

ANSWER GUIDE: That's classified



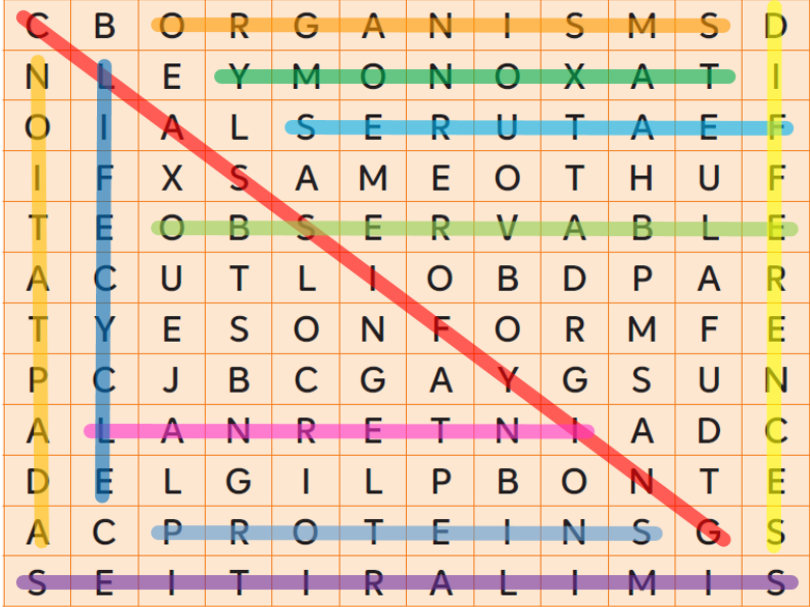
Term 3, 2020

Part 1: Understanding taxonomy

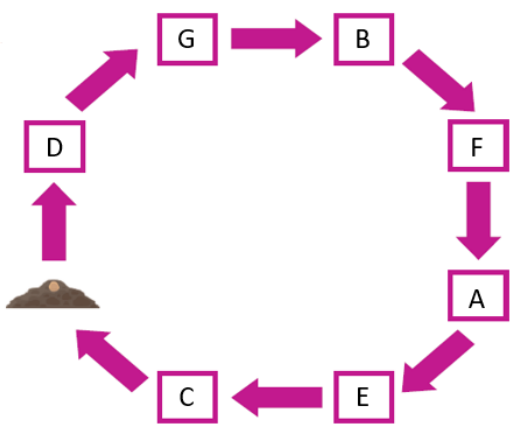
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Activity title	Answers
Same but different	Possible answers include: colour, body shape, shell/no shell, number of legs, tail/no tail, antennae/no antennae, wings/no wings

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Activity title	Answers
Living vs non-living	Living things: fish, lizards, plants, birds
Looks can be deceiving	
The origins of taxonomy	<p>Hierarchical system: classified according to various criteria into successive levels of layers</p> <p>Biologist: an expert in, or student of, the branch of science concerning living organisms</p>

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Activity title	Answers
What's in a name?	<p>Mottlecah (<i>Eucalyptus macrocarpa</i>) – Illyarrie (<i>Eucalyptus erythrocorys</i>)</p> <p>Red-flowering gum (<i>Corymbia ficifolia</i>) – Marri (<i>Corymbia calophylla</i>)</p>
Flowering plant's lifecycle	

Genus to species	<p><i>Banksia littoralis</i> only:</p> <ul style="list-style-type: none"> Leaves have soft, irregular teeth Leaves are shorter (up to 20cm) Shorter and wider flower spike (up to 20cm long, 7cm wide) Fruiting cones look hard and woody because they rapidly shed dead flowers so look different Flowers late summer to winter Grows only in winter-wet swampy areas <p><i>Banksia attenuata</i> only:</p> <ul style="list-style-type: none"> Leaves have fine serrated edges Leaves are longer (up to 27cm) Longer and narrower flower spike (up to 25cm long, 5cm wide) Fruiting cones look fuzzy because they keep remains of dead flowers which look like old netting between the fruits Flowers from spring to summer Grows in sandy soils <p>Both:</p> <ul style="list-style-type: none"> Leaves are leathery Flowers are yellow Fruiting cones remain on the tree for several years Small tree, up to 10m Rough, crumbly bark <p>Note: In the images used, <i>B. littoralis</i> appears longer than <i>B. attenuata</i>. This is a good example of why classification goes deeper than the appearance of one example.</p>
Namesake	<p>Which eucalyptus tree was named after Joseph Banks?</p> <p>B) Tenterfield woollybutt (<i>Eucalyptus banksii</i>)</p>





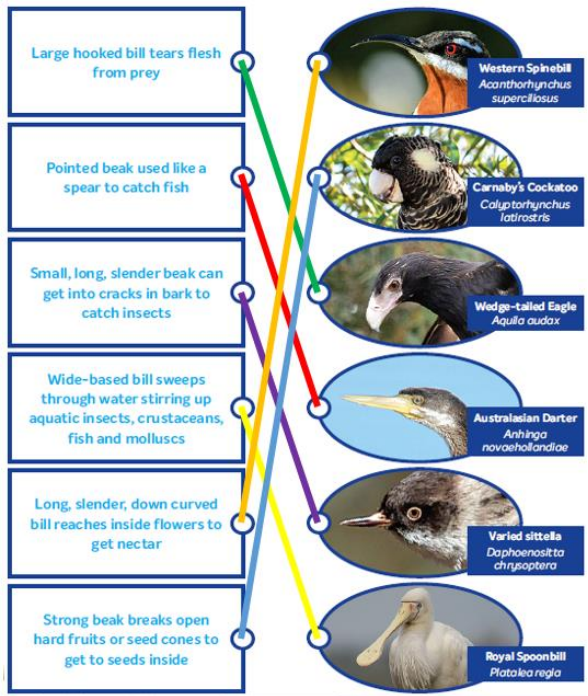
Activity title	Answers
No bones, no worries	<p>Hydrostatic skeleton: bodies have cavities filled with fluid surrounding the muscles</p> <p>Exoskeleton: rigid outer casing that covers the body protecting the organs; has joints to help the animal move</p>
Mighty macroinvertebrates	<p>Inverts key suggestion: https://www.uwa.edu.au/science/-/media/Faculties/Science/Docs/Aquatic-macroinvertebrate-Identification-key2.pdf</p>
Go with the flow	<pre> graph TD Q1[Is it soft bodied? (no exoskeleton)] -- Yes --> Q2[Does it have a shell?] Q1 -- No --> Q3[Does it have exactly 6 legs?] Q2 -- Yes --> A1[snail] Q2 -- No --> Q4[Is it aquatic?] Q3 -- Yes --> A2[ant] Q3 -- No --> Q5[Does it have more than 8 legs?] Q4 -- Yes --> A3[jellyfish] Q4 -- No --> A4[earthworm] Q5 -- Yes --> A5[centipede] Q5 -- No --> A6[spider] </pre>







Part 2: Warm wonders

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Activity title	Answers
Hot or cold?	1. B, 2. A, 3. D, 4. E, 5. C

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Activity title	Answers				
Colourful creatures	<p>They change colour so females know they are males looking to breed, but then they change back so that they can camouflage to avoid predators</p> <p>If people see the males when they are colourful not knowing they can change they might think they are a different species to the females.</p>				
Focus on feet	Common name	Eastern osprey	Australian Shelduck	Great crested grebe	Red-tailed black cockatoo
	Sketch of foot shape				
	How this foot shape helps	Strong foot with long talons helps to catch and carry prey. Can move one front talon to have two rear facing and two forward to help pick up fish.	Assists swimming as feet are like paddles, not suited for walking so ducks will usually swim or fly for longer distances.	Separated toes make running easy, webbing assists walking in boggy areas, folding toes together creates a paddle to assist swimming.	Two forward facing and two rear facing toes assists climbing and grasping.
Beak business					

Activity title	Answers
Mammal myth or fact?	<div><div>True</div><div>False</div></div> <div><div>1 are the only animals with hair or fur</div><div>2 all live on land</div><div>3 humans are classified in this group</div><div>4 all give birth to live young</div><div>5 have large brains for their size</div></div>
Mammal lifecycles	<div><div>Explore</div><div>Find out how these mammals reproduce then tick to show what type they are.</div><div><div><div><div>Black-flanked Rock Wallaby <i>Petrogale lateralis</i></div></div><div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div><div><div><div>Dingo <i>Canis lupus dingo</i></div></div><div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div></div><div><div><div>Quokka <i>Setonix brachyurus</i></div></div><div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div></div></div><div><div><div>Humpback Whale <i>Megaptera novaeangliae</i></div></div><div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div></div><div><div><div>Australian Sea Lion <i>Neophoca cinerea</i></div></div><div><div><input checked="" type="checkbox"/></div><div><input type="checkbox"/></div><div><input type="checkbox"/></div></div></div><div><div><div>Short-beaked Echidna <i>Tachyglossus aculeatus</i></div></div><div><div><input type="checkbox"/></div><div><input type="checkbox"/></div><div><input checked="" type="checkbox"/></div></div></div></div></div>

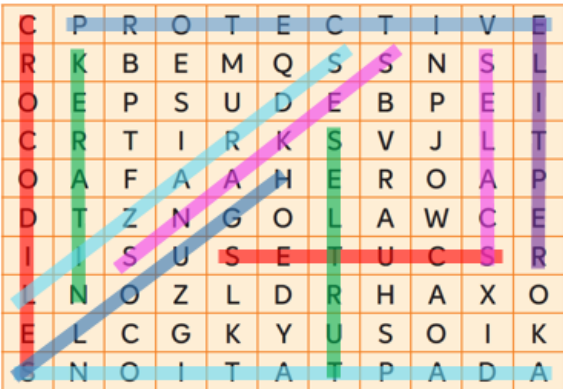


Activity title	Answers	
Marine mammals	Scientific name	<i>Dugong dugon</i>
	Diet	Herbivore – sea grasses
	Size	2.5-3m, 300kg
	Lifespan	70 years
	Reproduction	Have one calf after a 12 month pregnancy. Give birth underwater and guide newborn to the surface to breathe
	Location of fur	Whiskers on snout
	Interesting fact	Student's own choice
That's batty	They all have a similar shape for the arms and wrist. Humans and bats have five fingers	

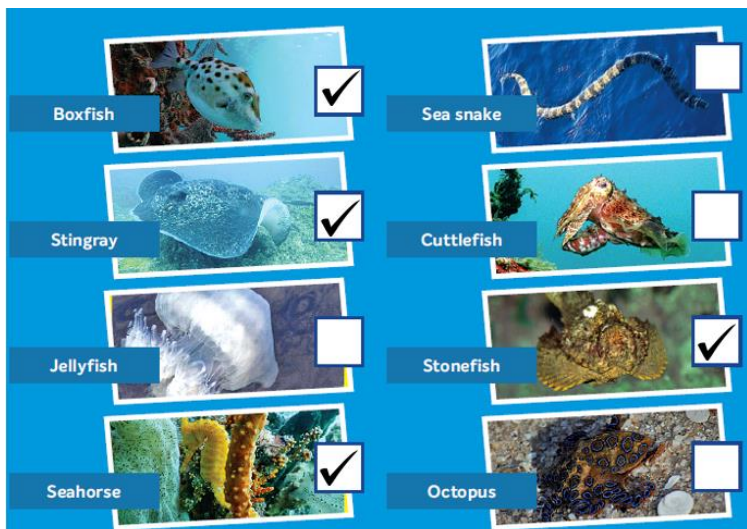
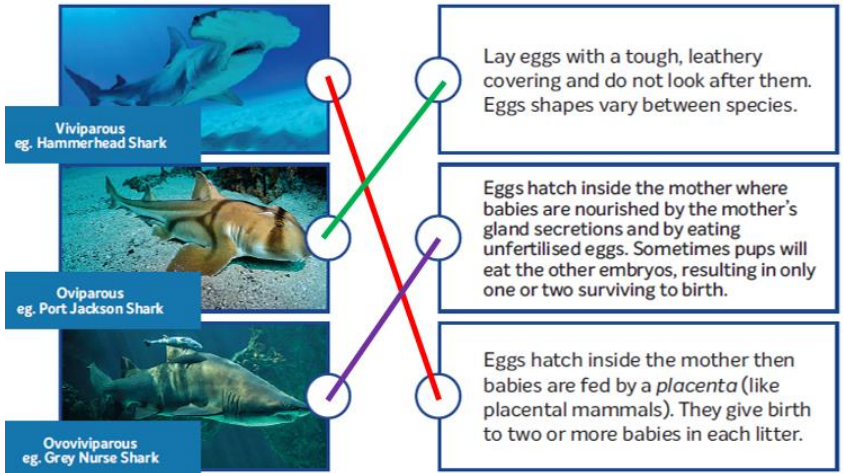
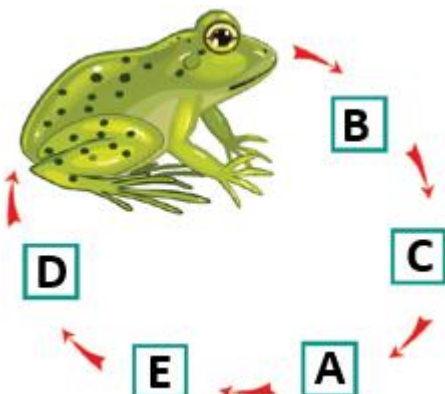
Part 3: Cool creatures

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Activity title	Answers	
Changing temperature	<div>warm up</div> <div>cool down</div>	
	move to shady areas	<input type="checkbox"/> <input checked="" type="checkbox"/>
	change their scales to a darker colour	<input checked="" type="checkbox"/> <input type="checkbox"/>
	burrow underground or use other animals' burrows	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
	move so they have less body parts touching hot ground	<input type="checkbox"/> <input checked="" type="checkbox"/>
	go into water	<input type="checkbox"/> <input checked="" type="checkbox"/>
	lay on a hot rock	<input checked="" type="checkbox"/> <input type="checkbox"/>

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Activity title	Answers					
Scaly skin						
Sss-snakes	<p>Venomous: bite their prey, injecting venom (poison) into it to prevent prey moving and cause death. Snakes are usually able to control how much venom they release so as not to waste it by using more than needed.</p> <p>Constrictors: bite their prey to hold it, then wrap their body around prey slowly squeezing it until it can no longer breathe. These snakes do not produce venom.</p>					
Snakes v lizards	<p>Some possible answers</p> <table><thead><tr><th>Similarities</th><th>Differences</th></tr></thead><tbody><tr><td><ul style="list-style-type: none">ectothermicmost lay eggsdry scales‘taste’ air with tonguehave a tailclassified in the order Squamatathree chambered heart</td><td><ul style="list-style-type: none">lizards have legs (except legless lizards), eyelids and visible earholessnakes can unhinge their jaws to eat large preydiet: all snakes are carnivores (lizards can be carnivores, herbivores or omnivores)</td></tr></tbody></table>	Similarities	Differences	<ul style="list-style-type: none">ectothermicmost lay eggsdry scales‘taste’ air with tonguehave a tailclassified in the order Squamatathree chambered heart	<ul style="list-style-type: none">lizards have legs (except legless lizards), eyelids and visible earholessnakes can unhinge their jaws to eat large preydiet: all snakes are carnivores (lizards can be carnivores, herbivores or omnivores)	
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Native or not?	<div></div> <div></div>					

Activity title	Answers
Fish or fake?	
Egg-ceptions	
Metamorphosis	

Activity title	Answers
DNA sequencing	B