

Each One Teach One

Standards of Learning

Study techniques

Objective

Students will:

- Learn facts about agriculture

Materials

- Fact Cards
- Paper
- Markers
- Overhead transparencies
- Overhead pens

Background Knowledge

The goal of the review activity is to provide a means for students to learn basic facts. This is a Maranzano strategy and has been proven to yield success with multiple choice testing. This activity also serves to strengthen your students team building skills and feel more comfortable in the classroom.

Procedure

1. Divide the class into groups of 4-6.
2. Provide each participant with a fact card.
3. Participants are given the charge to teach each person in their small group their assigned fact. Participants may use whatever teaching strategy and materials available within the room they wish to help others learn their fact. Announce there will be an evaluation at the end of the activity in which the good teachers and good learners will be recognized.
4. Distribute a card to each participant. Do not give further instructions. Allow time for participants to teach each other the facts. Emphasize the goal is to be a good teacher and a good learner.
5. Allow the groups to approach the activity differently. Observe how each group accomplished the task.
6. When the class has completed the assignment have all participants prepare for the evaluation. Participants must return their fact card and any notes to the teacher.
7. Ask participants to share the facts that someone else taught them. Keep a running record of facts shared. Commend each participant who successfully taught a fact to another person.
8. Commend each participant who shared a fact.
9. Identify any facts which were not shared.

Extension

- This activity can be adapted to fit any unit of study. Simply change out the fact to match the topic being studied.
- Have each participant further research their fact or an interesting fact learned.



- Discuss which learning strategies worked best.

Fact Cards

Agriculture is the number 1 industry in Virginia, and the number 1 industry in the United States.

Biodiesel can be made from vegetable or, animal fat or recycled cooking oil.

Biofuel blends are referred to with the initial of the biofuel, then a number indicating the biofuel percentage of the blend. For example, E10 is a 10% ethanol blend. B20 is a 20% biodiesel blend.

Growth in biobased products will stimulate rural development efforts in farming, forestry, and associated service industries.

Ethanol is an alcohol fuel made by fermenting the sugars found in grains, such as corn and wheat.

Ethanol usage can reduce total carbon dioxide emissions.



Gasohol refers to gasoline blends containing up to ten percent ethanol.

Ethanol costs more to produce than gasoline, so federal and state governments promote tax advantages to make ethanol more competitive in the marketplace.

Biomass produces two percent of the electricity we use (produced by electric utilities).

An acre is about the size of a football field.

Biomass contains little sulfur and nitrogen, so it does not produce the pollutants that can cause acid rain.

Biomass can be converted into usable energy in four ways: burning, fermentation, bacterial decay and conversion.



Wood (logs, chips, bark and sawdust) accounts for about 79% of biomass energy.

A ton (2000 pounds) of garbage contains about as much heat energy as 500 pounds of coal.

Landfills can collect methane gas, purify it, and use it as an energy source.

77% of biomass energy is used by industry.

Domestic bioenergy sources could help our nation to substantially reduce dependency on petroleum.

The exhaust from biodiesel-fueled vehicles smells like French fries!



Biodiesel has significantly improved lubricity, which can decrease maintenance costs and reduce engine wear. Even blends as low as 1% can improve lubricity by as much as 65%.

Virginia Tech and Virginia State University are the state's two land grant institutions.

A large tractor with attachments can cost more than a house.

Agricultural biotechnology helps farmers produce healthier, pest-resistant crops that require fewer crop protection chemicals.

Farmers who use crop protection chemicals are required to be trained in application methods and to keep accurate records of usage.

