Defining the Problem: "Needing more sense of community"

We are going to address the problems of "needing more sense of community" and this is our rationale (reasoning):

- Lots of bullying
- Lots of gossip
- Lots of people being left out
Designing Solution: Make a Friend Board

Sketchup
Teacher and Students’ Reflection on the Projects

Students’

Student: We named it “make a friend board.”
Teacher: I like that name! How did you come up with it?
Student: Well, we thought that it wasn't fair that a lot of kids are left out, and that the ELL getting bullied and pushed around and nobody talks to them because they can’t speak English. So we thought maybe if we made this people would start making more friends and we have these. These are the construction paper and we are going to have star paper clips and we are going to it on these, and when someone makes a friend, we’re going to put these on the paperclips. It is going to say who made a friend and who their friend is, and it is going to have a handcrank, and when you twist it all of the lights will light up.

(...)  
T: Could you put suggestions on how to make a friend. What if I am shy because I don't know how to make a friend…
Diane: We could write like, we could put suggestions around the board.
Victoria: Like take a risk and sit next to a new person at lunch, share your snack.
T: How many times do I get to crank it if I make a friend.
Victoria: We thought if you and Diane know each other, if you made her your friend. You would be able to crank but also A would be able to crank it. You both get to crank it together.

Teacher’s

To make the MaF board they had to know about different energy sources and particular renewable ones, energy sources. They used the handcrank because they thought that would last longer than the other ones. They needed to know their purpose so they had to survey the school to learn more what was important. One of the things they thought was a problem in our school was getting to know people and meeting new people because we have a high population of immigrants and refugees. They wanted to reach out to new people and try to form friendships. This board celebrates that and when people meet a new friend that day and they can come and light up the board and they have these little coupms and they can put their names on it and put it around it and celebrate their friendship. They also took the time to go around to other classes to ask how to say friend in many different languages, so they have it in Arabic, Burmese, Swahili.
Make a Friend Board

Story of the engineering invention:
We made this invention because people keep getting left out and some people are getting bullied.

We used the 2 LED lights and a hand crank generator. We also made this because people were getting left out from things like games and activities.

We first used a series then changed it to a parallel.

Ms. J said, "Your design is very cool and I have never seen a project like ours yet."

• About the engineers:
  • Victoria is very nice and respectful.
  • Diane is from another country.

• Materials:
  Construction paper, led lights, copper tape, cardboard, hand crank generator

Reflection Rubric

1. What knowledge and practices did the students develop and use?

2. How were the students recognized for their expertise?

3. In what ways, did students have opportunities to take action in meaningful ways?

4. What outcomes were made possible by the combination of the students’ knowledge/practices, recognition and action?

Write any questions you have that will help you teach this design cycle.