

Jelly Bean Dichotomous Key Activity

Name: _____

Date: _____ Class Period: _____



A **dichotomous key** is a method for determining the identity of something (like the name of a butterfly or a plant) by going through a series of choices that leads the user to the correct name of the item. Dichotomous means "divided in two parts".

At each step of the process of using the key, the user is given two choices; each alternative leads to another question until the item is identified. (It's like playing 20 questions.)

For example, a question in a dichotomous key for trees might be something like, "Are the leaves flat or needle-like?" If the answer was "needle-like," then the next question might be something like, "Are the needles in a bunch or are they spread along the branch?" Eventually, when enough questions have been answered, the identity of the tree is revealed.

Materials Needed: 1 container with 10 jelly beans

Objective: In this activity you will identify the flavor of Jelly Belly jelly beans based on their physical appearance (color) using a dichotomous key.

Directions:

1. Remove 1 jelly bean from your cup.
2. Read step 1 on the **Dichotomous Key To Jelly Belly® Jelly Beans**.
3. Decide which statement is true, and then follow the directions after that step.
4. Step 1 will lead you to a new set of steps.
5. Continue reading and following the steps until you discover the flavor of the jelly bean.
6. Starting with step 1, **record** all of the steps that you read to find the jelly bean flavor.
7. Record the flavor of the jelly bean.
8. Have your partner **taste** the jelly bean to verify if your identification was correct and initial in the table.
 - a. If the flavor was incorrectly identified, retrace the path of steps and see where you think your team made a mistake. Discuss the error and record a possible reason below the table.
9. Repeat steps 1-8 for the remaining jelly beans. **Alternate** with your partner until all jelly beans have been identified (so that you can both taste the jelly beans).
10. Working with your partner, discuss and summarize in 3-4 sentences how a dichotomous key could be useful in classifying living things.



1. Data Table:

Jelly Bean Flavor	Steps followed to identify the flavor	Flavor Test (Write "yes" if the flavor was correct. "No", if it was not – and the final correct flavor)
Example: tangerine	1, 2, 3, 8, 9, 10	Yes
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

2. Uh-oh! If a jelly bean was incorrectly identified, describe why the error may have occurred below. If you did not have any errors, explain how you were so successful!



3. Summarize in 3-4 sentences how a dichotomous key is useful in classifying living things.

Dichotomous Key to Jelly Belly® Jelly Beans

NOTE: This dichotomous key does not follow the standard procedures and for some steps there are more than 2 choices.

1. Yellow, orange, red or pink..... go to 2
Purple, blue or green go to 19
Black, white, brown or tan..... go to 25
2. Yellow or orangego to 3
Red or Pink go to ~~10~~ 11
11
3. Yellowgo to 4
Orange.....go to 7
4. Solid Yellow.....go to 5
Yellow with Brown Spots.....Top Banana
5. Bright yellow or yellow w/ white spots...Sunkissed®
Lemon
Light or pale yellowgo to 6
6. Light Yellow – CreamyPina Colada
Pale Yellow.....Crushed Pineapple
Pale Yellow – Marbled.....Buttered Popcorn
7. Solid Shade of Orangego to 8
Orange with spots.....go to 10
8. Bright Orange.....Sunkissed® Orange
Light or dark orange.....go to 9
9. Light or cream orange.....go to 10
Dark orange.....Orange Crush
10. Light Orange.....Tangerine
Dark Creamy Orange..... Orange Sherbet
Orange with red spots.....Peach
11. Redgo to 12
Pink.....go to ~~16~~
12. Solid Red.....go to 13
Dark Red with brown spots.....Pomegranate
13. Bright or cinnamon red.....go to 14
Dark Red.....go to 14
14. Bright Red.....Very Cherry
Red.....Red Apple
Dark Red.....Raspberry
Dark red with yellow spots.....sizzling cinnamon
15. Solid Pink.....go to 16
Pink with Spots.....go to 17
Pink with marbling.....go to 18
16. Cream Pink.....Bubble Gum
Light Pink.....Cotton Candy
17. Dark Pink w/ red spots.....Strawberry Daiquiri
Pink w/ red, blue & yellow spots.....Tutti Fruity
18. Pink w/dark pink marbling.....Strawberry Jam
Light Pink with red marbling.....Strawberry Cheesecake
19. Bluego to 20
Purple.....go to 21
Green.....go to 22
20. Light Blue.....Berry Blue
Dark Blue.....Blueberry
21. Lavender.....Island Punch
Purple.....Grape Crush
Lavender w/ dark spots.....Mixed Berry Smoothie
22. Solid Green.....go to 23
Green w/ marbling.....go to 24
23. Light yellow-green.....7-up®
Light green.....lemon-lime
Medium green.....kiwi
Green.....Green Apple
24. Light green w/ green spots.....juicy pear
Deep green with marbling.....margarita
Dark green w/ red marbling.....watermelon
25. Brown or Tan.....go to 26
Black or White.....go to 31
26. Solid Brown or Tan.....go to 27
Light tan w/ brown spots.....Toasted Marshmallow
Yellowish tan w/ orange spots.....Caramel Corn
27. Brown.....go to 28
Tan or marbled..... go to 30
28. Light or regular brown.....go to 29
Dark Brown.....go to 30
29. Brown.....Chocolate Pudding
Light brown.....A&W Root Beer
Reddish Brown.....Dr. Pepper®
30. Dark Brown w/ spots.....Cappuccino
31. White (creamy).....Coconut
White w/ black spots.....French Vanilla
Light white (almost see through)....A&W Cream Soda
Black.....Licorice

