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# Harry Potter and the Dichotomous Key

"He [Harry] finally tore his eyes away from the druidess Cliodna, who was scratching her nose, to open a bag of Bertie Bott's Every Flavor Beans. 'You want to be careful with those,' Ron warned Harry. 'When they say every flavor, they mean every flavor—you know, you get all the ordinary ones like chocolate and peppermint and marmalade, but then you can get spinach and liver and tripe. George reckons he had a booger-flavored one once.' Ron picked up a green bean, looked at it carefully, and bit into a corner. 'Bleargh—see? Sprouts.' They had a good time eating the Every Flavor Beans. Harry got toast, coconut, baked bean, strawberry, curry, grass, coffee, sardine, and was even brave enough to nibble the end off a funny gray one Ron wouldn't touch, which turned out to be pepper." (pp. 103–104)

- Harry Potter and the Sorcerer's Stone (Rowling 1998)

### Background:

In classifying both living and nonliving things, scientists have tried to provide an order to life so that we can better understand the world in which we live. All living organisms are organized (classified) according to genetic relationships. Currently the classification system contains eight levels: Domain, Kingdom, Phylum, Class, Order, Family, Genus, and Species.

Shared patterns and physical characteristics among related organisms can be organized and denoted in a classification tool called a *dichotomous key*. The key— used to identify organisms—is based on the premise an organism either possesses an observed physical characteristic or does not possess the characteristic.

#### procedure:

- 1. Obtain a sample of Bertie Bott's Every Flavor Beans
- 2. Use the Dichotomous Key to determine the flavor of each of your beans.
- 3. Record which beans you identified in the provided table.
- 4. If you discover a new "species" of bean, follow the format of the key and construct an addition so that the new "species" fits within the construct of the dichotomous key. Write your addition write on the key.

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## Observations:

List of Flavors of Bettie Bott's Evety Flavor Beans				

#### Figure 1.

#### Bertie Bott's Every Flavor Beans dichotomous key.

1a. Bean is green	go to line 2	11a. Bean is dark brown	Dirt
1b. Bean is NOT green	go to line 6	11b. Bean is light brown with  dark brown spots  Toasted N	Marshmallow
2a. Bean is light white/cream green		durk brown spots rousted i	viaisiiiiaiiow
w/brown spots	Booger	12a. Bean is yellow/cream	
2b. Bean is NOT light white/ cream green w/brown spots	an to 2	and may or may not have spots 12b. Bean is NOT yellow/cream	go to 13 go to 16
cream green w/ brown spots	go to 3	12b. beatt is NOT yellow/cream	go to 16
3a. Bean is lime green without spots	go to 4	13a. Bean is cream with yellow spots Butt	ered Popcorn
3b. Bean is lime green or darker		13b. Bean is NOT cream with yellow spots	go to 14
and may have spots or not	go to 5		
		14a. Bean is brownish yellow cream	Ear Wax
4a. Bean is light lime green	Grass	14b. Bean is NOT brownish yellow cream	go to 15
4b. Bean is medium lime green	Green Apple	45 D	
E- Bi-d	Watermelon	15a. Bean is bright yellow	Lemon Drop Banana
5a. Bean is dark green w/red swirls 5b. Bean is lime green w/spots		15b. Bean is yellow with brown spots	banana
5b. Beam is liftle green w/spots	Spinach	16a. Bean is pink with or w/out spots	go to 17
6a. Bean is gray	Black Pepper	16b. Bean is NOT pink	go to 18
6b. Bean is NOT gray	go to 7	100. Bodin is 1401 pink	90 10 10
ob. Doan to rear gray	go to 7	17a. Bean is light pink	Bubble Gum
7a. Bean is dark white	Sardine	17b. Bean is pink w/spots	Tutti-Fruitti
7b. Bean is NOT dark white	go to 8	, , ,	
	· ·	18a. Bean is orange w/spots	Vomit
8a. Bean is blue	Blueberry	18b. Bean is NOT orange w/spots	go to 19
8b. Bean is NOT blue	go to 9		
		19a. Bean is red w/spots	Cinnamon
9a. Bean is dark purple	Grape Jelly	19b. Bean is plain red	Cherry
9b. Bean is NOT dark purple	go to 10		
10 P '		** Note: Watch for new species!!	
10a. Bean is brown or light brown	mo to 11		
and may have spots  10b. Bean is NOT brown	go to 11		
TOD. Dealt is INOT Drown	go to 12		

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### Conclusion:

- 1. What did you use to determine what flavor of bean you had?
- 2. What did you do to determine if you were correct?
- 3. In the living world, what things do we classify?
- 4. In the nonliving world, what things do we classify?
- 5. Why would we want to classify things?

Lab modified from NSTA October 2003 article