

Farming Through Time

Standards of Learning

Science 6.2

Objective

Students will

- analyze and describe how the United States farming energy use has changed over time.

Materials

- hoe
- toy horse
- toy tractor

Background Knowledge

Farmers have always gotten up before sunrise, but long ago, there was no electricity so farmers lit kerosene lamps so they could see. They did many chores by lamplight. In the past farm buildings were made of wood not metal like they are today. The barns were the biggest buildings on the farm and had two floors. The animals lived on the first floor and hay was kept upstairs to feed the animals. Food was also stored in the top of the barn or in silos to store grains. Most farm work was done by hand and most tools were made of wood. The tools were very heavy and were used for chopping wood, cooking, keeping weeds away from the crops, and cutting down tall crops. Water came from wells deep into the ground but was still important for the farmers. The water was carried through pumps and into buckets, and there was often no running water in farmhouses or buildings. If anyone wanted to cook or take a bath they had to carry water from the pump to the house. At harvest time, the whole farm family had to help. The crops were cut down or picked by hand and thrown on carts or wagons to carry off. Farmers kept large, heavy horses called draft horses. These animals could pull plows and heavy loads. All of the animals on the farm were largely used to feed the family and any leftovers might be sold to make money. Cows had to be milked by hand and the cream that rose to the top of the pail was used to make butter. Icehouses were used to keep the milk cold and early-morning trains would take the milk into cities to be sold. Farming was a lot harder than it is today because the weather played a big factor in the survival of the family. Crops could be eaten by insects or killed by plant diseases.

Imagine what the workforce will be like in 50 years. How will technology affect the way we work, live, and play? How will our society produce food and fiber?

Procedure

1. Start a discussion on what farms were like in the United States in the 1700s. Students should mention farmers relied upon animal, family and possibly slavery (Turn this into human resources). Farming was done from sun up until sun down.
2. The 1800s scenario should look basically the same, but there were some tools that were introduced to make farming easier.



3. The 1900s scenario changed drastically with the introduction of the tractor and electricity made it to rural areas. Research into new and better crops, etc.
4. No matter what the scenario or the time, the same amount of energy has existed. Energy is neither created nor destroyed only changed from one form to another.
5. So, whether it was a farmer in 1795 in his garden taking a hoe to hill his tomato plants which changes the chemical energy in his body to mechanical energy to move the hoe, or.. (demonstrate)
6. Whether it was a farmer in 1895 driving a team of horses across his field to clear it.
7. Chemical energy in the farmer's body to mechanical energy to move behind the horses who also have chemical energy being changed into mechanical energy.
8. Then in the 1900s you have the tractor which uses chemical energy of gasoline which is changed into mechanical energy that allows the tractor to moved and perform work.

Extension

Build a classroom timeline from the 1700 to the present day involving food and fiber production.

