**Medicine Delivery Activity**

*Biomedical and Chemical Engineering Subcommittee*

**Supplies Needed**
1. Pack of Skittles  
2. 1 can of sprite  
3. A little corn starch  
4. A little flour  
5. A little sugar  
6. Some vegetable oil  
7. 1 clear cup  
8. Plastic spoon  
9. 1 bowl  
10. 1 plate

**Steps to Follow:**
1. Gather all of the supplies needed  
2. Open the sprite and pour some of it into the clear cup, but make sure to not use the entire can at once!  
3. Open the package of skittles and place 1 into the cup of sprite  
   a. Start a timer when the skittle is placed into the sprite  
   b. Watch as the colored coating dissolves in the sprite  
   c. Make note of how long it takes for the color to completely dissolve, leaving behind only a white skittle
4. Take a new skittle and coat it in any of the ingredients listed. 
   a. You can coat the skittle in one material, do layers of different ingredients, or make a dough out of the ingredients to coat the skittle in.
   b. Use the plate, bowl, and spoon to mix your ingredients together.
   c. Our activity video has a lot of different examples shown, so it’s really up to you what coatings you make and how many coated skittles you put in the Sprite.
5. Drop one of the coated skittles into the Sprite 
   a. Make sure to start another timer 
   b. Does this coated skittle take more or less time to dissolve compared to the one we first did with no coating? 
   c. Note: You will probably need to replenish the sprite as it turns colors from the dye on the skittles
6. Repeat with as many coatings/trials as you’d like!

Questions:
1. What difference do the different coatings make in the time it takes for the color of the skittle to dissolve? coatings increase the time it takes to dissolve
2. Why do chemical and biomedical engineers need to have different times for medicines to start working? different medical problems need different medicines - some need to work quickly and some need to last all day
3. If a patient has an allergic reaction to something, would biomedical and chemical engineers want to create a medicine to work fast or slowly? fast