

## STEAMing into Ringwood Public Library

What's happening this month at the library...



- S**cience
- T**echnology
- E**ngineering
- A**rts
- M**athematics

### RINGWOOD 3D:

### A New Jersey Makers Day Event

March 22 and 23!

Activities for all ages! Virtual Reality, Drones, Crafts, Coding, Contests, Building, and more!

Don't miss it! We'll be revealing our NEW 3D Printer!!

Thanks to the New Jersey State Library and the PSEG Foundation for funding this event!

Also going on...

*Building Bridges Challenge* in our STEAM area!

*Brainflakes, LEGOMania, Anime, and Gadget Gals!*

See our full schedule.



### What's New?

2019 has been designated by the United Nations as the *International Year of the Periodic Table of the Chemical Elements!*

In 1869, Dimitri

Mendeleev ingeniously organized information about all known chemical elements and created the Periodic Table of the Elements with forethought to save spaces for elements yet to be discovered.

### March 14th is Pi Day!

Pi or  $\pi$  is an irrational number that has no end beyond its decimal point. It's often abbreviated to 3.142. It is used to calculate the circumference of a circle. Knowing the diameter or radius of a circle can also help you calculate its area:

Circumference of a circle =  $\pi \times \text{diameter}$

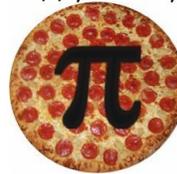
$\pi r^2 =$  the area of a circle, where  $r = \text{radius}$ , which is equal to half the diameter.

Solve it!

If the diameter of a circle is 3 cm, what is its circumference and area?

Find answers on the [STEAM page](#) on our website.

Happy Pi Day!



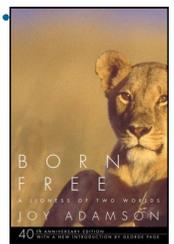
### Science in the Movies:

#### *Born Free*

A couple raise a lion cub in Africa.

Place a hold on the movie [here](#).

Place a hold on the book [here](#).



### Recommended Reading:

For Advanced Readers.

*The Tangled Tree: a radical new history of life,* by David Quammen

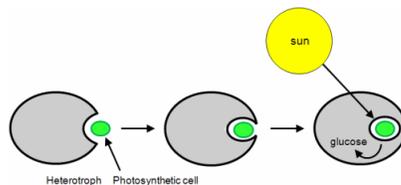
DNA sequencing elucidates our evolutionary tree.

[Place on hold here.](#)

## Celebrating Women's History Month:

Here are some important women in the history of science and invention:

- **Hedy Lamarr:** This actress with a star on the Hollywood Walk of Fame is also in the Inventor's Hall of Fame and received the Electronic Frontier Foundation Pioneer Award. During World War II, she worked, as a citizen scientist, on preventing torpedo signals from being jammed. She developed what is called the Frequency Hopping Spread Spectrum, which has been a foundation in developing communication technology, such as GPS, Wi-Fi and Bluetooth.
- **Lillian Gilbreth:** Studied workplace efficiency. She earned a PhD from Brown University with her dissertation "The Psychology of Management." She worked on ergonomics and repetitive motion in the workplace and in the home. Her work is the foundation for the design of most kitchens... the "work triangle."
- **Lynn Margulis:** A cell biologist who studied microbial evolution. Her *Theory of Endosymbiosis* proposes that the organelles of complex cells evolved from the absorption of simple bacterial cells by other simple cells. She also suggested that genetic variation is the result of the transfer of genetic information between different organisms.



## There's an app for that...

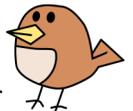
The *Let's Room* app allows users in groups to access scavenger hunt adventures in cities around the world. The app is free, but you must pay for the adventures.

### *This month's contest:*

Complete the Women in STEM match-up in our STEAM area and place it in the contest box. Make sure your name and phone number or email address are on the match-up.

*The Prize?* A \$10 Amazon gift card!

## What is Citizen Science?



Citizen Science occurs when regular citizens are asked to participate in collecting data for a study or to come up with ideas for solutions to problems. During WWII, the National Inventors' Council asked citizens to submit ideas.

Today, you can join many long term research projects as a regular citizen, without any advanced or formal science education. Here are some citizen Science projects you can get involved with:

Cornell's [Project FeederWatch](#)

Chicago Botanic Garden's [Budburst](#).

Berkeley's [SETI@home](#)



## Bullying and CyberBullying

Research has shown that both those who have been bullied and those that do the bullying can have short-term and long-term emotional problems, including depression. Victims of cyberbullying are at higher risk. For more information, see the article [How does bullying affect health and well-being?](#) on the National Institute of Child Health and Human Development website.

For more research articles on the subject, go to this [Google Scholar Search](#).