

Recycle This

New Mexico

Supercomputing challenge

Final report

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Team 125

Tibbetts Jr. high

Team members

Jesse Duarte

Jacob Hensley

Teachers

Ms. Maurer

Project mentor

Bob Robey

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Executive Summary

I'm sure we've all heard of recycling, but our world is not trying as much as we would like. So this is what we plan to fix, piece by piece. Our plan was to start out getting the city to recycle more but found out that that wasn't as easy as we expected, so we thought smaller and aimed it at our school.

We decided to do an advertising blitz at our school. We found a math model prior to the blitz and compared the results with what we expected from our model.

Our results showed that our blitz had worked as the results were higher than expected.

Problem Statement

People are throwing away things that can be recycled and that is damaging our

planet by using valuable resources. That is what we plan to fix. The two most likely reasons why people don't recycle is because they don't want to recycle or because they can't.

We wanted to do something to increase the amount of recycling. We decided to do an education and an advertising blitz.

Description

Our project started out as trying to inform our community and get data from our local waste management. We were going to make a model and then compare the results after our blitz.

We soon found out that our community was too big of a project to manage so we narrowed it down to our school. We asked our principal for how many recycle bins they used in the previous months. We then put the data into a spreadsheet and found the trend line. We then put up posters around our school and announcements on the intercom. After about a week we got the new results and made another spreadsheet and found the new trend line.

Method and Computational Model

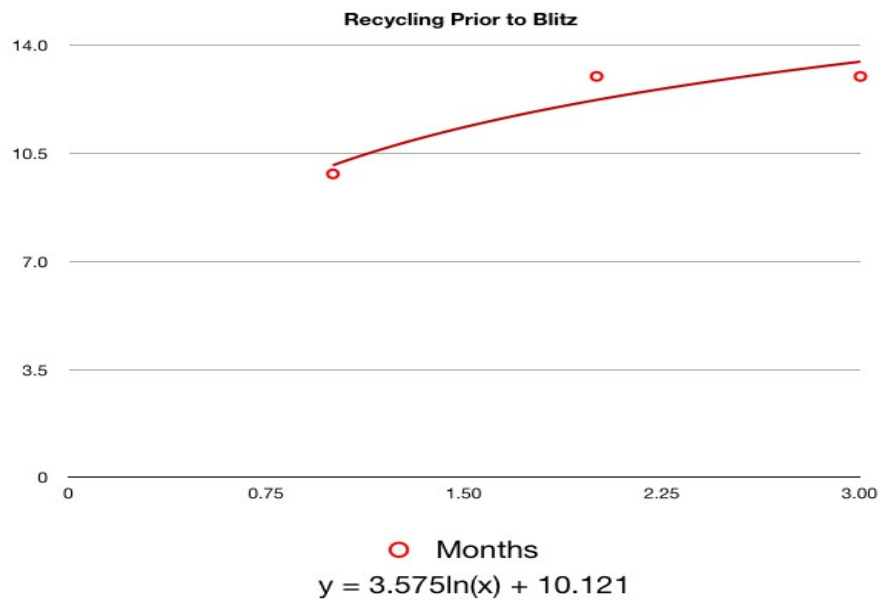
Steps

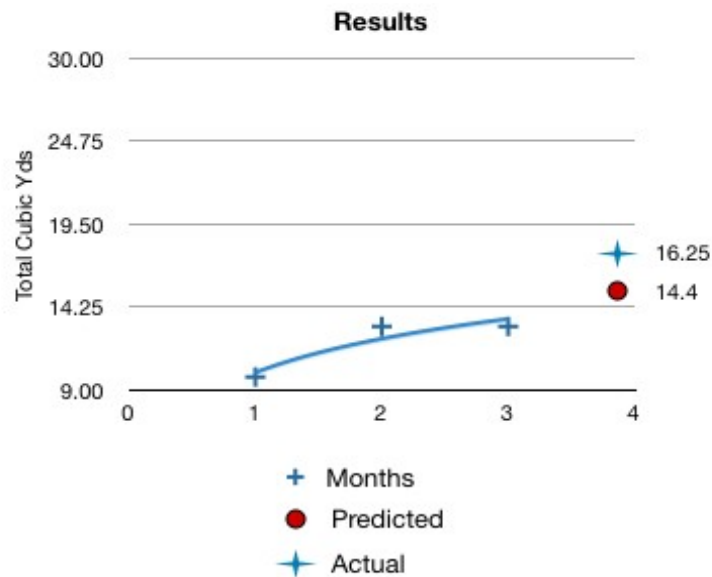
1. We collected the amount of recycling bins that had been filled and then found how much each bin held in cubic yards. We computed the trend line using a spreadsheet and found our model was closer to a logarithm function because $r = .93$ which is close to 1. The function is $y = 3.575 \ln(x) + 10.121$. *We used this line to make a prediction what the cubic yards should be if this trend continued. It predicted that 14.4 cubic yards should be recycled.*
2. The next thing we did was start advertising. We used posters and the announcement system to inform our school about recycling. We used data we found on the internet and from Waste Management.

3. We collected the amount of recycling bins after the advertising blitz. We converted it to cubic yards and compared it to our prediction.

Results

The prediction was that 14.4 cubic yards would be recycled. Our data showed that it was 16.25 cubic yards. We believe that our blitz helped raise the recycling rate.





Conclusion

In order to increase recycling by our community and help preserve our natural resources an advertising and informational campaign would need to take place. We assume that our schools behavior would be the same as our community. We also believe that this campaign would need to be repeated at different times to remind the public.

Achievements

We learned how to do more advanced math, our school is more eco- friendly, and we know how to do more with graphs.

Acknowledgements

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Citations

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Appendix A

