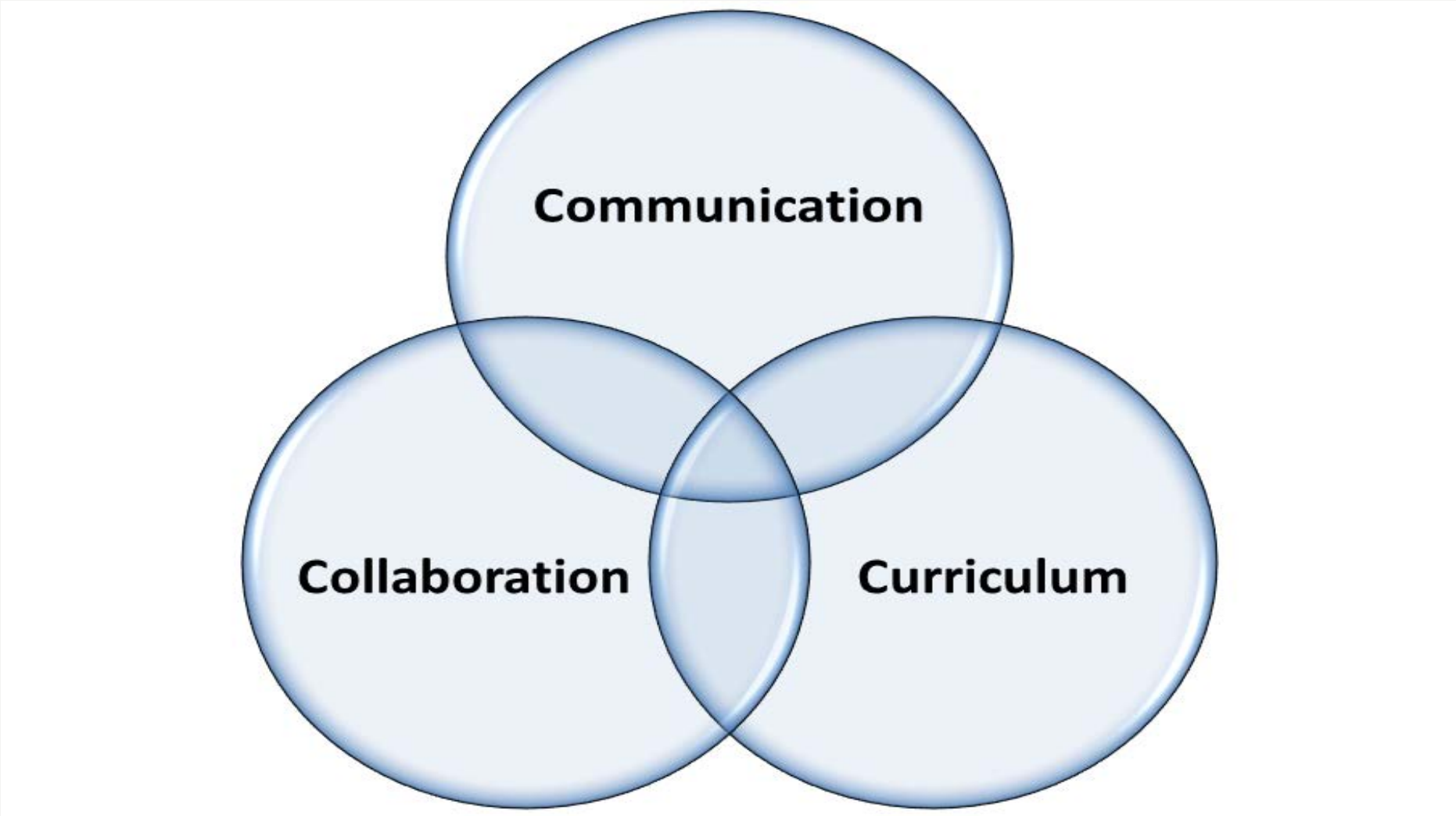
Science Standards

BENJAMIN FRANKLIN ELEMENTARY SCHOOL

Our Continued Commitment…



What is NGSS?

- NGSS is the Next Generation Science Standards (NGSS) – they are happening nationwide
- Ken-Ton adopted the NYSSLS – the same as NGSS but with13 added standards
  - Pre-K-12 program
  - 9 out of the 13 additional NYS standards are focused on Pre-K
- The change came about because ELA and Math instruction had been taking a majority of instructional time
  - NYS recognized the need to address this discrepancy
  - The NGSS started in 2012 – California was first to adopt them in 2013
  - NYS chose to wait to adopt in order to learn from other states who adopted early

Then & Now

- We used to present science facts in lecture form
- The emphasis was on the right answer
- Students learned about Life, Earth, & Physical Science
- Science happened in the classroom when the teacher had time
- Teachers told students the information
- Very teacher-driven

- NYSSLS – Now we are giving them a "**phenomena"**
  - Seeing something that is difficult to explain
  - A chance to see the science happen and help the students make the connections
- The emphasis is on "How do we know that is the answer?"
- The topic of engineering was added
- Hands-on investigations are occurring in the lab
- The science lab is the first line of instruction and classroom teachers support vocabulary development, content and books on the topic
- Students come up with the ideas and make the connections through experiments
- Very student-driven

How We Teach Science

There are 8 science practices

1. Asking questions that are testable
2. Developing and using models
3. Planning and carrying out investigations
4. Using math and computational thinking
5. Analyzing and interpreting data
6. Constructing explanations (for science) and designing solutions (for engineering)
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

Kindergarten Analysts

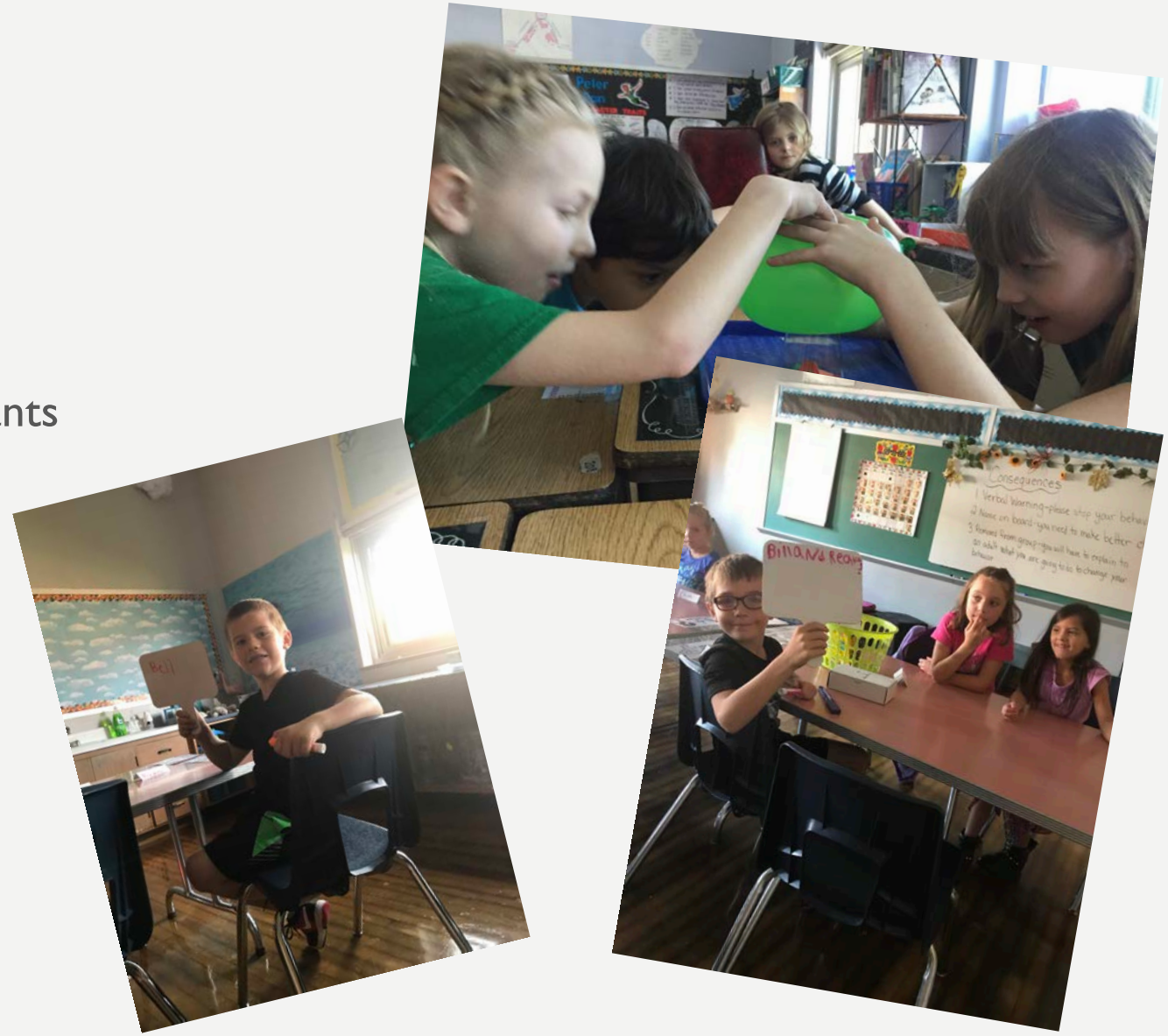
- Weather
- Effect of sun on Earth's surface
- Forces - Push vs pull
- Magnets
- Basic human needs

1st Grade Chemists

- Seasonal amounts of light
- Sun, Stars & the Moon's predictable patterns
- Plant & Animal similarities
- Patterns in Behavior
- Biomimicry

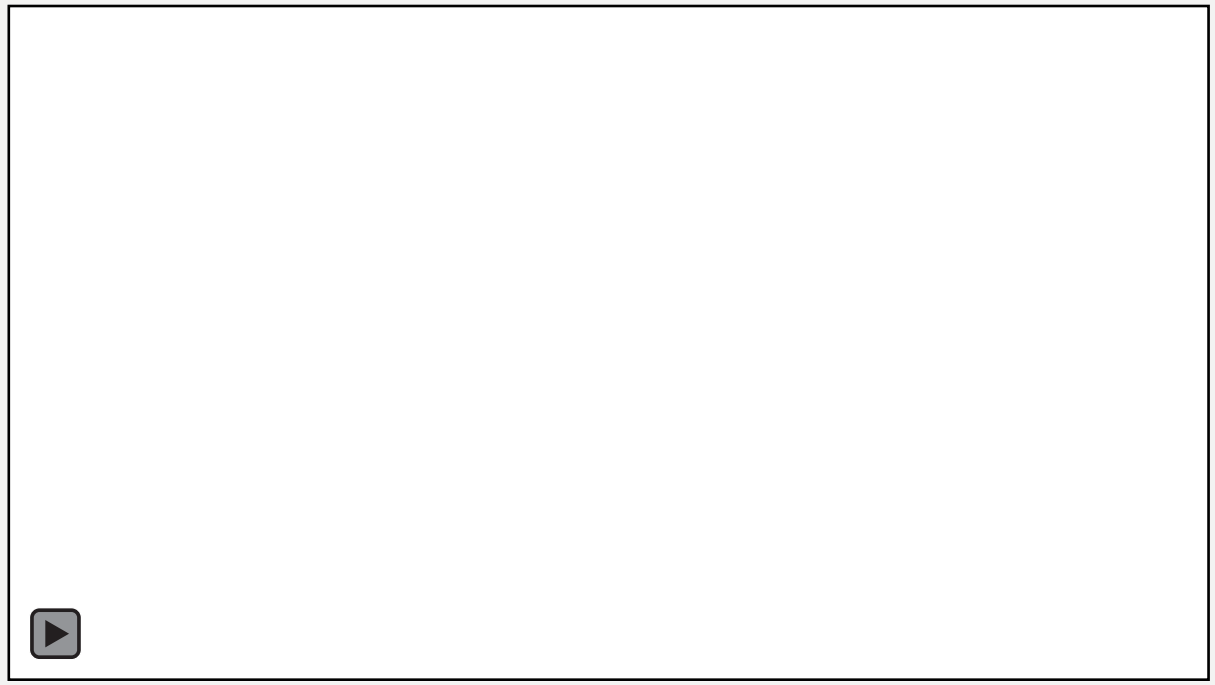
2nd Grade Physicists

- Biodiversity
- Seed dispersal and pollination
- Affect of sunlight and water on plants
- Heating and cooling
- Classifying materials of property
- Forms of water on the Earth



3rd Grade Examiners

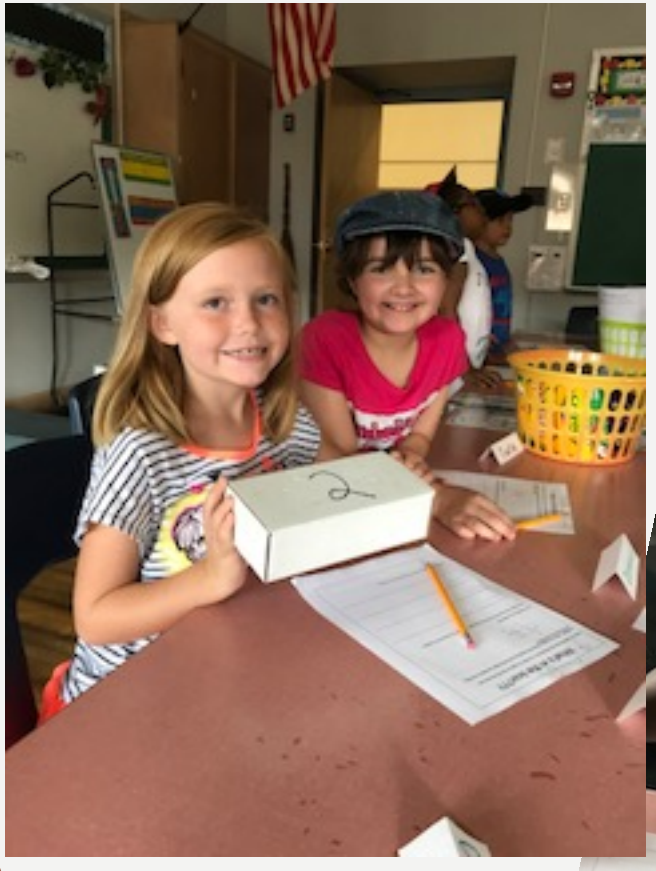
- Build on the forces of motion
- Magnetism
- Life Cycles
- Animal Survival
- Fossils
- Weather

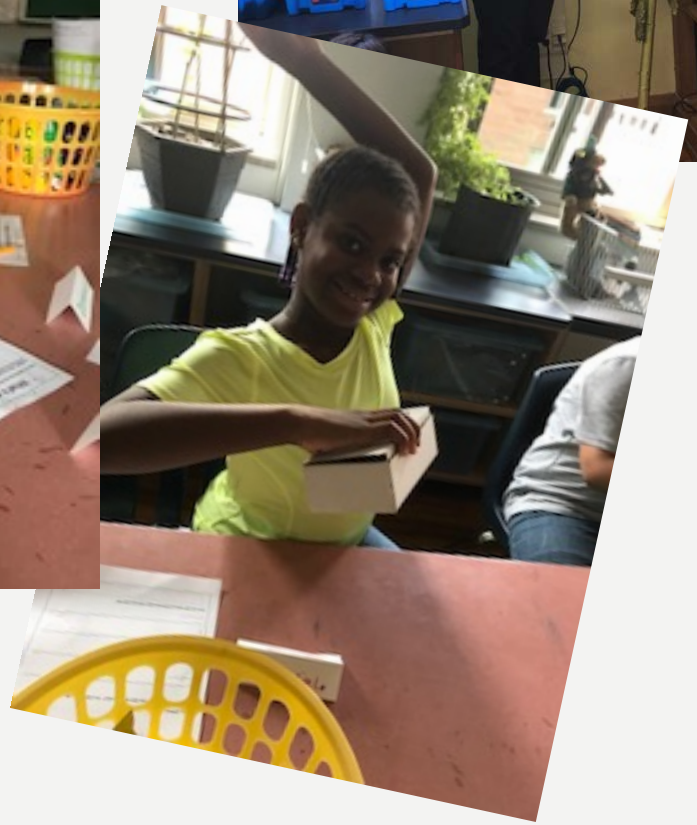


4th Grade Experts

- Earth's Changing Features
- Natural Hazards
- Wave patterns
- Electricity
- Energy and Motion
- Mass/volume

Now It's Your Turn





Thank you for allowing us to be here and share all of the exciting events happening at our school!

Let us know if you want to see the science rooms in action, we always welcome the extra hands!!