# What's Up With Science, Man?

An Introduction to Next Generation Science Standards (NGSS)

# Overview of NGSS

- Illinois is among 26 states that worked collaboratively to update the standards
- ISBE recommends a 3 year transition period for schools and districts to adopt them
- ISBE has stated that the NGSS will not be formally assessed for at least 3 years following adoption
- ISBE plans to release supporting documents/materials to schools and district to help them navigate through bringing the standards into their classrooms

# District 15 Plan (3-5 year implementation plan)

Phase 1: Awareness and Dissemination
- Become as well-versed in the NGSS as possible
- Familiarize staff with NGSS website and ISBE links

Phase 2: Transition
- Scope and sequence of standards
- Realignment of standards if needed

Phase 3: Implementation

Phase 4: Transformation

# Why NGSS

- Moving away from “Mile Wide, Inch Deep”
  - Content has been reduced so students can spend more time engaging in practices of science.

- Shifts in Science
  - Deeper understanding and application of content
  - Concepts build coherently across k-12
  - Align with Common Core State Standards (CCSS)
  - Reflect real world interconnectedness
  - Emphasis on science, technology, engineering, and math (STEM)
  - Designed to prepare students for college and career readiness

- Sample of NGSS: States of Matter

# Take a Look at Our Standards

- “I can” statements
- Lessons Already Implemented in class
- New Ideas to be Implemented

# A Simple Way to Integrate NGSS and CCSS

Science World Magazine

# Time to Get Your Hands Dirty!

Complete the Venn Diagram as you explore

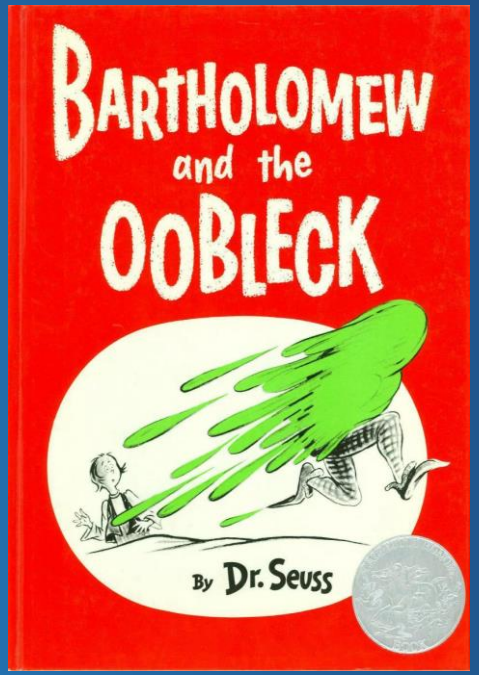
# BrainPOP States of Matter

Define solid, liquid and gas during the video


ABC, Activity Before Content!

# Incorporating L.A.

- Bartholomew and the Oobleck
- Venn Diagram
- CCSS
  - W.5.8 Recall relevant information from experiences
  - W.5.9 Draw evidence from literary or informational text
  - RI.5.7 Drawing on information from multiple print or digital sources



# Incorporating Math

- Provide students with measurements to make the recipes
- Weigh each ingredient separately and then the final product
- CCSS
  - MP.5 Using Tools Strategically
  - MP.4 Model With Mathematics

# Incorporating Social Studies

- Discuss the various ways that materials are shipped around the world using the states of matter

| States of Matter | Types of Transportation | Examples |
|---|---|---|
| Solid | Land Travel | Trains, trucks, cars |
| Liquid | Water Travel | Boats, canoes, barges |
| Gas | Air Travel | Airplane, hot air balloon, blimps |

- CCSS
  - SL.1.1 Participate in collaborative conversations about topics & texts
- IL Social Studies Standard
  - 16.C.3b and 16.C.4B Expansion and industrialization

# Large Recipe of Gak

Mix:
2 cups of Elmer's Glue
1.5 cups warm water

Seperately ( mix together)
1 cup warm water
3 tsps. Borax


Add Borax mixture to glue mixture
Mix up  with hands in Ziplock Bag.

Hint: If you want color, add food color to the water before mixing it with glue
Keep sealed for storage.

Add water if the mixture becomes dry

# OOBLEK Recipe

Equal parts of cornstarch and water

# Your Turn to Build a Unit

Solar System ESS1A and ESS1B

1. Pick a grade area of focus

2. Create an activity to introduce the solar system (remember ABC)
    a. Example: Scale model of the planets

3. Create an interdisciplinary activity based on CCSS on the bottom of the NGSS handout.

4. Fill out the graphic organizer with your ideas

5. Share with the group

# My Robot is Better Than Your Robot

# Use Your Resources

- McHenry County Farm Bureau Ag in the Classroom
- NGSS Resources
- Tools on the Web for Tablets that Support Student Learning in Science
- BrainPOP
- Science World Magazine

# Please feel free to contact us

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