Innovator Hub Club STEM Camp
with TI-Innovator Hub and TI-Nspire
October 24th and October 31st

Texas Instruments STEM Team

and

Ft. Wayne Schools

See this link for the most up-to-date camp information.
https://tinyurl.com/FtWayneSTEMcamp

TEXAS INSTRUMENTS

Texas Instruments STEM Team

- My name is **Fred Fotsch**. I worked as a high school teacher for 27 years. Other work experiences over the years include; chemistry professor for Drury University, Educational Technology Specialist for International Business Machines, a content consultant for Texas Instruments, and an entrepreneur for educational technology equipment. Presently, I live in Dallas, Texas, and work as the STEM Innovation Manager for Texas Instruments. I enjoy education, the outdoors, travel, and being with my friends and family.

- My name is **Dave Santucci**. My job at Texas Instruments in Dallas is to help design new calculators. I have been working at Texas Instruments for a long, long time. In the last few years, I have been helping students and teachers do STEM and coding. I am learning a lot myself and, I love learning together with students.

- My name is **Erick Archer**. I have worked with science and STEM teachers on many projects over the last 14 years while at Texas Instruments. I am very excited about how STEM is becoming accessible to more and more students.

web: www.TIstemProjects.com   email: stem-team@ti.com
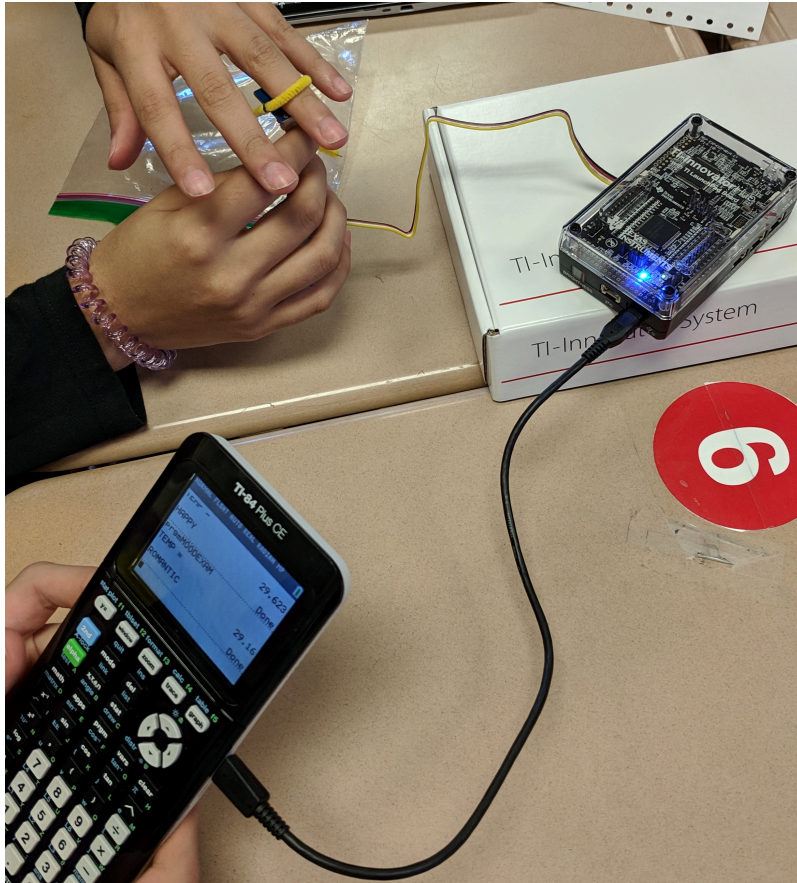
TEXAS INSTRUMENTS

Camp Schedule

- Wednesday, October 21, 4:30-6:30: **Office Hours/Orientation**

- **Saturday, October 24, 10:30-12:30: Camp Day 1**

- Thursday, October 29, 4:30-6:30: **Office Hours to answer questions**

- **Saturday, October 31, 10:30-12:30: Camp Day 2**

- Monday, November 2, 4:30-6:30: **Office Hours to answer questions**

See this link for the most up-to-date camp information.
https://tinyurl.com/FtWayneSTEMcamp

TEXAS INSTRUMENTS

Camp Project: Make a Digital Mood Ring

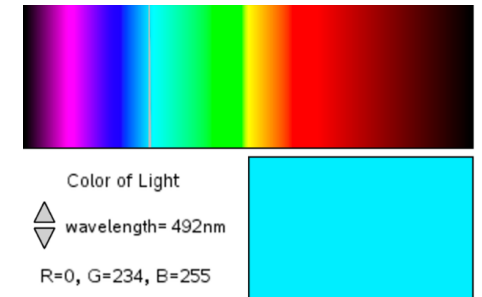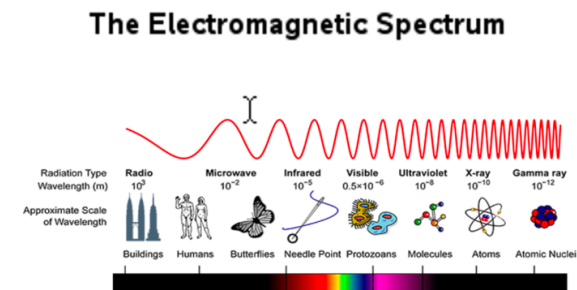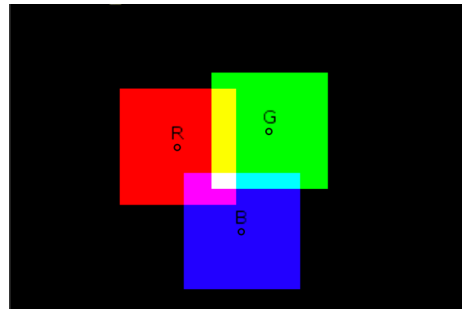Create a system to control the color of an LED based on the temperature of your finger.
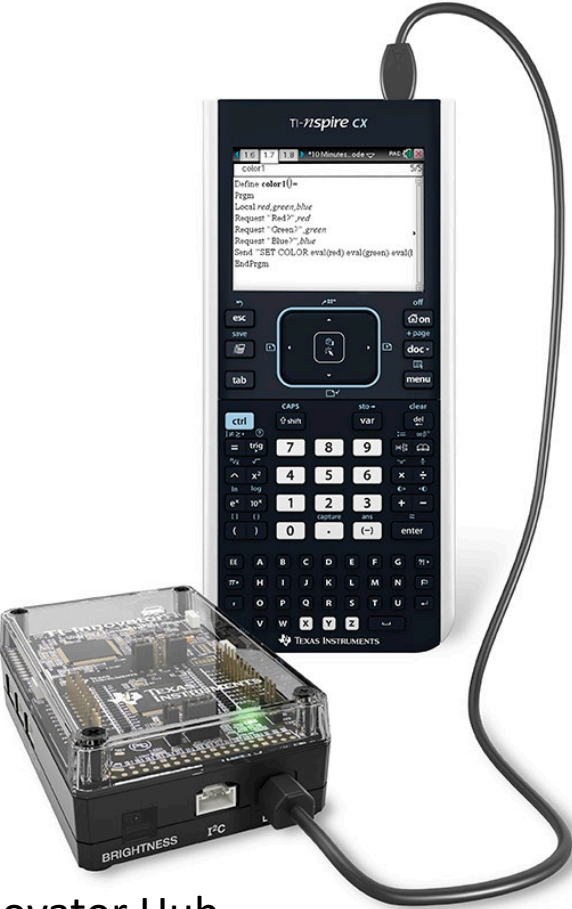
You will learn about
- Primary and secondary colors
- The electromagnetic spectrum
- Visible light
- Temperature sensor input
- Color (Red-Green-Blue) LED output
- Programming in Python
- Loops, If-then statements, Variables,…

```
while get_key() != "esc":
    t = my_temp.measurement()
    text_at(5,"Temperature = " + str(t)+"°C","left")
    if t<20:
        text_at(8,"I feel happy","left")
        color.rgb(255,0,0)
    if t>=20 and t<22:
        text_at(8,"I feel hopeful","left")
        color.rgb(0,255,0)
```
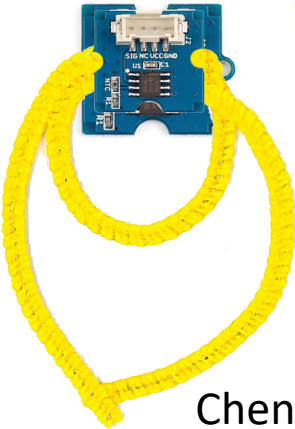
The Electromagnetic Spectrum

Color of Light

wavelength= 492nm

R=0, G=234, B=255

TEXAS INSTRUMENTS

Digital Mood Ring Project Equipment

Unit-to-unit cable

TI-Innovator Hub

Temperature sensor

Sensor cable

Chenille wire

TEXAS INSTRUMENTS

Getting ready for the camp

- Go to the Camp web page for the latest information about the project and the schedule
  - https://tinyurl.com/FtWayneSTEMcamp

- Learn about the TI-Nspire CXII calculator (video link)
- Write your first Python program on the TI-Nspire CXII (video link)

- Interested in exploring more Python?

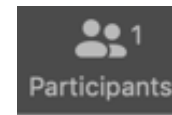Check out the TI 10 Minutes of Code for Python lessons. (link)

- See How Mood Rings Work (video link)

Expected Conduct

- Be polite in chat or lose the privilege

- Be nice and supportive of others! :)

- Be respectful of the speaker
  - Participants will be muted when the session is not open for discussion
  - Put your questions and comments into the chat

- During activities, raise your digital hand

- Participant Options

Go to the participant window and raise your hand.

TEXAS INSTRUMENTS

Ice Breaker

Tell us why you signed up for the camp

Put your answer into the Chat window.