My El Nino Campaign Reflection Data Collection - 2015 - 2016

Jeffrey R. Bouwman
GLOBE Webinar
Monday, June 13, 2016
8:00 p.m.

Jeffrey R. Bouwman

6th & 7th Grade Science Teacher
Shumate Middle School
Gibraltar School District

Adjunct Professor
Science Education & Educational Technology
University of Michigan - Dearborn

Contact Information:
Email: bouwmaj@gibdist.net
Facebook: Shumate Science
Twitter: @jeffbouwman

Shumate Middle School (Gibraltar School District)

Big #GettingScienceDone Shout Outs:

- **David Bydlowski (Wayne RESA)**
- **Andy Henry (Wayne RESA)**
- **Brian Campbell (NASA SMAP/GLOBE)**
- **John Kay (Science Teacher SMS)**
- **Beth O'Neill (Science Teacher SMS)**
- **Sammy DeAngelo (Science Teacher SMS)**
- **Shawn Irwin (Science Teacher SMS)**
- **Els Ferguson (Principal SMS)**
- **Tracy Richardson (Assistant Principal SMS)**
- **Cindy Hoffman (Principal Weiss Elementary)**
- **Gibraltar School District Maintenance**

School Location

School 🏠 | Data Sites 📍
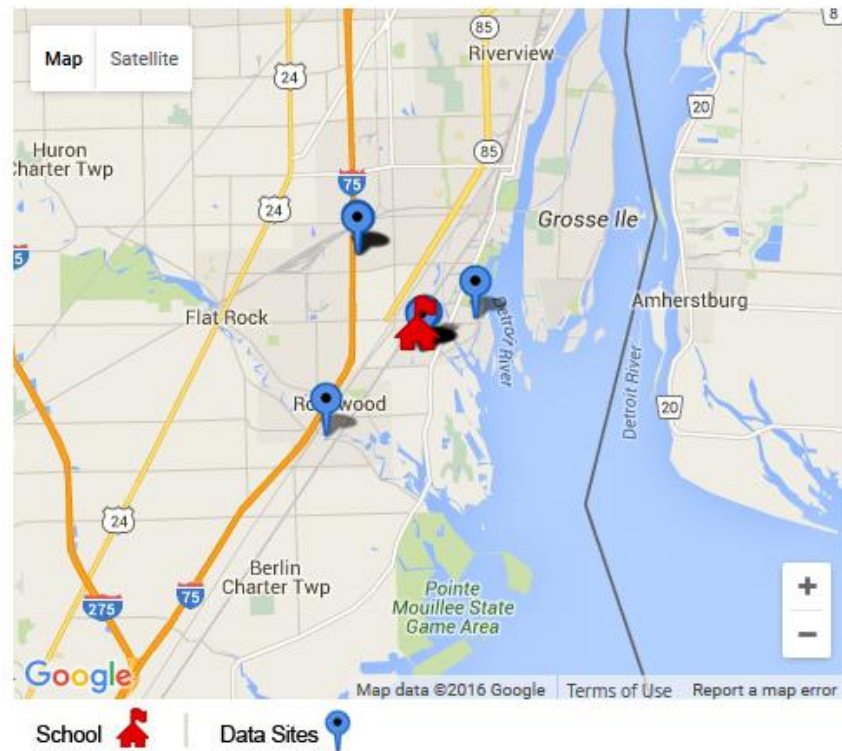
2015 – 2016 – Beginning of the Year (Sept – Nov)

- My first year teaching at Shumate!

- 1 rain gauge for measuring precipitation for CoCoRaHS.

- 1 GLOBE site for seventh graders to take SMAP samples and surface and soil temperatures.

- My focus was on *#DataSmashing* precipitation and soil moisture data. "If precipitation increases, will soil moisture?"

- Weather was focused on in seventh grade (Michigan Grade Level Content Expectations).

- I took all of my seventh graders outside at the end of the hour (last 10 minutes of class). All data was put on the data board together.

SMS CoCoRaHS Rain Gauge

2015 – 2016 – Middle of the Year (Nov – March)

- 3 rain gauges for measuring precipitation for CoCoRaHS. We measured snow too!

- Weather was moved to sixth grade (Michigan Science Standards) - New standards alignment.

- 5 GLOBE sites for sixth and seventh graders (one per hour).

- My focus was on setting up procedures for managing all of the GLOBE sites.

- Train-the-Trainer with a Site Supervisor.

- Students became responsible for data.

- We had a very gentle winter and El Nino was happening. *Thank goodness!*

2015 – 2016 – End of the Year (March - June)

- **Continued to collect rain data for CoCoRaHS and occasionally GLOBE.**

- **9 GLOBE sites for sixth and seventh grade.**

- **Collected approximately 2,400 samples during the 2015 – 2016 school year.**

- **My focus was keeping all of the data organized!**

- **Train-the-Trainer with a Site Supervisor method was working really well.**

- **Students collected and monitored all of the data. We had a lot of data!**

- **I found out about the new El Nino campaign and started adjusting the focus.**

March 18 · 🌐

Big shout out to my First Hour Seventh Graders for collecting their 100th soil sample of the year for the NASA SMAP project. – Mr. Bouwman #GettingScienceDone

324 people reached   Boost Post

So El Nino is......

I asked a few students about El Nino:

- "A nickname for a student in third hour!"

- "Something funny my dad talks about (references)!" Chris Farley SNL Skit

- "The reason winter wasn't bad this year in Michigan."

- "Something to do with the ocean and it being warm."

- "The what?!?"

- "We haven't discussed this in Spanish class with Senora Brown yet."

Reflection: I wish I would have put more emphasis on El Nino this year. I'm not sure this phenomenon is a big deal in Michigan.
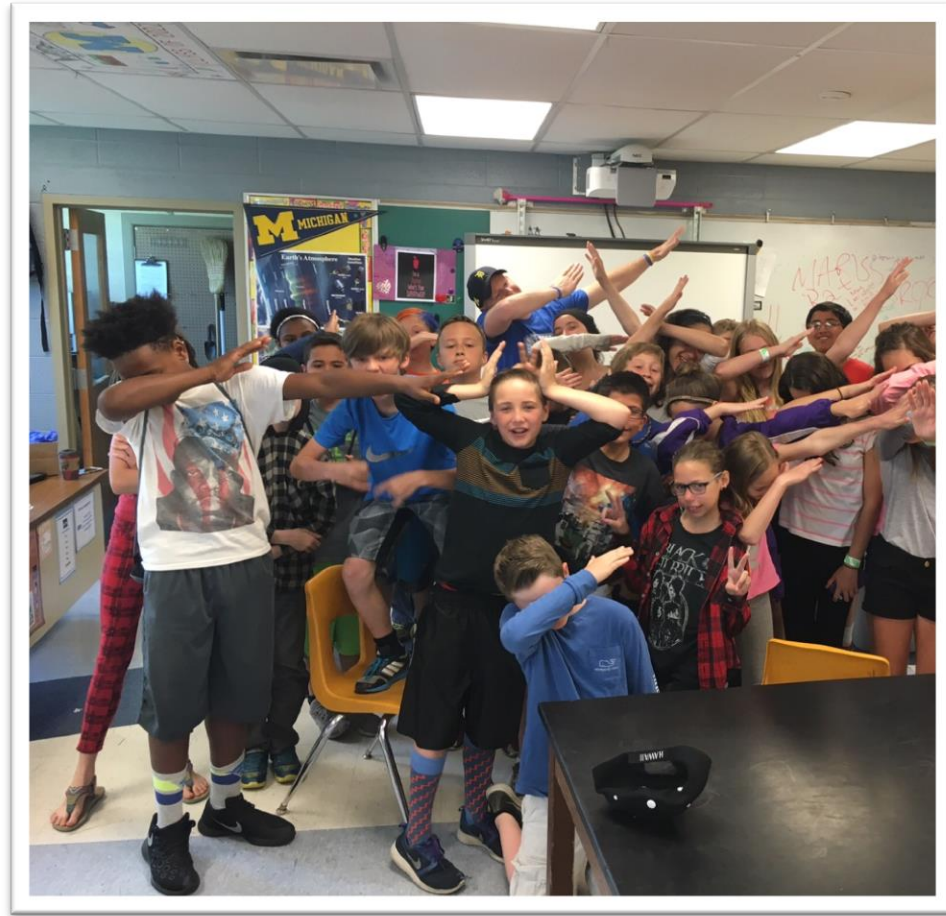
Moving Forward at Shumate – Part 1

Continue to use the Data Board

- **Precipitation (Rain and Snow)**

- **Rain pH**

- **Soil Moisture**

- **Soil Temperature**

- **Surface Temperature**

- **Clouds**

- **Add Temperature (including max. & min.)**

- **Add Biometry – Canopy & Ground Cover**

Reflection: The Data Board worked really well this year! Students need to see the data on a daily basis. The data lead to great conversations about the weather.

Jeff Bouwman @jeffbouwman · May 13
Our data board today (5/13/16) @GLOBEProgram. We rolled out our 9th study site today! @NASASMAP @k12science

♥ 6
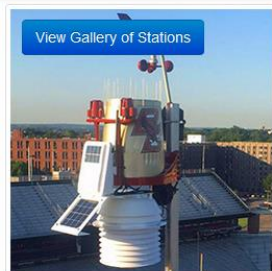
Moving Forward at Shumate – Part 2

Incorporate More Technology

- **Chromebooks**

- **Naturebytes Cameras**

- **WeatherSTEM**

WeatherSTEM

RESOURCES   DE

View Gallery of Stations

Weather Station   **Agricultural Sensors**   **Environmental Camera**

Jeff Bouwman @jeffbouwman · May 17
Today is an AWESOME day! Our @naturebytesuk cameras are here! Nature pics coming soon. @Dutchgirl8161 @GSDacademics
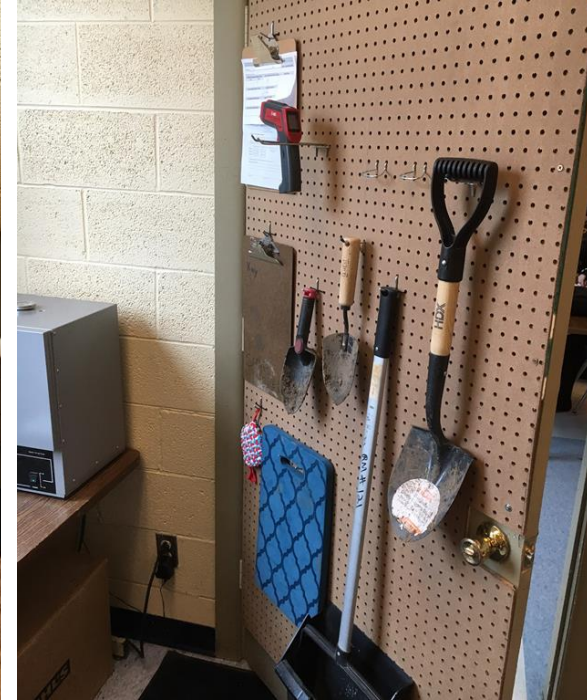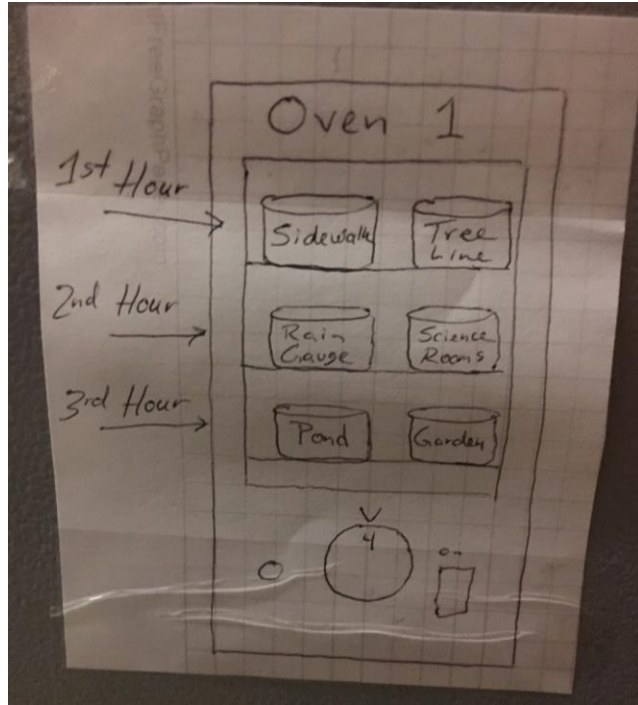
1   5

Moving Forward at Shumate – Part 3
Organization is Key!

Moving Forward at Shumate – Part 4

GLOBE eTraining is AWESOME

Protocol Training Records | Training Modules

Show [100 ▼] entries   Search: [   ]

Module	Sphere	Completed On
ELECTRICAL CONDUCTIVITY	Hydrosphere	06/05/2016
INTRODUCTION TO ATMOSPHERE	Atmosphere	06/05/2016
INTRODUCTION TO HYDROSPHERE	Hydrosphere	06/05/2016
WATER pH - Using pH Meter	Hydrosphere	06/05/2016
WATER pH - Using pH Paper	Hydrosphere	06/05/2016
WATER TEMPERATURE - Using an Alcohol-Filled Thermometer	Hydrosphere	06/05/2016
WATER TEMPERATURE - Using a Temperature Probe	Hydrosphere	06/05/2016
WATER TRANSPARENCY - Using a Secchi Disk	Hydrosphere	06/05/2016
WATER TRANSPARENCY - Using a Transparency Tube	Hydrosphere	06/05/2016
AIR TEMPERATURE	Atmosphere	06/04/2016
BAROMETRIC PRESSURE	Atmosphere	06/04/2016
CLOUDS	Atmosphere	06/04/2016
PRECIPITATION - Rain	Atmosphere	06/04/2016
PRECIPITATION - Snow	Atmosphere	06/04/2016
RELATIVE HUMIDITY	Atmosphere	06/04/2016
SURFACE TEMPERATURE	Atmosphere	06/04/2016
INTRODUCTION TO GLOBE	n/a	05/14/2016
INTRODUCTION TO PEDOSPHERE (SOIL)	Pedosphere (Soil)	05/14/2016
SMAP Soil Moisture	Pedosphere (Soil)	05/14/2016

Any Questions?
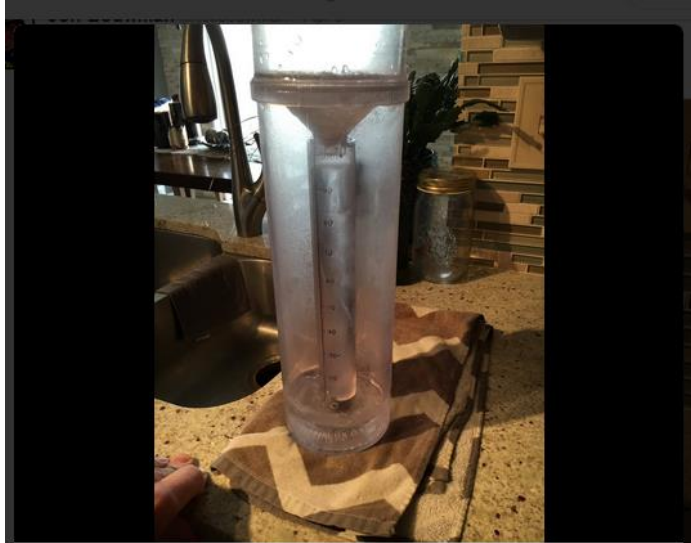
Jeff Bouwman @jeffbouwman · Apr 3
@CoCoRaHS @k12science Back from Branson, about to do my multi day report, and frozen. Only in #PureMichigan
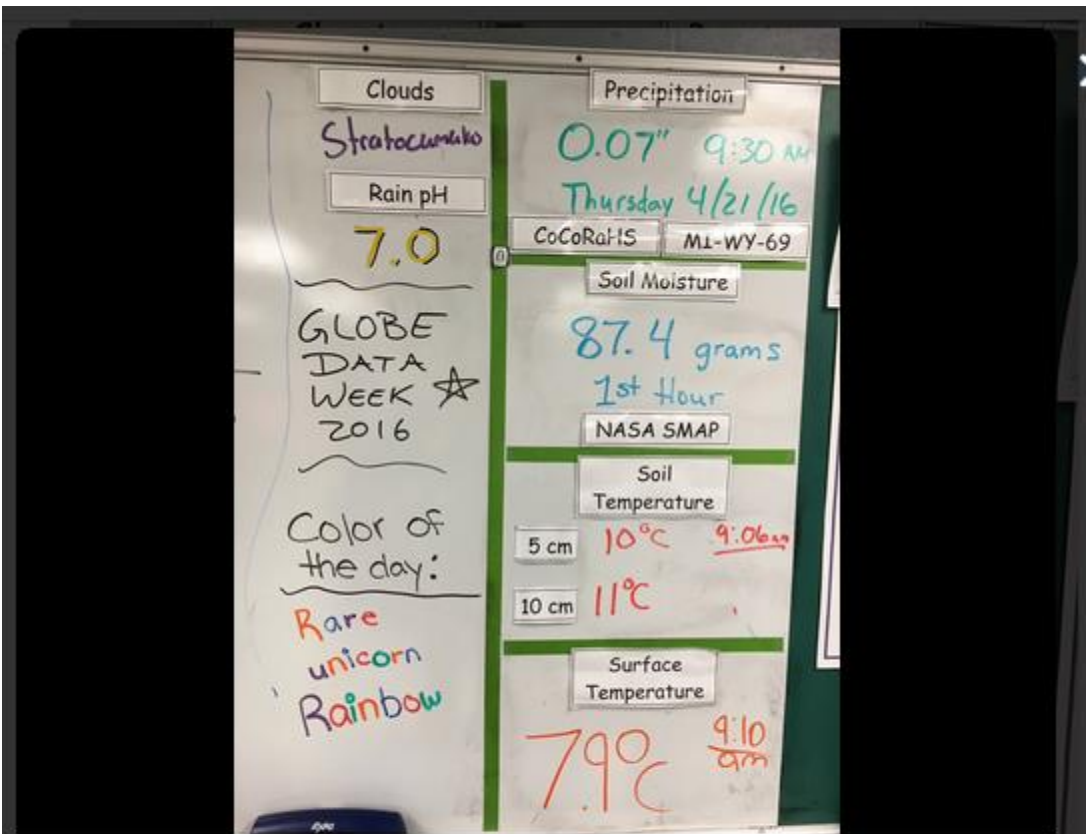
Jeff Bouwman @jeffbouwman · Apr 21
Day 4 @GLOBEProgram Data Entry Challenge at SMS! Our 7th Graders picked #RareUnicornRainbow today @Dutchgirl8161

Contact Information:
Email: bouwmaj@gibdist.net
Facebook: Shumate Science
Twitter: @jeffbouwman

#GettingScienceDone
THANK YOU!

Shumate Science

MUNIVERSITY OF MICHIGAN-DEARBORN