

# APPENDIX A

## A Simple Biological Key

1. Microscopic.....	<b>2</b>
Macroscopic (visible with the naked eye).....	<b>3</b>
2. Eukaryotic cell.....	<i>kingdom Protista</i>
Prokaryotic cell.....	<i>kingdom Monera</i>
3. Autotrophic.....	<i>kingdom Plantae</i> ..... <b>4</b>
Heterotrophic.....	<b>5</b>
4. Leaves with parallel veins .....	<i>phylum Anthophyta</i> ..... <i>class Monocotyledoneae</i>
Leaves with netted veins .....	<i>phylum Anthophyta</i> ..... <i>class Dicotyledoneae</i>
5. Decomposer.....	<i>kingdom Fungi</i>
Consumer.....	<i>kingdom Animalia</i> ..... <b>6</b>
6. No backbone.....	<b>7</b>
Backbone.....	<i>phylum Chordata</i> ..... <b>22</b>
7. Organism can be externally divided into equal halves (like a pie), but it has no distinguishable right and left sides.....	<b>8</b>
Organism either can be divided into right and left sides that are mirror images or cannot be divided into two equal halves.....	<b>9</b>
8. Soft, transparent body with tentacles .....	<i>phylum Cnidaria</i>
Firm body with internal support; covered with scales or spiny plates; tiny, hollow tube feet used for movement.....	<i>phylum Echinodermata</i>
9. External plates that support and protect.....	<i>phylum Arthropoda</i> ..... <b>14</b>
External shell or soft, shell-less body.....	<b>10</b>
10. External shell.....	<i>phylum Mollusca</i> ..... <b>11</b>
No external shell.....	<b>12</b>
11. Coiled shell.....	<i>class Gastropoda</i>
Shell made of two similar parts.....	<i>class Bivalvia</i>
12. Wormlike body without tentacled receptors on head.....	<i>phylum Annelida</i>
Non-wormlike body or tentacled receptors on head... ..	<i>phylum Mollusca</i> ... <b>13</b>
13. Wormlike body with tentacled receptors on head.....	<i>class Gastropoda</i>
Non-wormlike body with 8 or more tentacles used for grasping.....	<i>class Cephalopoda</i>
14. More than 3 pairs of legs.....	<b>15</b>
3 pairs of walking legs.....	<i>class Insecta</i> ..... <b>16</b>
15. 4 pairs of walking legs, body in two divisions.....	<i>class Arachnida</i>
More than 4 pairs of walking legs.....	<i>class Malacostraca</i>
16. Wings.....	<b>17</b>
No wings.....	<b>21</b>
17. All wings transparent.....	<b>18</b>
Nontransparent wings.....	<b>19</b>
18. Capable of stinging from back of body.....	<i>order Hymenoptera</i>
Cannot sting (may be able to bite).....	<i>order Diptera</i>
19. Large, sometimes colorful wings.....	<i>order Lepidoptera</i>
Thick, hard, leathery wings.....	<b>20</b>
20. Pair of hard wings covering a pair of folded, transparent wings.....	<i>order Coleoptera</i>
Pair of leathery wings covering a pair of transparent wings.....	<i>order Orthoptera</i>

21. Piercing, sucking mouthparts for obtaining blood.....	<i>order Siphonaptera</i>
Mouthparts for chewing.....	<i>order Hymenoptera</i>
22. Jaws or beak.....	<b>23</b>
No jaw or beak.....	<i>class Agnatha</i>
23. Skin covered with scales.....	<b>24</b>
No scales on skin.....	<b>26</b>
24. Fins and gills.....	<b>25</b>
No fins; breathes with lungs.....	<i>class Reptilia</i>
25. Mouth on lower part of body.....	<i>class Chondrichthyes</i>
Mouth on front part of body.....	<i>class Osteichthyes</i>
26. No scales, no hair, no feathers; skin is slimy.....	<i>class Amphibia</i>
Feathers or hair.....	<b>27</b>
27. Tail.....	<i>order Caudata</i>
No tail.....	<i>order Anura</i>
28. Feathers on body.....	<i>class Aves</i>
Hair on body.....	<i>class Mammalia</i>
29. Hooves.....	<b>29</b>
No hooves.....	<b>30</b>
30. Odd number of toes.....	<i>order Perissodactyla</i>
Even number of toes.....	<i>order Artiodactyla</i>
31. Carnivore.....	<b>32</b>
Herbivore.....	<b>33</b>
32. Teeth.....	<i>order Carnivora</i>
No teeth, eats insects.....	<i>order Insectivora</i>
33. Enlarged front teeth for gnawing.....	<b>34</b>
No enlarged front teeth for gnawing.....	<b>35</b>
34. Legs for crawling.....	<i>order Rodentia</i>
Hind legs for jumping.....	<i>order Lagomorpha</i>
35. Enlarged trunk, used for breathing and grasping.....	<i>order Proboscidea</i>
Tendency to stand erect on two hind limbs.....	<i>order Primates</i>