Creating BlueKote Design Challenge

DESIGN CHALLENGE Notes:
This design challenge explores how BlueKote helps us in biology, health and sanitation.
For a better understanding in the biophysics of how iodine works, go here

Problem: We need to make sure sores and delicate skin is disinfected and remain are sterile

Challenge: Iodine and iodine salts are a very simple antiseptic that we can use to destroy germs

So to create a Bluekote iodine replacement we need a solvent that can be mixed with a liquid that can be diluted and still be effective. Iodine is a dangerous chemical solvent and must be treated carefully

Materials:

We need a few a spray bottle
We need a source of iodine and povidine
We need a colorant to make the iodine appear blue
We need water
We towels and cleaning wipes
Face masks and gloves

Brainstorm:
1. How does iodine work on destroying germs?
2. What else does iodine do that makes it so powerful?
3. Should we dilute iodine? Are there warnings?
4. How diluted is the iodine we have on hand right now?

Design/Build:
1. In a nonreactive spray bottle mix the four ingredients.
2. Determine the best way to add materials together so that they are roughly equal
3. You must be able to see the color density of the iodine colorant mixture
4. Your colorant must also be hygienic - that is, it can't hurt animals or humans

Test:
Now you need to see if the bluekote substitute is working
How could you determine if the bluekote is destroying pathogens or hiding wounds?

Evaluate:
- How will you record your results?
- How will you know how much of each component you have is doing what?
- Can you create different types of dirty materials and test them?
- What would you do differently?

Share:
- Record your cleaning wipe tests on a chart.
- Which combination or ratio of water to solvent worked best?
- How did you know?