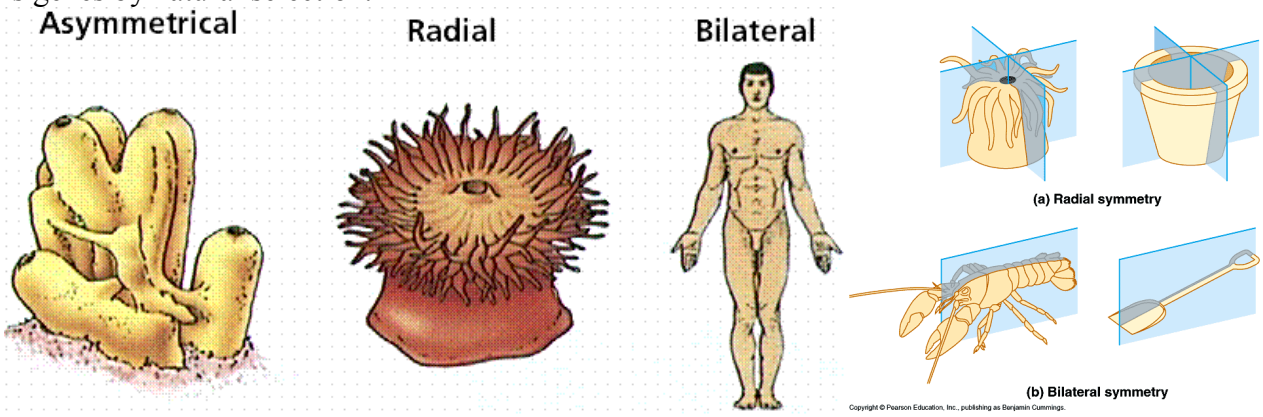
Name: _____ Date: _____ Period: _____

Recognizing Symmetry

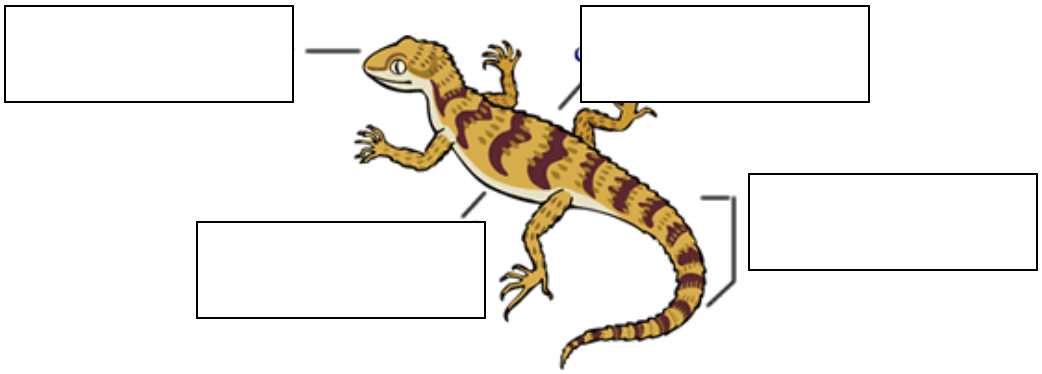
All animals have their own particular body plan, a term used to describe an animal's shape, symmetry and internal organization. An animal's body plan results from a patter of development programmed into the animal's genes by natural selection.



Sponges, such as the on shown above have the simplest body plan of all animals. Sponges are **asymmetrical** or irregular in shape and sometimes their shape depends on where they are growing. The body plans of virtually all other animals show a definite body shape and symmetry.

Some of the first animals to evolve in the ancient oceans had radial symmetry. Animals with **radial symmetry** have body parts arranged around a central axis, somewhat like spokes around a bicycle wheel. A plan passing through the central axis divides the organism into roughly equal halves.

The bodies of all other animals show **bilateral symmetry**, a body design in which there are distinct right and left halves. A plane passing through the animal's midline divides the animal into mirror image halves. There is a dorsal (top) and a ventral (bottom) surface plus an anterior (front) and a posterior (back) end. Label below:



Type of symmetry:	Define in your own words:	Example:
Asymmetry		
Radial Symmetry		
Bilateral Symmetry		

Quick Lab ☺

You can use the letters of the alphabet to better understand the nature of symmetry.

Procedure:

1. Spread the letters on the table in front of you so you can see all of them.
2. Sort the letters into groups based on their symmetry. Place them in the appropriate square below. Once you are sure, glue them down ☺ For example, A shows bilateral symmetry and J is asymmetrical.

ASYMMETRY	
RADIAL SYMMETRY	
BILATERAL SYMMETRY	

Analysis

1. What letters did you find difficult to classify. EXPLAIN why.

2. What letters show the same kind of symmetry as sponges?

3. What are two animals that have the same type of symmetry as the letter M?

4. Where would you place yourself?

5. What is one strength and one weakness of using symmetry to classify or describe organisms?

Cut these letters out to be glued down in the symmetry boxes ☺

RETURN YOUR SCISSORS & GLUE STICKS WHEN YOU ARE FINISHED ☺

Please make sure that the lid to your glue stick is on tight ☺

Throw all other scraps of paper in the recycling bin ☺

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