

Assisting in the Movement from STEM to STEAM

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$$12-2 = 10$$

$$11+1 = 12$$

~~BIG TEN
CONFERENCE~~

Transforming Agricultural Education for a Changing World

In many ways, agriculture is intertwined with other disciplines in the natural and social sciences, with agriculture professionals using similar approaches and systems as those in other fields. Agriculture now so thoroughly combines basic and applied aspects of the traditional STEM disciplines of science, technology, engineering, and mathematics that the acronym might rightly expand to become STEAM, joining agriculture with the other fundamental disciplines.

http://dels-old.nas.edu/ag_education/

STEM to STEAM

Science

Technology

Engineering

Mathematics



Science

Technology

Engineering

Agriculture

Mathematics

What science concept is illustrated?



ADHESION

What science concept is illustrated?



COHESION

Why do we care?

BP Oil Spill 2010



- **How does this affect water quality?**
- **Who are the constituents that are affected?**
- **What impact on agriculture will this have?**

Other Examples

- **CC vs. ML**
- **Cation Exchange**

Think of an agricultural, food, or natural resource concept, from within your field, and write it down on the yellow note card.

Think of a core subject concept that is fundamental to the agricultural concept that you previously identified, and write it down on the pink note card.

The Process

1. Identify the agricultural, food, or natural resource concept
2. Identify the “enabling” core concept
3. Describe the connection between the two
4. Implement the deductive model to teach the lesson

Academically Integrated Method of Enhanced Demonstration Learning Module

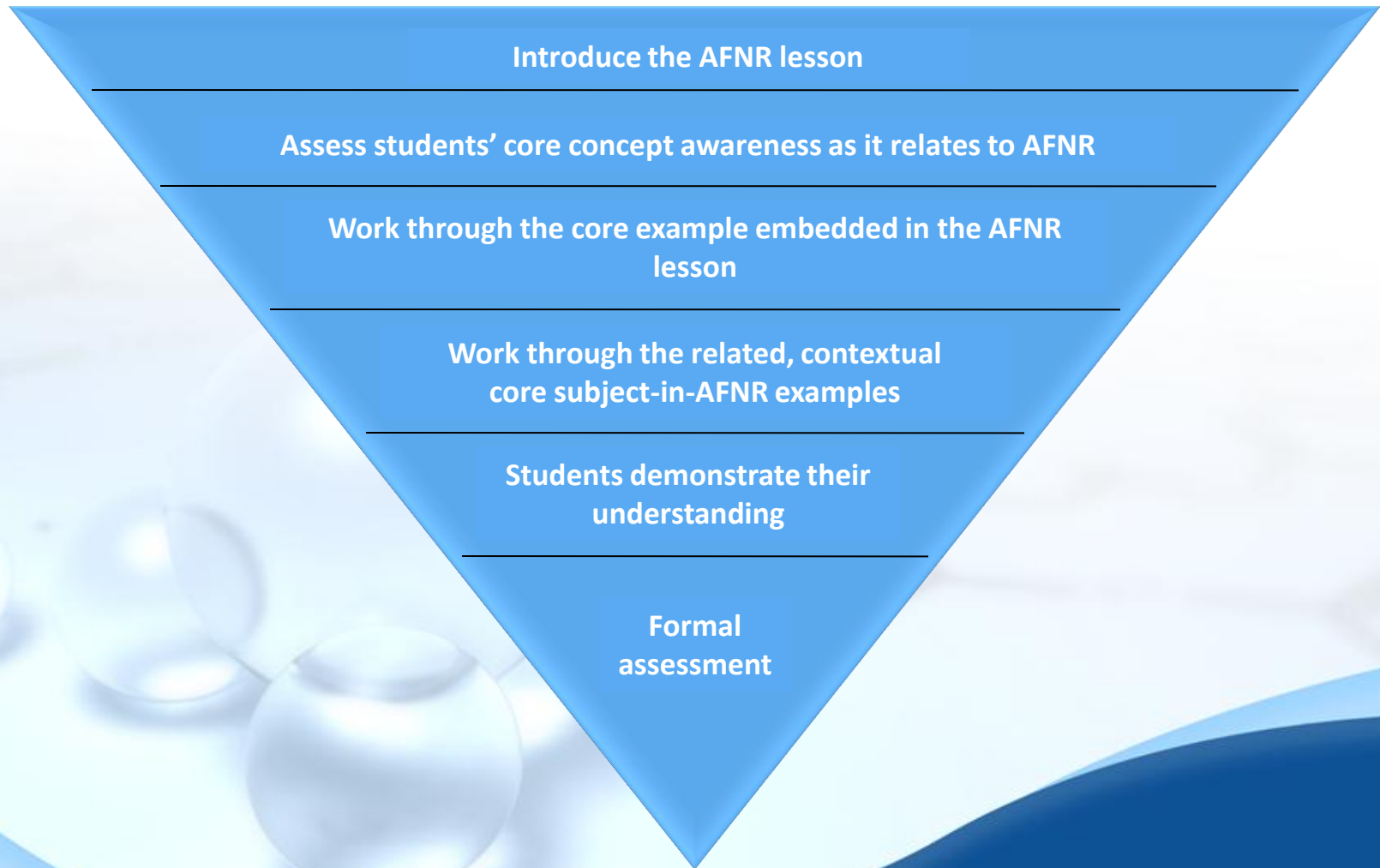
Course:
Unit:
Lesson:

Agriculture, Food, & Natural Resource Concept

Core Subject Concept

AIMED Approach

Deductive Model



Resources

Strategies to Integrate Now

www.strategiestointegratenow.com

Achieve, Inc.

www.achieve.org

The Curriculum Matrix

www.leadered.com/curriculumMatrix.html

States' Career Clusters

www.careerclusters.org/

QUESTIONS??

Please turn in your sheets before you leave and provide me with an email address if you would like the ideas emailed to you.