Activity Sheet Answer Key

Use this activity sheet to complete your ethanol journey. If you have any questions remember you can replay that section of the activity.

Questions 1 – 6 Cover "What is Ethanol?"

1. Which engines are able to be fueled by ethanol?
   All: Car, Lawn Mower, Airplane, Motorcycle, Boat

2. Who invented the first car able to run off ethanol, gasoline, or a mixture of both?
   Henry Ford

3. Fill in the blank: The United States is the largest producer of ethanol in the world?

4. In your own words, explain what a renewable resource is and how it is different from a nonrenewable resource. Then give an example of both.
   Exact answers will vary. Should be along the lines of: Renewables can be made over and over (ex:solar energy). While, nonrenewable is finite (ex: oil).

5. During ethanol production, what part of the corn kernel is used to make fuel?
   Starch

6. Besides ethanol, what other products are made during the ethanol production process?
   Answers include: animal feed, corn oil, and carbon dioxide

Ethanol's Environmental Benefits

1. What year did the "Clean Air Act" begin and why was it passed?
   1990, The goal was to help reduce the amount of harmful substances in the air from burning straight gasoline.

2. Name three benefits of ethanol for our planet?
   Helps reduce smog, reduce acid rain, and damage to the ozone layer.
   Could also include that it is biodegradable, uses less water, can generate double the amount of energy compared to the amount it takes to make it. Burns cleaner than fossil fuels.

Ethanol Economic Impact

1. Ethanol helps to create direct and indirect jobs. Please give one example of each.
   Direct: Someone in a biorefinery
   Indirect: Farming, transportation, equipment managing

2. Name 3 careers you could have within the ethanol industry.
   Farmers, truck drivers, biorefinery worker

Ethanol Uses

1. According to the simulation, what ethanol blended fuels are available to you at the pump? (You should have more than two for this answer)
   E85, E15, E10

2. What vehicle might run on a flex fuels like E85?
   Flexible Fuel Vehicles (FFVs), some racecars

3. Nearly all cars and light trucks on the road today can run on what ethanol blended fuels?
   E10 and E15

4. What color indicates E85 fuel on both a vehicle's gas cap and fuel pump label?
   Yellow

Bonus: Complete the ethanol challenge and show your teacher the special badge you earned.