"Reading & Robotics"
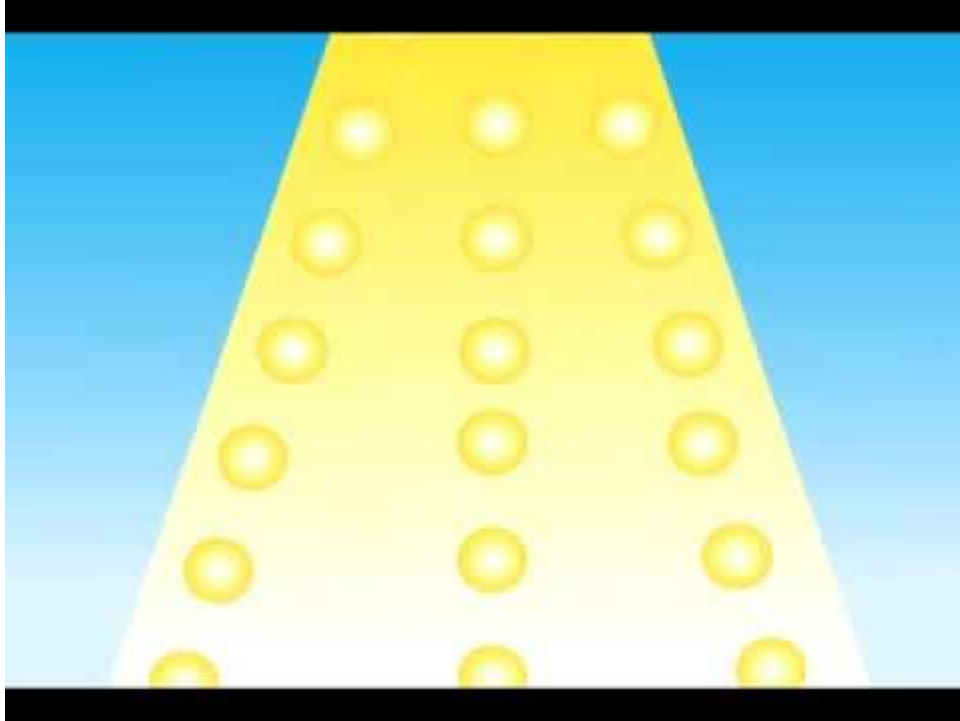
01/19/19

Today's themes are: The Electromagnetic spectrum and infrared light.

The Sun & light particles

Questions

- The sun gives off e____y
- The sun's e_____ gives off L____
- Light is made of tiny pieces of M____r
- M____r is what makes up everything around us.
- A very small piece of M_____ is called a p_____e
- Light P_____ move in a wave
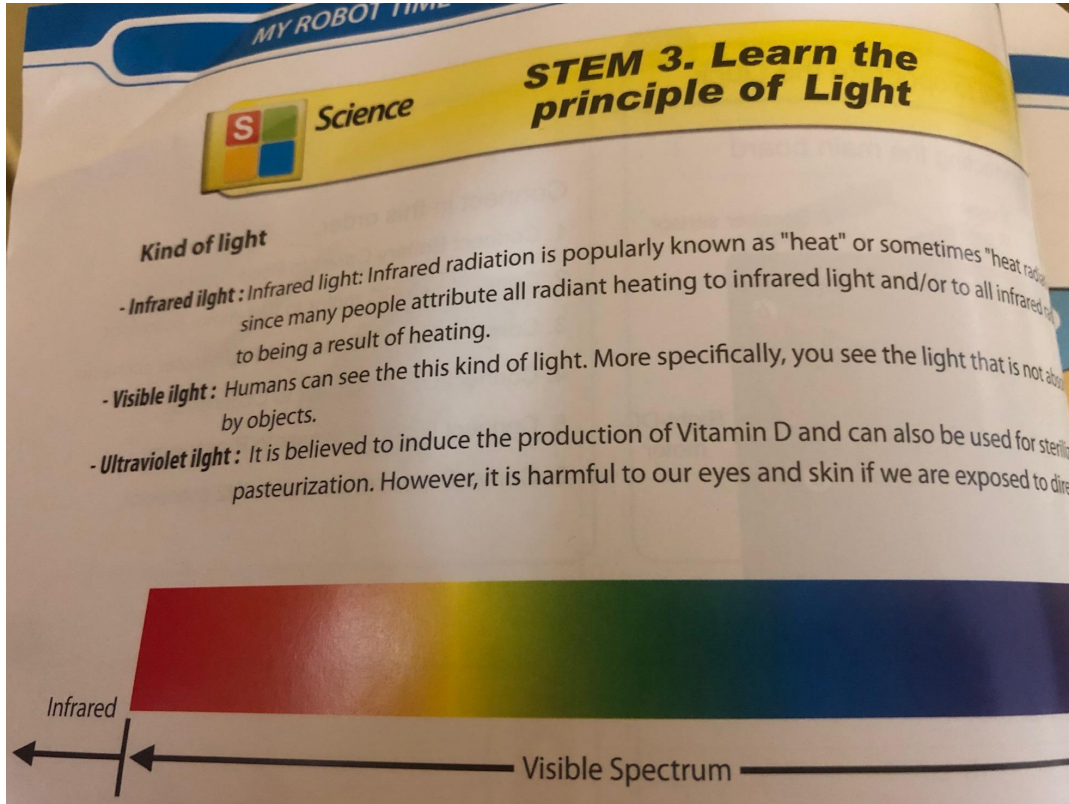- Light moves faster than any other thing

Electromagnetic Spectrum - Infrared waves (IR)

Electromagnetic Spectrum - Infrared waves (IR)

- Light waves are special waves called electromagnetic waves
- All electromagnetic waves travel at the same speed
- Radio rays, infrared rays, visible light, ultraviolet rays, x-rays & gamma rays, ultraviolet rays
- **We will learn about infrared rays today!**

Electromagnetic Spectrum - MRT3-2 page 26

MY ROBOT TIME

Science

STEM 3. Learn the principle of Light

Kind of light

- **Infrared ilght :** Infrared light: Infrared radiation is popularly known as "heat" or sometimes "heat radia" since many people attribute all radiant heating to infrared light and/or to all infrared ra to being a result of heating.

- **Visible ilght :** Humans can see the this kind of light. More specifically, you see the light that is not abso by objects.

- **Ultraviolet ilght :** It is believed to induce the production of Vitamin D and can also be used for steriliz pasteurization. However, it is harmful to our eyes and skin if we are exposed to direc
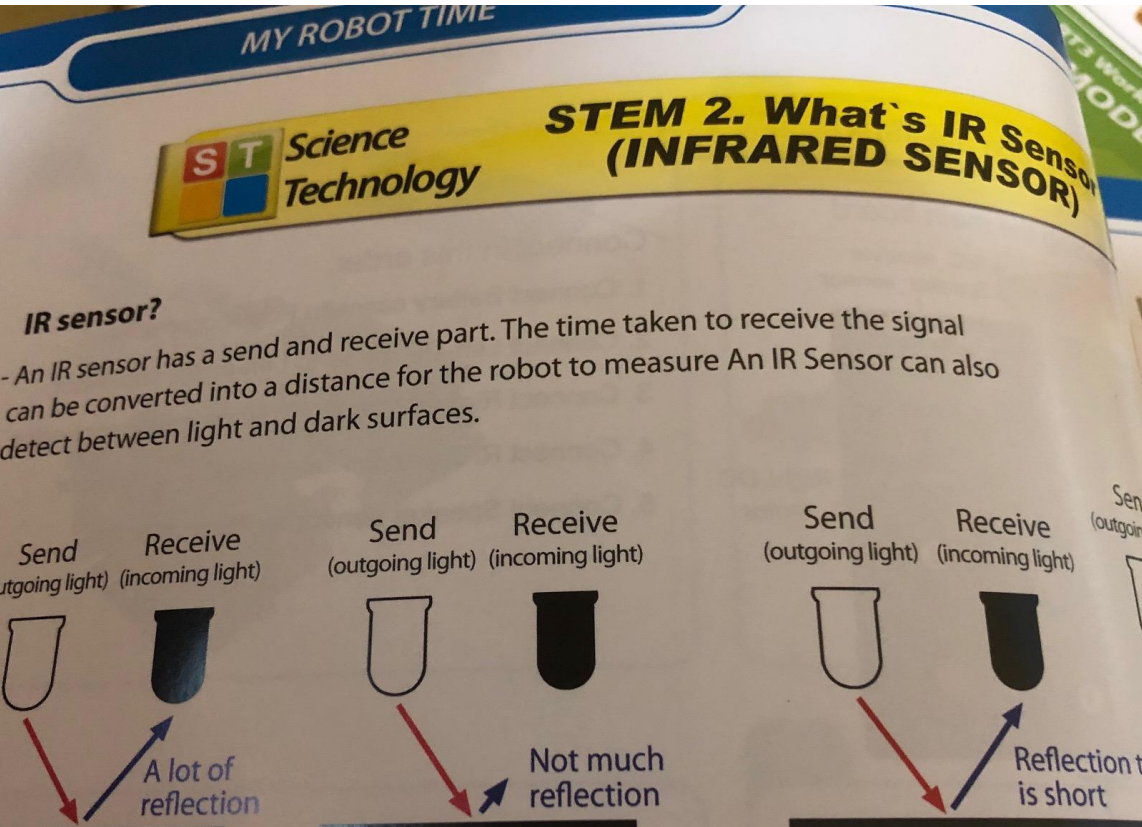
Infrared

Visible Spectrum

TODAY WE WILL DISCUSS ONLY ONE LIGHT RAY ON THE ELECTROMAGNETIC SPECTRUM

INFRARED LIGHT!

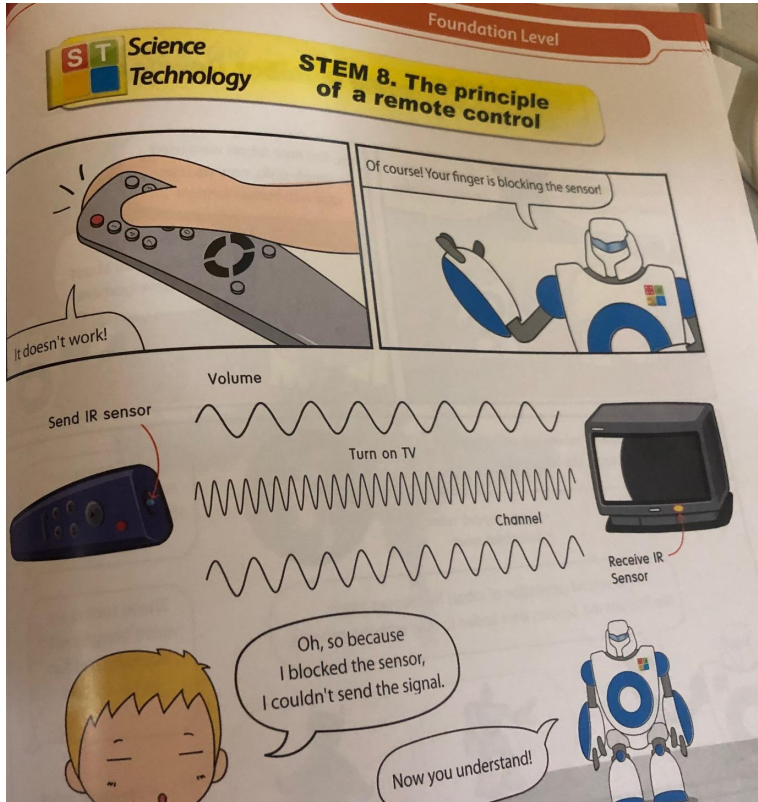THE REMOTE CONTROL FOR THE ROBOT SENDS AND RECEIVES SIGNALS ON THE INFRARED SPECTRUM

- The principle of a remote control

- Send – on the remote

- Receive – on the robot

- The robot brain translates the instructions from send unit to receive unit (via the program)

The eyes of the Robot–IR Sensor 2

Form groups of 2 or 3 and take turns reading cartoon

More About The Remote Control

EXPLAIN HOW THIS REMOTE WORKS!

Use two IR sensors

Scratch Programming Team -- Create an animation that uses keys on the keyboard to control your sprite

- Use at least 4 keys
- Use a function on Scratch that you have never used before
- Do not use text on this project! Use sound or any other function.

Now it's time to swap teams everyone! Break down your robots and clear your Scratch programs!