prolifically in Egypt, Turkey and Greece.</p> <p>CARD 6</p>
<p>TEAM 1</p> <p>1600s CE</p> <p>TRADE</p> <p>Eggplants are first described as curiosities in England where they are grown as novelties and suspected of being poisonous.</p> <p>CARD 7</p>	<p>TEAM 1</p> <p>1950–2000 CE</p> <p>MIGRATION</p> <p>Italian and Mediterranean settlers come to Australia after World War Two, bringing a taste for eggplant and the skills to grow it. Today, Asian and Lebanese eggplants are almost as common as the Mediterranean type, reflecting changed cultures and food preferences in Australia.</p> <p>CARD 8</p>

Team 2: Hot Chilli Peppers

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>TEAM 2</p> <p>Your Team is...</p> <p>Hot Chilli Peppers</p> <p>Your starting place is:</p> <p>Bolivia</p> <p>CARD 1</p>	<p>TEAM 2</p> <p>7500 BCE</p> <p>WILD FOODS</p> <p>Chillies are eaten in Peru and Bolivia and the mountain communities of the Andes. Farmers start to domesticate the plant.</p> <p>CARD 2</p>
<p>TEAM 2</p> <p>7000 BCE</p> <p>TRADE & MODIFICATION</p> <p>People trade or take seeds to Ecuador, Venezuela and the Caribbean. Chilli peppers change from generation to generation and farmers begin collecting hundreds of different types.</p> <p>CARD 3</p>	<p>TEAM 2</p> <p>1400s CE</p> <p>EXPLORATION</p> <p>Christopher Columbus encounters hot chilli peppers in the Caribbean. They are seen as a cheap substitute for expensive black pepper.</p> <p>CARD 4</p>
<p>TEAM 2</p> <p>1400 CE</p> <p>EXPLORATION and TRADE</p> <p>The Conquistadors take chilli peppers from South America to Europe, where they are grown in Spain and Portugal.</p> <p>CARD 5</p>	<p>TEAM 2</p> <p>1500 CE</p> <p>EXPLORATION, TRADE and INVASION</p> <p>Portuguese traders, explorers and occupying forces take chillies with them: within 30 years of Christopher Columbus' encounter they are grown in Goa, India, in Thailand and in Brazil.</p> <p>CARD 6</p>
<p>TEAM 2</p> <p>1500 CE</p> <p>TRADE and EXPLORATION</p> <p>Hot chillies spread like wildfire (get it?) across Asia and throughout the Mediterranean basin wherever climates are warm enough to grow them. They become favourite foods in many hot-country cuisines.</p> <p>CARD 7</p>	<p>TEAM 2</p> <p>1950–2000 CE</p> <p>MIGRATION</p> <p>Australia accepts mass migration after World War Two. People with expertise growing Mediterranean varieties of chillies arrive and begin farming in Australia. Thirty years later, following the Vietnam War, people with skills growing Asian varieties arrive and grow Asian chillies on a large scale for a market increasingly interested in Asian food.</p> <p>CARD 8</p>

Team 3: Potato Perfection

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>TEAM 3</p> <p>Your Team is...</p> <p>CARD 1</p> <h2>Potato Perfection</h2> <p>Your starting place is:</p> <p>Peru</p>	<p>TEAM 3</p> <p>10,000–8,000 BCE</p> <p>CARD 2</p> <h2>MEDICINE</h2> <p>Native populations in Peru eat potatoes – even though they are poisonous! They have worked out that eating clay at the same time as the potatoes neutralises the poison. This makes potatoes, a valuable food source, available to them.</p>
<p>TEAM 3</p> <p>7,000–0 BCE</p> <p>CARD 3</p> <h2>MODIFICATION</h2> <p>Farmers in the Andes (Peru, Bolivia, Ecuador), develop non-poisonous varieties of potatoes. They grow hundreds of varieties, each at different altitudes in the mountains.</p>	<p>TEAM 3</p> <p>1300 CE</p> <p>CARD 4</p> <h2>INVASION</h2> <p>The Inca Empire rises in Peru and conquers territory, taking potatoes with them to Ecuador, Columbia, Chile and parts of what are now Bolivia and Argentina.</p>
<p>TEAM 3</p> <p>1500 CE</p> <p>CARD 5</p> <h2>EXPLORATION and INVASION</h2> <p>The Spanish, looking for gold, conquer the Incas and take the strange tubers back to Europe. Potatoes were not popular in Europe: people thought they were boring and unhealthy, possibly poisonous.</p>	<p>TEAM 3</p> <p>1700 CE</p> <p>CARD 6</p> <h2>FAMINE</h2> <p>Famine in Northern Europe (Prussia) and in France means that starving people eat the unpopular potato. It spreads through peasant communities in cooler climates such as Russia, the Netherlands, England, Ireland, Scotland and France.</p>
<p>TEAM 3</p> <p>1800s CE</p> <p>CARD 7</p> <h2>FAMINE and MIGRATION</h2> <p>Potato blight hits Europe, hard. In Ireland, over several summers it wipes out the crops and results in widespread famine. Millions of people emigrate to America, Australia and other parts of the British Empire, taking potatoes with them.</p>	<p>TEAM 3</p> <p>2009 CE</p> <p>CARD 8</p> <h2>TRADE and INFESTATION</h2> <p>Potatoes are grown on a huge scale in China for export. In 2009, potato crops in North America are badly hit by a beetle imported on Chinese potato crops. (World expansion can be reduced by disease and pest movement.)</p>

Team 4: Crazy Carrots

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>TEAM 4</p> <p style="text-align: right;">CARD 1</p> <p style="text-align: center;">Your Team is...</p> <h2 style="text-align: center;">Crazy Carrots</h2> <p style="text-align: center;">Your starting place is:</p> <p style="text-align: center;">Afghanistan</p>	<p>TEAM 4</p> <p style="text-align: right;">CARD 2</p> <p style="text-align: center;">3000 BCE</p> <h2 style="text-align: center;">WILD FOODS</h2> <p style="text-align: center;">Wild carrots appear across Europe, growing in many regions. They are purple or sometimes white. People collect the seeds for medicine.</p>
<p>TEAM 4</p> <p style="text-align: right;">CARD 3</p> <p style="text-align: center;">900 CE</p> <h2 style="text-align: center;">MODIFICATION</h2> <p style="text-align: center;">A yellow variant of the normal purple carrot appears, probably in Afghanistan or nearby parts of Russia where farmers are selecting plants with larger roots.</p>	<p>TEAM 4</p> <p style="text-align: right;">CARD 4</p> <p style="text-align: center;">1100 CE</p> <h2 style="text-align: center;">INVASION</h2> <p style="text-align: center;">The Arabs occupy Spain and bring purple and yellow carrots with them.</p>
<p>TEAM 4</p> <p style="text-align: right;">CARD 5</p> <p style="text-align: center;">1200 CE</p> <h2 style="text-align: center;">TRADE</h2> <p style="text-align: center;">Purple and red carrots are taken to Italy.</p> <p style="text-align: center;">They are also traded to China.</p>	<p>TEAM 4</p> <p style="text-align: right;">CARD 6</p> <p style="text-align: center;">1300-1500 CE</p> <h2 style="text-align: center;">TRADE and EXPLORATION</h2> <p style="text-align: center;">Yellow, red and purple carrots spread across Northern Europe and reach England just after 1400.</p>
<p>TEAM 4</p> <p style="text-align: right;">CARD 7</p> <p style="text-align: center;">1700 CE</p> <h2 style="text-align: center;">MODIFICATION</h2> <p style="text-align: center;">An orange variant appears, probably in the Netherlands, developed from the yellow varieties.</p>	<p>TEAM 4</p> <p style="text-align: right;">CARD 8</p> <p style="text-align: center;">1600 CE</p> <h2 style="text-align: center;">EXPLORATION</h2> <p style="text-align: center;">Orange and white carrots are taken with European explorers and settlers to all parts of America, Australia, and parts of Africa.</p>

Team 5: Radical Rice

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>Team 5</p> <p style="text-align: right;">CARD 1</p> <p style="text-align: center;">Your Team is...</p> <h2 style="text-align: center;">Radical Rice</h2> <p style="text-align: center;">Your starting place is:</p> <p style="text-align: center;">China, Wuhan district 8,000 BCE (10,000 years ago)</p>	<p>Team 5</p> <p style="text-align: right;">CARD 2</p> <p style="text-align: center;">6,000 BCE</p> <h2 style="text-align: center;">FLOOD</h2> <p style="text-align: center;">The Huai River floods regularly. It carries away your rice crop and the seeds take root downstream gradually ending up growing in wet areas all the way to the coast.</p>
<p>Team 5</p> <p style="text-align: right;">CARD 3</p> <p style="text-align: center;">1,000 BCE</p> <h2 style="text-align: center;">MIGRATION</h2> <p style="text-align: center;">Coastal traders establish communities in Western India and Sri Lanka. They take rice grains / seeds with them. Gradually, rice spreads throughout South-East Asia.</p>	<p>Team 5</p> <p style="text-align: right;">CARD 4</p> <p style="text-align: center;">1500 BCE</p> <h2 style="text-align: center;">MODIFICATION</h2> <p style="text-align: center;">An independent strain of rice appears in the Niger River Delta and spreads to Senegal.</p>
<p>Team 5</p> <p style="text-align: right;">CARD 5</p> <p style="text-align: center;">344 BCE</p> <h2 style="text-align: center;">INVASION</h2> <p style="text-align: center;">Alexander the Great takes an army to India, and returns to Greece with rice grains / seeds.</p>	<p>Team 5</p> <p style="text-align: right;">CARD 6</p> <p style="text-align: center;">1000-1400 CE</p> <h2 style="text-align: center;">TRADE and INVASION</h2> <p style="text-align: center;">With the Arab conquest of Spain, rice spreads from Greece to Spain, Sicily, and North Africa – and gradually all around the Mediterranean basin. Rice is taken to Turkey, Bulgaria and France.</p>
<p>Team 5</p> <p style="text-align: right;">CARD 7</p> <p style="text-align: center;">1600 CE</p> <h2 style="text-align: center;">EXPLORATION</h2> <p style="text-align: center;">Explorers and settlers take rice grains/seeds to the New World. The Portuguese take rice to Brazil; the Spanish take it to Central and South America; and the British take it to North America.</p>	<p>Team 5</p> <p style="text-align: right;">CARD 8</p> <p style="text-align: center;">1850 CE</p> <h2 style="text-align: center;">MIGRATION</h2> <p style="text-align: center;">British settlers to Australia have experience growing rice in India and the Americas, so they plant it in warmer, wetter northern Australia. Gradually production moves south to irrigated land near the Murray river.</p>

Team 6: Terrific Tomatoes

PRINT EACH TEAM ON A DIFFERENT COLOURED CARD

<p>Team 6</p> <p>Your Team is...</p> <p>CARD 1</p> <h2>Terrific Tomatoes</h2> <p>Your starting place is:</p> <p>the border of Ecuador & Peru</p>	<p>Team 6</p> <p>unsure, 1500 BCE?</p> <p>CARD 2</p> <h2>TRADE and MIGRATION</h2> <p>Tomatoes are eaten in Aztec communities across Mexico, Belize, Guatemala, El Salvador and Costa Rica. They are no longer tiny bitter yellow or red fruit but have become larger and softer.</p>
<p>Team 6</p> <p>1500 CE</p> <p>CARD 3</p> <h2>EXPLORATION</h2> <p>The Conquistadors take tomatoes from the Aztecs to Spain. Called '<i>love apples</i>' these small yellow fruit are considered poisonous and were grown just for their looks.</p>	<p>Team 6</p> <p>1500-1700s</p> <p>CARD 4</p> <h2>TRADE and MODIFICATION</h2> <p>Tomatoes are traded to Italy where they are grown in flower gardens but not to eat. Tomatoes, however, modify easily from one generation to the next, and they become developed by Italian farmers for larger red and orange fruit. Soon it becomes evident they were delicious.</p>
<p>Team 6</p> <p>1600 CE</p> <p>CARD 5</p> <h2>TRADE</h2> <p>British scientists and collectors love a special plant, and they get tomatoes just before 1600. Their poisonous reputation come with them and it takes until the mid-1800s before people eat tomatoes regularly in Britain. (By which time they are a staple in Italy and Spain.)</p>	<p>Team 6</p> <p>1800 CE</p> <p>CARD 6</p> <h2>TRADE and INVASION</h2> <p>The British control territory in the Middle East in the early 1800s. The British Consul to Syria, John Barker, starts cultivating in the area. It doesn't catch on as a common food until about 1880 in Egypt, Turkey, Lebanon and across the Middle East.</p>
<p>Team 6</p> <p>1700s CE</p> <p>CARD 7</p> <h2>EXPLORATION</h2> <p>Although tomatoes came from Central and South America, the British and North American settlers did not cultivate them until about 1710-1800.</p>	<p>Team 6</p> <p>1850-2000</p> <p>CARD 8</p> <h2>MIGRATION</h2> <p>Although there are native bush tomatoes that have been eaten in Australia for thousands of years, they are not the same plant. The tomatoes we see in supermarkets came to Australia with European settlers, especially British and then Italian settlers, who appreciated that a warm long summer suits tomatoes and they grow well here.</p>