To transfer the constraint to pddl I first wrote out the actions and added predicates as needed. The first predicates that were clearly needed were the ones that checked for objects class (ex. Color, Block, Bucket). To write an action first I would look at the amount of variables that would be manipulated by the action. Then, I looked at the preconditions. If there were no predicates to express what I wanted I would add predicates. The same process was used for the effects. To code the problem initial and goal states I used the predicates created for the actions.

I ran into trouble with the predicate (is-color ?obj ?obj) because I was initially using it to say that it was painted a certain color and that it could paint something else a certain color. I also ran into trouble debugging but eventually started looking at relaxed problems which helped a lot.