

GEMS Alien Juice Bar

<https://lawrencehallofscience.org/activities/alien-juice-bar/>

Name _____ Class _____ Date _____

Note: by refreshing the website, you will always start at the beginning of the activity, in case you need to get back to the main menu.

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.



Fill in the data table:

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

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Click on “Test More” to continue.

1. Click on the pitcher of cabbage juice and drag towards one of the nine drinks.
2. You may pour the cabbage juice to indicate if it is an acidic, basic or neutral drink.
3. Continue until all nine drinks have been poured, or you can try to guess the pH of each bottle!
4. Place the drinks onto the correct shelf above the alien’s head.
5. When done, pull the “**check me**” lever.
6. If you are wrong, the bottles will come off the shelf – try again until you get them all right!
7. Fill in the table to indicate where each drink belongs.

Fill in the data table:

Acid	Neutral	Base

Click on ‘Continue’ for a surprise!

Click on “Main Menu” to continue.

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Challenge 2 – The Flying Cabbage Juice Bar

1. Read the directions on the screen and then hit “**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 #	They Asked For	You Gave:	Sick? Try Again	Yummy or Dead?
Example	Neutral	Lemon Juice	Water	Yummy!
1				
2				
3				
4				
5				
6				

Did all your customers survive? Congratulations! Click on “**Continue**”.

Did you lose your license? Try again!

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Challenge 3 – Alien Juice Bar

1. Click on **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.
7. Record your results!

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

Conclusions: 3-5 complete sentences on what you learned by doing this activity.