

ANSWER GUIDE



Term 2, 2021

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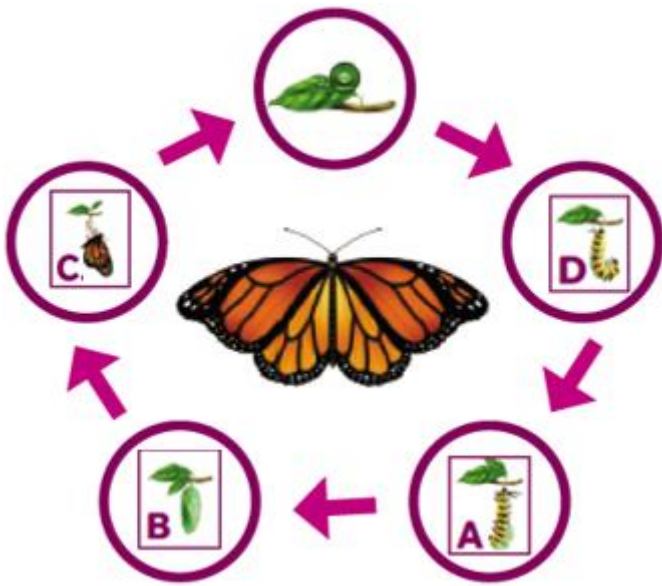
Part 1: Poisonous



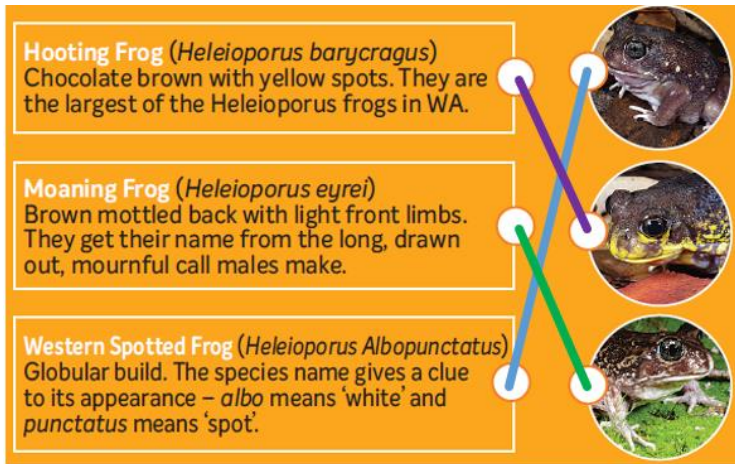
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Activity title	Answers
Deadly, dangerous or scary?	Student's own response

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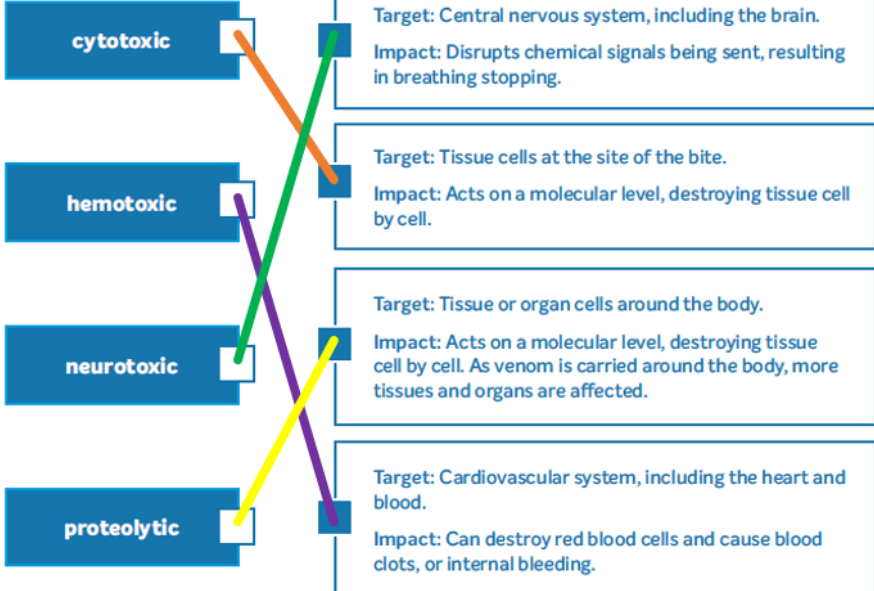
Activity title	Answers
What's the difference	
Know your toxins	If it bites you and you get sick it is venomous. If you bite it and you get sick it is poisonous.
Double threat	Blue-ringed octopus
What's in a name?	Some possible answers: Common Blowfish, Weeping Toadfish, Banded Toadfish, Common Toadfish, Striped Toadfish.
Evaluate	To be sure that everyone is talking about the same species because people might know them by different common names. Especially important when communicating about potentially dangerous plants and animals.
True or false?	They inflate their bodies to look bigger and intimidate predators.
You are what you eat	

Activity title	Answers
Poison peas	Gastrolobium spinosum is Prickly poison Gastrolobium villosum is Crinkle-leaf poison Gastrolobium bennettsianum is Cluster poison
Poisons in the pasture	Introduced species like the fox and dog are new to the country and hadn't evolved to develop the tolerance to the poison pea that local native species had. Native species from other parts of Australia would also not be able to eat the poison pea for the same reason.
Protective poison: Investigate	Suggested website: https://www.dpaw.wa.gov.au/management/pests-diseases/westernshield/western-shield-fox-and-cat-baiting-locations
Protective poison: Evaluate	Student's own response.
Poisonous... or not?	Some possible answers: seeds were ground into flour to be eaten; the poison was used to stun fish to make them easier to catch, leaves were used for thatching, the fluffy 'wool' at the base of the leaves was used as kindling to make fire...
Introduced poisonous pals: Discover	1. EGG 2. LARVA 3. PUPA 4. ADULT
Introduced poisonous pals: Explore	

Activity title	Answers
Toxic traveller	Protect sugar cane crops from insects.
Toad busters: Explore	 
Toad busters: Evaluate	Student's own response.
Natives, not a nuisance	 <p>Hooting Frog (<i>Heleioporus barycragus</i>) Chocolate brown with yellow spots. They are the largest of the <i>Heleioporus</i> frogs in WA.</p> <p>Moaning Frog (<i>Heleioporus eyrei</i>) Brown mottled back with light front limbs. They get their name from the long, drawn out, mournful call males make.</p> <p>Western Spotted Frog (<i>Heleioporus Albopunctatus</i>) Globular build. The species name gives a clue to its appearance – <i>albo</i> means 'white' and <i>punctatus</i> means 'spot'.</p>
Clever creatures	<p>true</p> <p>false – Estuarine Crocodiles can, but Freshwater Crocodiles can't</p> <p>true</p> <p>false</p> <p>true – Keelback Snakes have adapted to have smaller heads so they can eat Cane Toads safely. Those with large heads tried to eat larger (and therefore more poisonous) Cane Toads and died without producing offspring. Those with smaller heads could only eat smaller (and therefore less poisonous) Cane Toads, which did not kill them. They reproduced and passed on their 'small head' genes to their offspring, who in turn would also produce small headed offspring capable of eating young Cane Toads.</p>


Part 2: Venomous

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Activity title	Answers
Targeted toxins	 <p>cytotoxic</p> <p>Target: Central nervous system, including the brain. Impact: Disrupts chemical signals being sent, resulting in breathing stopping.</p> <p>hemotoxic</p> <p>Target: Tissue cells at the site of the bite. Impact: Acts on a molecular level, destroying tissue cell by cell.</p> <p>neurotoxic</p> <p>Target: Tissue or organ cells around the body. Impact: Acts on a molecular level, destroying tissue cell by cell. As venom is carried around the body, more tissues and organs are affected.</p> <p>proteolytic</p> <p>Target: Cardiovascular system, including the heart and blood. Impact: Can destroy red blood cells and cause blood clots, or internal bleeding.</p>

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Activity title	Answers			
Sss-snakes	Scientific name	<i>Notechis scutatus</i>	<i>Pseudonaja affinis</i>	<i>Oxyuranus scutellatus</i>
	Common name	Tiger Snake	Dugite	Coastal Taipan
	Where found	south-west & south-east Australia, inc. Tasmania	southern WA	northern WA, northern NT, QLD & north-east NSW
	Interesting fact	eg. They give birth to live young.	eg. They use both envenomation and constriction to subdue prey.	eg. Adults undergo a seasonal colour change – lighter in summer and darker in winter.
Snake safety	Some possible answers: stay on marked paths when bushwalking; wear boots and long socks when bushwalking as snake bites are generally at the foot and ankle level; avoid walking in long grass – if you can't see your feet you can't see a snake; stomp your feet when walking to alert snakes to your presence; don't reach into dark places such as under logs or into bags which have been left outside as snakes may be resting in there; if you have wild mice in your garden be aware that snakes are probably there too; snakes are more likely to be active on warm days...			
Explore: first aid	Use a reputable medical source for the most up to date information. Generally it will include using a pressure bandage, immobilising the victim, and calling 000.			

Activity title	Answers								
Explore: death adder	Common Death Adder: southern WA Desert Death Adder: west and central WA Kimberley Death Adder: Kimberley region (northern WA) Pilbara Death Adder: Pilbara region (northern WA) Rough-Scaled Death Adder: north-east WA								
Valuable venom									
Snakes at sea	<table border="1"> <thead> <tr> <th>adaptation</th><th>how it helps</th></tr> </thead> <tbody> <tr> <td>flattened oar-like tail</td><td>Acts like a paddle to assist swimming</td></tr> <tr> <td>nostrils on top of the snout</td><td>Can put tip of nose out of water to breathe</td></tr> <tr> <td>valved nostrils can be closed</td><td>Stops water entering lungs while underwater</td></tr> </tbody> </table>	adaptation	how it helps	flattened oar-like tail	Acts like a paddle to assist swimming	nostrils on top of the snout	Can put tip of nose out of water to breathe	valved nostrils can be closed	Stops water entering lungs while underwater
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Activity title	Answers																								
Venomous marine life	A6, B3, C1, D5, E2, F4																								
True or false	<div><p>Tick to show which of the statements below about blue-ringed octopus are true, and which one is false.</p><table><thead><tr><th></th><th>True</th><th>False</th></tr></thead><tbody><tr><td>are small – body is around 5cm and arms 10cm</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>have eight arms with rows of muscular suckers</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>don't have eyes</td><td><input type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr><tr><td>have three hearts</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>have blue blood</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>are good at camouflage</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr><tr><td>are highly intelligent</td><td><input checked="" type="checkbox"/></td><td><input type="checkbox"/></td></tr></tbody></table></div>		True	False	are small – body is around 5cm and arms 10cm	<input checked="" type="checkbox"/>	<input type="checkbox"/>	have eight arms with rows of muscular suckers	<input checked="" type="checkbox"/>	<input type="checkbox"/>	don't have eyes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	have three hearts	<input checked="" type="checkbox"/>	<input type="checkbox"/>	have blue blood	<input checked="" type="checkbox"/>	<input type="checkbox"/>	are good at camouflage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	are highly intelligent	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Nasty nip	They draw water into their body then eject the water through a funnel, which can be pointed in different directions. Pushing water out of their body through this funnel allows them to move quickly.																								
Bluebottles	Remove tentacles with tweezers if still attached, rinse area with water or vinegar, don't rub or itch, immerse area in hot water to kill the protein in venom which causes pain. If hot water not available, apply a cold pack for pain relief. Seek medical attention for severe reactions or stings to throat or face.																								
Sea jellies	surfing																								

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Explore: Redback Spider	Males are: much smaller than the female, light brown with white markings on the back (no red stripe) and lack the distinctive rounded abdomen of females.
Evaluate: Redback Spider	Student's own response.
Explore: Ants with attitude	Protect the queen in the nest. Use stinger to capture insect prey to carry it back to the nest.
Discover: Ants with attitude	Nectar and other plant juices Insect prey
Bzzzzz	Australia has some stingless bees.
Watch out for wasps	They feed on other insects people consider pests to the plants in their garden, such as caterpillars and beetles. They pollinate plants.
Small stingers	Scorpion Centipede

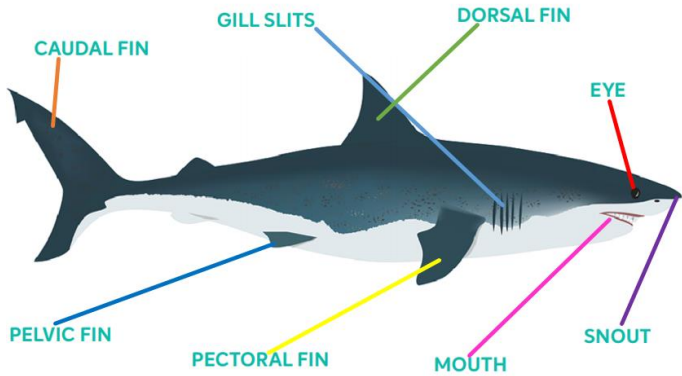
Part 3: Strong, sharp or stealthy

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Activity title	Answers
Sharp and spiky	

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Activity title	Answers
Explore	<div> <p>Tiger Shark (<i>Galeocerdo cuvier</i>)</p> <ul style="list-style-type: none"> • slender body • short, blunt snout • grey vertical stripes on sides (slightly faded on adults) • second largest predatory shark </div> <div> <p>White Shark (<i>Carcharodon carcharias</i>)</p> <ul style="list-style-type: none"> • torpedo-shaped body • pointed snout • large pectoral and first dorsal fins • grey or bronze above and white below • largest predatory shark </div> <div> <p>Bull Shark (<i>Carcharhinus leucas</i>)</p> <ul style="list-style-type: none"> • stout body • short, blunt snout • grey above and pale below, some have a pale stripe on flank • can live in the ocean or freshwater </div>
Investigate	Student's own research.
Predator or prey?: Evaluate	Student's own response.
Predator or prey?: Explore	Some possible answers: sharks control the species below them in the food chain by removing the weak and sick and keep the balance with competitors helping ensure species diversity; indirectly maintain seagrass and coral reefs by moving other species away, preventing them from damaging the habitat; without sharks there would be more large predatory fish which would eat more herbivores – and without the herbivores microalgae would expand dominating coral which would affect the survival of the reef system

Activity title	Answers												
Shark safety	<table> <tr> <th>safety tips</th><th>reason</th></tr> <tr> <td>avoid swimming at dawn and dusk</td><td>this is when most sharks are most active</td></tr> <tr> <td>swim at patrolled beaches</td><td>lifeguards are on duty and can warn of shark sightings</td></tr> <tr> <td>don't swim where people are fishing</td><td>sharks may be attracted by their food source – thrashing fish, bait or blood in the water</td></tr> <tr> <td>swim in a group</td><td>sharks are more likely to approach people who are alone</td></tr> <tr> <td>remove shiny jewellery</td><td>light reflects off jewellery in a similar way to fish scales, attracting nearby sharks looking for food</td></tr> </table>	safety tips	reason	avoid swimming at dawn and dusk	this is when most sharks are most active	swim at patrolled beaches	lifeguards are on duty and can warn of shark sightings	don't swim where people are fishing	sharks may be attracted by their food source – thrashing fish, bait or blood in the water	swim in a group	sharks are more likely to approach people who are alone	remove shiny jewellery	light reflects off jewellery in a similar way to fish scales, attracting nearby sharks looking for food
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Shark safety	Sharks use short-range electrical receptors in their snouts to find food. Shark deterrents use different methods to interrupt these receptors causing an unpleasant sensation for the shark if it gets close, thus the sharks move away from the person wearing it.												
Shark silhouette													
Light and dark	It helps them blend into their environment. The dark colour on top prevents it from being noticed from above, as it blends in with the deep ocean. The light colour on the belly blends in with the lighter surface of the water when viewed from underneath. This camouflage assists them when hunting, or being hunted.												

Activity title	Answers
Teenage tempers	Southern Hairy-nosed Wombat (<i>Lasiornhinus latifrons</i>). Found south-east WA.
Protective parents	<div> <div>True</div> <div>False</div> <div> <input checked="" type="checkbox"/> <input type="checkbox"/> they only swoop during breeding season (August to October) <input checked="" type="checkbox"/> <input type="checkbox"/> walking in a confident stance can deter swooping <input checked="" type="checkbox"/> <input type="checkbox"/> magpies can remember and recognise people <input type="checkbox"/> <input checked="" type="checkbox"/> if you crouch in fear a swooping magpie will leave you alone <input checked="" type="checkbox"/> <input type="checkbox"/> they defend a small area (approx. 100m radius around the nest) <input checked="" type="checkbox"/> <input type="checkbox"/> they are more likely to swoop cyclists and postal workers </div> </div>
When trees attack!	<p>Student's own response.</p> <p>Consider: they are native species; provide habitat for possums and birds; gum trees with well-established root systems are beneficial in storms as they absorb the brunt of the wind lessening the impact on houses/cars etc.; the chances of being killed by a falling branch are quite low</p>
Mozzie facts	<div> <div>Mozzie facts</div> <div>Choose the right word to complete these facts:</div> <div>Discover ?</div> <ul style="list-style-type: none"> • They feed on plant NECTAR, not blood. • Only FEMALES bite as they need BLOOD protein to produce their eggs. • Eggs are laid in WATER and only a few millimetres is required for breeding. • Lifecycle: the egg, LARVA, and pupa stages are AQUATIC, before becoming flying adults. </div>

Activity title	Answers
Tail as old as time	A1, B2
Largest living reptile	Some possible answers: colouring allows them to camouflage; their eyes, ears and nostrils are on top of their head so they can wait motionless with just those above water; they can move without creating ripples in water; can remain underwater for at least 1hr; they can move very fast through water appearing suddenly next to prey
Caution crocs	Some possible answers: obey all warning signs; don't allow pets or children to wander near the water; stay at least 3m away from the water's edge when fishing or camping; do not enter the water to retrieve fishing line; don't clean fish by the water or dispose of fish remains where people use the water; don't dangle arms or legs out of boats; don't swim or even paddle; never feed them; avoid returning to the same place to access water; don't do chores at the water's edge (collect water in a bucket then do washing/food prep elsewhere)
Protected predator	Some possible answers: apex predators remove sick and weak fish allowing the healthy to reproduce; eat indiscriminately preventing dominance of a single fish species and maintaining biodiversity; their excrement provides nutritious food for fish; eating prey whole prevents leftover decaying flesh spreading harmful infections; during the dry season they guard water points from terrestrial animals preserving the aquatic life within; they maintain their own population eating smaller crocodiles when there are too many of them