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Response Device

PDI Studio 5

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Plan: The device that our group created was using colored sand to better understand if children will be interested in an activity that is more complex than the instructions of “just play and make whatever you want.” In order to test this plan our group has come up with four separate activities involving the same response device for the four separate groups. With the first group, we let them create whatever they wanted with the colored sand. They were given simple instructions on using the funnel to spoon the sand into the bottles. We wanted to see what the kids came up with on their own without watching us or being influenced. The second group we tried to see if they could divide the bottle into 10 equally sections and fill to those levels. However we knew this might be a difficult task for them to execute so we sat down with each student and helped them mark on the bottle where they thought the lines should be drawn. With the third group we asked them to divide into groups of two and work together to create two separate bottles. This activity was to test how they could cooperate with their classmates. Finally with the last group, we worked alongside the students and made our own bottles. We wanted to see how they would react to the lack of an authority figure and if they would want to just play with us and the sand art.

Hypothesis: I expect the girls in the class to be much more interested in the sand art than the boys would be. Also I think this activity will get messy, with the children not sharing and grabbing the cups filled with sand, knocking them over. I also think the boys will be more into shaking the bottles and mixing up all the colors while the girls will be more protective of their creation.

Group 1 Response: The first thing we noticed was how well the students worked together. They waited for each other to be done using the colored sand and were very polite when asking us to refill colors for them to use. The first student we saw mix a color was a young girl and her goal wasn’t to create a new color but to create a speckled effect. She understood that mixing the sand would create something new but she wasn’t sure of the result. When the whole bottle turned blue because of the majority of blue sand in her mixture she attempted it again this time shaking the bottle much more gently. After the first girl experimented with this technique we saw the other students in the group attempt it as well. Some students after carefully layering their colors, they saw other students mixing their creations and they were happy to destroy their work in order to test out this mixing idea. One girl understood that the only way to make a new color was to mix it outside the bottle and then add it. There was only one student who did this and for some reason the other students didn’t even seem to notice her doing it. It was very obvious from the beginning to see that the boys seemed to struggle with fine motor skills. Spooning the sand into the funnel while holding the funnel and the bottle with the other hand appeared very difficult for them. However if they made a mess even a small one they were very upset and apologized to us. At the end of our time with this group the students, without prompt, compared their mixtures with their classmates.

Group 2: With this group, I spent the majority of my time with one boy who did not seem to enjoy this activity at all. He made it clear that he didn’t think he could do it, nor did he want to. He was not interested in the colors or measuring the different amounts or having any conversation with his classmates. This was not true for the rest of the group though, who did appear to enjoy the activity. The students seemed to understand that by marking off sections that were 1/10th of the bottle we were trying to create 10 equal sections but how to make sure they were equal seemed to be really difficult for them. Unfortunately due to the nature of sand art, measuring the same amount each time is very difficult and while the student’s creations appear to have ignored the markings, they actually did scoop a little, check, scoop a little more, check as they went along. With this group we saw very little shaking of the bottles or mixing new colors. This may have been because the activity had more instructions than with the first group.

Group 3: With this group we wanted to see how well the students could work together on the project. The team that I was watching worked really well together. They had a strategy for each bottle, they planned the colors and order that they put them in. While they were working together, they each claimed a bottle as their own and seemed to have the decision making power on their bottle. The students shared tasks such as holding the bottle or scooping the sand and would switch back and forth so each partner got a chance to do both. This group was the first time that they noticed the bottle could overflow and they really liked that, laughing and joking when it happened. Some quotes from this group were, “I do swirls,” “mine is unique” and best of all “I don’t think it would be hard to do this with someone I’m not friends with.” One boy even recognized that his bottle looked like the northern lights.

Group 4: With the last group we had two students who had to leave the classroom for a bit, but still wanted to do the activity. It was really nice to hear that they had heard such good things from the other students that they were interested in coming over to our station. With this group we worked alongside them and compared what we were doing with their own projects and they seemed to have a good time. However I think that the four of us were too many to really get to know the only two students we were working with. They appeared to be a little intimated and didn’t really speak up much. It also could have been because we were their last station so they may have been tired by the time they got to us.

**Terrific detail – over all this was a great project, especially the way you were able to experiment with the mechanics/physics of the sand in relation to their thinking and behavior (northern lights!?). Glad to see you reported the occasional failures as well as successes. Grade = A.**