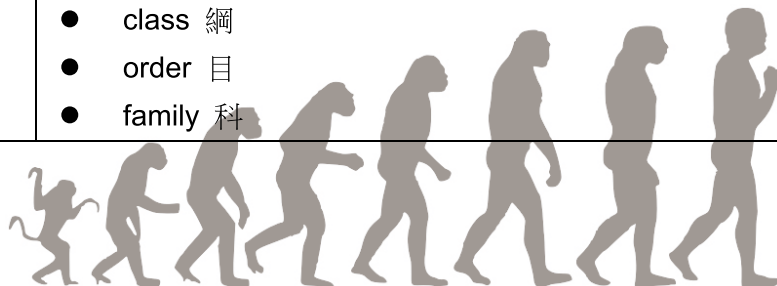


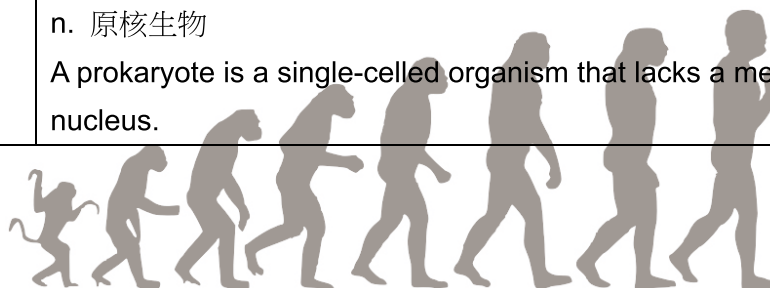
# Life Science 生命科學

## EVOLUTION 演化

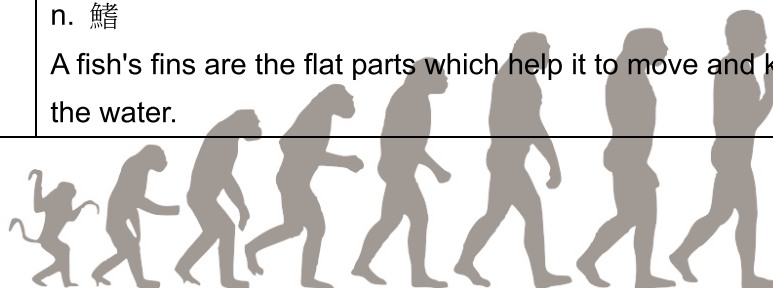
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| <b>chronobiology</b><br>[ˌkrʌnɒbaɪˈɒlədʒi] | n. 時間生物學<br>Chronobiology is the study of the effects of time and rhythmical phenomena on life processes.   |
| <b>evolution</b><br>[ˌɛvəˈluʃən]           | n. 演化<br>Evolution is the scientific idea that plants and animals develop and change gradually over a long period of time.  |
|  | ● mutation 突變   |
| <b>degeneration</b><br>[dɪˌdʒɛnəˈreɪʃən]   | n. 退化 (= devolution)<br>In biology, degeneration is a gradual change to a less highly developed type.   |
| <b>vestigial</b><br>[vɛsˈtɪdʒiəl]          | adj. 退化的<br>Vestigial means something occurs or persists as a rudimentary or degenerate structure.  |
|  | ● vestige 退化器官；遺跡   |
| <b>primitive</b><br>[ˈprɪmətɪv]            | adj. 原始的 (= primitive men)<br>Primitive means belonging to a society in which people live in a very simple way, usually without industries or a writing system.               |
|  | ● paleontology 古生物學   |
| <b>Darwinism</b><br>[ˈdarwɪnˌɪzəm]         | n. 達爾文主義 (= Darwinian theory)<br>According to Darwinism, all species evolved from a few common ancestors by means of natural selection.                                       |
|  | ● natural selection 自然選擇<br>● Nature selects, the fittest survives. 物競天擇，適者生存   |
| <b>extinction</b><br>[ɪkˈstɪŋkʃən]         | n. 滅絕<br>The extinction of a species of animal or plant is the death of all its remaining living members.   |
| <b>extant</b><br>[ɪkˈstænt]                | adj. 現存的<br>If something is extant, it is still in existence.   |
| <b>species</b><br>[ˈspiːʃɪz]               | n. 物種<br>A set of animals or plants in which the members have similar characteristics to each other and can breed with each other called species.                             |
|  | <ul style="list-style-type: none"> <li>● creature 生物</li> <li>● kingdom 界</li> <li>● phylum ; division 門</li> <li>● class 綱</li> <li>● order 目</li> <li>● family 科</li> </ul> |



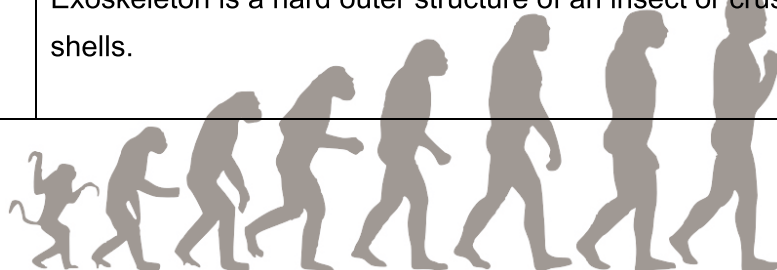
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|                                    | <ul style="list-style-type: none"> <li>● genus 屬</li> <li>● species 種</li> <li>● binomial system of nomenclature 二名法</li> <li>● speciation 物種形成</li> </ul> |
| <b>diversity</b><br>[daɪˈvɜːsəti]  | n. 品種多樣 (=variety ; multifariousness)<br>A diversity of things is a range of things which are very different from each other.                              |
| <b>breed</b><br>[brɪd]             | n. 品種 ; v. 繁殖<br>A breed of a pet animal or farm animal is a particular type of it.  |
|                                    | <ul style="list-style-type: none"> <li>● breeding-ground 繁殖地</li> <li>● breeder 飼育員</li> <li>● breeding season 繁殖季節</li> </ul>                             |
| <b>multiply</b><br>[ˈmʌltɪplaɪ]    | v. 繁殖 (= reproduce ; procreate ; fertilization)<br>To multiply is to breed or propagate. As everybody knows, rabbits multiply rapidly.                     |
| <b>inbreed</b><br>[ˈɪnˈbrɪd]       | v. 近親繁殖<br>To breed by the continued mating of closely related family.   |
| <b>mating</b><br>[ˈmetɪŋ]          | n. 交配<br>Mating is an act of sexual behavior between a pair of animals.  |
|                                    | <ul style="list-style-type: none"> <li>● monogamy 一夫一妻制</li> <li>● polyandry 一妻多夫制；一雌多雄</li> <li>● polygamy 一夫多妻制；一雄多雌</li> </ul>                          |
| <b>hatch</b><br>[hætʃ]             | v. 孵<br>Some animals hatch to produce young from an egg by applying natural or artificial heat   |
|                                    | <ul style="list-style-type: none"> <li>● incubation 孵化</li> <li>● hatchery 孵卵所</li> </ul>  |
| <b>spawn</b><br>[spɒn]             | v. 產卵<br>When fish or animals such as frogs spawn, they lay their eggs in great numbers.   |
|                                    | <ul style="list-style-type: none"> <li>● oviparity 卵生</li> <li>● viviparity 胎生</li> <li>● ovoviviparity 卵胎生</li> </ul>                                     |
| <b>offspring</b><br>[ˈɒfˌsprɪŋ]    | n. 後代 (= young)<br>The progeny or descendants of a person, animal, or plant are called offspring.  |
| <b>eukaryote</b><br>[juˈkæriət]    | n. 真核生物<br>Eukaryote is a cell or an organism that possesses a clearly defined nucleus.  |
| <b>prokaryote</b><br>[ˌproˈkæriət] | n. 原核生物<br>A prokaryote is a single-celled organism that lacks a membrane-bound nucleus.   |



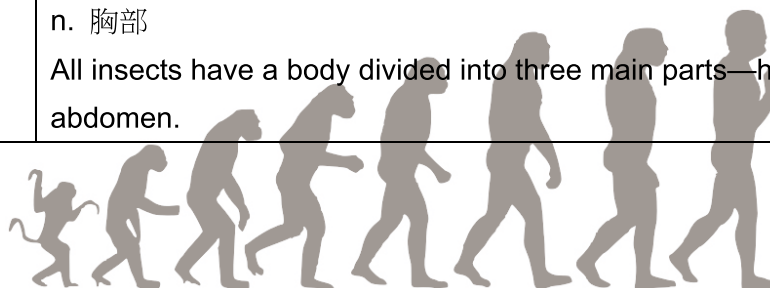
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| <b>fungal</b><br>[ˈfʌŋɡl]             | adj. 真菌的 (= fungous)<br>Fungal means caused by, involving with, or relating to fungus.  |
|                                       | <ul style="list-style-type: none"> <li>● fungal infection 真菌感染</li> <li>● fungoid 真菌狀的</li> </ul>   |
| <b>invertebrate</b><br>[ɪnˈvɜːtəbrɪt] | adj. 無脊椎的<br>An invertebrate is an animal that lacks a backbone or vertebral column.  |
|                                       | <ul style="list-style-type: none"> <li>● vertebrate 脊椎動物</li> <li>● Mollusca 軟體動物門</li> <li>● Arthropoda 節肢動物門</li> <li>● Cnidaria 刺胞動物門 (= coelenterate)</li> <li>● Annelida 環節動物門</li> <li>● Echinodermata 棘皮動物門</li> <li>● Chordata 脊索動物門</li> <li>● Porifera 多孔動物門</li> </ul>   |
| <b>aquatic</b><br>[əˈkwætɪk]          | n. 水生的<br>Aquatic life refers to animals that are adapted to live in water.   |
|                                       | <ul style="list-style-type: none"> <li>● crustacean 甲殼類動物</li> <li>● lobster 龍蝦</li> <li>● prawn 明蝦</li> <li>● shrimp 小蝦</li> <li>● crayfish 螯蝦</li> <li>● coral 珊瑚；珊瑚礁</li> <li>● starfish 海星</li> <li>● jellyfish 水母</li> <li>● sponge 海綿</li> <li>● octopus 章魚</li> <li>● urchin 海膽</li> <li>● terrestrial 陸生的</li> <li>● bivalve 雙殼類</li> <li>● clam 蛤蜊</li> <li>● oyster 牡蠣</li> </ul> |
| <b>gill</b><br>[ɡɪl]                  | n. 鰓<br>Gill is the respiratory organ of most aquatic animals that breathe water to obtain oxygen.  |
| <b>scale</b><br>[skel]                | n. 鱗片<br>The scales of a fish or reptile are the small, flat pieces of hard skin that cover its body.   |
| <b>fin</b><br>[fɪn]                   | n. 鰭<br>A fish's fins are the flat parts which help it to move and keep its balance in the water.   |



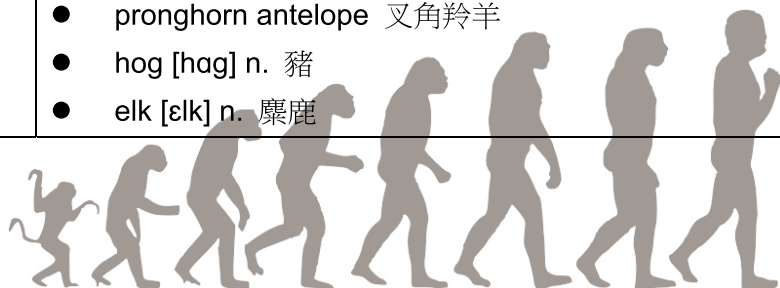
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|                                       | <ul style="list-style-type: none"> <li>● pectoral fin 胸鰭</li> <li>● dorsal fin 背鰭</li> <li>● caudal fin 尾鰭</li> </ul>   |
| <b>flipper</b><br>[ˈflɪpə]            | n. 肢；鰭<br>A flipper of penguins, turtles or seals is a broad flat limb used for swimming.   |
| <b>alga</b><br>[ˈældʒi]               | n. 藻類 (pl. algae)<br>The earliest life is thought to begin with algae which are simple organisms that live in oceans, lakes, rivers, and moist soil.  |
|                                       | <ul style="list-style-type: none"> <li>● blue-green alga 藍綠藻</li> <li>● agar 寒天；菜燕；石花菜</li> <li>● plankton 浮游生物</li> <li>● phytoplankton 浮游植物</li> <li>● zooplankton 浮游動物</li> </ul>  |
| <b>amphibian</b><br>[æmˈfɪbiən]       | n. 兩棲動物 (= amphibious animal)<br>An amphibian is an animal with scaleless skin that, with a few exceptions, lives part of its life in water and part on land.   |
|                                       | <ul style="list-style-type: none"> <li>● newts 蠃螈 (=Salamanders)</li> <li>● toads 蟾蜍</li> <li>● tadpole 蝌蚪</li> <li>● treefrog 樹蛙</li> </ul>  |
| <b>reptile</b><br>[ˈreptl]            | n. 爬行動物<br>A reptile is an animal that has dry, scaly skin and breathes by means of lungs.  |
|                                       | <ul style="list-style-type: none"> <li>● snake 蛇</li> <li>● viper 蝰蛇</li> <li>● adder 小毒蛇</li> <li>● rattlesnake 響尾蛇</li> <li>● cobra 眼鏡蛇</li> <li>● constrictor 蟒蛇 (= boa = python)</li> <li>● colubrid (無毒)蛇</li> <li>● crocodile 鱷魚</li> <li>● alligator 美洲鱷</li> <li>● turtle 龜</li> <li>● leatherback 棱皮龜</li> <li>● loggerhead 紅海龜</li> <li>● lizard 蜥蜴</li> <li>● chameleon 變色龍</li> </ul> |
| <b>exoskeleton</b><br>[ˌɛksoˈskeletn] | n. 外骨骼<br>Exoskeleton is a hard outer structure of an insect or crustacean, such as shells.   |



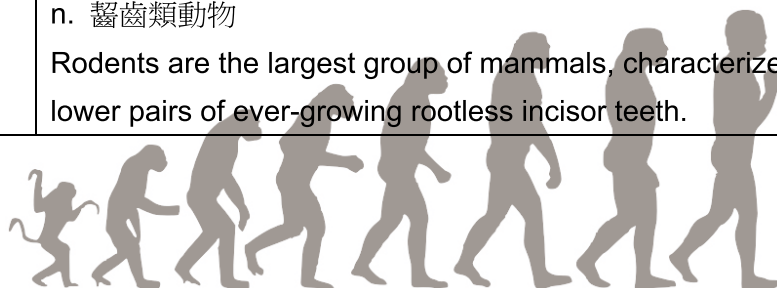
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| <b>venom</b><br>[ˈvɛnəm]                  | n. 毒液<br>About 270 species of snakes have venom that is harmful or fatal to human beings.  |
| <b>fang</b><br>[fæŋ]                      | n. 毒牙<br>Poisonous snakes inject venom through their fangs when they bite.   |
| <b>regeneration</b><br>[ˌrɪ,dʒɛnəˈreɪʃən] | n. 再生<br>Regeneration means to grow again. One example of regeneration is the lizard, which can grow a new tail in due time.   |
| <b>molt</b><br>[mɒlt]                     | v. 蛻皮；脫殼；換毛<br>The skin-shedding process is called molting.  |
| <b>hibernate</b><br>[ˈhaɪbəˌnet]          | v. 冬眠<br>In winter, some animals such as snakes survive by hibernating.  |
|   | <ul style="list-style-type: none"> <li>● poikilotherm 變溫動物</li> <li>● homotherm 恒溫動物</li> </ul>  |
| <b>dinosaur</b><br>[ˈdaɪnəˌsɔːr]          | n. 恐龍<br>Dinosaur is the name of a group of prehistoric reptiles that ruled the earth for about 160 million years.   |
|   | <ul style="list-style-type: none"> <li>● Jurassic Park 侏羅紀公園</li> <li>● triceratop 三角龍</li> <li>● Tyrannosaur 暴龍</li> <li>● Brontosaur 雷龍</li> <li>● Pterodactyl 翼手龍</li> <li>● Velociraptor 迅猛龍</li> </ul>                                  |
| <b>insect</b><br>[ˈɪnsɛkt]                | n. 昆蟲<br>Insects, which are small, six-legged animals, live almost everywhere on earth, from steamy tropical jungles to cold polar regions.  |
|   | <ul style="list-style-type: none"> <li>● compound eye 複眼</li> <li>● trilobite 三葉蟲</li> <li>● foraminifer 有孔蟲</li> <li>● insectivore 食蟲動物</li> <li>● anteater 食蟻獸</li> <li>● metamorphosis 變態</li> <li>● moth 蛾</li> <li>● mite 蟎類</li> </ul> |
| <b>antenna</b><br>[ænˈtɛnə]               | n. 觸鬚；觸角 (pl. antennae)<br>An insect's head consists of the mouth parts, eyes, and antennae.   |
|   | <ul style="list-style-type: none"> <li>● tentacle 觸角</li> </ul>  |
| <b>thorax</b><br>[ˈθɔːræks]               | n. 胸部<br>All insects have a body divided into three main parts—head, thorax, and abdomen.  |



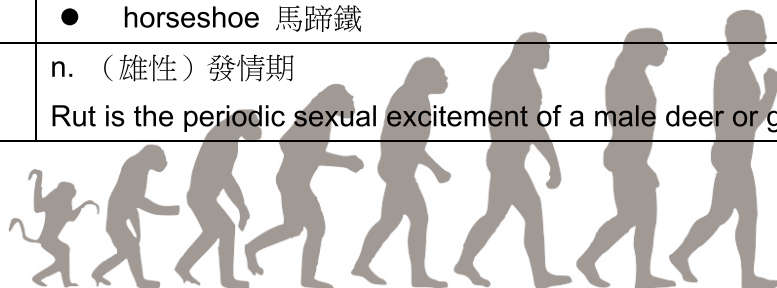
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| <b>beneficial</b><br>[ˌbenəˈfiʃəl] | adj. 有益的<br>Beneficial insects such as bees, butterflies pollinate plants. .  |
| <b>pest</b><br>[pest]              | n. 害蟲<br>Many insects are household pests, such as houseflies, ants, and cockroaches that eat or spoil the food stored in homes and warehouses.   |
| <b>parasite</b><br>[ˈpærəˌsaɪt]    | n. 寄生蟲<br>Some worms live as parasites in various animals and plants, causing a number of diseases.   |
|                                    | <ul style="list-style-type: none"> <li>● microbe 微生物</li> <li>● tapeworm 條蟲</li> <li>● flatworm 扁蟲</li> <li>● roundworm 蛔蟲</li> </ul>   |
| <b>larva</b><br>[ˈlarvə]           | n. 幼蟲；幼體<br>The newly hatched, wingless, often wormlike form of many insects before metamorphosis.  |
|                                    | <ul style="list-style-type: none"> <li>● caterpillar 毛毛蟲</li> <li>● pupa 蛹</li> <li>● cocoon 繭</li> <li>● seedling 幼苗</li> <li>● fry 魚苗</li> <li>● cub 幼獸(大部分四足肉食性動物)</li> <li>● calf 小牛、駱駝(大部分四足草食性動物)</li> <li>● piglet 小豬</li> <li>● lamb 小羊</li> <li>● chick 小鳥</li> <li>● infant 嬰兒</li> <li>● hatchling (從蛋孵出)幼體</li> </ul> |
| <b>youngster</b><br>[ˈjʌŋstə]      | n. 幼獸；幼兒<br>Youngster is a young animal or child.   |
| <b>mammal</b><br>[ˈmæməl]          | n. 哺乳動物<br>Mammal is a vertebrate that feeds its young with the mother's milk.  |
|                                    | <ul style="list-style-type: none"> <li>● snowshoe hare 北美野兔</li> <li>● cheetah 非洲獵豹</li> <li>● cougar 美洲豹</li> <li>● lynx 山貓；猞猁</li> <li>● raccoon 浣熊</li> <li>● ibex 野生山羊</li> <li>● pronghorn antelope 叉角羚羊</li> <li>● hog [hag] n. 豬</li> <li>● elk [ɛlk] n. 麋鹿</li> </ul>   |



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|                                   | <ul style="list-style-type: none"> <li>● mule deer [mjul dɪr] n. 長耳鹿</li> <li>● reindeer [ˈren, dɪr] n. 馴鹿</li> <li>● caribou [rkærə, bu] n. 北美馴鹿</li> <li>● gazelle [gəˈzɛl] n. 瞪羚</li> <li>● buck [bʌk] n. 雄鹿</li> <li>● moose [mus] n. 駝鹿；北美麋</li> <li>● bovine [ˈbovaɪn] n. 牛科動物</li> <li>● rhinoceros 犀牛</li> <li>● gibbon [ˈɡɪbən] n. 長臂猿</li> <li>● sloth 樹懶</li> <li>● pinniped 鰭腳亞目哺乳動物(海豹等)</li> <li>● otter 水獺</li> <li>● hippopotamus 河馬</li> <li>● walrus 海象</li> <li>● seal 海豹</li> </ul> |
| <b>cetacean</b><br>[sɪˈteɪən]     | n. 鯨豚目動物<br>Cetacean is any of an order of aquatic mostly marine mammals that includes the whales, dolphins, porpoises, that have a torpedo-shaped nearly hairless body, paddle-shaped forelimbs but no hind limbs, one or two nares opening externally at the top of the head, and a horizontally flattened tail used for locomotion.  |
|                                   | <ul style="list-style-type: none"> <li>● whale 鯨</li> <li>● porpoise 鼠海豚</li> <li>● dolphin 海豚</li> <li>● blubber n. 鯨脂；鯨油</li> <li>● blowhole n. (鯨、海豚等的)噴水孔</li> <li>● melon n. (鯨目動物頭部的)圓形隆起</li> </ul>  |
| <b>monotreme</b><br>[ˈmənə, trɪm] | n. 卵生哺乳類動物<br>Monotremes are mammals that lay eggs instead of giving birth to live young like marsupials and placental mammals.   |
|                                   | <ul style="list-style-type: none"> <li>● platypus 鴨嘴獸</li> <li>● echidna 針鼯</li> </ul>  |
| <b>placental</b><br>[pləˈsɛntəl]  | adj. 胎盤的（動物）<br>Placental mammals all bear live young, which are nourished before birth in the mother's uterus through a specialized embryonic organ attached to the uterus wall, the placenta.   |
|                                   | <ul style="list-style-type: none"> <li>● placenta 胎盤</li> </ul>   |
| <b>rodent</b><br>[ˈrɒdnt]         | n. 齧齒類動物<br>Rodents are the largest group of mammals, characterized by upper and lower pairs of ever-growing rootless incisor teeth.  |

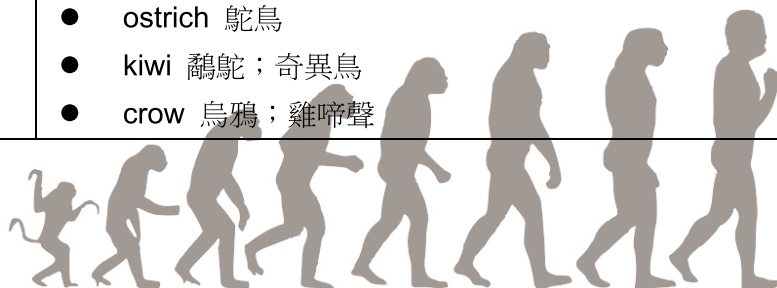


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|                                     | <ul style="list-style-type: none"> <li>● beaver 水獺</li> <li>● hare 野兔</li> <li>● squirrel 松鼠</li> <li>● mouse 老鼠</li> <li>● marmot 土撥鼠</li> </ul>  |
| <b>marsupial</b><br>[mɑːˈsjupiəl]   | adj. 有育兒袋的（動物）<br>Marsupials are mammals that most of the young are carried in a pouch.  |
|                                     | <ul style="list-style-type: none"> <li>● kangaroo 袋鼠</li> <li>● wombat 袋熊</li> <li>● koala 無尾熊</li> </ul>  |
| <b>pouch</b><br>[paʊtʃ]             | n. 育兒袋；袋囊<br>A pouch is a bag-like pocket of skin in a female marsupial such as kangaroo or koala.   |
| <b>canid</b><br>[ˈkænəd]            | n. 犬科動物(= Canidae)<br>Canid is a lineage of carnivorans that includes domestic dogs, wolves, foxes and many other extant and extinct dog-like mammals.   |
|                                     | <ul style="list-style-type: none"> <li>● coyote 小狼, 山狗</li> <li>● jackals 豺狼</li> </ul>  |
| <b>primate</b><br>[ˈpraɪmɪt]        | n. 靈長類動物<br>Primates are the group of mammals made up of human beings and the animals that resemble them most closely.   |
|                                     | <ul style="list-style-type: none"> <li>● apes 人猿</li> <li>● gorilla 大猩猩</li> <li>● chimpanzee 黑猩猩(非洲)</li> <li>● orangutan 紅猩猩</li> <li>● baboon 狒狒</li> </ul>                                     |
| <b>anthropoid</b><br>[ˈænthrəˌpɔɪd] | n. 類人猿 (= anthropoid ape)<br>The anthropoid structure of certain apes includes lack of a tail and cheek pouches.   |
| <b>beast</b><br>[biːst]             | 野獸<br>Beast is an animal, especially a large four-footed mammal.   |
|                                     | <ul style="list-style-type: none"> <li>● hide 獸皮</li> <li>● horn 獸角</li> <li>● tusk 長牙</li> <li>● antler 鹿角</li> <li>● velvet 鹿茸；鹿角嫩皮；天鵝絨</li> <li>● pelage 毛皮</li> <li>● horseshoe 馬蹄鐵</li> </ul> |
| <b>rut</b><br>[rʌt]                 | n. （雄性）發情期<br>Rut is the periodic sexual excitement of a male deer or goat.  |





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| <b>estrus</b><br>[ˈɪstrəs]            | n. (雌性)發情期(= oestrus =heat-period)<br>Estrus is the periodic state of sexual excitement in the female of most mammals, excluding humans.  |
|                                       | <ul style="list-style-type: none"> <li>● estrus cycle 發情週期</li> </ul>   |
| <b>domesticate</b><br>[dəˈmɛstə, ket] | v. 馴化 (= tame)<br>People domesticate animals or plants so that they are under human control and provide food, power or companionship.   |
| <b>carnivore</b><br>[ˈkarnə, vor]     | n. 肉食性動物；食蟲植物(= predator)<br>Carnivore, also called predator, animal whose diet consists of other animals.  |
|                                       | <ul style="list-style-type: none"> <li>● herbivore 草食性動物</li> <li>● omnivore 雜食性動物</li> </ul>   |
| <b>browse</b><br>[braʊz]              | v. 吃葉；吃草<br>When animals browse, they feed on grass or leaves.  |
| <b>prey</b><br>[pre]                  | v. 捕食；n. 被捕食的動物<br>An animal taken by a predator as food is called prey.  |
|                                       | <ul style="list-style-type: none"> <li>● trapper 誘捕動物者</li> <li>● forage 覓食</li> </ul>  |
| <b>scavenger</b><br>[ˈskævɪndʒə]      | n. 食腐動物 (= carrion-feeder)<br>Vulture, jackals, and some beetles are scavengers, feeding on decaying matter.  |
| <b>aves</b><br>[ˈave]                 | n. 鳥類動物<br>Aves is the scientific name for birds.   |
|                                       | <ul style="list-style-type: none"> <li>● phoenix 鳳凰</li> <li>● waterfowl 水鳥；水禽</li> <li>● robin 旅鶇；知更鳥</li> <li>● starling 星椋鳥</li> <li>● songbird 燕雀</li> <li>● swallow 燕子</li> <li>● warbler 鶯</li> <li>● riflebird 蜂鳥</li> <li>● mandarin duck 鴛鴦</li> <li>● canary 金絲雀</li> <li>● hornbill 犀鳥</li> <li>● warbler 鸚鳥；鳴鳥；用顫音歌唱的人</li> <li>● blackcap 黑色莓；黑頭鶯類（歐洲）</li> <li>● wood thrush 畫眉鳥</li> <li>● emu 鸕鶿</li> <li>● ostrich 駝鳥</li> <li>● kiwi 鸕鶿；奇異鳥</li> <li>● crow 烏鴉；雞啼聲</li> </ul> |



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|  | <ul style="list-style-type: none"> <li>● jay 松雞；鳥</li> <li>● raven 渡鴉</li> <li>● hawk 鷹</li> <li>● plover 玢；千鳥；玢科鳥（如鳳頭麥雞）</li> <li>● magpie 鵲；饒舌的人</li> </ul>  |
| <b>beak</b><br>[bɪk]                   | n. （鷹等的）喙 (= bill)<br>A bird's beak is the hard curved or pointed part of its mouth.   |
|  | <ul style="list-style-type: none"> <li>● hooked nose 鷹鉤鼻</li> <li>● upper/lower mandible of beak 上/下喙</li> <li>● crest (鳥類頭部後方) 冠</li> <li>● crown (鳥類頭部前方) 冠</li> <li>● lore 眼先(眼部前方的羽毛)</li> <li>● wing coverts 覆羽</li> <li>● quill 羽毛管</li> </ul> |
| <b>plumage</b><br>[ˈplʊmɪdʒ]           | n. 羽毛<br>Plumage is the feathers on a bird.  |
| <b>migrate</b><br>[ˈmaɪˌɡreɪt]         | v. 遷移<br>When it gets cold, many birds migrate to places where the weather is milder and more food is available.   |
| <b>gregarious</b><br>[ɡrɪˈɡeɪriəs]     | adj. 群居性的 (= social)<br>Gregarious animals or birds normally live in large groups.   |
|  | <ul style="list-style-type: none"> <li>● hordes (昆蟲、人等) 群</li> <li>● swarms (昆蟲等) 群</li> <li>● flock (鳥、羊等) 群</li> <li>● herd 獸群</li> </ul>  |
| <b>habitat</b><br>[ˈhæbɪˌtæt]          | n. 棲息地<br>The place where an animal lives is called its habitat.   |
| <b>perch</b><br>[pɜːtʃ]                | v. (鳥) 飛落；棲息<br>Perch is a resting place or vantage point. A robin flew up and perched on the highest branch.  |
| <b>echolocation</b><br>[ˌɛkoloʻkeɪʃən] | n. 聲波定位<br>Echolocation is a physiological process for locating distant or invisible objects by sound waves reflected back to the emitter from the objects.  |
| <b>camouflage</b><br>[ˈkæməˌflɑːʒ]     | n. 偽裝<br>The various ways animals, insects in particular, blend with their surroundings are called camouflage.   |
| <b>nocturnal</b><br>[nɒkˈtɜːnl]        | adj. 夜間的；夜行性的<br>Nocturnal creatures are active mainly at night.   |
|  | <ul style="list-style-type: none"> <li>● diurnal 日間的；白晝的</li> </ul>  |

