



Panasonic Student
Eco Citizenship Project

Joseph H. Brensinger School

Jersey City, New Jersey

2017

2nd Place Winner

Panasonic

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on LITERACY *and* LEARNING





ACTION TAKEN: As humans and inhabitants of this Earth, we must find a way to reduce the flooding. New Jersey uses three times more money on roads than any other state. The concrete that is used on roads is not permeable. Therefore, rain cannot be absorbed by the Earth. The water greatly accumulates and creates dangerous floods. Flooding also causes debris on the streets to spread around the state and creates a dangerous environment. Debris that is on the streets is spread around the city, causing danger for plants and other living things. Flooding leads to damaged roads, delay and lack of convenient and rapid transportation, and a difficulty for humans to get to their destination safely and in time. Permeable concrete can allow the Earth to absorb the water that could potentially cause floods. Also the amount of money that New Jersey spends on roads can decrease. With permeable concrete, plants can absorb the rainwater that would be accumulated on top of normal concrete. Floods can be stopped, along with destroyed homes and hurt families with permeable concrete.

Student Names: _____

Teacher Name: _____

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Big Question

How Can We Save
the Earth?



ACTION TAKEN: It is our job to save the Earth from the dangers of debris that spreads around it due to floods. In New Jersey, floods are large and they cause the state to spend money on roads than any other state. In order to be well prepared, we contacted experts to have their opinions and guidance. Experts such as Natalie Dermijenco gave us a guide and advice as to how to make an efficient permeable surface that was safe for the environment. With her and other experts, we had opinions and ideas that helped us develop our project. We also did research on the amount of floods that happened and what they cause to families. Within our research we also researched what materials would be better.

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Teacher Name: _____

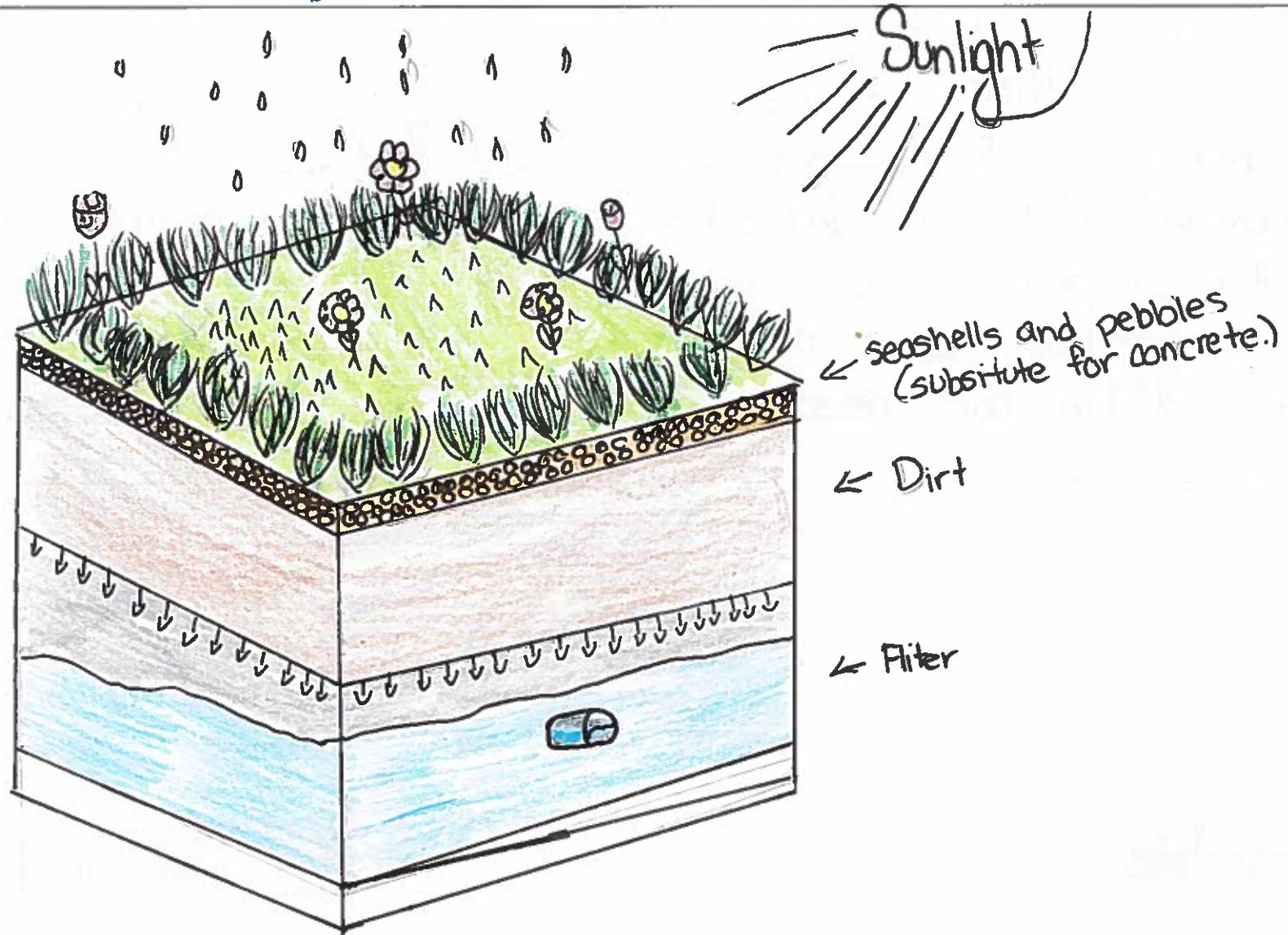


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Panasonic Eco Picture Diary

Entry 3



ACTION TAKEN: Permeable concrete are usually known to be frail and we as a team are trying to find new materials that are sturdy and still be porous. For our layers, we mostly focused on aggregates and pebbles. We have done research and aggregates are a material used to make concrete so we concluded that we should use an ingredient in normal concrete so that it can have its browniness. With the pebbles and aggregates together we have created ourselves a suitable replacement for original concrete. Also, during our months of research we have contacted a professor named Natalie Jeremeijenko that gave us advice for our project. We were told to think small, simple and creative and that is what we did. Seashells are one of things we came up with because they are sturdy and porous, so we hypothesized that a layer of shells would be a great substitute for concrete along with pebbles.

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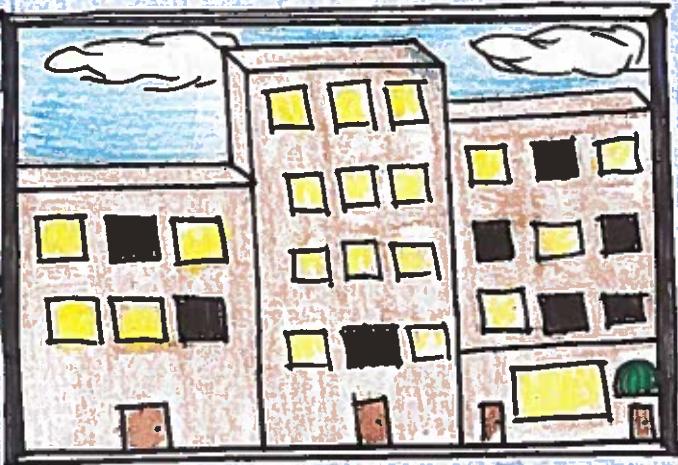


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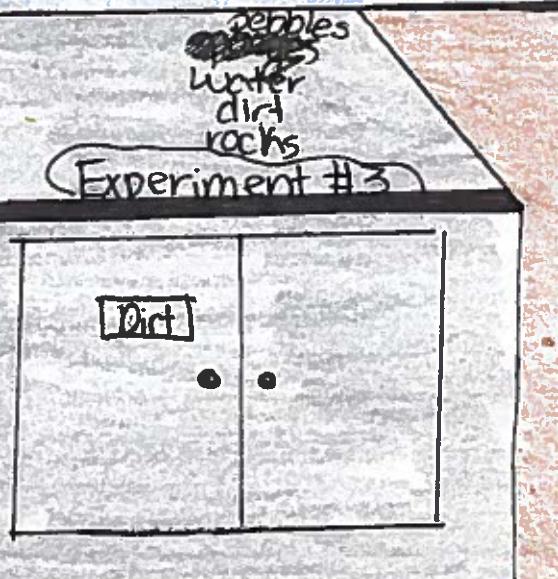
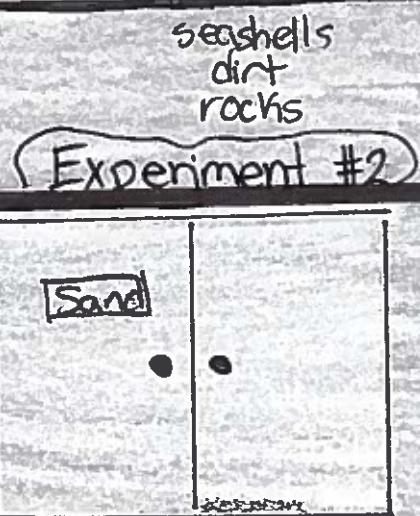
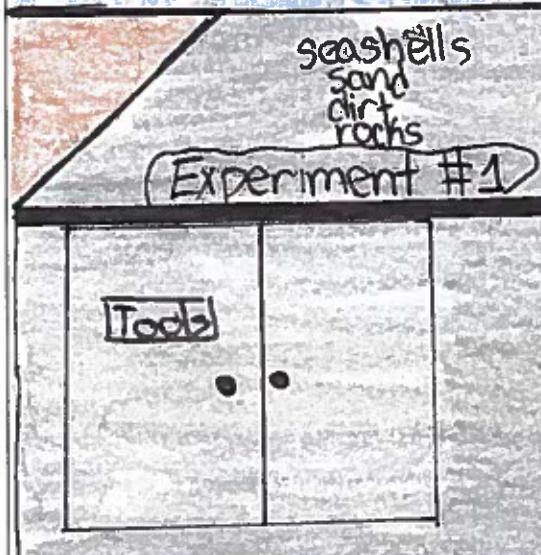
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Entry 4



Permeable
Concrete
Project



ACTION TAKEN: In order to make sure that this project was as perfect, efficient, and safe for our environment, we completed three different test multiple times. Our first test was using seashells, sand, dirt, and rocks. Our second experiment was with seashells, dirt and rocks. Our third experiment was with pebbles, seashells, dirt and a little bit of rocks. We also used aggregates within the three experiments. After all the tests, we found that both seashells and pebbles work well! along with the aggregates, so we used those for our project.

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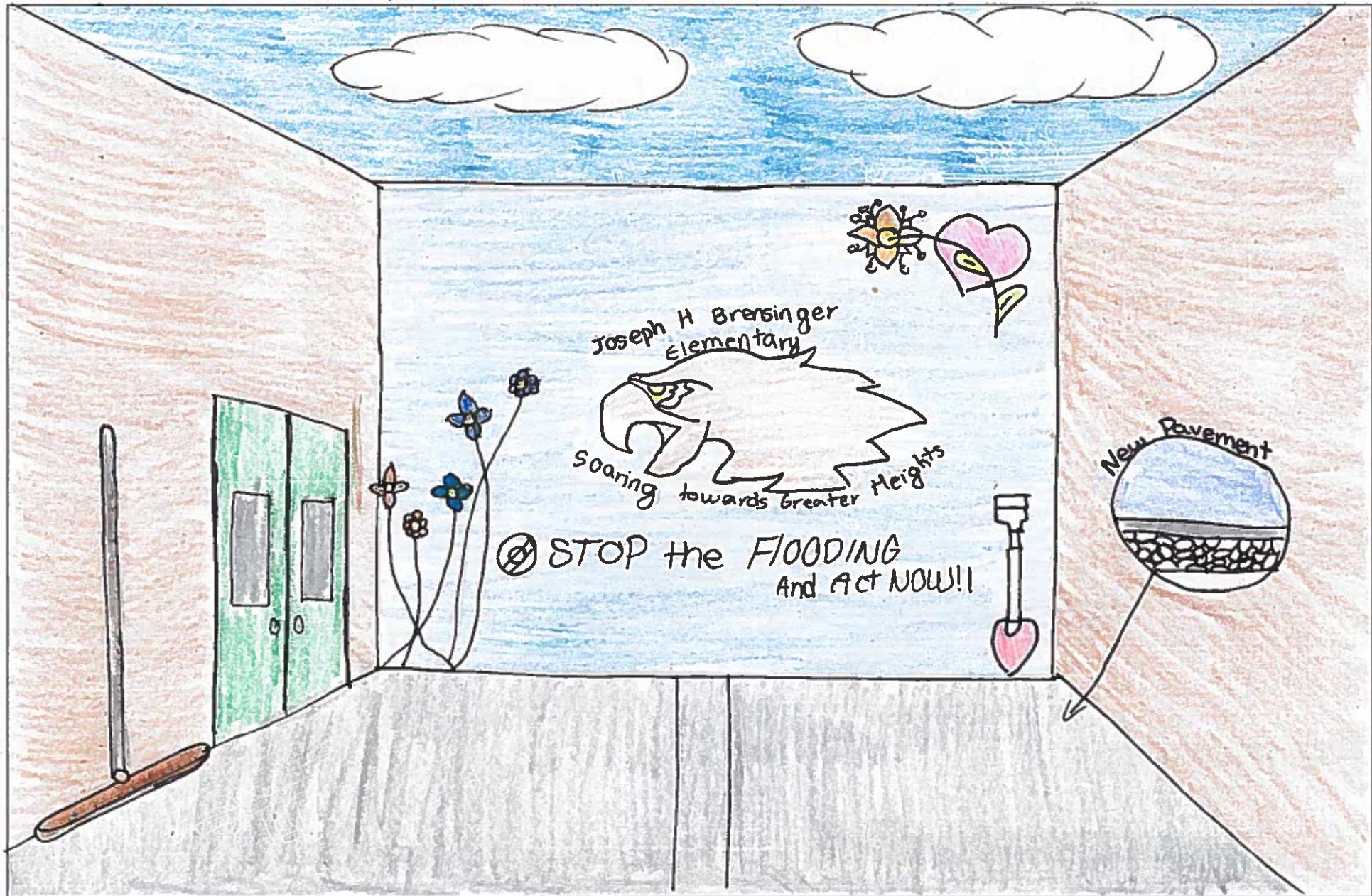
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Panasonic Eco Picture Diary

Entry 5



ACTION TAKEN: Flooding is a dangerous issue that we must solve immediately. In the future we plan to gain permission from the school to completely test our design in the schools courtyard. Our team will develop the experiment and make sure that it is made to perfection. After our project is completed and proved to be effective and safe for the environment as well as humans, we plan to apply our design to the streets of New Jersey. This permeable concrete can help thousands of people in New Jersey that suffer greatly and lose their homes due to flooding. Many people are hurt physically and mentally due to the outcome of hurricanes and floods. If this experiment is a success, New Jersey may possibly use less money on road damages than ever before. Permeable concrete can allow humans to have a safer environment with less economic troubles.

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