

DICHOTOMOUS CANDY KEY ACTIVITY

Grades 6TH-8TH



Background: Scientists use dichotomous keys to help them identify animals or plants, since there are so many different types of organisms in the world. In a dichotomous key, you answer a series of questions to help you identify the organism. A dichotomous key is a tool that helps to identify an unknown organism. A dichotomous key is a series of statements consisting of two choices that describe characteristics of the unidentified organism.

The user has to make a choice of which of the two statements best describes the unknown organism, then based on that choice moves to the next set of statements, ultimately ending in the identity of the unknown. Dichotomous keys are often used in field guides to help users accurately identify a plant or animal, but can be developed for virtually any object. They are particularly helpful when two species are very similar to one another.

Materials:

- Lollipops, jolly ranchers, tootsie rolls, starbursts, chocolate kisses, life savers, Andes mints, gum-balls
- Candy Dichotomous Activity Sheet, Pencil

Instructions: Spread out the candies on your table. Use the classification key to determine the scientific name of each candy. Choose one candy. Start at step 1 and read the paired statements. Choose the statement that best describes that candy and go to the step that statement tells you.

Continue following along using the same piece of candy until you have determined its name. Write the common name on the line. Then start with a new candy and follow the same procedure. YOU WILL ALWAYS START WITH STEP 1. Continue until you have named all 8 candies. You will only use each scientific name once. Rule to follow: DO NOT EAT ANY CANDY!



CANDY DICHOTOMOUS KEY ACTIVITY SHEET

Grades 6TH-8TH



Candy Dichotomous Key Activity Sheet

1. a. Candy is hard. Go to step 2.
b. Candy is not hard. Go to step 5.

2. a. Candy is spherical. Go to step 3.
b. Candy is not spherical. Go to step 4.

3. a. Candy is on a stick. *Coccus podus* _____
b. Candy is not on a stick. *Coccus tinus* _____

4. a. Candy has oblong shape. *Bacillus frutus* _____
b. Candy doesn't have oblong shape. Go to step 6.

5. a. Candy is square. *Esquadra frutus* _____
b. Candy is not square. Go to step 6.

6. a. Candy is flat. Go to step 8
b. Candy is not flat. Go to step 7.

7. a. Candy has oblong shape. *Bacillus rollus* _____
b. Candy doesn't have oblong shape. *Pyramis bes* _____

8. a. Candy has 4 right angles. *Rectiano verdus* _____
b. Candy does not have right angles. *Platys blancos* _____

Conclusions:

The scientific names are written as two words.

This is called _____

The first word of the scientific name is called the _____

The second word is called the _____

Use what you know about word origins and determine what platys means _____

What do you think bacillus means? _____

Which one candy is missing? _____

Now you can enjoy the candy!

THE SCIENCE OF ANIMAL NAMES

Grades 6TH-8TH



Background: Binomial nomenclature is the method that we use to uniquely name every different organism on Earth, living or extinct. All organisms have a scientific name that includes two Latin words. The two words are made from the names of the genus the species belongs to and a second word to separate each of the species within the same genus. Many people wonder why scientists use complicated, hard to pronounce names when speaking about familiar animals and plants. Common names such as pythons, vultures, and whales are successfully used in casual communication, convey an immediate idea of what a particular animal looks like. Scientists avoid using common names because they are often not specific to a particular species. Here is an example to think about:

According to the binomial system of nomenclature, every organism is designated a scientific name with two parts: Genus is written first and is capitalized (e.g. *Homo*) then species follows and is written in lower case (e.g. *Homo sapiens*). Some species may occasionally have a sub-species designation (e.g. *Homo sapiens sapiens* – modern man, humans, people).

Instructions: You will put your Latin skills to the test as you match the common name of an animal species to its scientific name. Use the Latin mini dictionary to help you. Draw a line from the common name to the scientific name and check your answers on the internet.

Clouded Leopard

Wolf

Pale Fox

Polar Bear

Lion

House Cat

Swift Fox

Yellow-Throated Martin

Ursus maritimus

Vulpes velox

Felis domesticus

Neofelis nebulosa

Vulpes pallida

Canis lupus

Panthera leo

Martes flavigula

Mini Latin Dictionary

<i>Canis</i> - Dog	<i>Domesticus</i> -Of the house	<i>Felis</i> -Cat	<i>Flava</i> -Yellow	<i>Gula</i> -Throat
<i>Leo</i> -Lion	<i>Lupus</i> -Wolf	<i>Maritimus</i> -Of the sea	<i>Martes</i> -Marten	<i>Nebulosa</i> -cloudy
<i>Pallida</i> -Pale	<i>Panthera</i> -Panther	<i>Ursus</i> -Bear	<i>Velox</i> -Speedy	<i>Vulpes</i> -Fox

CLASSIFICATION WORD SEARCH

Grades 6th-8th



Directions: Find each of the classification terms in the word search below.

ANIMAL	CLASS	CLASSIFICATION	FAMILY	FUNGI
GENUS	KINGDOM	MONERA	ORDER	SPECIES
PHYLUM	PLANT	PROTIST	TAXONOMY	GROUPS

L Y H N Q U X V S G T M F Y T E W P G Z
Y X A B Q B Q G A R E N O M Y R X B F T
V O B P E U J Q U R F H G O Z E A P E P
M Z L J J J B L E T I C L N X D U I P F
T A R X V E E E A K N G Z O G R N W G D
Y E H J O O U S E M T R C X G O V U X M
B S N F T Q W T B A I B L A I A Y F N P
I F C W U T F H M I Z N V T A R M K Z C
S P G E M S X H O G V I A I D T S O K R
P E H D J I A D D N E C J C D P H C Z I
Y L I O V T C V G U I P W A U Y B T Y J
O N S C O O L G N F P U G O X J N S Y B
G C D S E R O N I A J U R O H V G Z T A
D T N A L P R S K M R G E N U S V A G S
Y Q X J H H S M T I J S K H L X J Q Z N
B T S Y B A J H Y L P I N J W W G R P O
B K L M L N Z S B Y O X J W C Z W A R R
K U F C B Y Q P R O S L J M B Z U Y S W
M U A D W V H G Z Y W V K W N R B X F R
W R T A D S A A Y X O W S E S Z I K U F

