

Around the World with Art: Batik

Students learn about the ancient Indonesian art of batik fabric and make a paper version of the technique. Teachers will need to provide watercolor paint, Crayons, and paper.

Kansas College and Career Ready Standards for Visual Arts

2nd grade –

VA: Cr1.2.2. Make art or design with various materials and tools to explore personal interests, questions, and curiosity.

VA: Cr2.1.2. Experiment with various materials and tools to explore personal interests in a work of art or design.

3rd grade –

VA: Cr1.2.3 Apply knowledge of available resources, tools, and technologies to investigate personal ideas through the art-making process.

VA: Cr2.1.3. Create personally satisfying artwork using a variety of artistic processes and materials.

VA: Cr3.1.3. Elaborate on visual information by adding details in an artwork to enhance emerging meaning.

Classroom teacher will need to provide for each student:

- One sheet of white watercolor paper, copy paper or construction paper
- Crayons
- Watercolor paints
- Paint brush
- Water in a cup or bowl
- Several layers of newspaper for a work space
- Paper towels for blotting

Program Connection Information

Please use an external microphone (conference style) rather than the integrated one in the computer for the audio for your class and locate it centrally in the room. It can be difficult for the Greenbush teacher to hear the students using the computer microphone and therefore it reduces the interactive nature of the lesson. It is fine to use the computer webcam for your video source.

All classes will take place using Zoom desktop video. If your building is already set up to use a desktop video application with a computer, simply open a browser and enter <https://zoom.us/j/3662120241> in the URL space. You may need to download Zoom launcher software (free download) if you don't already have it. This needs to be done in advance of the lesson.

If using a Polycom video conferencing unit (or any legacy type video conferencing unit) to connect to a ZOOM conference, make sure the unit is in "encrypted mode" then dial the following IP on the internet: 162.255.37.11 or 162.255.36.11 and once connected, they will ask for a MEETING ID: enter 3662120241 (for Sharon at Science Center).

It's always a good idea to touch base with your district technology facilitator prior to your program to make sure all systems/equipment are in place and operational and that there aren't any firewalls in place that might prevent you from connecting to Zoom.

Once you connect, you will enter a Zoom waiting room. Your Greenbush teacher will admit you into the final meeting room.

If you have questions, please call Sharon Bertolio at Greenbush, 620-724-6281, or email at sharon.bertolio@greenbush.org (best method of contact).

Additional Lesson Resources

Teachable Indonesia

A dozen ways to grab
your students' attention

Prepared by the Southeast Asia Center
at the University of Washington
March 2016

Indonesia is wider across than the United States



General Indonesia Teaching and Learning Resources

- **TOP RESOURCE:** CultureGrams--You probably already know that CultureGrams is a reliable way to access basic information about countries, including maps, images, videos, interviews, economic data and histories. To access the CultureGrams website, log in to your Seattle Public Library account and visit <https://seattle.bibliocommons.com/item/show/2469372030>. Navigate to either the "World" or "Kids" version of the Indonesia CultureGram.
 - **Suggested activity:** Date literacy: Use the "Build-Your-Own Graphs and Tables" tool to generate content applicable to your classroom. Try comparing Indonesia to the US or to the countries with which it shares islands: Timor-Leste, Brunei and Malaysia. The data in the graphs and tables comes from the CIA World Fact Book.

Language resources:

- The national language of Indonesia is Indonesian (Bahasa Indonesia). For a brief history, see Dr George Quinn's introduction <http://ipll.manoa.hawaii.edu/indonesian/about/bahasa-indonesia-the-indonesian-language/>.
- Listen to basic phrases (with helpful illustrations) and find worksheets on the Victoria State Government website <https://www.education.vic.gov.au/languagesonline/indonesian/Indonesian.htm>.
 - **Tip:** There are links to the English translations and worksheet answers at the bottom of each section page.
 - **Tip:** Find songs https://www.education.vic.gov.au/languagesonline/indonesian/sect01/no_3/no_3.htm to play with follow-along lyrics by looking for the word *lagu* (song).

Sixty million Indonesians are Facebook users



65% of internet users report accessing the internet at an **internet cafe**, 50% on their **smartphones**, and 20% from a **home computer**

Social Media: Teaching and Learning Resources

- Indonesia is often called a “social media capital,” not because everyone is online (internet penetration is estimated to be 30%) but because nearly everyone who uses the internet also actively uses social media.
- **Lesson idea:** Practice reading infographics with images from Tech in Asia <https://www.techinasia.com/indonesia-web-mobile-data-start-2015>.
- Indonesia occasionally makes international headlines for one of its other social traditions: **smoking**. Indonesia is the only Asian country that has yet to ratify the World Health Organization’s Framework Convention on Tobacco Control. Cigarette advertisements are everywhere in Indonesia, including around schools.
 - **Newsela** has an article appropriate for grades 4+ that touches on this story: <https://newsela.com/read/smoking-increase/id/2378>
 - **Discussion idea:** Why do so many people in Indonesia smoke? How does this differ from the United States?
 - More background from The Guardian: <https://www.theguardian.com/world/2012/mar/22/indonesias-smoking-epidemic>

Indonesia has been led by **seven presidents**



Megawati Sukarnoputri became the first female president in 2001. She was the fifth woman to head a Muslim majority nation.

Indonesian Politics: Teaching and Learning Resources

- Resources for teaching about women and presidency from Rutgers: <http://tag.rutgers.edu/teaching-toolbox/classroom-resources/lesson-module-women-and-the-presidency/>
- Short biography of Megawati from the BBC: <http://news.bbc.co.uk/2/hi/asia-pacific/1452246.stm>
- Short biography of Indonesia's current president, Joko Widodo (Jokowi) from Britannica: <https://www.britannica.com/biography/Joko-Widodo>
- Following on the **social media** theme, "taking selfies and building photo collages after voting" became a "standard practice" in the 2014 election. This short article from the Wall Street Journal <https://blogs.wsj.com/indonesiarealtime/2014/07/09/photos-indonesian-voters-dip-their-fingers-and-pose/> contains a photo gallery of images of ink-stained fingers that Indonesians posted on Instagram after the 2014 election.

Religion is listed on ID cards in Indonesia



Religion: Teaching and Learning Resources

- The five principles of **Pancasila** (lit: five principles) provide the philosophical foundation of the Indonesian state. These are:
 1. Belief in the one and only God
 2. Just and civilized humanity
 3. The unity of Indonesia
 4. Democracy guided by the inner wisdom in the unanimity arising out of deliberations amongst representatives
 5. Social justice for all of the people of Indonesia
- Article 29 of the Indonesian constitution reads "The State shall be based upon the belief in the One and Only God. The State guarantees all persons the freedom of worship, each according to his/her own religion or belief."
 1. Note, that there is no reference to Islam or Allah. Indonesians are assigned one of six religions at birth: Islam (87%), Christianity (6%), Catholicism (3%), Hinduism (2%), Buddhism (1%) and Confucianism (0.2%).
- **Project idea:** Design a national ID card. What information so you believe should be included on an ID, and why? What information should not be included?
 1. Notes: In addition to religion, Indonesian ID cards also include the following information: marital status, occupation, and place of birth.
 2. Questions: Why doesn't the US have a national ID card? Using the image above, can you figure out which word means "religion"?

Nutmeg and mace come from the seed of *buah pala*



The war between the Dutch and the British to control nutmeg trade led to a **massacre** in the Banda islands in 1621, and to the British gaining control of **New York** in 1665.

Spices: Teaching and Learning Resources

There are many possibilities for teaching about nutmeg due to the starring role it played in the spice trade.

- **TOP RESOURCE** The Sultan Qaboos Cultural Center maintains a website about Indian Ocean Trade Routes <http://www.indianoceanhistory.org/>. For information on nutmeg and mace, choose the “medieval” map from the menu at the top of the page. Then, click on the symbol over the Maluku Islands. Next, choose the “first global era” map and compare the information. These maps can be used to gather information on trade throughout the Indonesian archipelago from prehistoric times to today.
- **Lesson idea:** What is a spice?
 - The Dutch East Indies Trading Company (VOC) attempted to maintain a monopoly on their “famous four” spices: nutmeg (nut), mace (aril), cloves (flower) and cinnamon (bark). All are widely available in whole form. Compare the taste of fresh-ground to pre-ground spices.
 - Suggested book for lower grades: *The Yummy Alphabet Book: Herbs, Spices, and Other Natural Flavors* by Jerry Pallotta
- **Additional resources:**
 - “The First Silk Roads” (810L) in unit 8.3 of the Big History Project

Tempeh, a staple protein source, is held together by a fungus!



Javanese people consume twice as much tempeh as meat.

Tempeh: Teaching and Learning Resources

- **Background** from NPR <https://www.npr.org/sections/thesalt/2013/04/05/174847636/journey-to-javas-tempeh-village-where-soybean-cakes-are-born> and Tempeh.info <https://www.tempeh.info/tempeh-history.php>
- **Lesson idea:** Ferment your own tempeh!
- You can purchase a tempeh kit online from Budiman Food <http://www.budimanfood.com/>.
- In order to do this “experiment,” you will need a kitchen to boil and drain the soybeans. The rest <http://www.budimanfood.com/makingof.html> can be done in the classroom.
- Assuming you don’t have access to an oven in your classroom, you will need another way to incubate your tempeh. A simple solution is to place a small ice chest full of boiling water inside a larger ice chest. Incubate your tempeh inside the larger ice chest. You can control the temperature by replenishing the boiling water and/or wrapping the large ice chest in a blanket.
- Turn this project into a true experiment by setting up two tempeh incubators, one warmer and one cooler. Ask students to make a prediction about which tempeh will be ready first based on what they know about fungi. Assign students to monitor and maintain the temperature throughout the incubating process (you will need a simple meat thermometer).
- In addition to science concepts (measuring temperature, creating and stabilizing heat, mold, fermentation, testing hypotheses about different conditions), this project can lead in to lessons about where food comes from, food safety, and food access.
 - Most Indonesians would rather eat meat, but can’t always afford to, whereas in the US, tempeh is considered a trendy health food, available only at specialty shops.
 - In Indonesia, tempeh production is a cottage industry and is only available for purchase fresh at the market. It should be eaten within a matter of days, or it will spoil. In the US, most tempeh is factory produced and then steam pasteurized and vacuum sealed. It can last for months on the shelf. The taste is remarkably different.
 - Most soybeans in Indonesian tempeh are grown in the United States!
- Recipes <https://www.tempeh.info/recipes/recipes.php> (scroll down for traditional recipes)

Wayang kulit puppets are accompanied by gamelan music



It used to be common for performances to last **all night!** But the audience was welcome to eat, talk, and even to nap.

Gamelan Teaching and Learning Resources

- **TOP RESOURCE** Explore gamelan sounds and instruments online: This interactive website from the Museum of International Folk Art <http://online.internationalfolkart.org/dancingshadows/performance/instruments.html> provides easy-to-digest information about gamelan and *wayang kulit*. This link takes you to the instrument page, but you are encouraged to click around!
- **Watch performances on YouTube:** For recommended videos, songs, and a few lesson ideas, visit the Fun Music Company http://funmusiccoimages.com/pdf/pmlp5_lessonplan03_indonesianmusic.pdf
- **Eager for a live performance?** Check out Seattle's Gamelan Pacifica <https://gamelanpacific.org/>.
- **"Virtual Gamelans"**
 - **Apps:** Search the IOS or Android app store for "Virtual Javanese Gamelan". This app allows the user to touch instruments to generate unique sounds.
- **CultureGram Videos:** CultureGram also has a concise series of videos about gamelan! Log in to the CultureGram website (you can access it through the Seattle Public Library website at <https://seattle.bibliocommons.com/item/show/2469372030>). Then, navigate to the "video gallery": Home > World Edition > Asia > Indonesia > Video Gallery. You will find this series of videos: Gamelan Instruments (6:49), Gamelan Orchestra (2:41), Becoming a Musician (3:33), Bronze Instruments (2:35), etc

Komodo dragons can kill a water buffalo with one bite!



How do they do it? They only have a little venom, but the bacteria that live in their saliva are deadly.

Komodo Dragons: Teaching and Learning Resources

- Try enriching a lesson about reptiles, endangered species, or conservation with *Kraken-ka the Komodo Dragon* <https://www.goodreads.com/book/show/2750620-kraken-ka-the-komodo-dragon>, a contemporary folk tale by Jodi Parry Belknap, Tamara Montgomery and Joseph Dodd (Illustrator), professors in the Drama Department at the University of Hawaii. In it, Naga teaches Kraken-ka, the first Komodo dragon, a lesson about self-control. The accompanying CD includes templates for creating *wayang kulit*-style puppets to accompany the story, as well as lessons about Komodo dragon food chains and diets. These lessons can be supplemented with one of several science books about Komodo dragons. Another picture book that can be used to pique students' interest is *Komodo!* by Peter Sis.

Some Indonesian animals **evolved** in Asia and some in Australia.

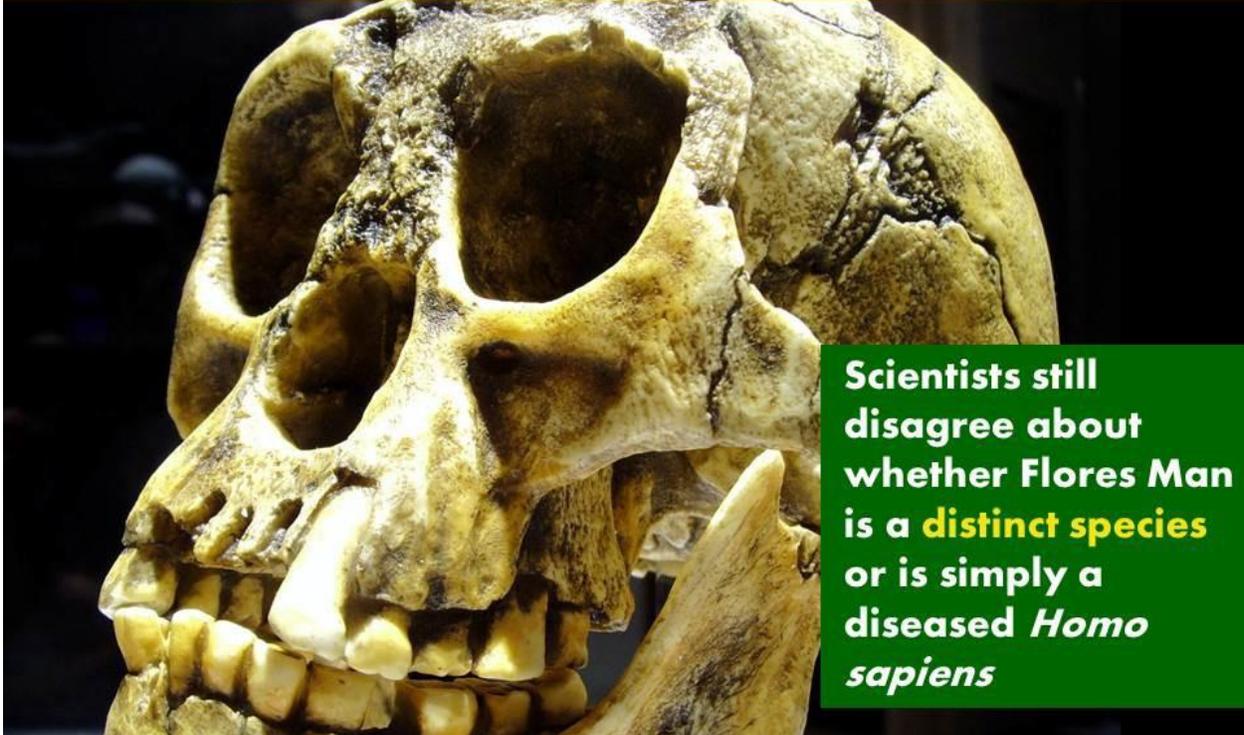


Which one do you think is related to animals in Australia?
The **tarsier** or the **cuscus**?

Evolution: Teaching and Learning Resources

- Alas, there is no children's book about Alfred Russel Wallace, the Victorian explorer who developed the theory of evolution at around the same time as Darwin.
- Instead of publishing his theory, Wallace traveled throughout what is today Indonesia. His observations are collected in *The Annotated Malay Archipelago* and formed the basis for what is today known as the Wallace Line, the deep ocean trench that separates the Australian continental shelf from the Asian continental shelf. Wallace had no understanding of plate tectonics, but deduced this line from the differences between the flora and fauna on either side. For an elementary explanation of the Wallace Line see *The Day the World Exploded* by Simon Winchester (pgs 38-41) and *Little People and a Lost World* by Linda Goldenberg (pgs 31-33).
https://www.goodreads.com/book/show/2078826.The_Day_the_World_Exploded
- For a short explanation of Wallace and Darwin, check out *Charles Darwin and the Mystery of Mysteries* by Niles Eldredge and Susan Pearson (pgs 108-116)
<https://www.goodreads.com/book/show/8132800-charles-darwin-and-the-mystery-of-mysteries?>
- **Map of the Wallace Line** from Wikipedia: https://en.wikipedia.org/wiki/Wallace_Line
- **Lesson idea:** While intended for grades 7-8, this lesson from NOAA https://oceanexplorer.noaa.gov/oceanos/explorations/10index/background/edu/media/walk_line.pdf may serve as inspiration for lower grades. It was developed in conjunction with a joint USA-Indonesia exploratory probe of some of the waters along the Wallace Line.
- **Newsela Article on illness and deforestation:** <https://newsela.com/read/malaria-forests/id/13822> (Grade level: 3+):

The **hobbit-sized** *Homo floresiensis* was discovered in 2003



Homo floresiensis Teaching and Learning Resources

- ***Little People and a Lost World: An Anthropological Mystery*** by Linda Goldenberg covers the *homo floresiensis* controversy at a middle school reading level. It explains advanced concepts such as evolution, DNA analysis and radiocarbon dating, as well as the nature of the political and scientific disputes over the fossils, which were discovered in 2003. For a shorter introduction to the debate, see these articles from the Bradshaw Foundation http://www.bradshawfoundation.com/origins/homo_floresiensis.php and the Smithsonian Magazine <https://www.smithsonianmag.com/history/were-hobbits-human-14768/>. For an update from 2014, see this article: <http://www.bradshawfoundation.com/news/origins.php?id=Homo-floresiensis-debate-rages-on>.
- **Discussion questions:** What motivated prehistoric humans to sail off into the unknown to search for new islands? How can we know from where people migrated and when? There are clues in present-day languages!
 - **Jared Diamond** on the significance of the Wallace Line to human evolution in Discover <http://discovermagazine.com/1997/aug/mrwallacesline1198>
 - **Austronesian family:** <http://www.britannica.com/topic/Austronesian-languages>
 - **Map** of Austronesian migration as determined by language-mix from Nature: <http://www.nature.com/articles/ncomms5689>

The 1883 **Krakatoa** explosion darkened the sky worldwide



For years, the moon appeared green because the ash clouds scattered red light.

Krakatoa and the Ring of Fire: Teaching and Learning Resources

- Krakatoa (aka *Krakatau*) was an island volcano located between Java and Sumatra in present-day Indonesia. It erupted in 1883, killing somewhere between 36,000 and 120,000 people.
- Although written for elementary readers, *The Day the World Exploded* https://www.goodreads.com/book/show/2078826.The_Day_the_World_Exploded by Simon Winchester contains a treasure trove of information about Krakatoa. It is an illustrated adaptation of the author's bestselling *Krakatoa: The Day the World Exploded* (which was written for an adult audience). The stories and primary sources in this book could add a cultural and/or historical dimension to your volcano science lesson.
- There is no shortage of online resources about Krakatoa, the Ring of Fire, volcanoes, and plate tectonics. Here is a short video about Krakatoa to get you started:
 - History Channel <https://www.history.com/shows/how-the-earth-was-made/videos/the-krakatoa-volcano>