Name:_____

Challenge 1 - Alien Juice Bar:

1. Click on Challenge 1 then "start".
2. Click on the pitcher of cabbage juice and drag towards one of the three drinks.
3. The cabbage juice will pour into a beaker and may or may not change color.
4. Continue until all three drinks have been poured.
5. Place the drinks onto the correct shelf above the alien's head.
6. When done, pull the "check me" lever.
7. If you are wrong, the bottles will come off the shelf - try again until you get them all right!
8. Fill in the data table to show your results.

Drink	Color in Beaker	Acid, Neutral, or Base?
Window Cleaner		
Lemon Juice		
Water		

Click on "Test More" to continue.

9. Click on the pitcher of cabbage juice and drag towards one of the nine drinks.
10. You may pour the cabbage juice to indicate if it is an acidic, basic or neutral drink.
11. Continue until all nine drinks have been poured, or you can try to guess the pH of each bottle.
12. Place the drinks onto the correct shelf above the alien's head.
13. When done, pull the "check me" lever.
14. If you are wrong, the bottles will come off the shelf - try again until you get them all right.
15. Fill in the table to indicate where each drink belongs.

Acid	Neutral	Base

Challenge 2 - The Flying Cabbage Juice Bar:
1. Click on Challenge 2, read the directions, then "start".
2. Listen to your customers **carefully**, if you give them the wrong drink, they can get sick or even die and you will lose your license! Good Luck!
3. You can test the pH of each drink with the pitcher of cabbage juice and you can also restock the shelf if you run low on drinks.
4. **Drink choices:** lemon juice, water, mouthwash, water, cough medicine, window cleaner, toothpaste juice, coffee, liquid soap, water, soda pop, and orange juice.
5. Record your results into the data table.

Customer #	Asked For:	You Gave:	Sick Customer? Try Again.	Yummy or Dead?
Example	Neutral	Lemon Juice	Water	Yummy
Example	Acid	Coffee	X	Yummy
1				
2				
3				
4				
5				
6				

6. Did all your customers survive? Congratulations! Click on "Continue".   OR: Did you lose your license? Try again!
   If all of your customers survived, leave the next table blank.

Customer #	Asked For:	You Gave:	Sick Customer? Try Again.	Yummy or Dead?
1				
2				
3				
4				
5				
6				

Challenge 3 - Alien Juice Bar Challenge:

1. Click on Challenge 3, read the directions, then "start".
2. Drag the pitcher of cabbage juice until all the glasses on the tray change color and the pH is indicated.
3. The server will tell you what types of drinks need to be on the tray.
4. Your job is to add different amounts of liquid (click and drag the bottles) to each glass to change the pH to the pH that is being asked for. **Mentally** assign a number to each glass to keep track in the data table.
5. This is a tough assignment, one hint is that different drinks will make the pH either change in small increments or large increments; it is up to you to figure out the right combinations! Good luck!
6. When you have reached the correct pH for all the glasses on the tray, it will automatically move to the next level. Record your results!

Drink #	Acidic Drinks		Basic Drinks		Neutral Drinks	
	Start	Finish	Start	Finish	Start	Finish
1						
2						
3						
4						
5						
6						

Use the writing prompt to write a conclusion on the next page.