



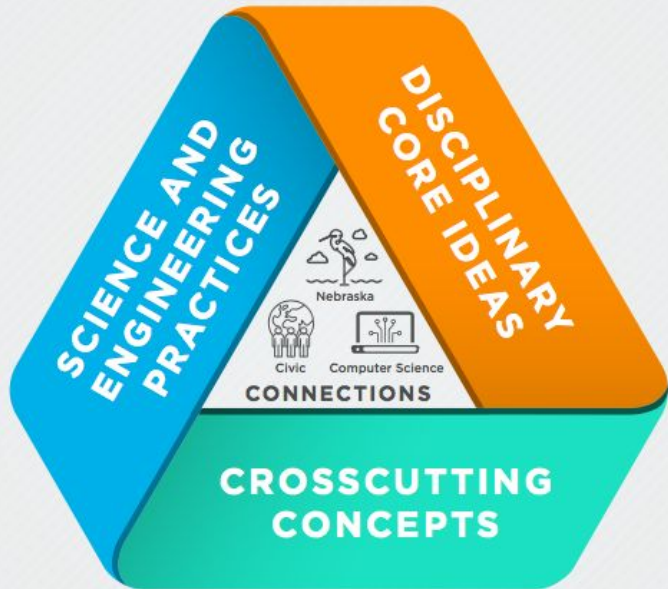
# Phenomena

PLN 11/6/2017

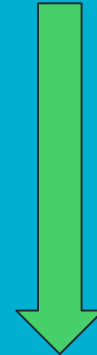


NEBRASKA'S COLLEGE AND CAREER READY  
**STANDARDS FOR SCIENCE**

# New standards—the *Shift*



**FROM LEARNING ABOUT TO**



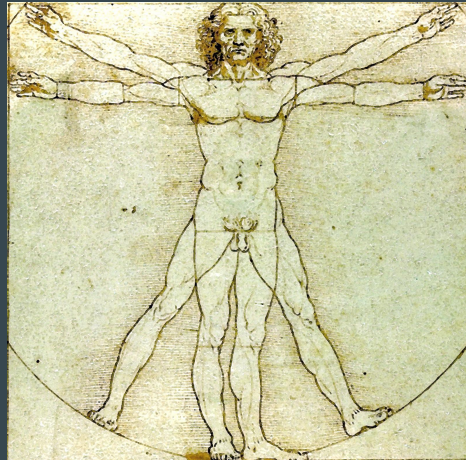
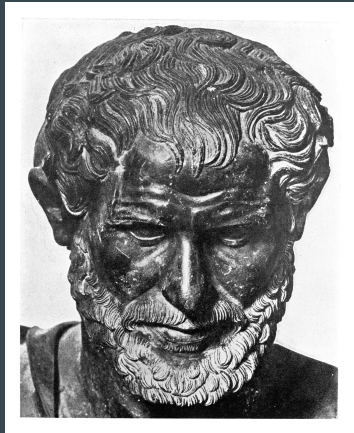
**FIGURING OUT**

# Science...

**What is it?**

# History and Philosophy

- Taking what you know to figure out what you don't know
- A way to understand the world around us



*Phenomena are observable events that occur in the universe and that we can use our science knowledge to explain or predict. The goal of building knowledge in science is to develop general ideas, based on evidence, that can explain and predict phenomena.*

## **Phenomena**

Definition from [Achieve, Next Generation Science Storylines & STEM Teaching Tools](#)

# Using phenomena



Using Phenomena in NGSS-Designed Instruction  
An Interview with Brian Reiser

# Why use phenomena?

- Engage
  - Elicit PK
  - Common experience
  - Ask questions
  - Motivate
  - Equality
-

# KINDS OF PHENOMENA?

- Unit: **Anchoring** phenomenon
- Days: **Investigative** phenomenon
- Moments: **Everyday** phenomenon

## Examples:

- a “case” of something (*what happened to the aspens when wolves were introduced into the Yellowstone*)
- a puzzling observation of the everyday (*Rainwater isn't salty, even when it is coming from the salt water in the ocean*).



# What does this look like in the classroom?

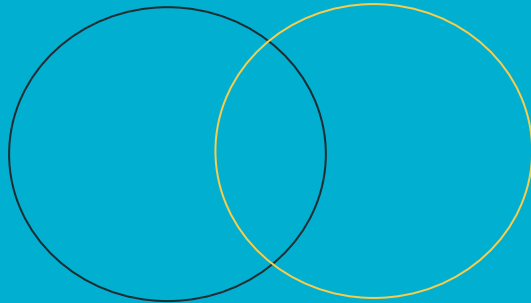
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## Similarities and Differences

What is the teacher doing?

What are kids doing?

Is this different from your current practices?



# Using Phenomena

**AN EXAMPLE**

# Phenomena Resources

- T.J. McKenna of Connecticut Science Center

<http://ngssphenomena.com>

- Science News feeds on social media (Twitter)

Podcasts: Radio Lab (Science), 99 Percent Invisible (Design and Engineering),

SCIENCE Magazine

- Science News
- Radio Lab
- 99 Percent Invisible
- [Scijourner](http://scijourner.com)
- <http://stemteachingtools.org/>
- <https://www.sciencefriday.com/>
- <https://ww2.kqed.org/science/series/deep-look/>
- You own labs-activity before content