Dichotomous Keys

- **A dichotomous key is a tool that allows the user to determine the identity of items in the natural world based on the items characteristics**

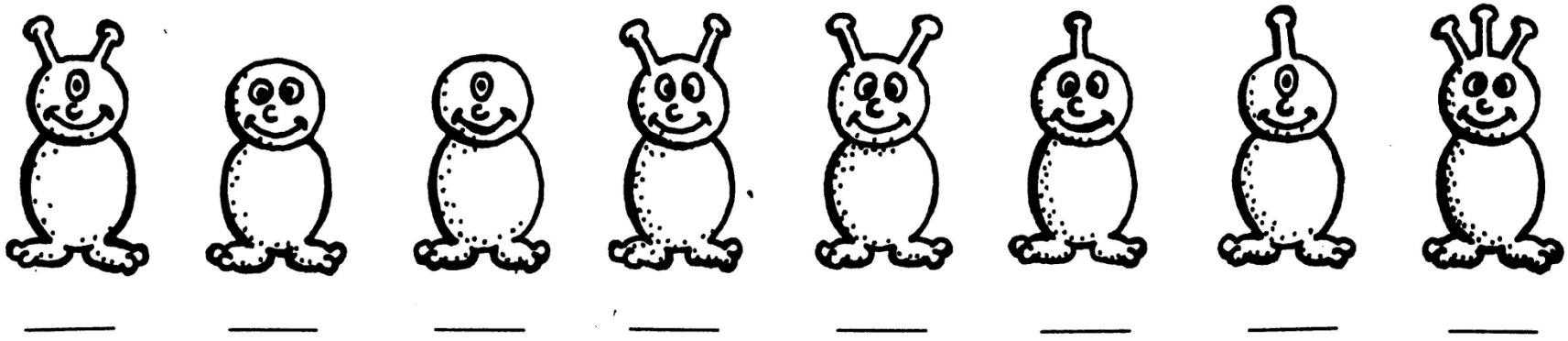
- **"Dichotomous" means**

  "divided into two parts" Greek origin

  - **dichotomous keys always give two distinct choices in each step, often they are opposites**
    - **Black/white; good/evil; pointed/rounded**

How to use a Dichotomous Key?

Here are creatures we don't know!



Lets choose one

How to use a Dichotomous Key?

Choose only one creature at a time.

How to use a Dichotomous Key?

Read steps 1a and 1b

1 a. The creature has two eyes.
b. The creature has one eye.

Decide which statement is true

_____

1b is true

How to use a Dichotomous Key?

Then follow the directions after that step.

1 a. The creature has two eyes.  Go to step 2.
b. The creature has one eye. Go to step 5.

Go to step 5!

_____

How to use a Dichotomous Key?

At choice 5, you make another dichotomous choice

5 a.	The creature has one or more antennae.	Go to step 6.
b.	The creature has no antennae.	Its name is "A."

5a is true

Go to step 6!

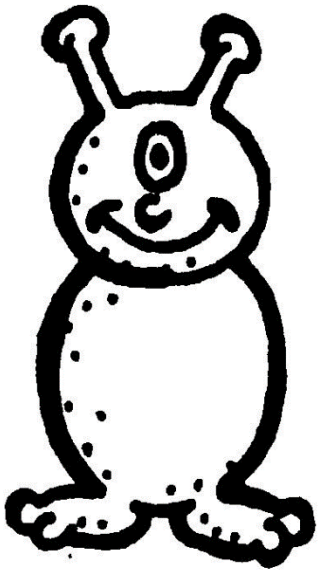
_____

How to use a Dichotomous Key?

Keep going until you come to a step that gives you the creature's name.

6	a.	**The creature has one antennae**	**Go to Step 7.**
	b.	The creature has two antennae.	Its name is "C."

c



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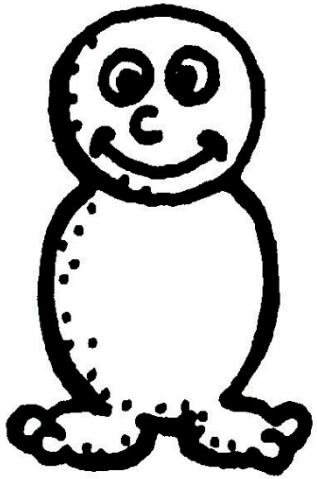
How to use a Dichotomous Key?

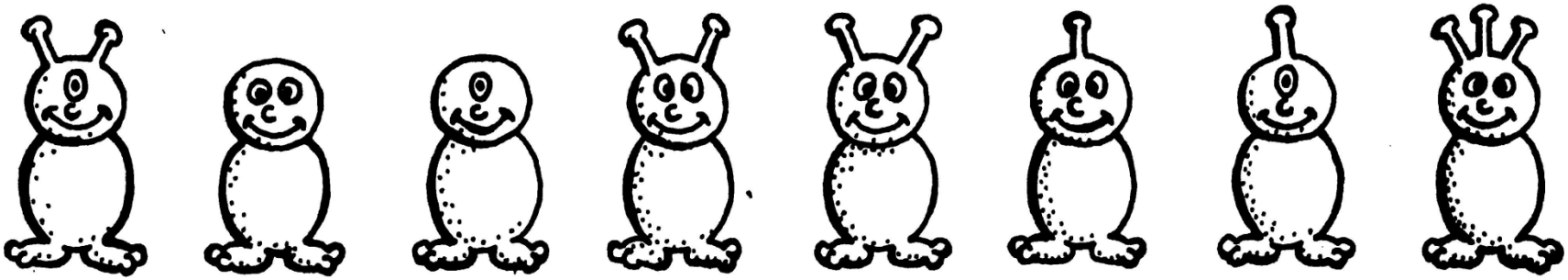
Choose a new creature and start at step 1a and 1b again. Continue until you find the creature's name.

C



Where do you start Again?

Then, find the names of all the creatures



____ ____ ____ ____ ____ ____ ____ ____

What if I needed to make a key:

- Start with the most obvious features of the item and move to more specific statements.

- Remember, each statement must have 2 choices.
  - For example you might start by creating a dichotomous key to identify students in your class. Begin with very general statements: Is the student male or female? Does the student have blue eyes or brown eyes? Does the student wear glasses? Etc. You can set up your key as a flow chart, or as a grid.

- Use constant characteristics rather than variable ones. (Flowers change with the seasons)

- Use measurements rather than terms like "large" and "small".

- Make the choice a positive one
  - something "is" instead of "is not".

- If possible, start both choices of a pair with the same word or item.
  - the body is “round” vs the body is “square”

- Finish the dichotomous key with a full description of the organism

Dichotomous key

Another Example of a dichotomous key…

1	With flower.	Angiosperms
	Without flower	Go to 2
2	Seedless.	Go to 3
	Seed bearing	Gymnosperms
3	Plant body do not differentiated into root, stem and leaves.	Go to 4
	Plant body differentiated into root, stem and leaves	Go to 5
4	Without photosynthetic pigment.	Algae
	With chlorophyll or other photosynthetic pigment	Fungi
5	No vascular tissues.	Mosses
	With vascular tissues	Fern

Dichotomous key

- the dichotomous key can also be expressed in a diagram form