

**Dichotomous Key (SCI201-Learning Event 5)**

The dichotomous key consists of a series of pairs of statements that require you to place the organism into one of two categories. For each of the organisms, begin at step 1 of the key and proceed through the key until you have identified the organism.

1	a	Irregular-shaped body; structure with many pores	Phylum Porifera
	b	Regular-shaped body (with right and left halves or a cylindrical shape)	2
2	a	Radial symmetry (disk-shaped or barrel-shaped)	4
	b	Bilateral symmetry (similar right and left body halves)	3
3	a	Animal has internal skeleton	19
	b	Animal has external skeleton or no apparent skeleton	6
4	a	Body hard, arms extend from a central disk, or spines present	18
	b	Soft body; little or no color	5
5	a	Saucer-shaped transparent body with small tentacles	Class Scyphozoa
	b	Barrel-shaped body, tentacles at one end	Class Anthozoa
6	a	Hard outer covering	10
	b	No hard outer covering	7
7	a	Body flattened	8
	b	Body not flattened	9
8	a	Smooth, nonsegmented body	Class Trematoda
	b	Apparently segmented, flattened body	Class Cestoda
9	a	Nonsegmented	11
	b	Segmented body	Phylum Annelida
10	a	Body has jointed legs	14
	b	Body inside shell is soft, has no jointed legs	13
11	a	Tentacles or other appendages present	12
	b	Body long and tubular, no appendages	Phylum Nematoda
12	a	Appears as a snail without a shell	Class Gastropoda
	b	Tentacles and eyes present	Class Cephalopoda
13	a	Bivalved shell (two halves)	Class Bivalvia
	b	Univalved shell (single unit)	Class Gastropoda
14	a	Jointed appendages on most body sections	15
	b	Jointed appendages on certain body segments; not all appendages are legs	16
15	a	One pair of legs per body segment	Class Chilopoda
	b	Two pairs of legs per body segment	Class Diplopoda
16	a	Two pairs of antennae, large claws often present	Class Crustacea
	b	One pair of antennae or none, no large claws	17
17	a	Four pairs of legs, no antennae or wings	Class Arachnida
	b	Three pairs of legs, wings present	Class Insecta
18	a	Arms present, body surface knobby	Class Asteroidea
	b	Many-spined animal, resembles a pincushion	Class Echinoidea
19	a	Fishlike, flattened body, appendages finlike not jointed	20
	b	Not fishlike, body not flattened, appendages jointed or absent	21
20	a	Scales on body to not overlap, skeleton of cartilage	Class Chondrichthyes
	b	Scales on body overlap, skeleton bony	Class Osteichthyes
21	a	Body covered by scales, zero or four legs	Class Reptilia
	b	Body not covered by scales	22
22	a	Claws absent	Class Amphibia
	b	Claws or nails present on toes, skin covered with feathers or hair	23
23	a	Feathered, claws present	Class Aves
	b	Hair present	Class Mammals