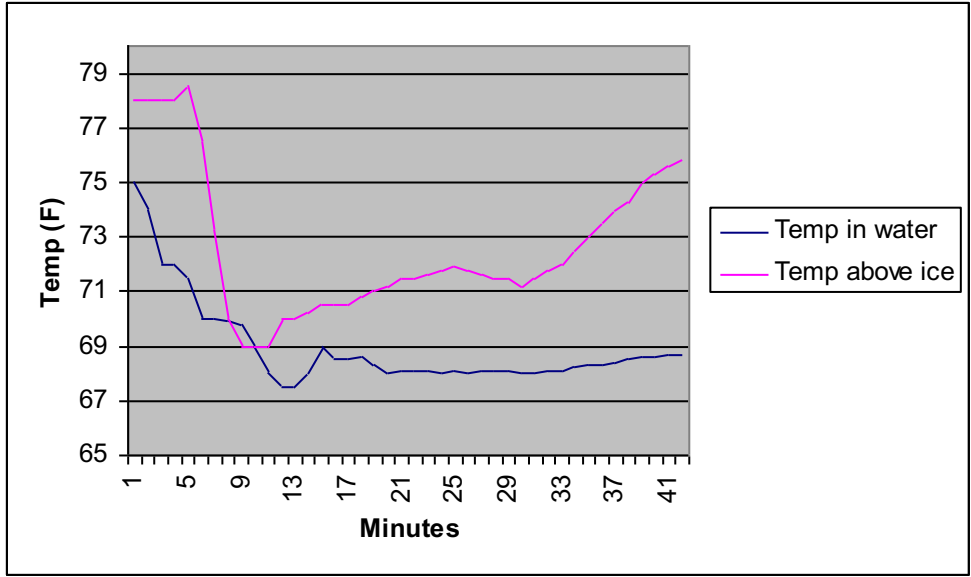


Data Tables and Observations:

Note: the average starting height of the ice in Water, Land and Water and Land based ice was 1 inch.

Water Based Ice: In the first set of five minutes I noticed that the bubbles that were caught in the ice were escaping as it melted. And I noticed that as the ice melted from the lamp it created pools of water on the surface of the ice and as these pools increased in size the melting of the ice would increase too. In the second set of five minutes I noticed that the water was melting the ice faster than the lamp was, this is either because I used warm water or the fact that ice, reflects 90% of the light that shines on it opposed to water which absorbs 90% of the light that shines on it thus making the water melting the ice faster. Within the second set of five minutes I noticed that as the ice melted it became easier to see through. And I noticed that the ice that was at a higher altitude relative to the water melted slower thus proving that water melts ice faster than light. In the third set of five minutes I noticed that as the ice melted, the water temperature increased because the ice stopped melting as fast and the water had more time to heat up from the sun without as much ice adding cold water. Also in the third set of five minutes I noticed that all the bubbles had escaped from the ice and for some reason the water temperature was staying close to the same. In the fourth set of five minutes the ice was completely clear except for the elevated ice that had hardly melted thus not releasing the bubbles of air in it and making it harder to see through. Also in the fourth set of five minutes I noticed that you could very clearly see the separation between the salt water that was originally in the tank and the freshwater that the melting ice had created. In the fifth set of five minutes I

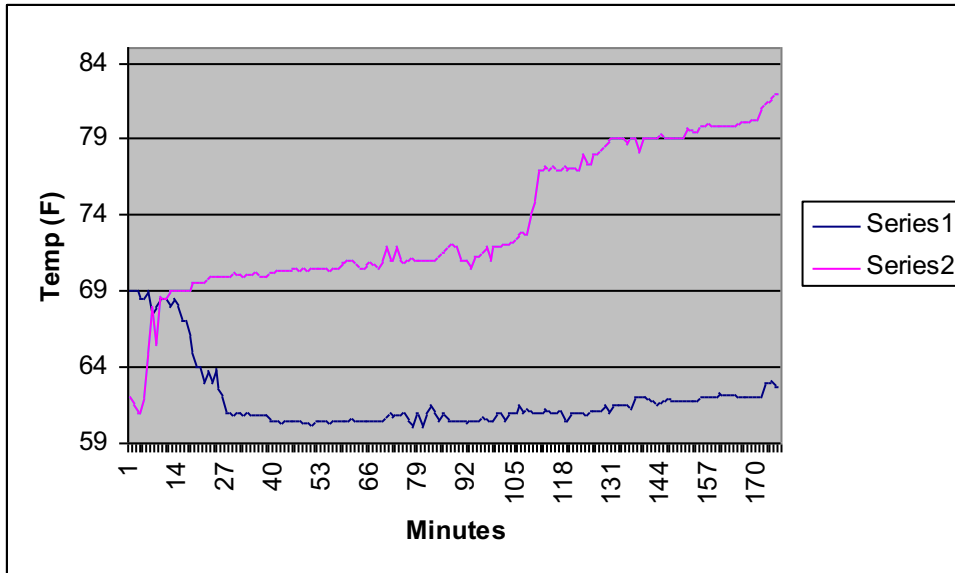
noticed that the ice seemed to be sinking, I think that this is because there were less air bubbles in it that were causing it to float. And as it sank more of the ice is exposed to the water that melts the ice faster. The same thing is happening all over the globe. As ice melts sea levels rise and the ice that is land based is forced to stay at the elevation that it is, and the water eventually surrounds the ice and melts it faster creating more water thus making a chain reaction and rising sea levels higher and the same thing happens all over again to the higher elevated land based ice with water surrounding it. I also noticed in the fifth set of five minutes that the line that separated the salt water and the freshwater (Salt water being on the bottom because its denser) was distorted, but the only place it was distorted was under the ice that was melting. At the sixth set of five minutes the ice had split into two pieces both remnants of the once higher elevated ice (which by then was the only ice left). At the seventh set of five minutes I noticed that the one of the chunks of ice had now melted and the last piece of ice had bubbles clenched to the side. At the eighth set of five minutes the ice was about $\frac{3}{4}$ by $\frac{1}{2}$ inches. And the depth of the ice was too small to measure. At forty-two minutes the ice completely melted. I measured that the melted ice had added $\frac{1}{2}$ and inch of freshwater to the tank that had 3 inches of salt water in it. As the ice disappeared the line separating the saltwater from the freshwater was no longer distorted. After the ice melted the bubbles that were once in the ice are now spread all over the tank. After the ice melted when the water is stirred the line that separates the salt water and the freshwater becomes distorted. This is a graph that shows the two temperatures that I measured.



Land Based Ice:

In the first set of five minutes I noticed that the thinner ice melted first releasing the bubbles and became clearer. I also noticed that a small pool of water was forming on the ice as it melted. In the second set of five minutes I noticed that the soil melted the ice faster than the lamp did. At the third set of five minutes I noticed that the ice was becoming even clearer as the ice melted. At the fourth set of five minutes I noticed that the pool of water on the ice continued to grow larger. And puddles have formed on all the ice. No observations for the fifth set of five minutes. At the sixth set I measured that at this time the ice had decreased around $\frac{1}{4}$ of an inch. The small ridges on the ice that were formed when freezing have now melted off at the seventh set of five minutes. At the eighth set of five minutes I noticed that when the some ice melts on the higher elevated ice it flows down to the lower elevated areas and in doing so creates small indents in the

ice. No observations for the ninth or tenth set of five minutes. In the eleventh set of five minutes I estimated that in the lower elevated areas the water collected a $\frac{1}{32}$ of an inch high that hour. However this is only true in the first hour because as more water collects on the ice the faster it melts thus making the water on the ice increase by a certain percent of the water on the ice the previous hour. No observations the twelfth, thirteenth or fourteenth set of five minutes. In the fifteenth set of five minutes I noticed that the water was $\frac{3}{32}$ inches high at the lowest elevation of ice. No observations in the sixteenth, seventeenth, eighteenth, nineteenth or the twentieth set of five minutes. In the twenty-first set of five minutes I noticed that the soil made indents in the bottom of the ice. No observations in the twenty-second set of five minutes. In the twenty-third set of five minutes I noticed that the ice had decreased in height $\frac{3}{8}$ ^{ths} of an inch. At the twenty-fourth set of five minutes the height of the ice was $\frac{1}{4}$ of an inch. No observations from the twenty-fifth set of five minutes through the thirty-second set of five minutes. I noticed in the thirty-third set of five minutes that the small indents that the water made from rushing down the higher elevated ice were becoming deeper, and I could see a crevasse forming. No observations from the thirty-fourth set of five minutes to the thirty-seventh set of five minutes. After three hours the ice remained $\frac{1}{8}$ th of an inch and it melted around $\frac{7}{8}$ ^{ths} of an inch. This is a graph that shows the two temperatures that I measured. This is a graph that shows the two temperatures that I measured.



Water and land based ice:

In the first set of five minutes I saw a thin layer of water forming on the ice. No observations for the second or third set of five minutes. In the fourth set of five minutes I noticed that the water that was on the ice started erode the ice making small indents. No observations for the fifth set of five minutes through the eighth set of five minutes. In the ninth set of five minutes I noticed that the small indent that I saw earlier had become deeper and formed smaller indents that branched off of it. After forty minutes the ice is $\frac{3}{4}$ of an inch. In the tenth set of five minutes I noticed that the deeper water on the ice started to create a Moulin. The Moulin digs deeper. At fifty minutes the Moulin has traveled all the way through the ice. The almost melted but I had to stop the experiment. There was no sign that the water melted the ice faster than the land. After fifty minutes the ice it still around $\frac{3}{4}$ of an inch high. This is a graph that shows the two temperatures

that I measured.

