Ineffective Fuels

Final Report
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Team Number 57
Jackson Middle School

Team Members:
Heidi Rolson, Nicholas Elkins, and Bella Montoya
Team Sponsor: Mrs. Glennon

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Executive Summary:

Our team has been investigating sources of energy. We questioned how coal was affecting our environment based on its co_2 and how it affects the environment around us.

We did some research to find a lot of alternative resources of energy, but we found two alternative energy types that would be good for our project. The two alternatives are wind and solar energy, which produce less co_2 than fossil fuels.

We then used Starlogo TNG to create a model that would be able to compare which fuel had less of a carbon dioxide impact by using turtles to represent fumes, wind power, solar power. We used a building to represent solar panels, squares to represent how much energy was made by the wind turbine, water droplets as coal energy, and a pole for the wind turbine. We made coal from balls, a building for the power plant, wind is bubbles, diamonds represents co_2, and solar energy is a cylinder.

We are not completely finished with the model but will be in the next weeks. We will have our results when we come to the finals.

Statement of the problem:

The problem we are trying to solve is to find another energy source to help reduce the amount of coal used in New Mexico. The CO_2 in the air is very harmful to our

Environment. By altering the co_2 cycle and increasing the amount of CO_2 in the air thus creating a green house affect.

Method:

We were struggling on finding a topic for our project. We bounced on different ideas with Mrs.Glennon and Mrs. Patty until we found a subject that we were comfortable doing. We researched coal and the other sources of energy. Then, we started programming using Starlogo TNG. We had some trouble at first, but soon got accustomed to the programming language. We had arguments on what agents we should use and how we should lay out the program. We worked on the project changing different parts of it. We were evaluated on what we had done and we were told to combine all three programs and are still doing so. We are still changing different parts of the program to get accurate results from our model. Then, we were reviewed by Mrs. Janet and found some crucial errors to help us correct our model. We are currently about to finish our Final model.

Model Progress:

Our Model is planning to show how coal is first taken from the coal miner to the power plant to then create energy. Also creating CO_2 in this process to show one of the down sides to coal.

The part of the model to represent Wind energy is to first use a slider to change the rate on wind that would be represented in the model. Then, when each wind

agent would collide with the wind turbine it would produce a certain amount of energy. We are working on Solar and will soon finish.

Results:
 Our results for our project is still process we are continuing various tests and will soon get a final answer to our project.

What We Learned:
  During this long experience we have learned many things about programming and also about renewable Sources. We also learned about how CO_2 effects the environment around us.

What we want to do:
We plan to continue programming and making our program better so we can get more accurate results for prove that our answer would be correct

Conclusion:
We are currently working on a conclusion and will have one within the next week.

Most Significant Achievement:
Bella Montoya

My most significant achievement was to be able to debate with my team mates to find a the correct answer

Nicholas Elkins
My most significant achievement was being able to help solve a problem that still needs to be answered fully.

Heidi Rolston
My most significant achievement was making a full power point with help of my teammates.

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