



Activity: Skittles Rainbow

What You'll Need:

Included in the kit:

- One bag or box of Skittles

Not included in the kit:

- 2 plates or bowls
- $\frac{1}{4}$ - $\frac{1}{2}$ cup cold water
- $\frac{1}{4}$ - $\frac{1}{2}$ cup warm water

Procedure:

SKITTLES RAINBOW: CHEMICAL REACTION
Step 1 Arrange the Skittles in a single row colored pattern around the edge of the plate.
Step 2 Pour over enough cold water to cover all the Skittles and the plate itself on the first plate.
Step 3 Pour over enough warm water to cover all the Skittles and the plate itself on the second plate.
Step 4 Watch and wait as a rainbow appears on the second plate, the colors will move towards the middle and create a whirl of color.

Did anything happen in the first plate? Why? Do you notice any patterns? What could you change? Can you test something else? What can you try next?

OPTIONS

Try doing this experiment again (with more Skittles or another hard-shelled candy) and test to see if there are differences using salt water vs. sugar water vs. tap water. Do you think the colors will change at the same or different speeds? Test it out to see for yourself and then hypothesize why – come up with a good guess that you can test. You could also do the experiment again with different patterns of colors to see how many different artistic creations you can make. Maybe save a few Skittles to eat, too. 😊



The Science Behind It:

Skittles have hard candy shells that are mostly made from sugar with various colors of dye added to them. When placed in liquid, like water, the outside shells will dissolve, like they are becoming “broken apart” by the water.

The sugar and dye from the candy shell dissolving is denser than the water. The color creeps out toward the center because of this. The colors are all about the same density, so they don’t mix. When colors reach each other as they dissolve, they push into the lower density area in the middle of the plate or bowl. This is what creates the cool, colorful pinwheel. The colors will not mix until the water is agitated.