



Ginkgo Learning Activities



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Ginkgo Learning Activities

These learning activities have been designed to provide ideas for exploration and creativity, based on the Year of the Plant texts found on our website.

Each package begins with a series of comprehension questions about the text, designed to help students understand and hopefully to pique their interest about the plant in question! There follows a series of learning activities which can be used as written, or as a springboard for further study around the subject.

We encourage educators and students to create their own learning using our ideas. For example, in the case of the Science and Social Studies presentations, questions are provided as a starting point but students are free to create a presentation by following their own line of intellectual curiosity.

Finally, we encourage you to take these classes outside! Using the First Nations principle of learning being rooted in a sense of place, many of these plants can be found in your local area. Learning about these plants, their uses and their importance to many groups of people, we hope that a deeper connection may be made to the the student's sense of identity, family and responsibility.



Ginkgo Learning Activities - Article Questions



Read the ginkgo article and answer the questions below to learn about this fascinating tree.

Find the article here: <https://vancouverchinesegarden.com/wp-content/uploads/2020/09/Year-of-the-Plant-Ginkgo-Plant-Profile.pdf>

Curriculum Links:

Curricular Competencies (Science 7, Indigenous Knowledge and Perspectives): Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest

Express and reflect on a variety of experiences and perspectives of place

Curricular Competencies (SS K - 10) Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions

1. What's another name for the ginkgo tree?
2. Scientists know that the ginkgo tree was once found all over the world. Where can we find it growing in the wild today?
3. The ancient Chinese cultivated the ginkgo tree, meaning they nurtured the wild trees and helped them grow and reproduce. For what two reasons did they do that?
4. The ginkgo tree travelled from China to Asia and then to the rest of the world through trading routes. How and when did the ginkgo tree get to Europe?
5. Why is the ginkgo tree a symbolic tree in China and Japan?
6. How else is the ginkgo celebrated in Asia?
7. Why do people enjoy growing the ginkgo tree?



Ginkgo Learning Activities - Article Questions

8. Why is the ginkgo tree a useful tree in the city?
9. What are male ginkgo trees the most popular?
10. List the ways the fruit of the ginkgo tree is eaten.
11. List the ways the ginkgo tree is used in both Traditional Chinese and Western herbal medicine.
12. The ginkgo tree is not native to Vancouver but we have them growing throughout the city. The ginkgo tree means different things to different people.

From what you have read in the text, what might these people think about when they look at a ginkgo tree in Vancouver?
 - a) A scientist
 - b) Someone from China
 - c) A Buddhist

Ginkgo Learning Activities - Science

Science | Ginkgo Presentations

1. Select one of the topics below, or choose your own topic about the ginkgo tree to create a project.
2. Use the space below to make notes from the article to start your research.
3. Present your findings in a way you think best, for example: a powerpoint presentation, a written paper, a poster or some other way.

Curriculum Links:

Curricular Competencies (Science 7): Make observations aimed at identifying their own questions about the natural world.

Communicate ideas, findings, and solutions to problems, using scientific language, representations, and digital technologies as appropriate.

Ginkgo Learning Activities - Science

a) Living Fossils

Curriculum Links: Curricular Competencies (Science 7): Evolution by natural selection provides an explanation for the diversity and survival of living things.

Content: the fossil record provides evidence for changes in biodiversity over geological time



**The ginkgo tree is a living fossil.
Explore the idea of living fossils.
What makes them so unique in the
plant and animal world? Why have
they not needed to evolve or adapt?**

We use fossils - the remains or imprints of plants or animals that lived long ago - to understand how species have evolved and adapted over thousands of years.

The ginkgo tree that we know today is almost identical to ginkgo fossils found more than 200 million years ago. Scientists used to consider it a type of conifer but we now know it is not part of any plant family. Ginkgo fossil and a leaf from a modern tree.



Ginkgo Learning Activities - Science

b) Why has the Ginkgo tree survived for so long?

Curriculum Links:

Content (Science 7) : organisms have evolved over time / survival needs / natural selection



What makes the ginkgo so resilient? Give examples of some of the conditions and places it survives in and explore why it is such a tough, long living tree.

The ginkgo tree is the oldest species of tree. Fossils have been found from 170 million years ago, from the Permian era. It is one of the most resilient tree species - 6 ginkgo trees survived the Hiroshima atom bomb. It is a popular tree to plant in cities worldwide - from Tokyo to New York - because it can grow in a city environment with relatively low levels of oxygen, poor soil and pollution.



Ginkgo Learning Activities - Science

c) Street Trees

Curriculum Links:

Curricular Competencies (Science 7, Indigenous Knowledge and Perspectives): Express and reflect on a variety of experiences and perspectives of place

Content (Science 7) :organisms have evolved over time / survival needs / natural selection



The ginkgo is a popular street tree. Where can you find ginkgo trees in your area? What other trees are planted in city streets? Why are those ones chosen? Is it better to plant native or non-native trees in an urban environment?

Trees are planted in city streets for a number of reasons, including providing shade and beauty in an otherwise urban scene. Trees that are planted in cities should be tolerant of pollution and lower oxygen levels in the soil. This means the trees that are planted need to be chosen and looked after carefully.

Other Science-related ideas:

Grow a ginkgo tree:

<https://m.espacepouirlavie.ca/en/growing-ginkgo-seed>



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Ginkgo Learning Activities - Social Studies

Social Studies | Ginkgo Presentations

1. Select one of the topics below, or choose your own topic about the ginkgo tree to create a project.
2. Use the space below to make notes from the article to start your research.
3. Present your findings in a way you think best, for example: a powerpoint presentation, a written paper, a poster or some other way.

Ginkgo Learning Activities - Social Studies

a) Symbolism of a Ginkgo Tree

Curriculum Links:

Big Ideas (SS 7): Religious and cultural practices that emerged during ancient times have endured and continue to influence people

Curricular Competencies (SS 7-9, Indigenous Knowledge and Perspectives): Explain different perspectives on past or present people, places, issues, or events, and compare the values, world views, and beliefs of human cultures and societies in different times and places

Content (SS 7): Origins, core beliefs, narratives, practices, and influences of religions



What does the ginkgo mean to you? Have you ever seen one, eaten ginkgo nuts or taken it for your health? The ginkgo tree has special meaning to many groups of people. Create a presentation that explores some of these meanings.

For example, the ginkgo is a sacred tree in Buddhism and Shintoism, a Japanese religion. The ginkgo tree is the national tree of China. The next time you come to our Garden, you will be able to see the maple, representing Canada, and the ginkgo standing proudly side by side on our main courtyard!



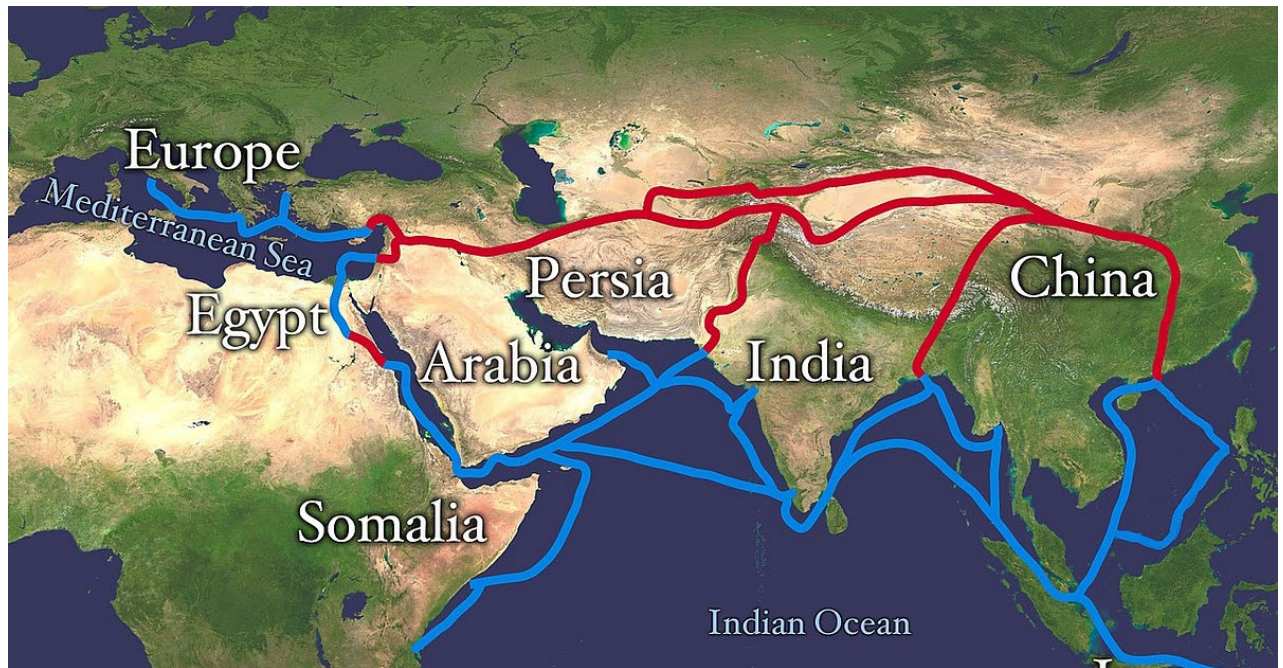
Ginkgo Learning Activities - Social Studies

b) Trading Routes

Curriculum Links:

Big Ideas (SS 7): Economic specialization and trade networks can lead to conflict and cooperation between societies. Exploration, expansion, and colonization had varying consequences for different groups. (SS 8)

Content: interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations (SS8)



Explore the ways that the ginkgo travelled from China to other parts of the world. What else was traded along trade routes such as the Silk Road? What were the consequences of trading routes on populations that they passed through? What were the consequences on populations that received traded goods?

The ginkgo tree travelled from China to other parts of Asia through trading routes and then on to Europe. It was brought over to the United States in the 1780s by a well known botanist called William Hamilton who owned an estate in Philadelphia.



Ginkgo Learning Activities - Arts Education and ADST

ADST: Food Studies

Curriculum Links:

(ADST 6-8): Factors that influence food choices, including cost, availability, and family and cultural influences
variety of eating practices

With whom, what, when, how, why, where food is consumed in a variety of situations

Health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts

- a) Explore the different uses for ginkgo in cooking.
- b) Are there any things to be cautious of when preparing ginkgo nuts?



- c) Where can we buy ginkgo nuts in Vancouver or in your local area? Is it easy to find? Is it cheap to buy? If not, what implications does this have for people who want to eat ginkgo for cultural/health reasons?

If you are able to find ginkgo nuts to buy, try out a recipe!
<https://cookpad.com/us/search/ginkgo>



Ginkgo Learning Activities - Arts Education and ADST

Arts Education: Art Nouveau

Curriculum Links:

Big Ideas:

Works of art influence and are influenced by the world around us. (Arts 5)

Artistic expressions differ across time and place (Arts 6)

Curricular Competencies:

Experience, document and present creative works in a variety of ways (Arts 5-6)

Describe, interpret and respond to works of art (Arts 5-6)

Art nouveau is a style of art that was popular between the 1880s and 1910. It wasn't used in fine art (painting and sculpture) but was found in the decorative arts such as furniture, jewelry and other objects. Designs were taken from the natural world and artists were heavily influenced by the way plants and flowers looked and curved.

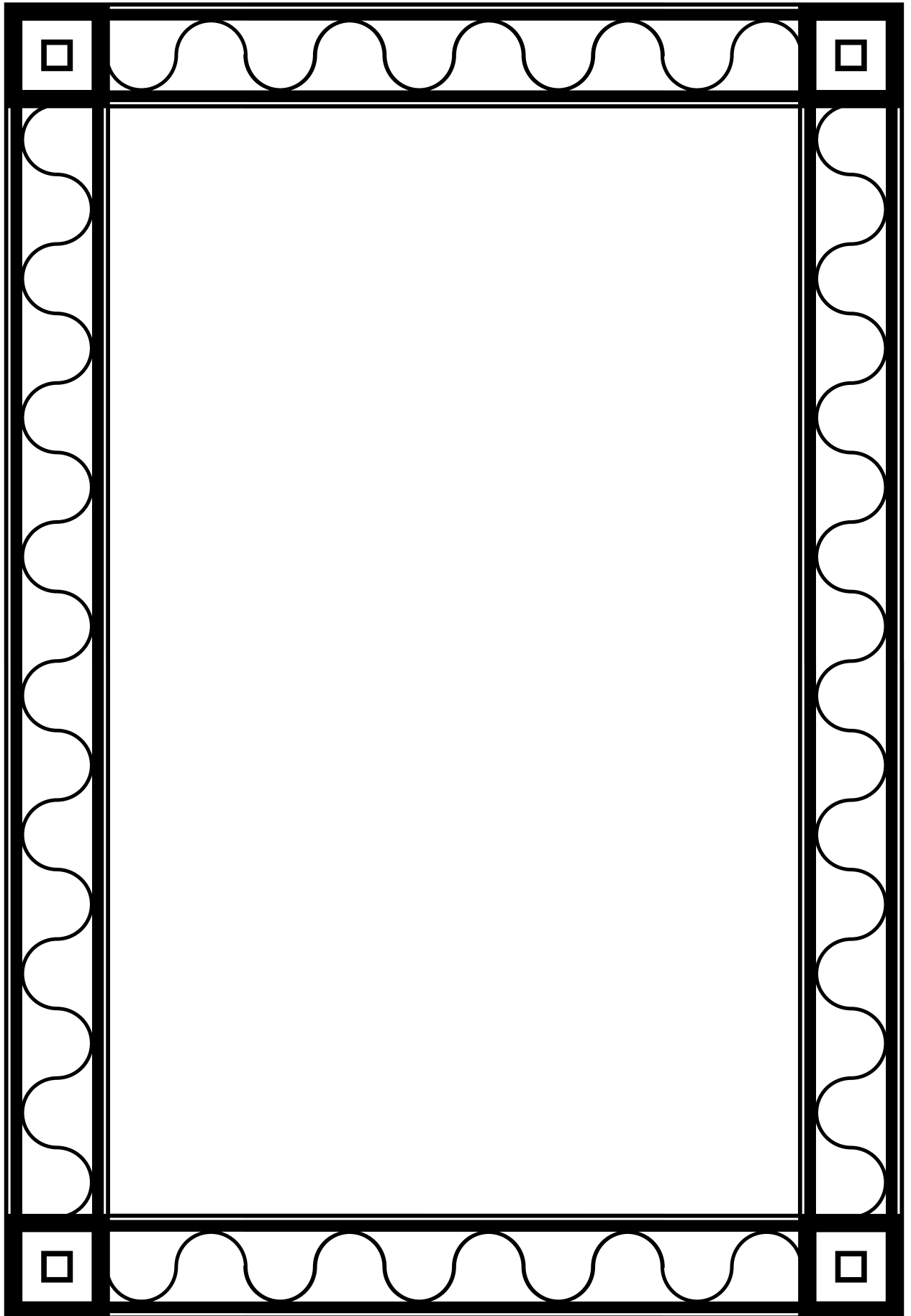
Art Nouveau images often decorated glass in doors and windows. The ginkgo leaf was a popular motif as you can see in these designs on stained glass, which are modern but based on the Art Nouveau style.

The designs were simple and often had strong, straight border lines around the main section. The black lines around the leaf designs were made of iron or lead, also used to create the frames of the window



Ginkgo Learning Activities - Arts Education and ADST

Make your own ginkgo-themed stained glass design using the template below.



Ginkgo Learning Activities - Arts Education and ADST

Here is a ginkgo pattern for you to colour or use as inspiration.



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Ginkgo Learning Activities - Answers

Ginkgo Learning Activities

1. What's another name for the ginkgo tree?

Maidenhair tree

2. Scientists know that the ginkgo tree was once found all over the world. Where can we find it growing in the wild today?

In the remote mountain valleys of China's Zhejiang province

3. The ancient Chinese cultivated the ginkgo tree, meaning they nurtured the wild trees and helped them grow and reproduce. For what two reasons did they do that?

(In Buddhist temples) as a substitute for the scared fig tree underneath which the Buddha received enlightenment.

(In orchards) for its nut-like seed.

4. The ginkgo tree travelled from China to Asia and then to the rest of the world through trading routes. How and when did the ginkgo tree get to Europe?

It was discovered in Japan and Korea in 1692, and its first mention in European literature was in the accounts of Dutchman Engelbert Kaempfer's time in Japan. It made its way to Europe in the mid 1700s.

5. What does the ginkgo tree symbolize in China and Japan?

It symbolizes longevity due to its long life span.

It symbolizes perseverance and resilience due to the fact it survived the Hiroshima bomb.

6. How else is the ginkgo celebrated in Asia?

It is a common subject in art, logos and official symbols. It is the national tree of China and the official tree of Chengdu in China, Tokyo in Japan and the Urasenke school of Japanese tea.

7. Why do people enjoy growing the ginkgo tree as an ornamental plant?

It is highly resistant to pests and disease.

8. Why is the ginkgo tree a useful tree in the city?

It has the ability to grow well even in the low oxygen, high salt environment of urban areas.

9. What are male ginkgo trees the most popular?

The fruits of the female tree give off a rancid odour when they ripen in autumn.



Ginkgo Learning Activities - Answers

Ginkgo Learning Activities

10. List the ways the fruit of the ginkgo tree is eaten.

As a toasted snack, in China in congee, soups and stir fries, in the Japanese egg custard dish chawanmushi, in Korea as nutty garnish or a grilled street food.

11. List the ways the ginkgo tree is used in both Traditional Chinese and Western herbal medicine.

In Traditional Chinese Medicine: helping with blood and oxygen circulation, brain function, and soothing coughs

In western medicines: in medicines that treat brain and memory illnesses, such as dementia and Alzheimer's.

12. The ginkgo tree is not native to Vancouver but we have them growing throughout the city. The ginkgo tree means different things to different people.

From what you have read in the text, what might these people think about when they look at a ginkgo tree in Vancouver?

a) A scientist

They might think about the fact the ginkgo has been around since the time of the dinosaurs, or that it is a living fossil.

b) Someone from China

They might think of their country, as the ginkgo is the national tree of China

c) A Buddhist

They might think of Buddhist temples in China as ginkgo trees are often grown there.

