

Science understanding, Science inquiry

 Verbal/Linguistic  Logical/Mathematical

Scientific naming of living things uses Latin and Greek. When scientists discover a new organism, they describe it and give it a name. They need to understand the meaning of Latin and Greek words so that the name they give describes the organism in some way. For example, *Melaleuca viridiflora* is the biological name for the broad-leaved paperbark—a small tree native to woodlands, swamps and streams of monsoonal northern Australia. The first name (genus name) is a combination of two words: *mela* meaning black and *leuca* meaning white. The bark of the *Melaleuca* is white with black areas. The second name (species) is also a combination of two Latin terms: *virid* meaning green and *flora* meaning flower. So *Melaleuca viridiflora* is a tree with green flowers that belongs to a group of trees that have white and black bark.

Naming animals

In Table 6.4.1 is a small selection of words used in naming species. When words are combined, the last letter may be dropped. Sometimes letters such as 'e', 'i' or 'o' have to be added in the middle, or 'us' and 'um' added at the end.

Table 6.4.1

What it does		How it looks		Its body	
Word	Meaning	Word	Meaning	Word	Meaning
<i>amphi</i>	half	<i>aculeat</i>	pointed, spiny	<i>ursus</i>	bear
<i>bates</i>	walker	<i>cinereus</i>	grey	<i>canis</i>	dog
<i>bios</i>	life	<i>deinos</i>	terrible	<i>cheiro</i>	hand
<i>carnis</i>	meat	<i>erio</i>	woolly	<i>dactylo</i>	finger
<i>gradus</i>	step or walk	<i>fuliginosus</i>	sooty	<i>dent</i>	tooth
<i>malus</i>	bad	<i>lasios</i>	hairy	<i>hippo</i>	horse
<i>odorus</i>	smelling	<i>giganteus</i>	very large	<i>glossus</i>	tongue
<i>perigrinus</i>	wanderer	<i>macro</i>	large	<i>mastax</i>	mouth or jaw
<i>potamo</i>	river	<i>obesus</i>	fat	<i>placo</i>	flat
<i>sulcata</i>	digging	<i>nefrens</i>	toothless	<i>phascolo</i>	pouch
		<i>rufus</i>	red	<i>pteryx</i>	wing
		<i>trachys</i>	rough	<i>pus</i>	foot
		<i>tri</i>	three	<i>rhamphos</i>	curved beak
		<i>verrucosa</i>	covered in warts	<i>sauros</i>	lizard

- 1 The following four animals are all native to Australia: *Phascoglossus cinereus*, *Tachyglossus aculeatus*, *Macropus rufus*, *Macropus fuliginosus*.

For each animal **state** what the name means and **identify** the animal you think it is.

Biological name	What it means	The name I know the animal by
<i>Phascoglossus cinereus</i>		
<i>Tachyglossus aculeatus</i>		
<i>Macropus rufus</i>		
<i>Macropus fuliginosus</i>		

- 2 **Explain** what the name 'dinosaur' tells you about those animals.

3 Frogs and toads are amphibians. They are animals that spend part of their life in water and part on land. They also have very different body shapes at different stages in their life. **Explain** why 'amphibian' is an appropriate name for this animal group.

- 4 If there was such an animal, **propose** what *Canis rufusobesus* would look like.
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Naming plants

Table 6.4.2 lists some different words used to describe plants.

Table 6.4.2

Word	Meaning	Word	Meaning
<i>andr</i>	male	<i>helio</i>	sun
<i>brachy</i>	short, little	<i>leuca</i>	white
<i>calyptratus</i>	caplike	<i>litho</i>	stone
<i>callos</i>	beauty	<i>mela</i>	black
<i>carpa</i>	fruit	<i>micro</i>	small
<i>corne</i>	made of horn	<i>stemon</i>	thread
<i>eu</i>	good	<i>teret</i>	rounded off, smooth
<i>flora</i>	flower	<i>truncatus</i>	cut off
<i>folium</i>	leaf	<i>viridis</i>	green

- 1 There are hundreds of different *Eucalyptus* trees in Australia. **State** what it is that they all have in common that causes them to be grouped together.
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- 2 **Describe** what makes *Eucalyptus tereticornis* and *Eucalyptus microcarpa* different from the others.
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- 3 The Australian bottlebrushes have the genus name of *Callistemon*. **State** what this name means.
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Refer to Tables 6.4.1 and 6.4.2 for questions 4 and 5.

- 4 *Hakea macrocarpa*, *Ficus macrocarpa* and *Acacia macrocarpa* are three very different plants but they all have the same specific name. **Describe** what they all have in common.
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- 5 Descriptive words can be used for both plants and animals; for example, *Synanceia verrucosa* is the stone fish, *Hakea verrocosa* is an Australian native bush and *Lithops verrucoculosa* is a small plant growing close to the ground. **Describe** the characteristic they all have in common.
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- 6 (a) If you were offered a *Odoromalasaurus* as a pet do you think you would take it?
YES/NO
- (b) **Explain** your answer.
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- 7 **Propose** a good name for a:

- (a) dog with dark woolly hair _____
- (b) bottlebrush tree with short rounded leaves _____

- 8 You discover three new animals and one new plant. **Describe** these and **propose** a scientific name for each of your discoveries.

Plant/animal	Description	Scientific name