AN ACTIVITY GUIDE FOR

Alberto Salas Plays PAKA PAKA CON LA PAPA

by Sara Andrea Fajardo;
illustrated by Juana Martinez-Neal

ABOUT THE BOOK

What can a potato do? To the Peruvian scientist Alberto Salas, they have the power to change the world. Go on the hunt with Alberto for wild potatoes before they become extinct in this playful picture-book biography by Sara Andrea Fajardo, gorgeously illustrated by the Caldecott Honoree Juana Martinez-Neal.

High up in the Andes mountains of Peru, agricultural scientist Alberto Salas is on a quest. A quest for . . . potatoes.

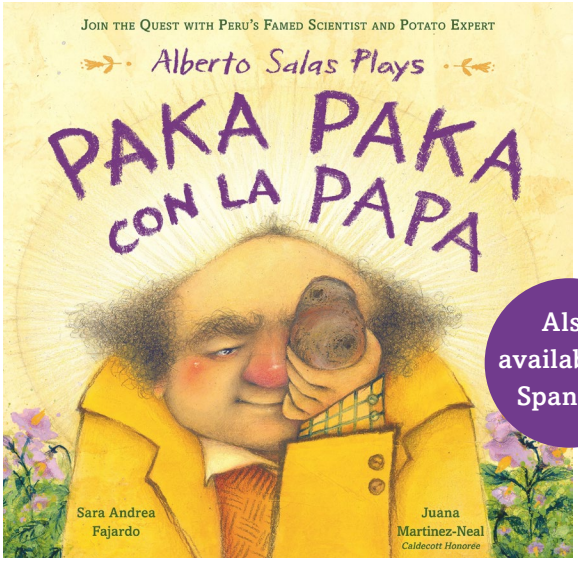
Up and down the Andes he goes, playing an epic game of paka paka con la papa, potato hide-and-seek. These potatoes are special: They have the power to feed the world.

Alberto doesn't have a second to waste. The climate is changing and he must find each and every one to save them before they are extinct.

The game is on!

Alberto races and peers and prods. Drives and trods and climbs. Will he find the potato he seeks? Will he win the game of paka paka con la papa?

Author Sara Andrea Fajardo's spirited biography about "the godfather of potatoes" is paired with lush art by Caldecott-honoree Juana Martinez-Neal to capture how the celebrated scientist Alberto Salas brings joy, curiosity, and fun to his very important, life-changing work.



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ABOUT THE CREATORS

Sara A. Fajardo is a Peruvian American writer whose dad constantly reminded her that potatoes are from the Andes. So she jumped at the chance to work as a consultant for the International Potato Center. Over the years she's learned which potatoes help paint your lips the perfect shade of red, how to cure a sour stomach with potato, and how much we owe the farmers and plant scientists who care for our potatoes. She's never met a potato she doesn't love and wants the world to know that a sweet potato is as related to a potato as a lemur is to a gorilla. Please don't ever tell her that your favorite potato is a sweet potato because it will lead to a very long yet loving lecture.

Juana Martinez-Neal is the Peruvian-born daughter and granddaughter of painters. Her debut as an author/illustrator, *Alma and How She Got Her Name*, was awarded a Caldecott Honor and *Zonia's Rain Forest* was named an ALA Top 10 Sustainability-Themed Children's Book. She illustrated the *New York Times* bestselling picture book *Tomatoes for Neela* by Padma Lakshmi; *Fry Bread: A Native American Family Story* by Kevin Noble Maillard, which won a Robert F. Sibert Medal; and *La Princesa and the Pea* by Susan M. Elya, for which she won a Pura Belpré Illustrator Award. She also co-illustrated, with Molly Idle, *I Don't Care* by Julie Fogliano. Juana Martinez-Neal lives in Connecticut with her family.

DISCUSSION QUESTIONS

1. When Alberto first started collecting, things like GPS or Google maps did not exist. He had to rely on the position of the sun, a compass, his memory, and the maps he drew to get him from place to place. What kind of landmarks can you use to help you find your way?

2. A lot of the games Alberto played as a boy helped him as an adult scientist. For example, he used to race against friends to harvest the most papa de zorro and was inspired by the cloth dolls his friends made to make his own paper wawas to carry what he collected. Why do you think that the games Alberto played as a little boy were so important in helping him become a successful plant collector? What games do you play in nature that could help you as a scientist?

3. The native potatoes that Alberto found have beautiful names in Quechua that are inspired by how they look. For example, Azul Sunqu means blue heart, Puma Maki means puma's paw, and Ritipa Sisan means snow flower. What names would you give to the fruits and vegetables you eat based on how they look?

4. Part of what made Alberto so successful was that he spoke both Spanish and Quechua. Why do you think speaking more than one language helped him?

5. Alberto didn't find the potatoes all by himself. Why was it so important for him to ask locals to help him find the potatoes he was seeking? How does their knowledge help plant collectors like Alberto to be more successful?

6. In the book it says "each plant lost is like a star dimming from the sky." Why is the loss of a potato variety something that we should worry about? Why is it important to collect and protect potatoes and all the fruits and vegetables we eat?

7. The author used Quechua words and phrases throughout the book when she was describing actions and the game of paka paka con la papa, potato hide-and-seek. How does this help you feel closer to Alberto and the Andes?

8. At the end of the book we learn that Alberto is revisiting a place that was once a quiet riverbank but is now a zoo. How does this help paint the picture of a changing world and the challenges plants face in surviving those changes?

9. Why do you think the author chose to tell this story as a game of paka paka, potato hide-and-seek? How does this game help you better understand Alberto's work?

10. The author was inspired by the star shape of potato flowers and uses that in her writing: "following the potato constellation," "stars sway where lions pace." How does this help bring you closer to Alberto's way of seeing the world?

11. The illustrator used a special art technique called collage to bring Alberto to life. That means she layered in bits of handmade paper, cut-out art pieces, and even soil into her artwork. How does this technique help you feel closer to Alberto's work?

PAKA PAKA CON LA PAPA MEMORY GAME

Not only were there no maps of the areas where Alberto was collecting, there was also only one book available in Peru that described in detail the characteristics, or features that make something unique, of the potato varieties he was seeking. That book was too prized to take on collection trips and had to be left in the capital city of Lima, which meant Alberto needed to draw his own maps and sketch out the features of the plants he would collect before setting off on his next adventure. Over time, he was able to memorize the uniqueness of each plant and not let himself be fooled by look-alikes.

Do you have what it takes to play paka paka con la papa? Test your memory skills by finding the hidden matches. Don't be fooled by look-alikes, because while some of these might appear similar, a plant collector knows to pay attention to details like the subtle color changes of the plant's petals or the shape of the leaves. Who will make the most matches?

How to Play

Objective

Find matching pairs of cards by remembering where they're located in the game grid.

Setup

- Shuffle your paka paka con la papa playing cards.
- Lay the cards face down in rows and columns.

- Players take turns flipping over two cards at a time to try and find matching pairs.
- If the cards match (for example, two photos of Alberto), the player keeps the pair and takes another turn. If the cards do not match, the player flips them back over so they're face down, then it's the next player's turn.
- Continue taking turns until all the cards have been matched up.
- The player with the most pairs at the end of the game wins.

Tips for Printing

- Print the memory cards double sided. Using a paper cutter (if available) cut each sheet out into eight individual cards. Laminate for repeated use.

MAKE YOUR OWN HERBARIUM SAMPLE

A herbarium sample is like a snapshot that lets future collectors know where a plant was collected and how it grew at a specific point in time. The same plant can look very different depending on where it was picked. For example, one papa de zorro, known as *Solanum acaule*, was collected at 3,200 feet, where it's not as cold as the highland Andes and rarely has frost, and another came from the side of the road at 4,000 feet, where temperatures can dip below freezing. The one from the lower elevation had big sprawling leaves that sprawled out as they reached for the sun, while the one at the higher elevation had tiny leaves that huddled close to the ground as if they were trying to keep warm.

You can make your own time-traveling herbarium samples by collecting and preserving flowers for the future.

What You'll Need

- Scissors (to cut the plant): Ask an adult to help with cutting if needed.
- Paper: Any kind of thick paper will work best, like scrapbook or construction paper.
- A pencil: For labeling your plant.
- Glue stick or tape: To attach your plant to the paper. Make sure to use the acid-free kind.
- A big heavy book: To press the plant flat and dry it.
- A magnifying glass: To look closely at the plant's details.
- A book or website to identify the scientific name of your plant: One resource is here.

How to Make Your Own Herbarium

1. Look for your plant specimens: Go outside and look for interesting plants, flowers, or leaves, or think about what kinds of plants you've seen in your environment (weeds, dandelions, wildflowers, etc.) and go searching specifically for them. You can ask an adult to help you identify them or use an app such as SciName.

2. Pick the plant: Gently cut your specimen from the plant. Make sure to cut a portion that has a stem, leaves, and a flower. This will give you a clearer idea of the different parts of the plant and what they look like for future reference.

3. Press your plant: To preserve your plant, place it between two sheets of paper. Put it in a book that is heavy enough to flatten it. Carefully close the book and place a heavy object, like another book, on top. You'll need to leave it for at least two to three days so the plant can flatten and dry out. If you're in a very humid area this may take a bit longer.

4. Prepare your herbarium sheet: When the plant is dried, you're ready to create your herbarium sheet. Get a piece of thick paper. Remove your plant specimen from the book and lay it out on the paper. Think about how it will best fit on the paper and place it so you can most appreciate the leaves and flowers.

5. Adhere your plant specimen to the paper: Use glue or tape to stick the plant onto the paper. Use an acid-free adhesive so that it doesn't eat away at your plant or paper over time. Make sure it is stuck down well so it doesn't come off the paper.

6. Label your herbarium: Jot down details about your plant, such as its common and scientific names, along with details about when and where you found it. Feel free to add other details, like what kind of aroma it has, its color, or anything special about it that you've noticed.

7. Store your herbarium: Once you're done, place your herbarium in a special folder or a box to keep it safe, or frame it and use it to decorate your walls.

OBSERVE LIKE A SCIENTIST

Alberto became an expert in identifying crop plants' wild relatives by looking closely at every detail of the plant. Can you look closely like Alberto? What do you see? Think like a scientist and draw the plant as realistically as possible. What do the different parts of the plant remind you of? How do you think that they help the plant? What names would you give them? Now compare your observations by researching the scientific names and think about how they help us identify plants no matter what language a person speaks. How close were you?

Do this with different plants. How are they different? How are they the same? How do these differences help the plant adapt and thrive in their environment?

OUTDOOR ACTIVITIES

See the World Like Alberto

Alberto never gets lost because he sees the landscape as a friendly face. Try to memorize your landscape like Alberto does! Look closely at your environment and identify what you see that can help you remember how to get back to a place. Now close your eyes and try to make a picture in your mind of it, then draw from memory what you saw.

Make Your Own Collection Map and Journal

Alberto couldn't just ask Alexa or Siri for directions. In fact, when he first started collecting, he had no access to a map and very few places in the Andes had phones. In order to know which direction he was going, Alberto had to rely on a compass and the location of the sun. He also carefully mapped out his route in his notebooks so he could remember details about each plant and where to find them later.

A river, a boulder, or a field of prickly cacti were all good markers to help Alberto find his way. He also always asked questions of those who knew best—the local farmers and community members, whose answers would guide him to hidden treasures and safety.

Next time you go for a nature walk try looking at the world like Alberto does and draw your own map, adding notes, such as time of year, to help you find your way in the future. What big landmarks stand out for you? What things will help you remember how to find it again? Are there any plants that stand out? Jot them down.

Tips for Mapmaking and Note-taking

1. Using a compass, identify which way is north. This will help you know what direction you're headed. Don't have a compass? Use the sun. Remember the sun rises in the east and sets in the west, so use the time of day and the position of the sun to identify each of the cardinal directions: north, south, east, and west.

2. Add a rose compass to your map to make it clear the direction in which the different landmarks lie.

3. Scan the landscape for clear landmarks that are likely to remain there throughout the changing seasons—a river, a creek, a boulder, a distinctive tree—and place them on your map.

4. Jot down notes to go with your map, such as the season or time of year. Remember, if you visit a river during the rainy season it might be raging rapids, but that same river during the dry season might be nothing but dust.

5. Look for distinctive plants, fungi, and flowers, and pay attention to what things surround them. This will help you understand the conditions in which they like to grow. Alberto always looked for the papa de zorro where animals couldn't reach it, like on the side of cliffs and under prickly cacti. Where do your plants or fungi like to grow? Under a log? Beside a tree? In the shade or open sun? Jot down these details in your notebook.

PAKA PAKA CON LA PAPA

MEMORY GAME

Azul Sunqu
(Blue Heart)
Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Azul Sunqu
(Blue Heart)
Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Gaspar
Solanum chaucha

Courtesy of the International Potato Center

Gaspar
Solanum chaucha

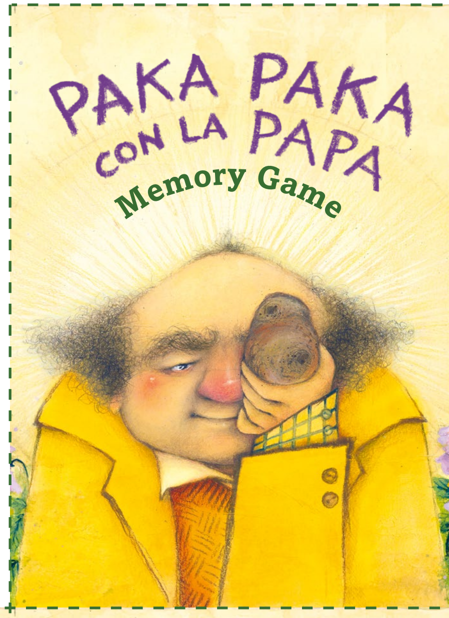
Courtesy of the International Potato Center

Puka Simi
(Red Mouth)
Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Puka Simi
(Red Mouth)
Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center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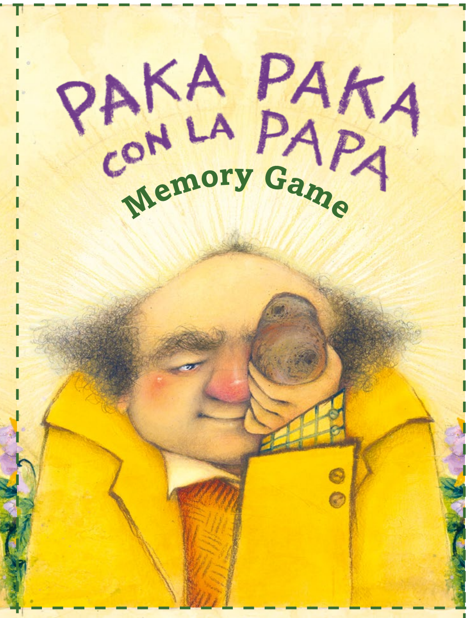
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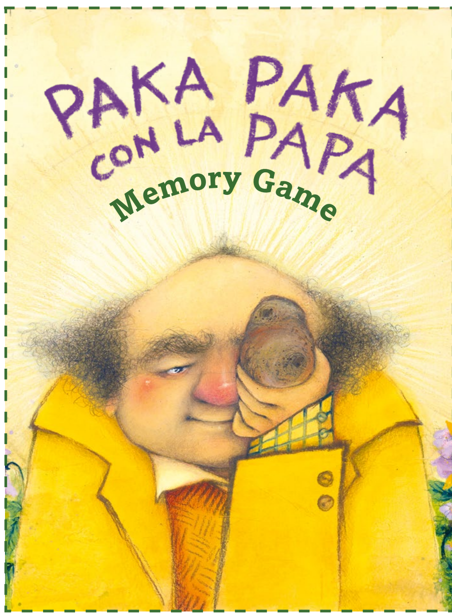
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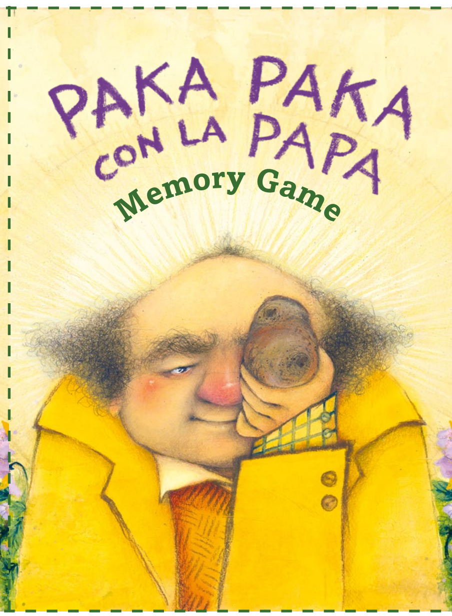
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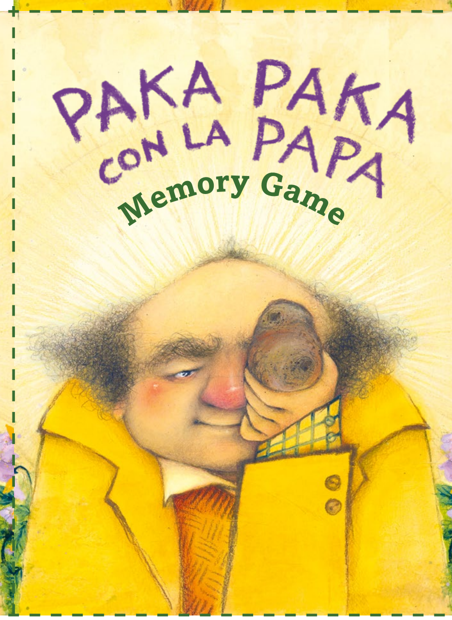
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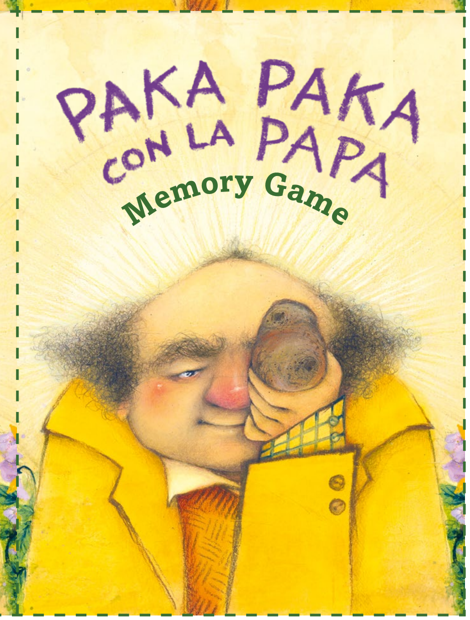

PAKA PAKA
CON LA PAPA
Memory Game

Yana Puma

(Black Puma)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yana Puma

(Black Puma)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yawar Wayku

(Blood Cooking)

Solanum stenotomum

Courtesy of the International Potato Center

Yawar Wayku

(Blood Cooking)

Solanum stenotomum

Courtesy of the International Potato Center

Native Potato Varieties

Courtesy of the International Potato Center

Native Potato Varieties

Courtesy of the International Potato Center

Puka Ñawi

(Red Eyes)

Solanum stenotomum

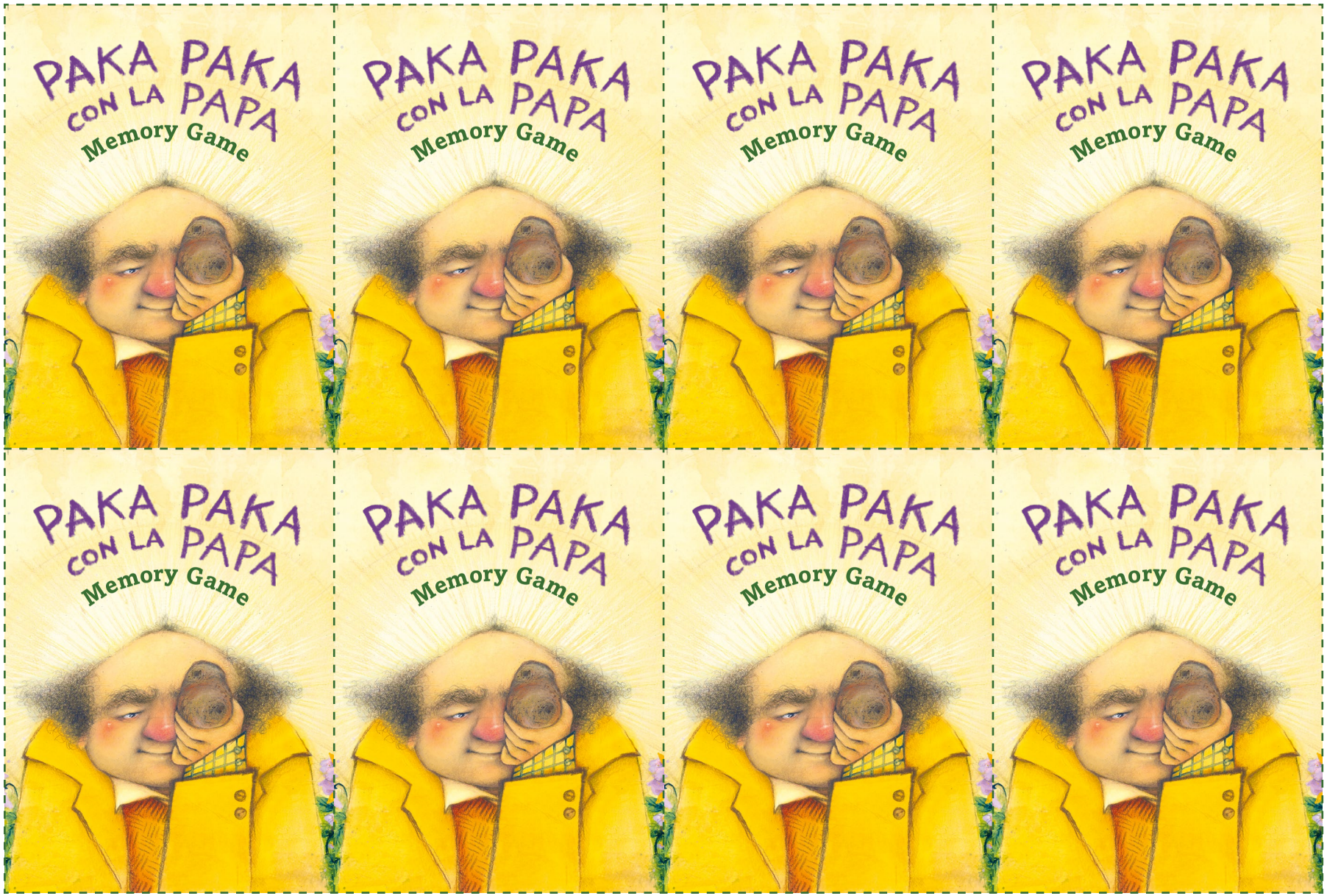
Courtesy of the International Potato Center

Puka Ñawi

(Red Eyes)

Solanum stenotomum

Courtesy of the International Potato Center


PAKA PAKA
CON LA PAPA
Memory Game

Yuraq Piña

(White Pineapple)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yuraq Piña

(White Pineapple)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Viuda

(Widow)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Viuda

(Widow)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yana Pepino

(Black Cucumber)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yana Pepino

(Black Cucumber)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Muru Piña

(Two-Colored Pineapple)

Solanum tuberosum subesp. Andigena

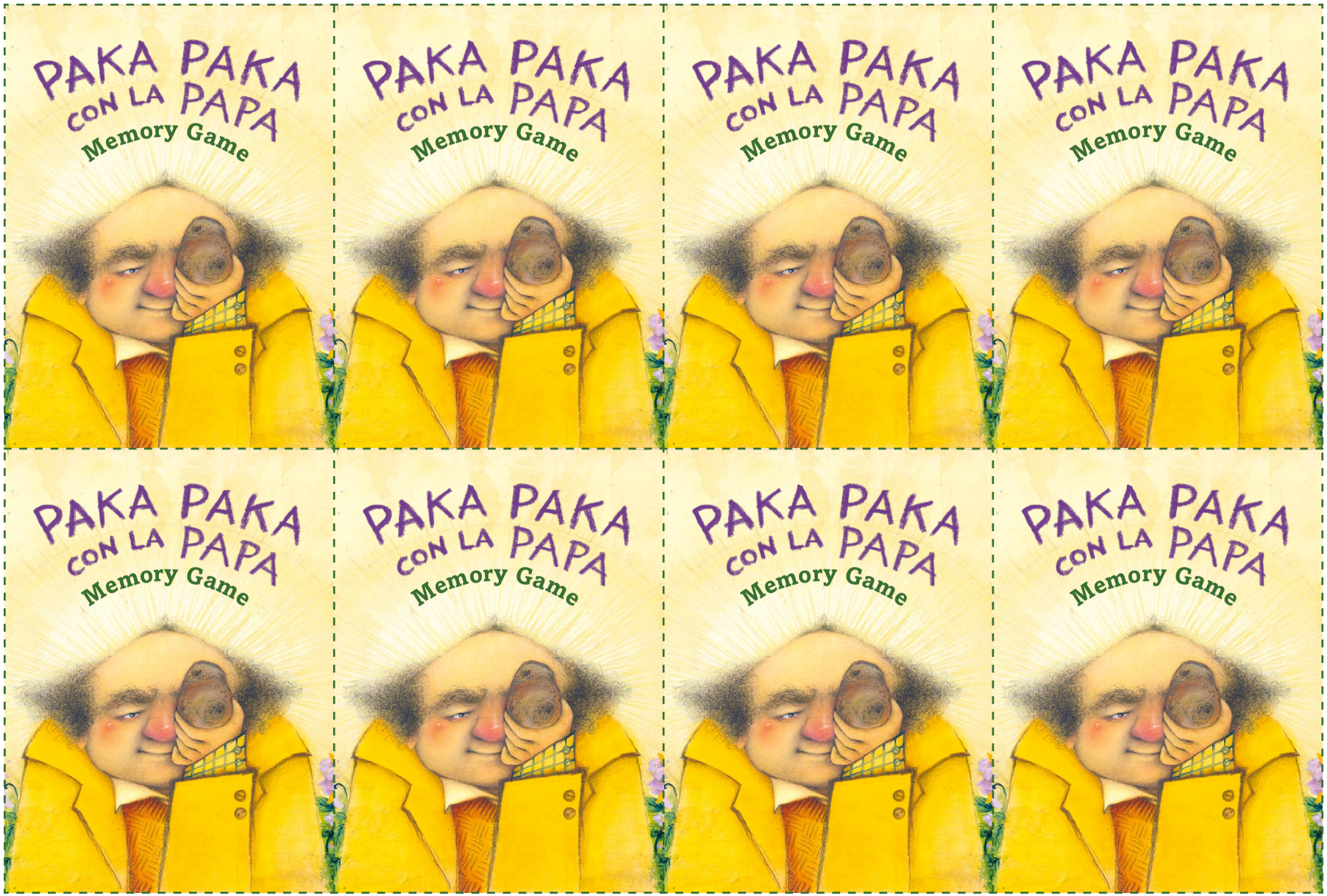
Courtesy of the International Potato Center

Muru Piña

(Two-Colored Pineapple)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center


PAKA PAKA
CON LA PAPA
Memory Game

Unchunchaki

(Swollen Foot)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Unchunchaki

(Swollen Foot)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Asnupa Zapatun

(Donkey's Shoe)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Asnupa Zapatun

(Donkey's Shoe)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yana Huayro

(Black Huayro)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Yana Huayro

(Black Huayro)

Solanum tuberosum subesp. Andigena

Courtesy of the International Potato Center

Alberto Salas

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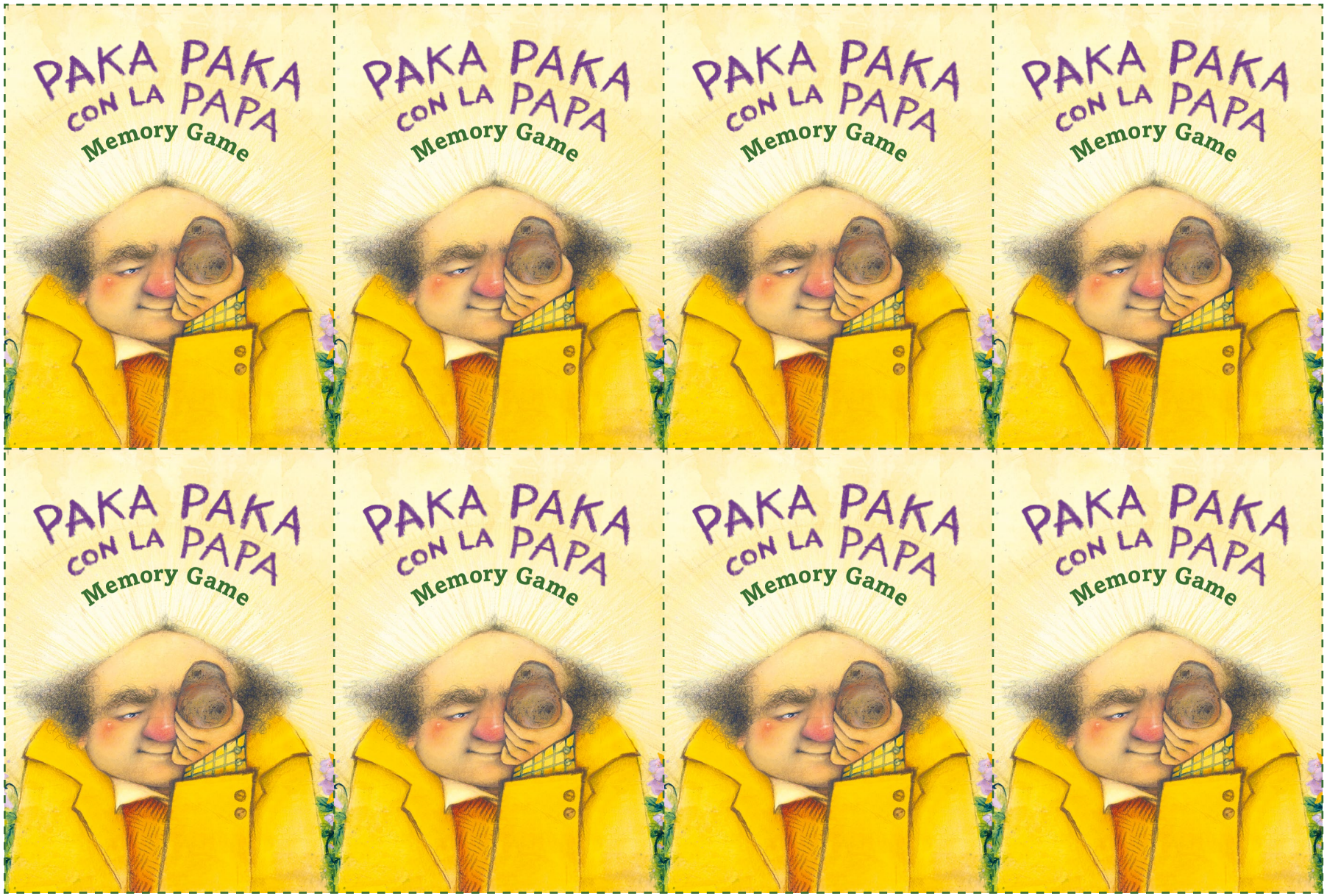
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