



AP Environmental Science 2000 Student Samples

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The newspaper should be recycled because paper is one of the easiest materials to recycle & reuse again & again. Instead of ~~cutting~~ cutting down trees to make paper, the community should recycle paper as much as possible. This recycled input reduces the economic & environmental costs associated with cutting down trees, harming young trees, & degrading forest ecosystems.

The newspaper should not be recycled because resources would be wasted. The human effort to separate different types of paper, to process it again to become like regular paper, & to ship the paper back forth between the consumer, the manufacturer, & the power plant is all waste since less resources would be used in making brand new paper.

Two pieces of scientific information that would be needed to evaluate the environmental benefits of recycling the newspaper would be finding out how many trees would be saved if the paper was recycled & reused compared to how many trees would be lost if they were needed to make new paper. Also, how much landfill space is saved or how little pollution is released into the air from burning paper by deciding to recycle paper rather than using it just once, throwing it away & making new paper.

Two pieces of scientific information that would be needed to evaluate the environmental

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costs of recycling the newspaper would be evaluating how much water would be wasted in breaking down the newspaper to repress it if it is recycled compared to if it wasn't & new paper was made. Also how much human effort it would take to collect & separate the different sorts of paper.

If the community could recycle either aluminum or paper, I would recommend that aluminum be recycled. It is hard for people to reuse aluminum in their home, but not for them to reuse paper. People can reuse sheets of paper, napkins, paper towels, & paper plates. They can also cut down the use of these products. Aluminum can be recycled & reused again & again & it won't lose its quality as fast as paper would.

Two difficulties that the community might face in implementing the recycling program might be getting the citizens to cooperate & protest from aluminum & paper companies.

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(a)(i) Recycling newspapers is important because it saves resources (so that additional trees don't have to be cut down) and it reduces the economic and environmental costs associated with landfills. Paper is the largest source of trash for landfills in the US. It takes up vital landfill space, making it necessary to create new landfills at faster rates.

(ii) It does not make sense to recycle the newspaper because it takes up too much energy, ~~and~~ in moving it from consumer to manufacturer, sorting recycled materials, and reprocessing it for use. Besides, paper can only be reprocessed a few times, and newspaper isn't even high-grade-quality paper. It has few uses after recycling, ~~and~~ since trees are a renewable resource, it makes more sense to use virgin materials, allowing for a more quality product and reducing ^{the} energy needed to process it post-consumer.

(b)(i) - what are the energy costs associated with recycling newspaper? (ex: how much energy does it take for a factory to reprocess recycled newspaper?)
 - how much could we ^{potentially} reduce the need for virgin materials (trees) by recycling? (how ~~is~~ effective is it really?)

(ii) - how much landfill space is taken up by thrown-out newspapers?
 - how much energy does it take to process virgin materials (and what are the environmental impacts from logging?)

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(c) This would be a hard decision, because although paper takes up more landfill space, aluminum is a non-renewable resource. I think that if I had to close one program for the community, I would recommend that the aluminum be recycled. It is better than the alternative because it conserves a non-renewable resource, ^(whereas paper is renewable) and because, while paper takes up more landfill space, it also decomposes much faster and is much more easily reabsorbed into the ecosystem.

(d) The community may face several difficulties in implementing the above recycling program. High costs could be an issue, but assuming that the community has enough funding, other problems include lack of interest by residents, who would prefer not to make the extra effort, ~~and~~ disagreements over which product to recycle, aluminum or paper (some may want to recycle paper only, and oppose the plan), ^{transportation of materials,} and making sure that the recycling facility is environmentally friendly.

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A - i - Recycling newspaper means that fewer trees will need to be cut down for use in paper production. Despite the fact that tree farms now provide a considerable percentage of the wood pulp used in paper production, they cannot fulfill all of our paper needs; the balance must be made up in forest trees.

Furthermore, if paper recycling is practiced enough so that any fresh pulp needed can be more than provided by tree farmers, there is the distinct possibility that lumber needs can then be supplied by tree farmers, thereby reducing the need to cut into new forest for lumber needs.

ii - Recycling newspaper is not economically or environmentally beneficial. It takes more energy to make a ream of recycled paper than it does to make one from new wood pulp. The sludge that is the by-product of recycling newspapers is environmentally hazardous. The paper produced from recycled materials is not as strong as paper from new sources. ~~Considering the increased level of energy needed, the hazardous by-products, and the decreased efficiency of the paper that are all a result of recycling,~~ It must be concluded that recycling is not a sound principle.

B **i-** The total necessary energy for producing new paper and recycled paper must be compared. The waste created by each process of paper production must be evaluated to determine their environmental impact.

ii- The total number of newly-cut trees needed for each process. The total environmental damage caused by sources of basic material, transportation, production energy, and waste. This usually tips in favour of recycling.

C- Aluminum. Because metals are more economically beneficial after being recycled compared to paper. The durability is not decreased in nearly the way paper is after being recycled. It doesn't have the level of ~~waste~~ relative waste ~~left~~ left after the recycling process that paper does.

D- Proper collection of the materials is a difficulty because many people do not want to make the effort to separate their aluminum from other garbage. Transportation to an appropriate facility may also prove to be a problem if they are very far away.