PROMONTORY
school of expeditionary learning

Creating the Great Thinkers of the 21st Century

PROMONTORY GREAT THINKERS

What is a Great Thinker?

A Great Thinker is a person who spends a great deal of time thinking deeply about important ideas. Historically, Great Thinkers have been considered those who have achieved fame for thinking of new or interesting ideas that have transformed humanity. However, the Promontory Great Thinkers Panel believes that there are numerous great thinkers who have positively impacted their fields, their communities, and the future, but have not acquired fame.

Why do we focus on Great Thinkers?

We believe that studying Great Thinkers of both the past and the present will stimulate active, critical, and deep thinking in our students. It is our hope that through their scrutiny of these people, students will begin to identify patterns of thought; connections Great Thinkers have to the past, present, and future; and barriers that Great Thinkers have fought to overcome. Our goal is that through their deepening understanding of Great Thinkers, our students will discover similar traits within themselves, and act upon those traits to become the Great Thinkers of the 21st century.

Commitment

We believe that each of our students has within them the seeds of a Great Thinker. We commit to providing knowledge and experiences to facilitate the important growth of imagination, meditation, creation, and consideration of multiple perspectives. We pledge to provide our students with the skills necessary to communicate their ideas and knowledge.

Process

A Great Thinkers Panel is available to help teachers in selecting Great Thinkers to be used in their classrooms. The panel will include two members of the Governing Board, the Director or Assistant Director, the librarian, and two teachers at Promontory School. This panel will be responsible for the maintenance of a schoolwide list of Great Thinkers.

Procedures

Teachers may use any name that is already on the schoolwide list. Teachers are able to nominate Great Thinkers to be included on the list. To request that the panel consider adding a person to the list, the attached form should be completed. The panel is seeking the following information:

- The Great Thinker's name.
- How will this person connect to your Expedition
- What makes them a great thinker
- Reference material so the panel can learn more about the person

A special note

As the current panel assumes responsibility for the Great Thinkers list (in April of 2021), it has come to our attention that the great majority of names on the Great Thinkers list are white males. We encourage the teachers at Promontory to seek out women and people of color to teach our children that ANYONE can become a Great Thinker.

PROMONTORY
school of expeditionary learning

Creating the Great Thinkers of the 21st Century

Name of person being considered as a Great Thinker	Maria Sibylla Merian (1647-1717) Jeanne Baret (1740-1807) Agnes Arber (1879-1960) Janaki Ammal (1897-1984) Ynes Mexia (1870-1938) Katherine Esau (1898-1997) Our reasoning behind picking these women is to show that botanists are from all over the world and helped shape our world-wide thinking through multiple cultures and societal bias. We plan on using all of them to teach continents and where they are on the globe to tie in social studies.
Why this person qualifies as a Great Thinker	Maria Sibylla Merian--German-born Sibylla Merian received her initial artistic training from her stepfather, Jacob Marrel, who was a student of the still life painter Georg Flegel. While her chief interest lied in entomology, she also identified many of the plant species that were essential to insects as food and habitat. She depicted both insects and their host plants accurately in popular volumes that included *The Caterpillars' Marvelous Transformation and Strange Floral Food* (1679 Jeanne Baret--Baret helped to collect more than 6,000 plant specimens on the voyage, frequently leading the field expeditions herself when Commerson was unable to due to poor health. She likely deserves credit for one of the expedition's best botanical finds: *Bougainvillea brasiliensis,* a pink flowering vine native to South America. While Baret's true identity was discovered two years into the trip, she wasn't persecuted, likely because she had been such an asset to the expedition. Her accomplishments were given recognition over 200 years after her death in 2012, when the South American species *Solanum baretiae* was named in her honor. Agnes Arber (1879-1960)Agnes Arber was a plant morphologist and historian of botany, who became the first woman botanist to be elected as a Fellow of the Royal Society in 1946. The daughter of a London art instructor, she developed an interest in plants and scientific illustration after meeting Ethel Sargant, another well-known plant morphologist, at a school presentation. During and after her time as a student at University College in London, Arber would spend years working as an Sargant's assistant.

PROMONTORY
school of expeditionary learning

Over the course of her career, Arber published multiple innovative research papers and books on botany, including two books which focused on the morphology (or external structure) of water plants and grasses in the *Gramineae* family. In addition to her scientific research, she released several publications on the history and philosophy of botany, including a book on the evolution of herbals.

In addition to being elected as a Royal Society Fellow, Arber was also awarded the Gold Medal of the Linnean Society of London in 1948 for her contributions to botany - becoming the first woman in history to receive the honor.

Janaki Ammal (1897-1984)was born to a family of 19 children, and, like her sisters had, was expected to wed through an arranged marriage. Despite living during a time when literacy among women in India was less than one percent, she decided to spur tradition and attend college, eventually receiving a doctorate in botany from the University of Michigan. Her expertise in cytology - the study of genetic composition in plants - led to the development of a sugarcane crop that allowed India to stop importing the plant from other countries, greatly bolstering their economic independence.

Over the course of her career, Ammal worked alongside some of the best scientists in the world at the Royal Horticulture Society in the UK, and was responsible for restructuring India's botanical survey. Although she is best known for her cytology work, she was also a staunch environmental activist, most notably using her status as a renowned scientist to protect hundreds of acres of pristine tropical forest in the Indian state of Kerala from the construction of a hydroelectric dam.

Ynes Mexia--The daughter of a Mexican diplomat, Mexía lived throughout the U.S. and Mexico before settling in California, where she became enamored with the state's wild landscapes. After a short stint as a social worker, she began taking classes in botany and science at UC Berkeley at the age of 51, and soon began joining sampling expeditions throughout the west.

Over the course of her career, she made multiple solo field trips to Mexico and South America, often traveling through remote wilderness, and collected as many as 150,000 plant samples during her expeditions.

Unfortunately, Mexía's work was cut short when she died of lung cancer in 1938. Despite of her relatively short scientific career, she left behind quite a legacy: while many of her specimens are still being analyzed by researchers today, she likely found as many as 50 new species and two new genera. One genus, *Mexianthus* - a lovely group of Mexican plants related to the sunflower - was named after her.

PROMONTORY
school of expeditionary learning

Katherine Esau--Russian-born botanist Katherine Esau's pioneering research laid the groundwork for modern scientists studying plant structure and cell function, and continues to influence generations of botany students.

Esau began studying agriculture in Moscow and then Berlin. After her family immigrated to the United States, she received her doctorate from the University of California at Berkeley. Her early career in botany centered around researching the hybridization and viruses of crops, and later focused on light-microscope studies of plant anatomy as technology advanced; phloem, the food conducting tissue in plants, was a major subject of her research. Her popular 1953 textbook, *Plant Anatomy,* is still an often-assigned classic in the field of botany.

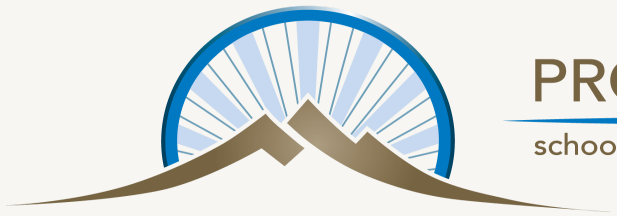
When she was a professor emerita at the University of California at Santa Barbara in 1989, Esau was awarded the National Medal of Science for her work, becoming the first trained botanist to receive the accolade.

Area of expertise:

All women are experts in Botany

References:

https://www.osgf.org/blog/2020/3/4/historys-greatest-women-botanists



PROMONTORY

school of expeditionary learning