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Looking for Climate Change : Some Final Thoughts on Cups

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A lot of cups

We decorated a lot of styrofoam cups to send the bottom of the ocean. Fifteen for schools. It would have been more, but the Bridgeview students decorated their own. Alison brought more than a 100 unused cups with her on the cruise and our restech provided another 50. We made them for ourselves, for our friends, for our family and for each other. We made one for the captain that we all signed.

To shrink or not to shrink

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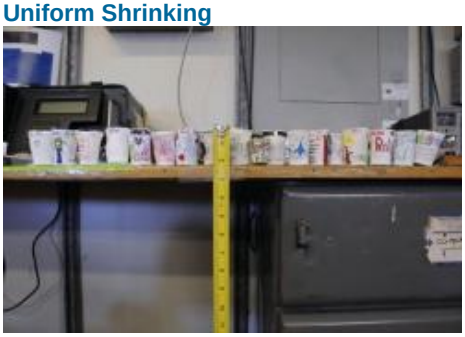
Cups on the left went to 4.3 km. Cups on the right went ot 6 km.

Why did the 12 oz cups come out so much larger than the 10 oz cups? And why would a 12 oz cup sent to 4000 m end up smaller than one sent to 6000 m?

We think the answer lies with the styrofoam we used. Because none of the packages of cups (12 oz or 10 oz) were the same brand, it is likely that the styrofoam they were created from was of different denisities.

Uniform Shrinking



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The Bridgeview School's 12 oz cups.

Perhaps the final size had something to do with the amount of paper towel stuffed into the cups. But, often this would fall out completely some time during the trip.

Further we noticed that the smaller cups, as well as the 12 oz cups that the Bridgeview students had decorated (yet another brand) came out uniformly the same size and fairly hard, whereas the the other ones tended to varying in their shrunken size, to curl in at the top and to be generally more flexible once shrunk. This result points to the idea that it is the type or quality of the styrofoam which has the biggest effect on the final size.

Other Objects

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We gave these tubs to Bob and Richard, the cooks.

We shrank other styrofoam items too. These two tubs came from the galley. They shrank beautifully, coming out a little wider, but no taller than the 12 oz cups. I wish we had a picture of the octagonal shipping containers we shrank. They were made of big popcorn type styrofoam (lots of air) and shrank enormously coming out small and dense. On some cruises styrofoam mannequin heads have been sent down. Again with varying results, some shrink a lot, some only deforming.

Dunkin Donuts

Now, one might have thought that a large chain such as Dunkin Donut's would get all its styrofoam from the same place. Well maybe, maybe not. Perhaps we'll send these pictures to D&D and ask.

I can't say if they all came from the same establishment, but these four Dunkin Donut's coffee cups went down together on the same cast. The two on the outside are 20 oz cups, the two on the inside 14 oz cups.

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The 14 oz D&D cups

Here are the two 14 oz Dunkin Donuts cups after their trip into the trench together.

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Why are they not the same size?

The 20 oz D&D cups

Here are the two 20 oz Dunkin Donuts coffee cups after having gone down to 6000 m together.

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