Course Mapping Guide BBC Bitesize Learning Collection



B B C BITESIZE + CENTURY

Inspiring content + Award-winning edtech



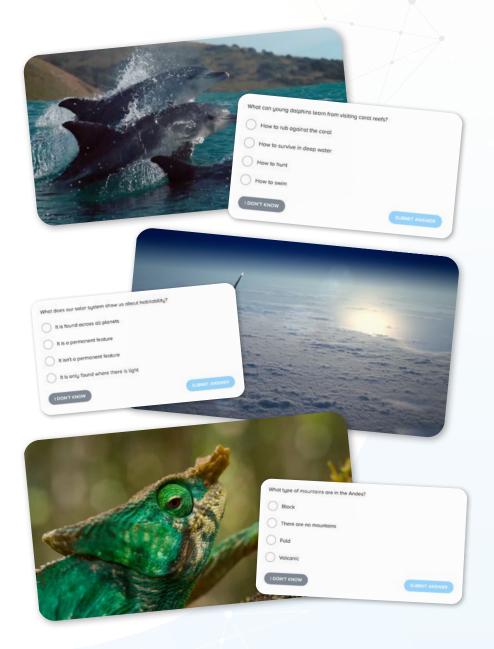
The Content

CENTURY has seamlessly integrated captivating BBC shows into our award-winning teaching and learning platform. Now your students can embark on an awe-inspiring journey, immersing themselves in the breathtaking beauty of our planet's most remarkable habitats, examining its history and even exploring the solar system.

Over 25 hours of video content that brings to life concepts and phenomena covered in natural history curricula in an engaging way.

Created by the world-renowned BBC team using the latest technology to capture the wonders of the natural world. The courses uncover the latest scientific discoveries made in collaboration with scientists across the globe, presented by legendary BBC experts such as Sir David Attenborough.

Each micro-lesson, referred to as a nugget on the CENTURY platform, includes a short educational video and ends with a series of formative assessment questions developed by teachers and subject-matter experts. These materials also foster the values of quality, trust and engagement which are the hallmark of the BBC's UK-leading BBC Bitesize education service, and bring the best of the BBC to the classroom.

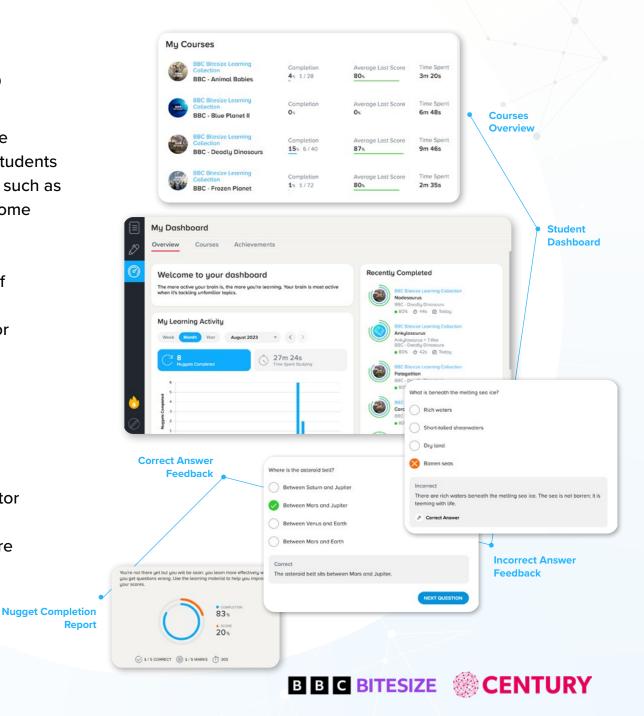






Student Benefits

- Access to over 300 micro-lessons that bring the wonders of the natural world to life and allow students to dive deeper into content they love on topics such as oceans, animals, dinosaurs, outer space, and some of the most amazing places on our planet
- Students can test their knowledge at the end of each micro-lesson with formative assessments that their teachers can view to provide credit for the work they are doing
- Students receive tailored feedback at the end of each micro-lesson to help them improve and expand their knowledge
- They can use their Student Dashboard to monitor performance, identify where they're doing well and where they can revisit content to learn more



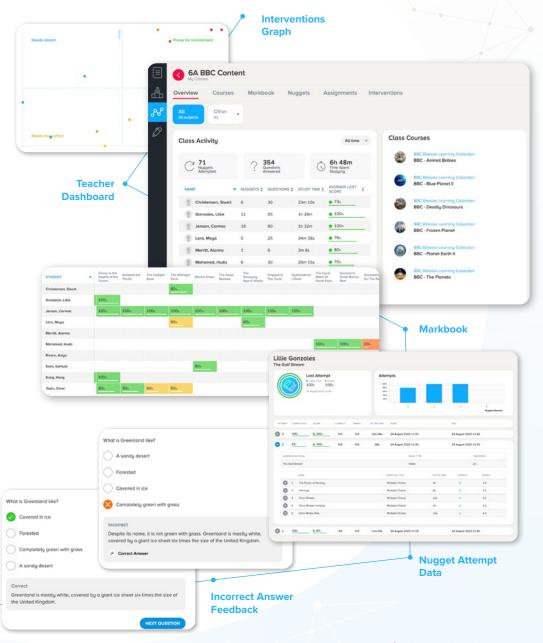
Teacher Benefits

- Over 25 hours of high-quality supplemental learning micro-lessons focused on natural history. Suitable for upper primary and secondary students
- Teachers can assign micro-lessons to students for both in-class or home study that will excite and engage them
- Teachers can monitor student engagement and performance with easy-to-use data dashboards that highlight strengths and areas for improvement
- All micro-lessons are automatically marked and include helpful feedback for students

Correct Answer

Feedback

Parents can rest assured that their children are interfacing with a vetted, highly curated content library that is enriching their education







B B C BITESIZE + CENTURY

Six courses from the BBC Bitesize Learning Collection that include over 300 micro-lessons with high-quality videos and over 1500 self-marking questions.



BBC - Animal Babies



BBC - Blue Planet II



BBC - Deadly Dinosaurs



BBC - Frozen Planet



BBC - Planet Earth II



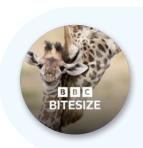
BBC - The Planets

Animal Babies

Baby animals in three very different wild environments. On the vast savannahs of Africa, youngsters encounter the world's top predators and face intense competition. Water babies must deal with threatening coasts and powerful currents. And in the mountains, food is scarce and the weather extreme.

It's a steep learning curve for all the babies. But, if they can learn from those around them, they might just overcome the hurdles that stand in their way.

With stunning photography and endearing animal stories, this series makes perfect family viewing.

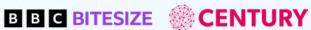


Animal Babies









Course Content

Animal Babies



Nugget Number	Nugget Name	Nugget Summary	Suitab Primary I S	
Safari Babie	es			
1	Wildebeest	Explore the amazing world of animal babies in the African savannah. Discover how these grassy plains, filled with iconic animals, pose unique challenges for the newborns. With millions of animals competing for food and a high number of predators, staying alive is the first hurdle for these safari babies. Witness the incredible journey of a wildebeest calf as it learns to stand and run within minutes of being born.	⊘	⊘
2	Cheetahs	Discover the challenges faced by cheetah cubs in the Serengeti. Explore how their large litter size and competition from other predators make survival difficult. Uncover the importance of play fighting for the cubs to learn self-defence skills. Learn about the role of camouflage and the need for the cubs to develop strength and speed.	\bigcirc	\checkmark
3	Elephants And Banded Mongoose	Learn about the challenges faced by young animals in the wild. From a vulnerable baby elephant searching for safety in a herd, to mongoose pups learning to defend themselves, these animals must rely on their instincts and the protection of their families to survive. Explore the importance of staying close to the group and following the lead of experienced parents.	⊘	\checkmark
4	The Elephant Calf	Explore the journey of an elephant calf and her mother as they search for their family. Learn about the unique language they use to communicate and how they finally reunite with the rest of the herd. Discover the tender interactions between the baby and her extended family, and the important role of the matriarch in guiding and protecting the calf.	\bigcirc	\checkmark





lugget Number	Nugget Name	Nugget Summary		ble for Secondary
5	Finding Food And Water	Uncover how animal babies face the challenge of finding food and water. Discover how baby ostriches navigate the dangers of the Kalahari desert. Explore the different ways that mammals, like elephants and hyenas, obtain food and water in their early days. Learn about the process of learning to hunt for carnivores, like cheetah cubs, and the obstacles they face.	\checkmark	V
6	Learning To Feed Yourself	Discover the banded mongoose family's hunting habits and the struggles of the brother pup. While the sister pup learns to dig for beetles, the brother relies on scraps and faces the consequences. Explore the challenges faced by cheetah cubs as they compete for food and the consequences of their failed attempt to guard their meal.	\bigcirc	\checkmark
7	Safari Babies Growing Up	Explore the challenges faced by safari babies growing up on the African plains. Discover the essential skills they need to master, such as establishing their place in the pecking order and knowing who to avoid. Uncover the importance of tree climbing for leopard cubs and the difficulties they face in stealing their mother's dinner. Learn about the treacherous journey of a banded mongoose pup as her family moves den and the obstacles they encounter along the way.	\checkmark	\checkmark
8	Elephants on the Move	Discover elephants learning important skills from their elders. Explore how an elephant calf relies on the experienced matriarch to teach her survival skills. Uncover the challenges faced by elephant calves when crossing rivers and the dangers they encounter. Learn how the matriarch leads the calf to a safe crossing point and protects her from the strong current.	Ø	\checkmark
9	Finding Independence	Learn about the exciting journey of a strong little mongoose pup as it travels to a new den. Along the way, it encounters danger from another mongoose clan hidden in the grass. In this nugget, explore the importance of strength in numbers and how the largest clan will win in feuds like this.	⊘	\checkmark
Water Babie	es			
10	Fur Seal Pups	Uncover the challenging life of an Antarctic fur seal pup on a crowded beach in the South Atlantic. Discover how these tiny pups rely on their mothers for food and protection, and learn about the dangers they face from aggressive male seals. Explore the amazing ability of the pups to find their own mothers through scent and sound.	\checkmark	V





Nugget Number	Nugget Name	et Name Nugget Summary	Suitable for Primary I Second	
11	Green Turtles	Explore the perilous journey of green turtle hatchlings as they make their way from the beach to the safety of the ocean. Discover the challenges they face, including predators like rufous night herons, and the strategies they use to increase their chances of survival. Uncover the importance of reaching the open ocean for their continued journey.	\bigcirc	\checkmark
12	North American Wood Ducks	Discover the incredible journey of North American wood ducklings as they leave their tree nest for the first time. With no food in the nest, they must make their way down a 20-metre tree to reach the water. Despite not being able to fly yet, they bravely jump and use their fluffy feathers to slow their descent. Once they reach the water, they can finally have their first meal.	\checkmark	\checkmark
13	Green Turtles At Sea	Explore the journey of green turtle hatchlings in Australia as they face the dangers of the reef and the lurking menace of crabs. Learn about the challenges they overcome to reach the safety of the open ocean. Turtle hatchlings can swim instinctively from the moment they enter the water, but for some babies, this can be a huge challenge.	⊘	V
14	Otter Pups	Discover the world of giant otters. Explore how a newborn otter pup overcomes its fear of water and learns to swim. Uncover the dangers that otters face in their natural habitat, including encounters with jaguars. Learn about the importance of being a strong swimmer for survival.	⊘	✓
15	Chicks And Ducklings	Uncover the ingenious ways that water babies overcome dangers in their environment. Discover how snow geese, eider ducks, and long-tailed ducks use different strategies to outsmart predators like wolves. Learn about timing, diversion tactics, and the perfect vanishing act.	Ø	✓
16	Seal Pups Growing Up	Learn about the life of fur seal pups in the South Atlantic as they grow up quickly and learn key skills in crèches. Discover the dangers they face from giant petrels and how they fight back to stay safe. Uncover the challenges they encounter when they leave the beach and venture into the cold waters of the South Atlantic for the first time.	Ø	V
17	Galapagos Penguins	Explore the fascinating world of Galapagos penguins. Discover how these unique penguins survive in the tropical heat by nesting in lava tube caves. Uncover the challenges they face, including predators like sally lightfoot crabs. Learn how the penguins eventually leave their homes and thrive in the refreshing waters of the Galapagos.	\bigcirc	\checkmark

lugget Number	Nugget Name	Nugget Summary	Suitable for Primary Seconda		
18	Water Babies Growing Up	Discover the journey of baby giant otters as they learn important skills for adulthood. Watch as the pups observe and attempt to mark their territory like the adults. Next, explore how baby African skimmers learn to catch their own food using a unique fishing technique. Follow along as they practise and improve their skills before they can fly.	\checkmark	Q	
19	Reaching Adulthood	Explore the journey of young animals as they grow and learn to survive in their environments. From giant otter pups learning to hunt for fish to green turtles preparing for a life in the ocean, these animals face challenges and overcome obstacles to reach adulthood. Witness their determination and resilience as they navigate the world around them.	Ø	V	
Mountain Ba	abies				
20	Guanaco Calves	Learn about the challenging life of a baby guanaco in the exposed slopes of Patagonia. With legs almost a metre long, getting to its feet is no easy task. Survival is crucial as there are formidable predators and few safe places to be born. Through coordination and speed, these newborns quickly adapt to their mountainous environment, starting their lives on these demanding mountain-sides.	⊘	Q	
21	Tufted Capuchin	Uncover the life of a young tufted capuchin in Brazil as he learns the importance of independence. Join him as he faces challenges, such as finding food and navigating treacherous terrain, all while relying on his mother for support. Discover how this young capuchin overcomes obstacles and grows into a more independent individual.	\checkmark	(v	
22	Grizzly Bears	Explore the dangers of high altitudes and sudden weather changes in the mountains. Discover how grizzly bear cubs rely on their mother for food and protection. Uncover the risks of getting separated from their mother and the potential harm from other animals. Learn about the importance of staying close and finding shelter during a snowstorm.	⊘	-	
23	Musk Ox	Explore the high Arctic and discover the challenges faced by young musk ox. In this barren land- scape, wolves pose a threat to the small and defenceless calves. Working together, the wolves separate the young musk ox from the herd. However, this calf proves to be a fighter and stays on its feet, buying enough time for the herd to come charging back.	\checkmark	V	



Nugget Number	Nugget Name	Nugget Summary		ole for Secondary
24	Escaping The Predators	Learn about the challenges faced by young animals in the mountains, such as the little capuchin monkey in Brazil and the markhor goat kid in the Karakoram mountains of Pakistan. Explore how these young animals rely on their instincts and use clever tactics to stay safe from predators like snakes, eagles, wolves, and the elusive snow leopard. Discover the importance of teamwork and survival skills in these tough environments.	\checkmark	⊘
25	Primates	Explore the lives of geladas and mountain gorillas in Africa. Geladas play on rock faces to improve their running and climbing skills, while mountain gorillas rely on their family for protection from rival silverbacks. Both animals face threats in their environments, but they learn important lessons to survive.	Ø	V
26	Finding Food	Discover the journey of grizzly bear cubs in British Columbia as they learn to catch fish and become independent. Uncover the resourcefulness of young capuchin monkeys in Brazil as they learn to find food and use tools. Learn about their journey towards independence and the importance of perseverance and adaptation.	⊘	✓
27	Learning New Skills	Uncover the challenges faced by a young mountain gorilla in central Africa. Discover how she learns to build a nest in the trees to keep safe and warm at night. Explore the importance of parental guidance in teaching essential skills. Learn about the little gorilla's journey to independence and the decisions she makes to ensure her safety.	Ø	V
28	The Gyrfalcon	Join three gyrfalcon chicks in the high Arctic as they learn to fly and become independent. Watch as the female chick takes the brave first leap, inspiring her brothers to follow suit. With wolves on the prowl, the chicks must overcome challenges and gain confidence in their abilities. Soon, they will leave their parents and become fully grown adults.	\checkmark	⊘



Blue Planet II

This bold cinematic experience takes viewers on a magical adventure across the greatest, yet least known parts of our planet – our oceans.

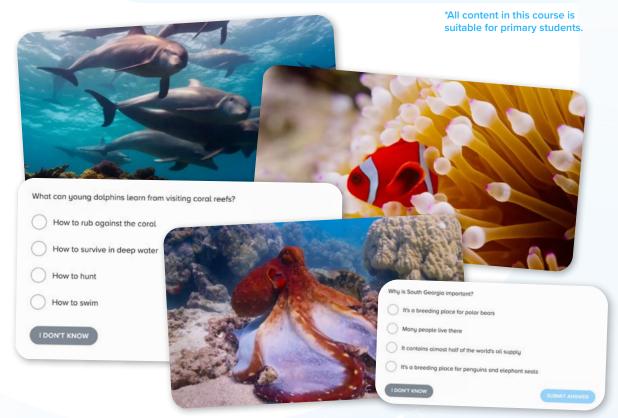
Travelling from the icy polar seas to the vibrant blues of the coral atolls, this series shares these astonishing new discoveries.

Meet the strange octopuses lurking in the depths of the Antarctic ocean. Watch giant trevally fish leap to catch birds in mid-air. And ride on the back of a killer whale as it rips into shoals of fish.

Inspiring awe and wonder, Blue Planet II reveals surprising new places, charismatic new characters and extraordinary new behaviours.

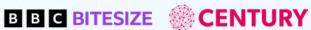


Blue Planet II









Course Content

Blue Planet II



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
One Ocean				
1	Surfs Up!	Explore the playful world of bottlenose dolphins as they surf and interact with their environment. Join a pod of dolphins in the Red Sea as they teach their young about the benefits of rubbing against Gorgonian coral. Discover the potential medicinal properties of the coral's mucus and how it inspires scientists to search for new medicines.	⊘	\checkmark
2	The Tuskfish	Explore the fascinating world of fish intelligence and discover the incredible tusk fish on Australia's Great Barrier Reef, who challenge our understanding of fish behaviour. Learn how this clever fish uses tools to crack open clams and find its meal. Uncover the surprising abilities of fish and the diverse communities that thrive in warm, shallow waters.	⊘	✓
3	Terns and Trevallys	Uncover the lives of terns. During the dry season, over half a million terns gather on a remote atoll in the Indian Ocean. The tern chicks, varying in age, use the shallow lagoon in the centre of the atoll as their training ground to learn to fly. However, they must be careful of the giant trevallies hunting them.		✓
4	Stormy Seas	Discover the incredible world of the oceans, which hold 97% of the world's water. Learn how the sun's warmth causes water to evaporate, forming clouds and generating powerful storms. Uncover the mystery of why Mobula rays leap in Mexico's Sea of Cortez. Witness the extraordinary ballet of life and death as the rays feast on luminescent plankton. Appreciate the vital role of microscopic plants in producing oxygen for all of us.	V	
All Courses	Course Overview	B B C BITESIZE	CENT	URY



Nugget Name	Nugget Summary	Suitable for Primary Seconda	
Rare Visitors	Explore the fascinating relationship between false killer whales and bottlenose dolphins off the coast of New Zealand. Discover how these two species come together in a unified army to hunt and communicate with each other. Uncover the incredible bond that exists between these different species as they gather in large numbers to take advantage of the seasonal bounty. Learn about the unique behaviours and interactions that occur during this annual encounter.	Ø	\checkmark
The Underwater Forests of Japan	Explore the fascinating world of the kobudai, a kind of giant wrasse found in the underwater forests off northern Japan. Discover how the male kobudai, weighing fifteen kilos and a metre long, attempts to mate with the females in his territory. Uncover the incredible transformation that occurs in the largest females, as they change from female to male and become the new rulers of the territory.	⊘	√
The Gulf Stream	Discover how icebergs form and why the surface starts to freeze. Uncover the secret of the ice- free fjords in northern Norway and the incredible gathering of orca that occurs there. Learn about the unique hunting techniques of the orca and how they attract humpback whales to join in the feast. These polar seas are rich in food, thanks to the Gulf Stream.	V	$\overline{\Diamond}$
Ocean Currents	Explore the importance of ocean currents in maintaining a favourable climate for life on Earth. Discover the worrying signs of changing conditions in the Arctic, where the extent of summer ice has decreased by 40% in the past 30 years. Uncover the impact of this warming on wildlife, particularly walruses who are forced to haul out on land due to retreating sea ice. Learn about the challenges they face, including the threat of polar bears and competition for suitable resting places. Understand the importance of solving these problems to protect the future of sea creatures and our Blue Planet.	\bigcirc	✓
Diving to the Depths of the Ocean	Explore the depths of the Antarctic ocean, a world as challenging as space. Discover the secrets that lie beneath the surface, where life thrives in unimaginable abundance. From the coldest waters on Earth to the increasing pressure and disappearing light, the deep sea is full of surprises.	\checkmark	\checkmark
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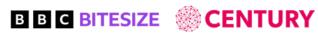


Nugget Number	Nugget Name	gget Name Nugget Summary	Suitable for Primary Second	
10	Beneath the Pacific	Explore the mysterious twilight zone, a dark and gloomy sea 200 metres below the surface. Discover strange creatures like the pyrosome, a giant tube of jelly, and the oceanic white-tip shark. Learn about the adaptations these creatures have made to survive in this low-light environment, such as the swordfish's large eyes, the cock-eyed squid's unique vision and the bizarre barreleye fish, with its transparent head filled with jelly. Enter this alien world and marvel at its wonders.	\checkmark	V
11	The Twilight Zone	The twilight zone is a refuge for 90% of all fish in the ocean. Discover how lanternfish migrate to the surface at night to feed on plankton, only to retreat back down during the day. Uncover the voracious hunting habits of the Humboldt squid, armed with powerful suckers to catch their prey. Learn about their tactics, including releasing a smoke-screen of black ink to hide their captures. The twilight zone is their preferred hunting ground, rarely venturing deeper into the perpetual blackness below.	⊘	✓
12	The Midnight Zone	Explore the mysterious world of the midnight zone, a kilometre below the surface where alienlike creatures produce dazzling displays of light. Discover how these creatures use light to attract mates and repel predators, making it the most common form of communication in this habitat. Learn about the fangtooth, the midnight zone's most voracious fish, and how prey use light as a decoy. Uncover the secrets of this dark and fascinating underwater world.	⊘	V
13	Marine Snow	Explore the fascinating world of siphonophores, creatures that clone themselves and can grow longer than a blue whale. Discover how organic debris from above provides food for filter feeders like jellyfish and sea cucumbers. Uncover the process of marine snow settling on the seafloor over millions of years, forming a thick layer of mud. Learn about the vast empty plain that covers half the surface of our planet.	⊘	✓
14	The Deep Seabed	Explore the deep seabed and discover its unique inhabitants. Meet the sea toad, an ambush predator with an enormous mouth and fins that have transformed into feet. Uncover the flapjack octopus, delicately sifting through the mud for worms and ready to jet away from danger. Learn about the six-gill shark, as big as a great white, that patrols the mud plains with minimal energy.	⊘	√

Nugget Number	Nugget Name	Nugget Summary	Suitable for Primary Seconda	
15	The Decaying Sperm Whale	Learn about the fascinating process of decomposition and recycling in the deep ocean. Discover how a huge sperm whale carcass becomes a bonanza for deep-sea creatures, attracting hungry six-gill sharks and other scavengers. Learn about the clean-up team of spider crabs and rock crabs, and how they are followed by predators like scabbard fish. Uncover the role of zombie worms in breaking down the remaining bones. In the end, the entire carcass is recycled, turning the whale fall into a temporary oasis on the seafloor.	\bigcirc	V
16	Trapped In The Coral	Explore the fascinating world of deep-sea coral reefs, where species thrive without sunlight and grow at a slow pace. These corals provide homes for various creatures, including the beautiful Venus' flower basket sponge. Within this sponge, shrimps find shelter and food, forming a symbiotic relationship. Discover the mystery behind how a simple sponge can create such a complex structure, benefiting the shrimps.	⊘	V
17	Hydrothermal Vents	Explore the fascinating world of hydrothermal vents, where half a million animals live in a single square metre. These animals depend on bacteria for their food and survive in searingly hot fluid. Discover how crabs consume bacterial mats on their shells and how shrimps carry bacterial cultures in their mouth-parts. Learn about the Lost City, an important hydrothermal vent in the Atlantic, where hydrocarbons, the building blocks of life, are created.	\checkmark	\checkmark
Coral Reefs				
18	The Coral Reefs Of South East Asia	Explore the Coral Triangle, a cluster of rich coral reefs in South East Asia. Discover the fierce competition for space, food, and mates among the diverse marine life. Uncover the remarkable talent of the cuttlefish, which can change colours and patterns to hypnotise its prey. Learn about the challenges it faces from predators like sharks. For those who succeed, there are great rewards in these bustling undersea cities.	\bigcirc	\checkmark
19	Australia's Great Barrier Reef	Discover the fascinating relationship between a coral grouper and an octopus on Australia's Great Barrier Reef. Discover how these two intelligent creatures work together to catch their prey. Learn how the grouper signals to the octopus and leads it to the hiding place of the prey. Witness the success that teamwork brings in reef city.	\bigcirc	$\overline{\hspace{1cm}}$



Nugget Number	Nugget Name	lugget Name Nugget Summary	Suitable for Primary Secondary		
20	Teamwork On The Reef	Explore the fascinating world of coral reefs and discover the importance of teamwork in their survival. Corals are colonies of tiny animals called polyps, which rely on plant-like cells living inside them for food. They also extract calcium carbonate from the sea-water to build their stony homes. These coral colonies can grow for centuries and create structures as big as houses.	Ø	V	
21	The Dawn Chorus	Dive into the fascinating world of coral reefs and learn about their constant activity. Explore the bustling activity of the reefs, where every resident has a role. Discover how scavengers like the sea cucumber recycle waste, while parrot fish bite off coral chunks and excrete sand. Uncover the dawn shift and the underwater chorus of fish and shrimps.	⊘	\checkmark	
22	Turtle Rock	Explore the fascinating world of green turtles in Borneo as they make their way to Turtle Rock, a special coral patch. Discover how blennies and surgeonfish clean the turtles, removing algae, parasites, and dead skin. Learn about the hierarchy among the turtles and the benefits of visiting a cleaning station, including reducing stress.	V	√	
23	In A Spin	Discover the fascinating world of coral reefs and discover their unique features. Every reef has city walls, known as the drop-off, which protect the reef from ocean waves. Twice a day, the walls are covered by the incoming tide, creating a strange phenomenon in the Bahamas. Seamen once believed it was a sea monster, but it is actually a whirlpool formed by the tide rushing over coral caves. These currents bring in microscopic food from the open ocean, sustaining the reef.	V	✓	
24	The Coral Lagoon	Discover the fascinating phenomenon of the 'manta cyclone' in the Maldives. Explore how the biggest tides attract hundreds of ocean giants, manta rays, with their massive wingspans. Witness how they filter out plankton with their wide-open mouths and create a vortex to concentrate their food. However, when the tide changes, the mantas leave the lagoon, ending their supply of food.	V	✓	
25	The Sheltered Side	Explore the tranquil and peaceful life on the sheltered side of the reef. Discover the dangers that come with the darkness as nocturnal predators like the lionfish and the bobbit worm hunt for prey. Learn how the bream use teamwork to protect themselves from the bobbit worm during daylight hours. Uncover the importance of staying aware of the bobbit's presence.	V	\checkmark	



Nugget Name	Nugget Summary	Suitable for Primary Seconda	
The Clownfish And The Anemone	Explore the fascinating relationship between saddleback clownfish and carpet anemones. The clownfish are immune to the anemone's poison and can find shelter there, away from danger. Uncover the hierarchy within the clownfish family, with the big female as the boss and the male clownfish's challenge to find a safe place for the female to lay her eggs.	V	⊘
Marbled Groupers	Explore the thrilling journey of a marbled grouper as it navigates the dangerous reef in search of a mate. Witness the intense competition among males to fertilise the eggs of the females. Learn about the risks they face from grey reef sharks and the critical moment when the females release their eggs. Discover the incredible journey of the fertilised eggs as they find a new home in another reef.	⊘	√
The Future	Explore the impact of rising sea temperatures on coral reefs. Discover how even a slight increase in temperature can cause coral bleaching, leading to the loss of colour and food source for corals. Learn about the potential future of coral reefs and the glimmer of hope provided by their reproductive process. Billions of fertilised eggs are released during coral spawning, allowing for the regeneration of coral reefs. As long as some reefs survive, there is hope for the future.	\checkmark	\checkmark
Feeding Frenzy	Explore the incredible phenomenon of a massive shoal of lanternfish off the Pacific coast of Costa Rica. Discover how dolphins, yellowfin tuna, mobula rays, and sailfish all join in the hunt for these tiny fish. Witness the intense chase and feeding frenzy that occurs as each predator tries to catch as many lanternfish as possible. Learn about the speed and agility of these marine creatures as they work together to disperse the shoal.	\checkmark	√
Sperm Whales	Explore the fascinating world of sperm whales and discover how these incredible creatures communicate, hunt for squid, and care for their young. Learn about the challenges faced by a young calf as it grows and develops. Witness the bond between a mother and her calf as they navigate the depths of the ocean together. Join us on this journey to uncover the secrets of the sleeping giants of the sea.	V	\checkmark
	The Clownfish And The Anemone Marbled Groupers The Future Feeding Frenzy	Explore the fascinating relationship between saddleback clownfish and carpet anemones. The clownfish And The Anemone Explore the hierarchy within the clownfish family, with the big female as the boss and the male clownfish's challenge to find a safe place for the female to lay her eggs. Explore the thrilling journey of a marbled grouper as it navigates the dangerous reef in search of a mate. Witness the intense competition among males to fertilise the eggs of the females. Learn about the risks they face from grey reef sharks and the critical moment when the females release their eggs. Discover the incredible journey of the fertilised eggs as they find a new home in another reef. Explore the impact of rising sea temperatures on coral reefs. Discover how even a slight increase in temperature can cause coral bleaching, leading to the loss of colour and food source for corals. Learn about the potential future of coral reefs and the glimmer of hoops provided by their reproductive process. Billions of fertilised eggs are released during coral spawning, allowing for the regeneration of coral reefs. As long as some reefs survive, there is hope for the future. Explore the incredible phenomenon of a massive shoal of lanternfish off the Pacific coast of Costa Rica. Discover how dolphins, yellowfin tuna, mobula rays, and sailfish all join in the hunt for these tiny fish. Witness the intense chase and feeding frenzy that occurs as each predator tries to catch as many lanternfish as possible. Learn about the speed and agility of these marine creatures as they work together to disperse the shoal. Explore the fascinating world of sperm whales and discover how these incredible creatures communicate, hunt for squid, and care for their young. Learn about the challenges faced by a young calf as it grows and develops. Witness the bond between a mother and her calf as they navigate the depths of the ocean together. Join us on this journey to uncover the secrets of the sleeping	The Clownfish And The Anemone Explore the fascinating relationship between saddleback clownfish and carpet anemones. The clownfish are immune to the anemone's poison and can find shelter there, away from danger. Uncover the hierarchy within the clownfish family, with the big female as the boss and the male clownfish's challenge to find a safe place for the female to lay her eggs. Explore the thrilling journey of a marbled grouper as it navigates the dangerous reef in search of a mate. Witness the intense competition among males to fertilise the eggs of the females. Learn about the risks they face from grey reef sharks and the critical moment when the females release their eggs. Discover the incredible journey of the fertilised eggs as they find a new home in another reef. Explore the impact of rising sea temperatures on coral reefs. Discover how even a slight increase in temperature can cause coral bleaching, leading to the loss of colour and food source for corals. Learn about the potential future of coral reefs and the glimmer of hope provided by their reproductive process. Billions of fertilised eggs are released during coral spawning, allowing for the regeneration of coral reefs. As long as some reefs survive, there is hope for the future. Feeding Frenzy Explore the incredible phenomenon of a massive shoal of lanternfish off the Pacific coast of Costa Rica. Discover how dolphins, yellowfin tuna, mobula rays, and salifish all join in the hunt for these tiny fish. Witness the intense chase and feeding frenzy that occurs as each predator tries to catch as many lanternfish as possible. Learn about the speed and agility of these marine creatures as they work together to disperse the shoal. Explore the fascinating world of sperm whales and discover how these incredible creatures communicate, hunt for squid, and care for their young. Learn about the challenges faced by a young call fas it grows and develops. Witness the bond between a mother and her calf as they navigate the depths of the ocean together. Joi

Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
31	A Floating Log	Explore the fascinating journey of a baby turtle as it leaves the dangerous coast and ventures into the open ocean. Discover the mystery of where these young turtles disappear to in their early years and uncover the communities of castaways that exist hundreds of kilometres offshore. Learn about the importance of finding refuge, the different creatures that inhabit these floating logs, and the challenges faced by young turtles as they navigate the high seas.	V	V
32	Container Ships	Uncover the incredible journey of plastic ducks that were lost at sea. These ducks travelled thousands of kilometres across the Pacific Ocean, reaching Australia and even the high Arctic. One duck, after fifteen years and crossing three oceans, landed on the west coast of Scotland. This journey highlights the interconnectedness of our oceans through a network of currents.	V	
33	The Whale Carcass	Explore the fascinating world of the blue shark and its reliance on ocean currents for survival. Discover how these currents carry the scent of food to the hungry shark, leading it to its next meal. Uncover the hierarchy of feeding around a whale carcass, with great white sharks dominating and smaller sharks like the blue shark waiting their turn. Learn how the blue shark replenishes its fat reserves and can survive for months without eating.		✓
34	Jellyfish	Discover how jellyfish use currents to travel and feed, growing to impressive sizes. Learn about the Portuguese man o' war, a complex and sinister creature that floats with the help of a gas-filled bladder and stinging tentacles. Uncover the unique relationship between the man o' war fish and its deadly host, as it feeds on the tentacles while avoiding their stings. Witness the efficient digestion process of the man o' war, which can consume over a hundred small fish in a day.	⊘	✓
35	The Whale Shark	Explore the mysterious journey of a lonely whale shark, the largest fish in the sea. Discover how these majestic creatures give birth to live young and the search for their birthing grounds. Uncover the significance of the Galapagos Islands, particularly Darwin Island, where whale sharks and hammerhead sharks gather to breed. Learn about the dangers the whale shark faces and how it protects its young. Could this be the nursery of the biggest fish in the sea?	⊘	✓



lugget Number	Nugget Name	Nugget Summary	Suital Primary I	ble for Secondary
36	The Wandering Albatross	Uncover the fascinating world of the wandering albatross, the largest living bird with wings that span three and a half metres. Discover how these incredible birds return to their nest site on South Georgia each spring to raise their chicks. Learn about the challenges they face in finding enough food in the open ocean and how they tirelessly care for their young.	\checkmark	V
37	Short-Finned Pilot Whales	Explore the impact of plastic pollution on marine animals, specifically short-finned pilot whales. Plastic waste in the ocean entangles and drowns marine creatures, while also combining with industrial chemicals and contaminating their food sources. This can lead to lethal levels of toxins in their bodies, affecting their health and even causing the death of their young. Unless we reduce the flow of plastics and industrial pollution into the oceans, marine life will continue to be poisoned for centuries.	⊘	
Green Seas				
38	Emerging From Winter	Explore the fascinating world of the far north, where after three dark months of winter, the sunshine of spring triggers a remarkable transformation. Starfish race for the highest point and spawn, while sea cucumbers emerge to collect their eggs. Sea-pens and other creatures join in the annual banquet, as fronds of kelp rise towards the surface, creating a vibrant marine forest. Discover the competitive and productive waters of these green seas.	\checkmark	V
39	The Kelp Forests	Explore the fascinating world of the octopus and how they use their camouflage skills to hide from predators like sharks and fur seals. Uncover the incredible ability of octopuses to disguise themselves with a protective armour of shells, allowing them to stay alive in a forest full of hungry mouths. Learn about the unique strategies and survival techniques of these amazing creatures.	√	$\overline{\hspace{1cm}}$



Nugget Number	Nugget Name	Nugget Summary	Suitab Primary I S	ole for Secondary
41	Sea Otters	Discover the fascinating world of sea otters! These amazing creatures spend most of their lives in the water and rarely leave. Learn how a mother otter helps her pup become a good swimmer by grooming its fur. Find out how sea otters survive by eating shellfish, including their favourite, urchins. Explore the impact of hunting on sea otters and how their protection has led to the recovery of kelp forests. Witness the incredible sight of otters gathering in large rafts.	\checkmark	⊘
42	Seagrass	Discover the surprising alliance between tiger sharks and green turtles in the vast marine grass- lands off Australia. Learn how the sharks keep the turtles on the move, preventing overgrazing of the seagrass. Uncover the benefits of seagrass, such as its ability to absorb and store carbon dioxide, making it a valuable asset in the fight against climate change.		✓
43	Spider Crabs	Explore the incredible journey of spider crabs in Australia. Once a year, hundreds of thousands of crabs march across the sea-grass plains to shed their old shells and grow. They face dangers from predators like sting-rays, but find safety in numbers by sticking together. Most of the crabs successfully moult and will soon return to the depths. This is a story of survival and triumph in the green seas.	\checkmark	√
44	The Giant Cuttlefish	Explore the fascinating world of the giant cuttlefish in Southern Australia. Discover how these creatures come together to breed, with over one hundred thousand males competing for females. Learn about the strategies used by smaller males to deceive and mate with females, ensuring genetic diversity for their young. Uncover the importance of communication and trickery in the cuttlefish's mating rituals. In the world of giant cuttlefish, size isn't everything.		$\overline{\hspace{1cm}}$
45	The Weedy Sea Dragon	Discover how the male sea dragon takes on the responsibility of carrying and protecting the eggs. Learn about the risks the fathers face as they venture into open waters to find food for their young. Uncover the challenges the baby sea dragons face as they hatch and grow in the presence of their ideal food.	⊘	\checkmark
46	The Zebra Mantis Shrimp	Uncover the fascinating world of mangrove forests and their importance as nurseries for young fish. Discover how the aerial roots of mangroves provide protection and abundant food for baby fish. Discover the deadly predator lurking in the green seas, the zebra mantis shrimp, and learn about its unique mating behavior. Understand the risks and benefits of the female mantis shrimp relying on her male partner for food.	⊘	V



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
47	Anchovies	Discover the incredible feeding frenzy off America's Pacific Coast, where dolphins and sea lions rush to Monterey Bay for a banquet. Algal blooms have caused an explosion in plankton feeders, attracting millions of anchovies. Dolphins herd the anchovies towards the surface, allowing sea birds and sea lions to join in. Humpback whales claim the biggest share, sieving out up to a hundred kilos of fish with each lunge. This feast highlights the importance of tiny plankton, which sustain almost all marine life.	⊘	V
Coasts				
48	Olive Ridley Turtle	Explore the incredible journey of an olive ridley turtle as she returns to the beach where she hatched 10 years ago. Discover the challenges she faces as she leaves the safety of the ocean and ventures onto land to lay her eggs. Uncover the spectacle of hundreds of thousands of mother sea turtles emerging from the ocean to ensure the survival of their species. Learn about the importance of overcoming obstacles to thrive in coastal environments.	⊘	V
49	Sea Lions	Explore the clever fishing technique of Galapagos sea lions and discover how they work together to herd and trap yellowfin tuna, providing them with a protein-rich meal. Learn about the importance of cooperation and planning in their hunting strategy. By using the coastline to their advantage, these sea lions have found a way to thrive in their environment.	\checkmark	V
50	Rock Pools	Dive into the fascinating world of rockpools and the creatures that inhabit them. Learn about the tides and how they create constantly changing conditions for sea-living creatures. Discover the strategies that grazers, scavengers, and filter feeders use to survive in this dynamic environment. Uncover the unique defences of limpets, including a slippery shield and a personal bodyguard. But beware of the clingfish, the one creature that limpets have no defence against.	⊘	V
51	Sally Lightfoot Crabs	Explore the exciting world of rockpool dramas, where the sea becomes land and the land becomes sea. Discover the Sally lightfoot crab and thousands of shore crabs waiting for the tide to go out. Learn about their race against the tide to reach their feeding grounds, while avoiding their deadliest enemies, the moray eel and the octopus. Witness the crabs' bravery as they risk their lives to graze on seaweed pastures, only to face the gauntlet again when the tide turns.	⊘	V



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
52	Coastal Erosion	Discover the powerful impact of waves on our coasts. Waves originating far out at sea grow in size as they approach the shore, reaching heights of up to 30 metres. These waves break and reshape the coastline, wearing away as much as 3 metres of coastline each year in some parts of Europe. Explore how waves sculpt stunning rock formations, such as dramatic arches and vaulted cathedrals of stone.	\bigcirc	V
53	Puffins	Explore the life of a puffin, a dedicated fisherman and parent. Puffins share the responsibility of raising their chick, or 'puffling', who needs five meals a day. They fly long distances to find good fishing spots, diving deep into the sea to catch fish. However, they must be cautious of Arctic skuas, who try to steal their catch. Despite the challenges, puffins work together to ensure their chick is fed.	\checkmark	\checkmark
54	Blenny Fish	Discover the fascinating world of the Pacific leaping blenny, a unique fish that lives on remote islands. Learn how the male blenny attracts the attention of the females with his flashy colours and seductive dance. Explore why these fish choose to live on land instead of in the sea. Uncover the challenges they face as poor swimmers in the ocean. Join us on this exciting journey into the life of the blenny!	⊘	\checkmark
55	King Penguins	Explore the fascinating world of penguins and discover how they have adapted to life in freezing waters and why they must come ashore once a year. Learn about the challenges they face, including navigating through elephant seals and enduring a catastrophic moult. Find out how penguins survive in harsh conditions and make the most of both land and sea. The coasts of South Georgia provide a protected habitat for these incredible creatures.	⊘	\checkmark
56	Human Impact	Discover the incredible gathering of coastal sharks off Florida's Palm Beach. Every January, ten thousand spinners and blacktips migrate to these warm shallows. However, these sharks now face pollution, habitat degradation, and fishing pressures that their ancestors never encountered. Coastal creatures must now navigate the challenges of our world as well.	√	√



lugget Number	Nugget Name	Nugget Summary		ble for Secondary
Our Blue Pla	anet			
57	Norwegian Fisheries	Explore the story of Leif Nottestad, a Norwegian fisheries scientist, and how the herring stock in Norway was on the brink of collapse in the late 1960s. Discover how the Norwegian government imposed restrictions to help the herring recover and how the fishery is now closely monitored by scientists. Learn about the use of multi-sensor camera tags to study the behavior of orcas and their hunting techniques. Uncover the importance of managing fisheries in a sustainable way.		V
58	Ocean Sounds	Explore the fascinating world of sound in the coral reefs of South East Asia. Marine biologist Steve Simpson has discovered that fish use sound to communicate, attract mates, and scare away predators. Clownfish, in particular, rely heavily on sound to communicate with each other and defend their colony. However, man-made noise, such as boat engines, is drowning out these natural sounds and disrupting the behavior of reef fish. Discover the impact of noise pollution on marine creatures and learn how we can reduce our noise to protect the ocean's inhabitants.	⊘	\checkmark
59	Plastic in the Ocean	Explore the impact of plastic pollution on albatross chicks. Discover how plastic ingestion affects their survival and learn about the sources of plastic pollution in the oceans. Uncover the alarming statistics of plastic waste in the ocean and understand the global responsibility to solve this problem. Plastic pollution is a serious threat to marine life and our actions can make a difference.		V
60	The Caribbean	Explore the incredible efforts of people around the world who are dedicated to saving endangered sea creatures. Discover how Len Peters, a brave conservationist, took it upon himself to protect leatherback turtles in a small fishing village in Trinidad. Learn how he faced resistance and hostility, but ultimately succeeded in changing attitudes and involving the whole community in the conservation efforts.	✓	V
61	Whale Sharks	Explore the world of whale sharks and the threats they face from fishing. Learn about the efforts of shark biologist Jonathan Green to save these extraordinary creatures by solving the mystery of where they give birth. Discover the surprising behavior of pregnant whale sharks and join Jonathan on a deep-sea dive to uncover their birthing grounds. Find out how this discovery can help protect these ocean giants and the importance of creating marine reserves.	⊘	✓

Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
62	The Sperm Whales	Explore the incredible recovery of sperm whale populations in Sri Lanka after the end of commercial whaling. Marine guide, Daya, discovered evidence of over 300 sperm whales in the area, suggesting that it has become a holiday spot for them. This success story shows the power of international cooperation in protecting endangered species.	⊘	✓
63	Coral Reef Changes	Explore the devastating effects of rising ocean temperatures on coral reefs, specifically the Great Barrier Reef. Discover how the warming ocean and El Niño have caused coral bleaching, leading to the death of 90% of branching corals. Uncover the impact of this bleaching on the tusk fish and other creatures that rely on the coral reef for survival. Learn about the alarming threat to coral reefs worldwide, with over two thirds at risk.	⊘	✓
64	Warming Seas	Explore the impact of climate change on our oceans, particularly at the Poles. Join the Blue Planet Two team on their ambitious expedition to dive to a depth of one thousand metres and reach the Antarctic seabed. Discover the rich ecosystem and investigate how the ocean is changing. Learn about the rise in sea and air temperatures and the effect on ice shelves and sea levels. Understand the importance of protecting our oceans and taking responsibility for our everyday choices. Protect our blue planet.	\checkmark	\checkmark



Deadly Dinosaurs

Wildlife presenter Steve Backshall is back with a bang! The award-winning presenter is on the hunt for the most deadly animals to have walked the earth: dinosaurs. Razor-sharp claws, axe-like heads and giant whipping tails are hunted down in the quest to find the world's top Triassic terror.

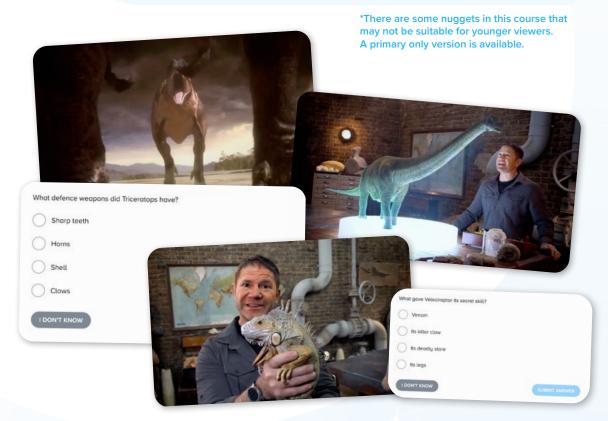
In his explorer's Dino Den, Steve Backshall brings dinosaurs back to life with exciting CGI. Outside the lab, the spectacle is cranked up to the max in a series of epic stunts. Spitfires, tanks, helicopters and monster trucks reveal the raw power and scale of Steve's favourite and most deadly dinosaurs.

The series culminates with the construction of the Ultimate Dinosaur. Steve builds his very own King of Killers, which would put Indominus Rex in the shade.

A combination of breathtaking spectacle and physical daring is served up in this immersive, action-packed and dramatic series. Think you know dinosaurs? Think again.



Deadly Dinosaurs









Course Content

Deadly Dinosaurs

There are some nuggets in this course that may not be suitable for younger viewers. You can review the content of these nuggets in the following pages. A primary only version of this course is available



Suitable for

lugget Number	Nugget Name	Nugget Summary	Suitable for Primary I Secondary	
Land of Gia	nts			
1	Argentinosaurus	Explore the world of Argentinosaurus, a ginormous plant-eating dinosaur that was longer than a blue whale and weighed as much as 10 double decker buses. Discover the deadly footprints of these giant animals, which could trap small dinosaurs and other creatures. Uncover the surprising danger of Argentinosaurus' dung, as it could prove fatal to anything in its firing line.	⊘	⊘
2	Diplodocus	Discover the fascinating world of Diplodocus, a giant dinosaur with cracking weaponry. This massive creature was three times heavier than an African elephant and had a neck twice as long as a giraffe's. Learn about the power and speed of Diplodocus' tail by watching a whip expert demonstrate how to crack a whip. Explore how this deadly defender could wipe out even the hungriest of dino hunters.	⊘	V
3	Carcharodontosaurus	Learn about the world of Carcharodontosaurus, one of the largest and most intimidating dinosaurs to ever exist. This super-sized predator measured up to 13 metres long and ate the equivalent of 2,000 sausages or 50 roast chickens every day! Experience the power of Carcharodontosaurus as its stomping force was tested on various objects in a junkyard.	\checkmark	✓
4	Patagotitan	Uncover the fascinating world of dinosaurs with the discovery of Patagotitan, the largest dinosaur ever found. This massive plant-eating sauropod was even bigger than the previous record holder, Argentinosaurus. Learn about the incredible size of Patagotitan's bones and how it compares to other dinosaurs. Discover the astonishing size of its heart and how it could pump 90 litres of blood in a single beat.	⊘	\checkmark



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
Deadly Defe	enders			
1	Nodosaurus	Explore the incredible features of the Nodosaur, the best preserved fossil ever found. Covered in protective scales from head to tail, even its eyelids were protected. This mighty dinosaur was as tough as a Warrior Recovery Vehicle, the most heavily armoured vehicle in the British Army. Despite lacking heavy weapons, the Nodosaur relied on its tough skin and camouflage to intimidate enemies.	⊘	✓
2	Triceratops	Learn about the fascinating world of Triceratops, one of the most famous dinosaurs. Discover how Triceratops used its fierce facial features for defence. Explore the theory that Triceratops charged like a rhino and find out what recent scientific tests revealed. Uncover the deadly gouging technique that made Triceratops a formidable defender.	⊘	V
3	lguanodon	Discover the world of the Iguanodon, the first dinosaur discovered by Gideon Mantell. Learn about its size, teeth, and unique thumb spike. Explore how the thumb spike was tested in a fencing match to see if it could be used as a weapon. Uncover the truth that the thumb spike was not an effective defence against predators, but rather a tool for stripping leaves off branches.	⊘	\checkmark
4	Stegosaurus	Experience the world of the Stegosaurus, an enormous and well-armoured beast. Discover its size and weight, as well as its deadly defence mechanisms against predators like the Allosaurus. Uncover the power of its spiked tail, known as the thagomizer, and how it could impale and defeat its attackers. Learn about the clever strategy of the Stegosaur herd, using the Camptosaurus as look-outs to stay one step ahead of danger.	⊘	✓
5	Ankylosaurus	Explore the incredible features of Ankylosaurus. With its impenetrable armour and a powerful swinging tail, Ankylosaurus was a nightmare for T-Rex. Discover how a robotic model of Ankylosaurus's tail club can smash through doors and even breeze blocks. Uncover the destructive power of Ankylosaurus as it pulverises objects in the deadly junkyard.	Ø	\checkmark
King of the	Killers			
6	T-Rex	Discover the legend of the Tyrannosaurus Rex, one of the largest predators to have ever lived. Explore its immense head and lethal teeth. Uncover its secret weapon - massive jaw muscles that could unleash a bite with a force of over six tons. Learn how this power allowed T-Rex to bring down its armoured prey and become one of the most successful predators in history.	Ø	\checkmark
All Courses	Course Overview	P.D.C. DITECIZE	CENIT	TID

get Number	Nugget Name	Nugget Summary	Suital Primary I	ole for Secondar
7	Velociraptor	Uncover the true appearance and hunting techniques of the Velociraptor. Discover that the Velociraptor was actually small, standing no more than a metre tall and weighing just 15 kilos. Learn that the Velociraptor was a quick and ruthless predator, running up to 40 miles an hour and working in a team. Find out how it delivered the killer blow using its precision claw-stabbing knife.	Ø	V
8	Mapusaurus & Allosaurus	Discover the Mapusaurus, a swift and powerful predator that hunted in packs. Learn about its size, bite force, and teamwork skills. Next, uncover the unique hunting technique of the Allosaurus, which used its skull like an axe to bludgeon and batter its prey. Watch as a replica of the Allosaurus axe was tested on soft fruit, demonstrating its terrifying power.	Ø	 ✓
9	Spinosaurus	Learn about the incredible Spinosaurus, the biggest carnivore to have ever walked the Earth. With teeth like a supersized crocodile, powerful forearms, and a dramatic sail on its spine, this predator was a force to be feared. Discover its secret skills, including its developed arms with enormous claws and its ability to thrive both on land and in the water. Uncover the recent twist that scientists have uncovered, suggesting that Spinosaurus may have evolved into a terrifying aquatic killer.	\checkmark	 ✓
		nave uncovered, suggesting that Spinosaurus may have evolved into a termying aquatic killer.		
Freak or U	nique	nave uncovered, suggesting that Spinosaurus may have evolved into a termying aquatic killer.		
Freak or Ui	nique Gigantoraptor	Explore the world of Gigantoraptor, the largest raptor ever discovered. Learn about its unique features and its role as a model parent. Discover the incredible strength of Gigantoraptor eggs through an 'egg-cellent' experiment. Uncover the surprising defence mechanism of these eggs and witness their ability to withstand extreme weight.	\bigcirc	V
		Explore the world of Gigantoraptor, the largest raptor ever discovered. Learn about its unique features and its role as a model parent. Discover the incredible strength of Gigantoraptor eggs through an 'egg-cellent' experiment. Uncover the surprising defence mechanism of these eggs	✓✓	✓

Nugget Number	Nugget Name	t Name Nugget Summary		ble for Secondary
13	Therizinosaurus & Pachycephalosaurus	Join two unique and deadly dinosaurs: Therizinosaurus, a giant herbivore with massive claws that were used for defence, and Pachycephalosaurus, known for its thick skull and headbutting behavior during mating season. Witness a thrilling experiment that simulates the power of the Pachycephalosaurus headbutt.	⊘	\checkmark
Kings of the	∋ Sky			
14	Microraptor	Explore the world of Microraptor, a deadly dinosaur that could glide through the skies. Learn how scientists discovered that Microraptor had feathers by studying fossils. Discover the incredible gliding abilities of Microraptor through a deadly experiment. Find out how a high tech wingsuit compares to Microraptor's natural gliding abilities.	Ø	\checkmark
15	Sinornithosaurus	Discover the cunning killer, Sinornithosaurus, and its deadly hunting techniques. Explore how Sinornithosaurus was bigger and deadlier than Microraptor, but not as good at gliding. Uncover the well-preserved fossils that reveal the true colours and patterns of Sinornithosaurus' feathers. Learn about its crafty camouflage and quick speed on the ground.	V	✓
16	Pterosaurs	Uncover the fascinating world of Pterosaurs, the flying reptiles that evolved to fill similar roles as modern birds but with some crucial differences. Discover how their wing membrane was supported differently from birds and bats, and how their size and lightweight bones allowed them to take flight. Explore the secrets of Pterosaur flight by comparing the bones of a cow and an ostrich, and learn how scientists have used 3D printing to study Pterosaur bones.	Ø	\checkmark
17	Hatzegopteryx	Experience the world of Hatzegopteryx, the largest creature to ever take flight. With a skull over three metres long, it was armed and dangerous, attacking both in the air and on the ground. Discover the incredible size and agility of this flapping reptile with a beak as big as a bathtub. Compare it to the iconic Spitfire plane, and imagine the terror of a flying animal of that size.	V	✓
All Courses	Cauras Quantian		CENIT	LIDV







Nugget Number	Nugget Name	Nugget Summary	Suitable for Primary Secondary	
Super Sense	es			
23	Troodon	Explore the incredible super sense of Troodon, a carnivorous dinosaur that thrived in the harsh Arctic environment. With their massive eyes, Troodons had an advantage in the dark Arctic winter, allowing them to find and hunt prey with ease. In a race against a prey dinosaur, Troodon's night vision proved to be superior, highlighting the advantage it gave them in catching their prey. Troodon's enormous eyes made it a deadly predator with exceptional night vision.	V	V
24	Sarmientosaurus	Discover the incredible auditory abilities of Sarmientosaurus, a 10-tonne titanosaur. By studying the three-dimensional structure of its inner ear, scientists discovered that it could detect sounds that humans can't hear. Sarmientosaurus could communicate and locate others using low-frequency sounds. These skyscraper-sized dinosaurs truly ruled the plains with their sub sonic super sense.	Ø	\checkmark
25	Spinosauruses	Learn about the incredible abilities of the mighty Spinosaurus, the largest predator to ever roam the Earth. With its long, crocodile-like snout and straight, conical teeth, Spinosaurus was perfectly adapted for catching slippery prey in the water. Scientists discovered that Spinosaurus had a super sense which allowed it to sense fish underwater even without seeing them. With its immense size and super sensing snout, Spinosaurus was a deadly and efficient hunter.	Ø	\checkmark
26	Daspletosaurus	Uncover the incredible sense of smell of the Daspletosaurus, a deadly predator that hunted in packs. We meet Cedric, a dog with a remarkable sense of smell, and witness a manhunt where Cedric tracks down the prey. Despite the prey's attempts to throw off the scent, Cedric's sense of smell proves to be unbeatable. Discover the power of scent and the importance of a keen sense of smell in the animal kingdom.	Ø	V
Secret Skills	5			
27	Sinornithosauruses	Explore the deadly secret skill of Sinornithosaurus, an aerial assassin from 125 million years ago. With primitive feathers and excellent camouflage, this predator could swoop down and attack with stealth. Some scientists believe that Sinornithosaurus had a lethal venom, similar to the venomous Gila monster lizard. Discover the different types of venom and their effects, including neurotoxin, cytotoxin, and hemotoxin. Uncover the potential implications of Sinornithosaurus's venom and its role in defence or killing prey.	Ø	⊘
All Courses	Course Overview	B B C RITESIZE	CENT	'IID'

Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
28	Velociraptors	Experience the secret skill of the Velociraptor. Discover how their claws were used as precision tools for puncturing veins and arteries, and potentially for climbing with great speed. Join Steve as he attempts to climb like a Velociraptor using safety ropes and claws against a world tree climbing record holder. Uncover the deadly hunting tactics of these sleek and supercharged predators.	\checkmark	⊘
29	Carcharodontosauruses	Discover the secret skill of the Carcharodontosaurus, a massive dinosaur that may have been even bigger than the T-Rex. This dinosaur had air sacs that gave it a turbo charged advantage, allowing it to be a remarkable long distance runner. Explore how these air sacs worked by comparing them to bagpipes and the saxophone. These air sacs supplied a constant stream of oxygen to the dinosaur's muscles, enabling it to catch fast prey.	Ø	\bigcirc
30	Majungasaurus	Explore the fascinating world of the Majungasaurus, the most formidable predator of its time. Discover how this giant dinosaur lived in a harsh environment, defending its territory with lethal force. Uncover the shocking truth of dinosaur cannibalism, as scientists found evidence of Majungasaurus feeding on its own kind. Learn about the desperate and dangerous survival strategies of these ancient creatures.	\checkmark	\bigcirc
31	Argentinosauruses	Learn about the incredible abilities of the Argentinosaurus, a massive dinosaur weighing over 70 tonnes. Despite its slow speed, it had two secret skills for survival. Firstly, its size made it too big for most predators to bring down. Secondly, the Argentinosaurus could use its immense weight to create a local earthquake, crushing anything in its path. Discover the power of this seismic stomp and how it could flatten any attacker.	Ø	⊘
Deadlier Th	an The Dinosaurs			
32	Killer Gas	Uncover the deadly gas that brought down the mighty dinosaurs. Volcanic eruptions released a ghostly gas that was impossible to detect but lethal. Using a tin foil 'boat' and an aquarium filled with the gas, we show how the gas sinks and forms a fatal fog. This gas suffocated dinosaurs, making it a deadly assassin.	\checkmark	\checkmark





Nugget Number	Nugget Name	Nugget Summary	Suitable for Primary Secondary	
33	Floods	Discover how a monsoon forced a herd of Centrosaurus to seek shelter, only to be hunted by a pack of predators. Uncover the deadly challenge of crossing a raging river, which proved to be too much for many of these dinosaurs. Witness the power of nature and how even rain can be deadly.	⊘	✓
34	Sandstorm	Uncover what it would feel like to face Mother Nature at her worst by stepping into a simulated dust storm. Learn about the dangers of sandstorms and how they could be lethal for animals like the gigantoraptor. Unfortunately, these dinosaurs couldn't survive the after-effects of the storm, as they were buried alive by a landslide.	\bigcirc	\checkmark
35	Lethal Toxin	Explore the deadly organism known as clostridium botulinum, a bacteria that causes botulism. Even a tiny amount of this bacteria can be fatal, making it one of the most lethal toxins on the planet. Discover how this powerful pathogen took down the most deadly dinosaurs of its time by infecting them through stagnant water. Learn about the rapid replication of clostridium botulinum and its ability to survive in microscopic amounts.	\checkmark	⊘
36	Lethal Asteroid	Explore the destructive force that wiped out the dinosaurs. Discover how an asteroid impact in the shallow sea caused a chain reaction, resulting in a cloak of darkness and freezing temperatures that lasted for years. Uncover the catastrophic effects on plants, animals, and the extinction of 70% of species on the planet. This deadly force brought the reign of the dinosaurs to an end, changing life on Earth forever.	Ø	V



Frozen Planet

Embark on the trip of a lifetime, as Planet Earth's team take you on the ultimate polar expedition into a breathtaking landscape most humans will never experience.

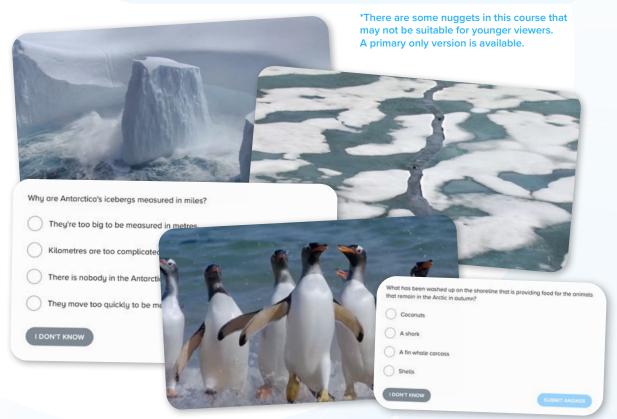
This landmark series brings to the screen the frozen wildernesses of the polar region for what could be the last time before they change forever, with the effects of global warming more evident in the Arctic and Antarctic than anywhere else on the planet.

Ambitious and epic in scale, it is the ultimate portrait of the polar regions, capturing all the fragile, jaw-dropping beauty and majestic power of the elements in the greatest wildernesses on Earth.

Narrated by acclaimed naturalist Sir David Attenborough and featuring the incredible wildlife cinematography that made Planet Earth a worldwide success, Frozen Planet has taken new technology to the most extreme and remote parts of our planet, capturing groundbreaking imagery above and below the ice.

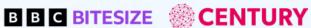


Frozen Planet









Course Content

Frozen Planet



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
To the Ends	of the Earth			
1	Polar Regions	Explore the extreme conditions of the Polar regions, where temperatures drop to -70 degrees centigrade and winds reach 200 miles per hour. Discover the challenges faced by the ultimate survivors in these harsh environments, including the long winter nights with no sun and the brief opportunity for life in the polar spring. Uncover the extraordinary transformation that occurs when the sun returns, triggering the melting of the frozen ice worlds.	\checkmark	✓
2	Polar Bears	Discover the exciting journey of a male polar bear as he searches for a mate in the vast, frozen Arctic. Willing females are scarce, and time is running out as the sea ice begins to melt. Follow the male as he tracks a single female without cubs, relishing her scent from miles away. With determination, he follows her footprints in the compacted snow, knowing that this pursuit could last for days.	Ø	\checkmark
3	Whales and Shearwaters	Experience the incredible transformation that occurs in the Arctic Ocean each spring. Discover the massive gathering of sea birds, including the short-tailed shearwaters, who travel thousands of miles to be here. Uncover the journey of humpback whales, who come from the Equator to feed in these rich polar waters. Learn about the challenges faced by all life in the polar regions.	⊘	V
4	Glaciers	Uncover the fascinating world of Greenland, the largest island in the world. Covered by a massive ice sheet, this bleak and quiet land is home to sapphire-blue melt-lakes that form and expand rapidly. As the water overflows, it carves its way through the ice, creating icy deltas.	\checkmark	\checkmark
			CENIZ	



Course Overview

Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
5	Icebergs	Learn about the incredible power of glaciers as they carve their way through mountains and reshape continents. Witness the birth of colossal icebergs and the impact they have on our planet. Discover how Greenland's melting ice affects ocean currents and global weather patterns. Uncover the beauty of Arctic ice sculptures created by the break-up of these icebergs. Explore the increasing number of icebergs as our climate continues to warm.	\checkmark	\checkmark
6	Moving South	Explore the barren tundra where animals migrate in spring, anticipating the lush grazing that follows the melting of snow. Timing is crucial for caribou, as arriving early risks winter storms, while delaying too long means insufficient fat for surviving the polar winter. Moving further south, we encounter the tree-line, where trees can grow due to warmth and liquid water. Survival is challenging, taking hundreds of years for a seedling to become a stunted shrub.	\checkmark	⊘
7	Snow	Experience the fascinating world of the Taiga forest, a vast belt of forest that stretches 7,000 miles around our planet. Discover how the winters south of the tree line are shorter, allowing trees to grow faster and taller, creating forests. Uncover the beauty and uniqueness of snowflakes, which play a vital role in the life of these silent forests. Learn about the diverse creatures in the Taiga and the importance of snow for their survival.	\checkmark	\checkmark
8	The Antarctic	Discover the fascinating world of the Antarctic, a frozen continent surrounded by ocean. Explore the massive icebergs that measure in miles, creating obstacles for giant waves. Uncover the cold and storm-racked seas that are teeming with life, including the masterful surfing penguins. Learn about gentoo penguins, who come ashore each spring to lay eggs and rear their young, requiring both parents to go fishing for their hungry chicks.	\checkmark	⊘
9	Summer in Antarctica	Join the incredible journey of over 40 million penguins and thousands of whales as they travel to the Southern Ocean to feed. Discover the southern humpbacks' long journey from the Equator to Antarctica. Uncover the challenges faced by the first explorers who ventured into the highest, driest, and coldest territory on Earth. Learn about the stunning seasonal change in Antarctica as the sea ice melts, transforming the continent.	\checkmark	\checkmark



lugget Number	Nugget Name	Nugget Summary		ble for Secondary
10	Beneath the Ice	Uncover the mysterious world beneath the permanent ice sheet in the south. Discover the specialised life forms that have adapted to survive in this frozen environment. Explore the secrets of the ice stalactites and the creatures that call them home. Learn about the slow growth and giant size of animals in this cold habitat.	Ø	 ✓
11	Ice Caves	Explore the ice caves surrounding the crater, potentially home to unknown life forms. Discover the Transantarctic mountain range, a formidable obstacle faced by explorers Scott and Amundsen on their journey to the South Pole. Uncover the daunting challenge of crossing one of the world's longest ranges, with winds reaching speeds of 200 miles per hour.	\checkmark	V
12	The Transantarctic Mountain Range	Discover the fascinating landscapes of Antarctica, from ice-capped mountains to the Dry Valleys. Explore the natural sculptures created by the winds and the massive ice blocks tumbling into the valleys. Uncover the Beardmore Glacier, one of the largest glaciers on Earth. Learn about the Antarctic ice cap, which holds 70% of our fresh water.	Ø	V
Spring				
				<u> </u>
13	Adélie Penguins	Join the fascinating journey of Adélie penguins as they return to Antarctica to breed. Discover how these male penguins build their nests using pebbles and why it is important for attracting a mate. Uncover the surprising behavior of some penguins who turn to a life of crime. Learn about the potential dangers of the early season sun.	Ø	V
13	Adélie Penguins Katabatic Winds	these male penguins build their nests using pebbles and why it is important for attracting a mate. Uncover the surprising behavior of some penguins who turn to a life of crime. Learn about the	✓✓	✓✓



Nugget Number	Nugget Name	et Name Nugget Summary		able for Secondary	
16	The Male Polar Bear	Explore the life of a male polar bear on the frozen ocean. Discover how he hunts for seals, using his extraordinary sense of smell to locate their dens beneath the ice. Learn about the challenges he faces, including the risk of the seal escaping if his aim is not precise. Uncover the impact of climate change on polar bear hunts, with the increasing warming effect of the sun and weakening sea ice.	\checkmark	\checkmark	
17	The Dam Burst	Discover the incredible power of spring as frozen waterfalls in the northern rivers begin to weaken and release billions of tonnes of fresh water. Witness the unstoppable force of the melt water as it propels ice, boulders, and trees downstream, transforming the motionless water shed into flowing rivers once more.	⊘	\checkmark	
18	Polar Bears on the Move	Learn about the impact of melting sea ice in the Arctic Ocean. As the ice breaks up, wildlife returns and the polar bear mother must navigate the challenges of finding food while protecting her cubs. The disappearance of some ice improves the chances of survival for the remaining cubs, but hunting for seals becomes difficult. The mother must balance the need to feed her family with the danger of leaving them behind.	⊘	\checkmark	
19	Narwhals	Uncover the journey of the narwhals as they navigate through cracks in the ice to reach new fishing grounds. Witness a stand-off between two teams of narwhals and discover the purpose of their tusks. As the ice breaks open, the narwhals shift their focus to social interactions. Explore the mysteries of narwhal society and the significance of their tusks.	⊘	\checkmark	
20	Oceans Teeming with Life	Experience the fascinating world of the Arctic Ocean teeming with bizarre creatures. Discover how the increasing warmth of the sun and nutrients from melting sea-ice fuel tiny plankton, attracting sea gooseberries and predatory sea slugs. Learn about the voracious Arctic cod, with shoals containing millions of fish, attracting predators from miles away. Witness the annual event of the cod harvest, where birds and seals feast on the abundance of life.	Ø	\checkmark	
21	Life on the Land	Witness the transformation of the land by the sun's heat in the Arctic tundra. Discover how Arctic poppies use the sun's rays to stay warm and attract insects. Uncover the astonishing story of the woolly bear caterpillar and how it survives the harsh Arctic winter. Learn about the challenges it faces in finding enough food before the cold returns.	\checkmark	\checkmark	



ugget Number	Nugget Name	Nugget Summary		ble for Secondary
22	The Woolly Bear Caterpillar	Discover the incredible journey of the world's oldest caterpillar as it prepares for its final spring. Watch as it weaves a silk cocoon and transforms its body to fly and search for a partner. Learn about the shortness of the Arctic spring and the struggle for survival in this seasonal place. Witness the ongoing transformation of the tundra as spring progresses.	\bigcirc	✓
23	South Georgia	Explore the harsh conditions of South Georgia, an island on the outer edge of the Antarctic sea ice. Discover how the wandering albatross and king penguins survive the vicious southern winter. Uncover the strategies these animals use to stay warm and find food in the stormy conditions. Learn about the importance of the rich waters of the southern ocean for their survival.	\checkmark	\checkmark
24	Penguins and Albatross	Uncover the return of life to South Georgia after the winter storms subside. Discover the impressive arrival of over 5 million pairs of macaroni penguins, the world's most numerous penguin. Explore the elaborate courtship display of the wandering albatross, who renew their bonds after months apart. Learn about their long-lasting partnerships, which can last up to 50 years.	\checkmark	\checkmark
25	First Flight	Experience the fascinating world of the wandering albatross as they prepare for their maiden flight. Discover why flying is crucial for their survival and how they practice for weeks to master their large wing span. Uncover the mental challenges some albatrosses face before finally taking off. The Southern Ocean awaits these birds, where they will not touch land for the next five years.	⊘	\checkmark
26	Penguins and Killer Whales	Discover the fascinating world of killer whales and their teamwork. While the females go fishing, the males take on the responsibility of incubating the eggs. Watch as they rise out of the water to navigate towards better fishing spots. Adélie penguins also face challenges in the Antarctic spring, as they must grow quickly to survive the approaching freeze. Will they win the battle for survival?	\checkmark	\checkmark
Summer				
27	Polar Bear Cub's First Summer	Learn about the challenges faced by polar animals as their ice world melts away in the summer. Discover the spectacular new landscape created by the increasing power of the sun. Uncover how the polar bear family must adapt to their rapidly changing home. Explore the first swimming lesson for the two cubs and their hesitation to embrace the watery world.	\checkmark	\checkmark



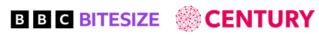
Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
28	The Lone Male	Explore the challenges faced by a lone male polar bear as he searches for food in the changing Arctic environment. Discover how the melting ice affects the bear's ability to hunt and survive. Uncover the need for polar bears to adapt their hunting strategies to avoid starvation.	⊘	✓
29	The Summer Melt	Uncover the Arctic as the northern part of the Earth tilts towards the Sun. Discover how the sun's continuous heat carves the ice into magical shapes. Explore the challenges faced by polar bears as they search for ice and food. Learn about their dense fur and how they conserve energy by dozing in the sun.	Ø	V
30	Life Returns to the Arctic	Follow the incredible journeys of Arctic birds as they return to the Arctic lands. Red phalaropes and Arctic terns have travelled long distances to feed and breed in these rich waters. Watch as they perform special dances and witness the challenges they face in raising their young. Discover how an eider duck has chosen an unconventional nesting spot and learn about the benefits of having feisty neighbours.	\checkmark	 ✓
31	The Hungry Bear	Discover the fascinating world of terns and eiders. Explore how these birds use their sharp beaks to defend against hungry bears and ensure the survival of their nests. Learn about the importance of choosing the right neighbours and how the rich waters of summer support the breeding and migration of these incredible birds.	Ø	\checkmark
32	Keeping Cool	Explore the fascinating lives of king penguins and elephant seals in the southern end of the planet. Discover how these animals cope with the long summer days and the challenges of overheating. Uncover the unique ways in which they cool themselves, from stretching out to cool their feet to taking dips in shallow rivers and indulging in mud baths.	\checkmark	✓
33	Baby Seal Pups	Uncover the fascinating island of South Georgia, located on the northern fringe of Antarctica. Discover its ice-free beaches, which attract a large population of Antarctic fur seals during the summer. Explore the incredible sight of five million seals gathering on the island's beaches. Learn about the importance of establishing a strong bond with their babies in such a crowded colony. Witness the males guarding their territories and the unique mating behavior of these seals.	⊘	V

ıgget Number	Nugget Name	Nugget Summary		ble for Secondary
34	Ice Retreat	Witness the opening up of the Southern Ocean as summer progresses. Discover the Antarctic Peninsula, where the ice retreats and reveals a dramatic coastline. Uncover the home of over 15 million crabeater seals, who owe their existence to microscopic algae. Learn about krill, the most important Antarctic creatures, who collect algae in their front legs and have a greater combined weight than any other animal on the planet.	\checkmark	V
35	Giants of the Ocean	Discover how humpback whales use their baleen sieves to strain krill from the water. Learn about the teamwork among humpbacks and how they collect overspill from each other. Uncover the speed and endurance of Antarctic minke whales with their pointed heads and short dorsal fins. Also, meet the extended family of killer whales, including mothers, young, and a male with a massive dorsal fin.	\checkmark	\checkmark
36	The Adélie Penguins	Explore the journey of Adélie penguins as they return to the Antarctic continent with stomachs full of krill. Learn about the importance of the retreat of the sea ice and the short walk back to the colony. Discover the challenges faced by the half million penguins in raising their chicks before the freeze returns.	\checkmark	V
Autumn				
37	Polar Bears in Autumn	Learn about the fascinating behavior of polar bears in the Canadian Arctic during autumn. As the sea ice freezes, these fearsome predators gather on the coastal strip, but instead of fighting over mates, they display a surprisingly tolerant and playful side. Marooned on land, they turn to vegetarian options like berries, and engage in playful sparring matches with well-matched opponents. Discover the social and boisterous nature of these usually solitary creatures.	⊘	V
38	Whales	Uncover the fascinating world of beluga whales in the Canadian Arctic. Discover how these majestic creatures rely on open water to reach their annual rendezvous. Learn about the unique behavior of baby belugas and how they ride piggy-back on their mothers. Explore the surprising reason why thousands of belugas are drawn to a special estuary. Experience the bliss of this temporary whale spa before the ocean freezes again.	\bigcirc	✓

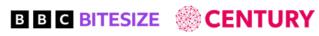
Nugget Number	Nugget Name	Nugget Summary		ole for Secondary
39	Brunnich Guillemots	Experience the fascinating world of Brunnich guillemots, one of the most numerous seabirds in the northern hemisphere. Discover how these birds prepare their chicks to make a daring 150-metre drop from vertical cliffs to the sea. Witness their challenges and successes as they learn to fly and escape predators. Join them on their journey to their winter feeding grounds, a thousand miles south, away from the approaching ice.		V
40	Polar Bears Feeding	Explore the Arctic after the breeding season as silence returns and storms bring an unexpected bonanza. Discover a huge fin whale carcass that attracts polar bears from miles away. Learn about their extraordinary sense of smell and how they peacefully share the 18-metre long dining table. Uncover their surprising sociability despite their reputation as loners.	\checkmark	⊘
41	The End of Autumn	Witness the freezing Arctic as the temperature drops and the sea begins to freeze. Discover how the bear family can finally return to their natural habitat after surviving the challenges of melting sea ice and lack of food. Uncover the dramatic change in the tundra as temperatures fall, triggering a vibrant display of red and yellow leaves. The Arctic comes alive with colour, transforming the entire landscape.	\checkmark	\checkmark
42	Musk Oxen	Discover the intense battle between two musk oxen as they fight for dominance and the right to mate. With their powerful horns and thick skulls, these polar titans clash in a fight that could be deadly. Watch as the resident bull defends his harem against the intruder, and see who emerges victorious. Despite the approaching winter, these resilient musk oxen will stay and brave the cold.		⊘
43	Caribou in the Arctic	Explore the transformation of the tundra in autumn as the moisture freezes and hoarfrost decorates the leaves. Discover how caribou migrate south for the winter, using frozen lakes as ice roads. Uncover the challenges faced by male caribou during the mating season as they compete for the attention of a female. Learn about the hierarchy within the herd and how the dominant bull earns the respect of the other males.	Ø	\checkmark
44	Autumn in South Georgia	Uncover the frozen landscapes of the Antarctic, from the ocean to the tundra. Explore the power of the ocean waves that bring food to South Georgia, attracting giant petrels and other scavengers. Learn about the feeding frenzy as different species compete for the spoils. Witness the end of the breeding season and the impending winter as the petrels prepare to head out to sea. The cold and ice will soon take over South Georgia's beaches.		V



Nugget Number	Nugget Name	Nugget Summary		ble for Secondar
45	Adélie Penguin Chicks	Learn about the challenges faced by Adélie penguins in Antarctica as they rear their chicks before winter. Discover how the chicks cluster together for warmth and rely on their parents to bring them food. Uncover the competition for food between the chicks and the importance of the parents' fishing trips. Follow the penguins' journey to become confident swimmers and their ability to reach the ice floes.	Ø	✓
46	Antarctic Winter Habitat	Follow the journey of emperor penguins as they navigate treacherous sea ice to reach their breeding grounds. Discover how these giants overcome obstacles and march miles to find a safe place to rear their chicks. Witness the courtship rituals and the crucial moment when the female passes the egg to the male for incubation. Learn about the harsh conditions they face and the challenges they must overcome to ensure the survival of the next generation.	\checkmark	V
Winter				
47	Arctic Animals	Explore the harsh conditions of the polar winter, where animals face violent winds, plunging temperatures, and months of darkness. Follow a female polar bear as she searches for shelter and prepares for the arrival of her cubs. Learn how she uses the accumulating snow to create a den and survive the winter.	⊘	V
48	Arctic Plants	Witness the devastating force of frost in winter as ice crystals form and destroy plants. Discover how coniferous trees like fur and pine can withstand low temperatures, creating the Taiga, the largest forest on our planet, which contains one third of all the trees on Earth.	⊘	√
49	Bison	Uncover the challenges faced by wolves as they hunt the giant bison in the winter wilderness. Discover how the bison's size and insulation help them survive the cold. Explore the strategies used by the wolves to try and catch their prey. Learn about the unique dynamics of this predator-prey relationship in the Arctic.	Ø	√
50	Wolverines	Learn how winter snow affects the forest and its inhabitants. Discover how the snow limits the growing season and shapes the trees. Uncover the unique relationship between wolverines and ravens, who work together to find food during the harsh winter. Explore the wolverine's powerful jaws and the raven's patience in waiting for leftovers. Find out how the wolverine stores food for the future.		√



Nugget Number	Nugget Name	Nugget Summary	Suitable for Primary Second		
51	Under the Snow	Explore the fascinating world of voles and their survival techniques in the winter snow. Discover how voles stay warm and find food beneath the snow, thanks to its insulating properties. Uncover the role of the least weasel, the vole's nemesis, and how it adapts to hunting in the snow. Learn about the weasel's unique way of staying warm by creating a cozy blanket from its own fur.	Ø	V	
52	The Polar Bears	Witness the harsh conditions of midwinter in the northern forests and the high Arctic. Discover how the male polar bear survives on the frozen ocean, searching for food. Uncover the incredible journey of the polar bear cubs, born blind and tiny, as they rely on their mother's rich milk to grow. Learn about the protective icy cocoons that keep the polar bear families safe until they emerge onto the snowy slopes in a few months.	Ø	V	
53	Auroras	Experience the mesmerising aurora lights that illuminate the sky a hundred miles above the Earth. Solar winds collide with the Earth's atmosphere, causing trillions of charged particles to dance across the sky. Witness the breathtaking aurora borealis in the Arctic and the aurora australis in the south, bringing light to Antarctica's long winter.	\checkmark	√	
54	Antarctic Animals	Discover the harsh conditions of the Arctic winter and the even more brutal darkness of Antarctica. Explore how male penguins protect their precious eggs from the gales, relying only on each other. Uncover the role of the Weddell seal, the only mammal to brave the winter in Antarctica, and how they maintain breathing holes in the ice. Learn about the insulation provided by the ice roof, keeping the temperature constant for millions of years.	Ø	√	
55	Antarctic Sea Life	Explore the fascinating world of the Antarctic sea floor. Discover how animals adapt to the extreme conditions, such as the borchgrevinki fish with anti-freeze in their blood. Uncover the dangers that lurk beneath the surface, from the deadly brinacles that encase living things in ice to the pressure that turns water into ice and lifts away anything attached. Learn about the constant cycle of life and death in this icy environment.	Ø	Q	
56	Weddell Seals	Experience the fascinating world of male Weddell seals and their unique mating rituals. Discover how their powerful calls can be heard over 15 miles away and how they use these calls to establish their territory. Uncover the intense battles that take place as the males fight for control of the best breathing holes.	Ø	Q	



lugget Number	Nugget Name	Nugget Summary		ble for Secondary
57	Emperor Penguins	Watch the return of the sun to Antarctica. Discover how female emperor penguins, after months at sea, are returning to their colony to reunite with the males who have been waiting for them. Learn about the challenges they face, including the increased distance due to sea-ice growth, and the desperate need for help to prevent starvation. Witness the heartwarming reward of a mother penguin seeing her chick for the first time.	\checkmark	\checkmark
58	Emperor Penguin Chicks	Explore the incredible journey of emperor penguins as they reunite with their chicks. Discover the strong bond between parent and chick, and the risks they face in the harsh conditions. Learn about the perseverance and survival instincts of these amazing creatures. The arrival of the Adélies signals the start of spring, bringing new life to the farthest ends of our planet.		√
The Last Fro	ontier			
59	Longyearbyen	Discover the harsh conditions of the polar regions and discover why humans have chosen to live there for thousands of years. Uncover the secrets of Longyearbyen, the most northerly town on Earth, where the Sun never rises for three months of the year. Learn about the resources that attract people to the Arctic, such as coal, oil, and minerals.	Ø	\checkmark
60	Norilsk	Explore Norilsk, the coldest city on Earth in Siberia, Russia. Discover how temperatures drop below -50 degrees Centigrade and how fuel freezes in trucks. Uncover the unique challenges faced by Arctic cities like Norilsk, including frozen ships and dependence on power plants for heating. Learn about the Norilsk Walrus Club, who brave the extreme cold every day.	⊘	\checkmark
61	Siberia	Follow the lives of the Dolgan, a tribe living in the coldest part of the Arctic. Learn about their reliance on reindeer for survival and how they use reindeer fur for clothing and insulation. Discover their nomadic lifestyle as they travel across the tundra in search of food for their herds. Uncover the importance of good relations with the in-laws in their communal way of living.	⊘	\checkmark
62	Chukotka	Uncover the dangerous journey of Inuit men in Chukotka, Russia, as they hunt for walruses to feed their families. Learn about the challenges they face, including navigating through ice floes and avoiding angry walruses. Discover how they use harpoons and floats to catch the walruses and prevent them from diving.		\checkmark

Nugget Number	Nugget Name	Nugget Name Nugget Summary		ble for Secondary
63	Life in the Arctic	Explore the dangerous mission of Kolya and his team as they search for food on an island in the bay. Kolya, the oldest and lightest man, relies on his friends to lower him down the 100 metre high cliffs to collect guillemot eggs. This risky task has claimed the lives of many men, but with no crops to grow, the Arctic people must take this chance to gather food.	\checkmark	⊘
64	Arctic Communities	Discover the lives of Arctic peoples who rely on animals for food and cannot grow crops due to the frozen ground. Explore how they move their reindeer to the coast to avoid blood-sucking flies. Uncover the tradition of bartering reindeer skins for fermented walrus meat, a valuable resource for the winter. Learn about the importance of community and the brief opportunity for isolated peoples to meet in the summer.	Ø	\checkmark
65	Greenland	Experience the Arctic wilderness of Greenland and the important role of Greenland huskies in maintaining Denmark's claim to this valuable territory. Discover how Rasmus and Roland form a close bond with their team of dogs and depend on their stamina during the harsh winter months. Learn about the intelligence of these dogs and their ability to navigate treacherous terrain.	⊘	\checkmark
66	Aurora Borealis	Learn about the magical world of the Northern Lights, or aurora borealis, in the Arctic. Discover how these lights are caused by electrically charged particles from the sun and the magnetic pull of the Earth's poles. Explore the importance of understanding the aurora and how scientists study it using rockets and glowing smoke. Uncover how the aurora affects our atmosphere and why it is a reminder of the sun's presence during the dark winter days.	⊘	\checkmark
67	Antarctica	Explore the history of Antarctica, a remote and inhospitable continent. Learn about the first human beings to glimpse the vast continent and the reasons behind their expeditions. Discover the preserved interior of a hut used by Captain Scott and his team in their attempt to reach the South Pole. Uncover the techniques and equipment used by these early explorers.	Ø	\checkmark
68	Antarctic Visitors	Uncover the lure of adventure in Antarctica, where intrepid travellers come during the brief summer to witness magnificent scenery and wildlife. Strict regulations govern how close people can approach wildlife, and visitors must leave no trace behind. Since 1959, Antarctica has been protected by an international treaty, allowing only scientific activities. New discoveries continue to be made in even the most visited places.	Ø	\checkmark



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
69	Active Volcano in Antarctica	Witness the fascinating world beneath Mount Erebus, an active volcano in Antarctica. Discover the coldest place on the Antarctic coast, where temperatures rarely rise above -30 degrees Celsius. Uncover a network of caves, hidden beneath the ice and snow, that contain unique ice formations found nowhere else on Earth. Learn about the scientific expedition mapping these caves and the possibility of specialised bacteria forming extraordinary crystal shapes.	\checkmark	\checkmark
70	Antarctic Scientists	Discover the secrets of Erebus, one of the most active volcanoes on Earth, and learn about the research conducted on its crater. Uncover the importance of measuring gases and their impact on our atmosphere. Journey to the edge of outer space to gather clues about the formation of the universe. Finally, join scientists on a plane as they measure the depth of Antarctica's ice sheet, providing valuable insights into its volume and future changes.	⊘	\checkmark
71	Antarctic Research Station	Explore the incredible journey of Captain Scott and his team through the Transantarctic Mountains to reach the South Pole. Discover the challenges they faced, including crevasses and extreme weather conditions. Uncover the advancements in technology and facilities at the South Pole today, including the high-tech Amundsen-Scott South Pole Station. Learn about the isolation and self-sufficiency of the scientists living at the base, and their unique opportunities for studying the night sky.	\checkmark	\checkmark



Course Overview

Planet Earth II

Experience the world from the viewpoint of animals themselves. From spellbinding wildlife spectacle to up close encounters, Planet Earth II takes you closer than ever before.

Planet Earth redefined natural history filmmaking, giving us the ultimate portrait of life on Earth. Advances in both filming technology and our understanding of the natural world mean we can reveal our planet from a completely new perspective. Now, Planet Earth II allows us to experience the world from the viewpoint of animals themselves.

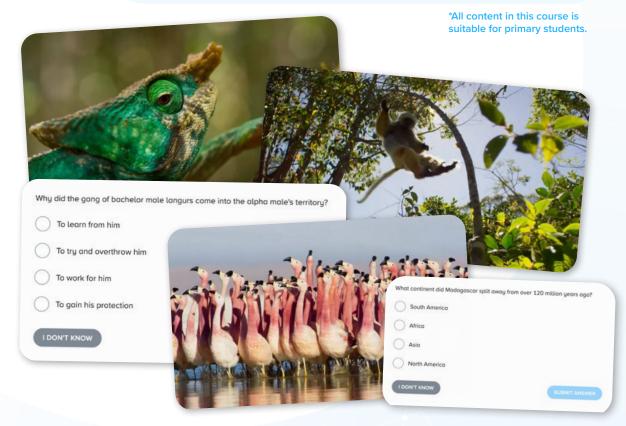
Travelling through jungles, deserts, mountains, islands, grasslands and cities, this series explores the unique characteristics of Earth's most iconic habitats and the extraordinary ways animals survive within them. New technology has allowed individual stories to be captured in an unparalleled level of detail.

Viewers are immersed in incredible landscapes, allowing them to share the most dramatic moments in the lives of animals.



Planet Earth II

View course content →









Course Content

Planet Earth II



Suitable for

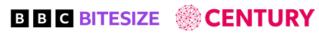
Nugget Name	Nugget Summary	Primary I	Secondary
Escudo Island	Explore the tiny island of Escudo, home to the pygmy three-toed sloth. Life is good for the male sloth, with plenty of food and no predators. However, he needs a mate. Unfortunately, the first sloth he encounters already has a baby and won't mate again for six months. The fate of the pygmy sloths is influenced by the size of their isolated island.	\bigcirc	V
Komodo Island	Experience the fascinating world of the Komodo dragon, the largest living lizard on the planet. Despite their massive size, these predators thrive on the island of Komodo due to their unique dietary needs. Learn about the intense competition between male dragons for the right to mate, where size and strength are crucial. Discover the incredible power of their tails and sharp teeth in their battles.		\checkmark
Madagascar	Discover the unique animals of Madagascar, such as lemurs, that have adapted to their environment over millions of years. Explore the different types of lemurs, from the large indri to the small ringtails and bamboo lemurs. Uncover the challenges faced by a baby sifaka in the arid and hostile spiny forest, where food and water are scarce. Learn about the importance of staying close to their mother for survival.	⊘	\checkmark
Fernandina	Learn about the volcanic islands of the Galapagos and the unique sea-going iguanas that inhabit them. These islands are formed by erupting volcanoes and are difficult for colonists to reach. Fernandina, one of the Galapagos Islands, is a desolate place but the surrounding sea is rich with life. Sea-going iguanas, who are vegetarians, graze on the seafloor and bring nutrients to the land, helping other animals survive.	\checkmark	⊘
	Escudo Island Komodo Island Madagascar	Excudo Island Explore the tiny island of Escudo, home to the pygmy three-toed sloth. Life is good for the male sloth, with plenty of food and no predators. However, he needs a mate. Unfortunately, the first sloth he encounters already has a baby and won't mate again for six months. The fate of the pygmy sloths is influenced by the size of their isolated island. Experience the fascinating world of the Komodo dragon, the largest living lizard on the planet. Despite their massive size, these predators thrive on the island of Komodo due to their unique dietary needs. Learn about the intense competition between male dragons for the right to mate, where size and strength are crucial. Discover the incredible power of their tails and sharp teeth in their battles. Discover the unique animals of Madagascar, such as lemurs, that have adapted to their environment over millions of years. Explore the different types of lemurs, from the large indri to the small ringtails and bamboo lemurs. Uncover the challenges faced by a baby sifaka in the arid and hostile spiny forest, where food and water are scarce. Learn about the importance of staying close to their mother for survival. Learn about the volcanic islands of the Galapagos and the unique sea-going iguanas that inhabit them. These islands are formed by erupting volcanoes and are difficult for colonists to reach. Fernandina, one of the Galapagos Islands, is a desolate place but the surrounding sea is rich with life. Sea-going iguanas, who are vegetarians, graze on the seafloor and bring nutrients to the land,	Escudo Island Explore the tiny island of Escudo, home to the pygmy three-toed sloth. Life is good for the male sloth, with plenty of food and no predators. However, he needs a mate. Unfortunately, the first sloth he encounters already has a baby and won't mate again for six months. The fate of the pygmy sloths is influenced by the size of their isolated island. Experience the fascinating world of the Komodo dragon, the largest living lizard on the planet. Despite their massive size, these predators thrive on the island of Komodo due to their unique dietary needs. Learn about the intense competition between male dragons for the right to mate, where size and strength are crucial. Discover the incredible power of their tails and sharp teeth in their battles. Discover the unique animals of Madagascar, such as lemurs, that have adapted to their environment over millions of years. Explore the different types of lemurs, from the large indri to the small ringtails and bamboo lemurs. Uncover the challenges faced by a baby sifaka in the arid and hostile spiny forest, where food and water are scarce. Learn about the importance of staying close to their mother for survival. Learn about the volcanic islands of the Galapagos and the unique sea-going iguanas that inhabit them. These islands are formed by erupting volcances and are difficult for colonists to reach. Fernandina, one of the Galapagos Islands, is a desolate place but the surrounding sea is rich with life. Sea-going iguanas, who are vegetarians, graze on the seafloor and bring nutrients to the land,



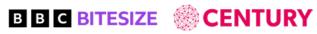
Nugget Name	Nugget Summary		able for Secondary
Marine Iguanas On Fernandina	Witness the dangerous journey of marine iguana hatchlings as they make their way to the sea. Racer snakes are on the alert, waiting for the best feeding opportunity of the year. Learn how the hatchlings must outrun the snakes and avoid detection to have a chance at survival. Watch the near-miraculous escapes and discover the unique way of life demanded by this hostile island.	\checkmark	V
Islands Off New Zealand	Explore the fascinating world of birds in the Sub-Antarctic islands off New Zealand. Discover how they brave gale-force winds and cold temperatures to breed during the brief summer. Uncover the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the special dance they perform and the race against time to raise a chick before winter returns.	⊘	\checkmark
The Seychelles	Uncover the fascinating world of island ecosystems. Discover how islands in warm, tropical waters provide a sanctuary for sea birds all year round. Explore the unique nesting habits of fairy terns and noddies, and learn about the challenges they face from the Pisonia tree. Finally, witness the resilience of the fairy tern as it successfully raises its chick amidst the changing island environment.	\checkmark	\checkmark
Christmas Island	Witness the fascinating world of the red crabs on a remote island. Discover how these crabs have adapted to a land-based existence and play a crucial role in maintaining their tiny crab utopia. Uncover the challenges they face from invasive yellow crazy ants and the impact it has on their annual migration to the sea. Learn about the importance of human intervention in controlling these invaders.	\checkmark	✓
Zavodovski Island	Explore the fascinating Zavodovski Island, a remote and stormy place in the Great Southern Ocean. Discover how chinstrap penguins brave dangerous conditions and risk their lives to find food for their chicks. Learn about the challenges they face, including the threat of skuas and the difficult journey back to their nests. This island may seem inhospitable to us, but for one and a half million penguins, it is paradise.	\checkmark	\checkmark
Arabian Peninsula	Discover the sun-baked mountains of the Arabian Peninsula, where Nubian ibex make their home. These skilled mountaineers choose the steepest cliffs to raise their young, but must descend to the valley for water. Watch as the young ibex make their first descent, avoiding predators like red foxes. Learn how they use their agility and speed to outsmart their enemies and return safely to the cliffs.	⊘	✓
	Marine Iguanas On Fernandina Islands Off New Zealand The Seychelles Christmas Island Zavodovski Island	Marine Iguanas On Fernandina Witness the dangerous journey of marine iguana hatchlings as they make their way to the sea. Racer snakes are on the alert, waiting for the best feeding opportunity of the year. Learn how the hatchlings must outrun the snakes and avoid detection to have a chance at survival. Watch the near-miraculous escapes and discover the unique way of life demanded by this hostile island. Explore the fascinating world of birds in the Sub-Antarctic islands off New Zealand. Discover how they brave gale-force winds and cold temperatures to breed during the brief summer. Uncover the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the special dance they perform and the race against time to raise a chick before winter returns. Uncover the fascinating world of island ecosystems. Discover how islands in warm, tropical waters provide a sanctuary for sea birds all year round. Explore the unique nesting habits of fairy terns and noddies, and learn about the challenges they face from the Pisonia tree. Finally, witness the resilience of the fairy tern as it successfully raises its chick amidst the changing island environment. Christmas Island Witness the fascinating world of the red crabs on a remote island. Discover how these crabs have adapted to a land-based existence and play a crucial role in maintaining their tiny crab utopia. Uncover the challenges they face from invasive yellow crazy ants and the impact it has on their annual migration to the sea. Learn about the importance of human intervention in controlling these invaders. Explore the fascinating Zavodovski Island, a remote and stormy place in the Great Southern Ocean. Discover how chinstrap penguins brave dangerous conditions and risk their lives to find food for their chicks. Learn about the challenges they face, including the threat of skuas and the difficult journey back to their nests. This island may seem inhospitable to us, but for one and a half million penguins, it is paradise. Discover	Marine Iguanas On Fernandina Marine Iguanas On Fernandina Bislands Off New Zealand Explore the fascinating world of birds in the Sub-Antarctic islands off New Zealand. Discover how they brave gale-force winds and cold temperatures to breed during the brief summer. Uncover the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the special dance they perform and the race against time to raise a chick before winter returns. Uncover the fascinating world of birds in the Sub-Antarctic islands off New Zealand. Discover how they brave gale-force winds and cold temperatures to breed during the brief summer. Uncover the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the challenges faced by a male Buller's albatross as he waits for his mate to arrive. Learn about the special dance they perform and the race against time to raise a chick before winter returns. Uncover the fascinating world of island ecosystems. Discover how islands in warm, tropical waters provide a sanctuary for sea birds all year round. Explore the unique nesting habits of fairy terns and noddies, and learn about the challenges they face from the Pisonia tree. Finally, witness the resilience of the fairy tern as it successfully raises its chick amidst the changing island environment. Witness the fascinating world of the red crabs on a remote island. Discover how these crabs have adapted to a land-based existence and play a crucial role in maintaining their tiny crab utopia. Uncover the challenges they face including the tiny crab utopia. Uncover the challenges they face from invasive yellow crazy ants and the impact it has on their annual migration to the sea. Learn about the challenges they face, including the threat of skuas and the difficult journey back to their nests. This island may seem inhospitable to us, but for one and a half million penguins, it is par



ugget Number	Nugget Name	Nugget Summary		ble for Secondary
11	The Alps	Learn about the challenges faced by a golden eagle in the Alps during winter. With a wingspan of two metres and extraordinary eyesight, the eagle must search for food in the snowy slopes. Facing competition from other eagles and persistent crows, the eagle fights to secure a kill and sustain itself.	\bigcirc	V
12	Mountains Of North America	Uncover the fascinating world of grizzly bears. Discover how these incredible animals survive the harsh winter by hibernating in snow-covered dens. Learn about their journey from the mountains to the valleys in search of food as spring arrives. Find out how they shed their winter coats and mark their territory by rubbing against trees. Join the bears as they feast on plants and marmots to prepare for their upcoming hibernation.	\checkmark	\checkmark
13	The Rockies	Explore the challenges faced by a bobcat in the winter mountains. Learn how the bobcat hunts for prey hidden beneath the snow and uses boulders as stepping stones to remain undetected. Discover a valley with a river that never freezes, providing a food source for hungry animals. Uncover the bobcat's struggle to catch prey in the water and its attempt to find prey in the trees.	⊘	\checkmark
14	Mount Kenya	Experience the unique climate of Mount Kenya, where there are no marked seasons and the temperature can drop below freezing at night. Discover how the cabbage groundsels protect themselves from the cold by closing up their leaves to form an insulating blanket. Uncover the beauty of the mountainside, with giant heathers, lobelias, and groundsel thriving in the tropical sun. Learn about the contrast between the bitterly cold nights and the warm sunshine during the day.	⊘	\checkmark
15	The Andes Mountains	Discover the high Andes at dawn, where animals like the mountain viscacha and flamingos brave the freezing temperatures to catch the sun's first rays. Witness the struggle of the flamingos as they break free from the ice and learn about the risks of walking on thin ice. Explore the challenges of living at high altitudes, where the sun's power can quickly turn from salvation to threat.	\bigcirc	\checkmark
16	Human Impact	Learn about the fragility of rocky peaks and the impact of human encroachment on the Alps. Discover how rising temperatures in the Rockies affect winter hibernation and plant growth. Uncover the alarming shrinkage of glaciers in the Andes. Explore the vulnerability of the Himalayas, the world's greatest mountain range, as temperatures rise faster than the global average.	\bigcirc	\checkmark



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
17	Snow Leopards	Explore the lives of snow leopards, rare and solitary creatures that leave messages for their neighbours using unique scents. Discover the challenges faced by a mother and her cub as they navigate the dangers of mating season. Uncover the fierce competition between males and the mother's selfless actions to protect her cub.		\checkmark
Jungles				
18	Rich Variety Of Life	Uncover the abundance of life in the Earth's jungles, which cover less than 6% of the planet's surface but are home to half of all land plants and animals. Discover the indri, a primate that calls the forests of Madagascar home, and learn about the challenges it faces in this crowded paradise. Life in the jungle is a constant struggle for space and food, and every species must find its own way to survive.	Ø	✓
19	Tree Life	Follow the complex world of the jungle, where animals like spider monkeys have to find their own way of getting around. Discover how spider monkey babies learn to climb and use their tails as safety lines. Uncover the dangers they encounter and the important role their parents play in keeping them safe.	⊘	\checkmark
20	Tree Habitat	Witness the world of the draco lizard, a small creature that relies on finding the perfect tree for its home. Discover the dangers of trespassing and the choices draco lizards have to make. Learn about the unique ability of these lizards to soar through the jungle like dragons. Will the draco lizard find a new tree with food and no owner?	Ø	\checkmark
21	Jungle Growth	Explore the incredible competition for space in the jungle. Discover how plants battle for light to grow. Uncover the story of the Hura tree, which has successfully risen above the jungle floor and now supports a thousand other plants. Learn about the abundance of plant species in the jungle and how they support a diverse range of animals.	Ø	\checkmark
22	Competition	Watch the intense competition among hummingbirds in Ecuador, where a hundred species fight for nectar. Swordbills have a beak longer than their body, allowing them to reach the sweet nectar in elongated flowers that other species can't access. This unique adaptation means they don't have to join the fight for food. However, having a longer beak comes with drawbacks, such as difficulty in keeping it clean and preening feathers.	Ø	\checkmark



Nugget Number	Nugget Name	Nugget Summary	Suital Primary I	ble for Seconda
23	Water	Discover the fascinating world of jungles, where trees create their own weather by releasing water vapour. Rain is essential for the survival of the jungle, and in some places, the trees are even submerged in water for part of the year. In these mysterious jungles, unexpected animals like river dolphins can be found, adapted to their unique environment. Explore the giants of the flooded jungle, including capybaras, giant otters, and the formidable caimans.	\checkmark	Q
24	Camouflage	Uncover the incredible world of camouflage in the jungle. Learn about animals like the leaf-tailed gecko and the glass frog, who use camouflage to hide from predators. Discover how the glass frog protects its precious eggs from a specialist hunter wasp.	⊘	V
25	Night Time In The Jungle	Learn about the fascinating world of glowing creatures in the jungle night. Discover how fungi use their luminosity to attract insects and spread their spores. Uncover the mysterious behavior of the railroad worm, an insect that uses different coloured lights to hunt and camouflage itself. Explore the unique adaptations of these creatures and their interactions in the forest.	⊘	Q
26	Survival	Discover the fascinating world of the indri, our distant cousins who call the forests of Madagascar home. Learn about their unique adaptations and the importance of their habitat. Explore the challenges they face as their rainforest home is being destroyed. Uncover the connection between humans and the jungle, and the need to protect this magical and wondrous place.	\checkmark	V
Deserts				
27	Namib Desert	Uncover the challenges faced by a pride of lions living in the Namib desert. The lions must chase their prey, a herd of oryx, with no cover for an ambush. After failed hunts and desperate times, the pride searches an area the size of Switzerland for food. They come across a dry riverbed where giraffes reside, but these giants are formidable prey. The pride must work together as a team to succeed.	⊘	V
28	The American West	Witness the fascinating phenomenon of rain in the desert. Discover how storms in the American West can unleash massive amounts of water in a short period of time, shaping the landscape over millions of years. Uncover the creation of slot canyons, deep and narrow channels carved through solid rock. Marvel at the breathtaking tablelands and isolated pinnacles that result from this natural process.	Ø	V



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
29	Cacti	Explore the unique world of desert plants, specifically cacti, and how they store water in their swollen stems. Discover the challenges faced by animals, like the Harris hawk, when hunting amongst the spiky cacti. Uncover the mysterious killer in the desert, the butcherbird, and how it uses the spines as a tool to hold and store its prey. Learn about the ingenious solution the butcherbird has found to ensure its young never go hungry.	\checkmark	V
30	Deserts Of Peru	Watch the incredible transformation that can occur in arid deserts when water is added. Discover how locusts take advantage of the sudden abundance of food and multiply rapidly, forming a devastating swarm that can strip a land of vegetation. Learn about the destructive impact of locusts on the environment and the long-lasting effects on the barren desert landscape.	V	⊘
31	Kalahari Desert	Discover the challenges faced by animals in the Kalahari desert as they search for food and water. Explore the incredible overland migration of zebras, the longest made by any mammal in Africa. Uncover the journeys undertaken by desert-living elephants in their quest for water. Learn about the importance of waterholes in the desert and the risks that animals face when they gather there.	\checkmark	⊘
32	Desert Birds	Discover the incredible journey of sandgrouse chicks in the desert. Their father travels 200 kilometres every morning to get water for the family using specially adapted feathers. Explore the dangers they face from predators like the goshawk. Uncover why sandgrouse nest far from waterholes and the importance of safety in numbers. Witness the father's heroic efforts to provide water for his chicks every day for two months.	Ø	⊘
33	Deserts Of Nevada	Uncover the intense battle for power and survival among wild horses in the Nevada desert. Discover how water becomes a valuable resource, determining the dominant stallion and securing mating rights. Explore the risks and consequences faced by these majestic creatures as they fight for control of the waterhole. Witness the triumph of the new arrival as he claims victory and secures the future of his herd.	Ø	⊘
34	Heat In The Desert	Learn about the harsh conditions of desert life, shaped by the scarcity of water and the relentless power of the sun. Discover how temperatures in deserts are rising more than the global average, causing them to expand. Uncover the incredible adaptations of the shovel-snouted lizard, which can briefly cool itself by raising its feet off the scorching ground.	⊘	✓



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
35	Nocturnal Desert Animals	Witness the remarkable strategies that desert animals have developed to survive in extreme conditions. Uncover the secrets of the golden mole, a blind creature that uses its hearing to locate prey on the surface of the dunes. Learn about the desert long-eared bat, which hunts scorpions on the ground using its hearing. Finally, watch the incredible ability of darkling beetles and webfooted geckos to extract water from the air in the driest places on Earth.	Ø	V
Grasslands				
36	The Saiga Antelope	Experience the fascinating world of grasslands, where one quarter of the Earth's land is covered by grass. Discover the tallest grass in northern India and the incredible creatures that call it home. Uncover the cycle of abundance, destruction, and rebirth that affects every creature on the grasslands. Learn about the saiga antelope, born with lanky legs and a unique nose that can detect fresh grass from hundreds of kilometres away.	Ø	V
37	The Rains	Explore the world of grasslands, where rain is sporadic and can come all at once, causing drastic changes. Learn about the Okavango grasslands in Southern Africa, where water transforms the landscape. Discover the challenges faced by a pride of lions with 3-month-old cubs, as they struggle to hunt in the flooded grasslands. Witness the arrival of buffalo herds, the most dangerous prey for lions. Will the lions be able to survive and feed their cubs?	\checkmark	\checkmark
38	The Harvest Mouse	Discover the incredible growth of grasses, which can go from shoots to flowers in just a few days. Explore how grasses create a towering landscape for creatures like the harvest mouse. Learn about the challenges of climbing grass and how the harvest mouse uses its prehensile tail to navigate.	\checkmark	\checkmark
39	The Carmine Bee-Eater	Learn about the African savannah and discover how carmine bee-eaters catch insects in mid-air. They need help from a kori bustard to stir up the grass. Then, explore ostriches and how they provide transportation for the bee-eaters. However, the bee-eaters need a creature even bigger - an African bull elephant - to create a path through the grass. As summer ends, the race to stock up on insects intensifies.	⊘	\checkmark
40	The Serval Cat	Uncover the life of a specialised predator, the serval cat, in the dry season. With extra-long legs and radar-like ears, the serval cat hunts for Southern African vlei rats. These clever prey move in short bursts to avoid detection, but even the slightest rustle gives the serval cat a clue. However, with a scarcity of rodents, the serval cat will have to go hungry.	Ø	\checkmark



Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
41	Jackson's Widowbird	Witness the nomadic way of life of grassland animals like wildebeest and Jackson's widowbirds. Discover how the male widowbird creates an elaborate breeding plumage and carefully selects grass blades to create a stage for attracting a mate. Learn about the challenges he faces in impressing the females and how stamina plays a role in winning their admiration. Uncover the final outcome of his courtship efforts.	Ø	V
42	Harvesting The Grass	Explore the incredible world of grass-eating insects in the East African savannahs and South American grasslands. Discover how tiny grasscutter ants harvest tough grass blades and feed them to fungus. Learn about the industriousness of ants and termites, who collect and break down dead grass to extract nutrients. Uncover the survival strategies of grasses, which can regenerate after fire and rain.	Ø	V
43	The Snow	Discover the challenges faced by bison and foxes in the freezing grasslands of North America during winter. The bison use brute strength to shovel through deep snow to find withered grass, while the fox relies on precision and listening skills to locate voles beneath the snow. Explore how these animals adapt to survive in extreme conditions and how their survival depends on the changing seasons.	\checkmark	\checkmark
44	Caribou	Witness the incredible journey of caribou in the far north as they give birth to over seventy thousand calves. These newborns must quickly strengthen their legs to keep up with their parents on a never-ending march. However, they face the constant threat of predators, like Arctic wolves, who try to separate the weak or slow. The caribou embark on a lifelong journey, chasing the seasonal growth of grass on which they depend.	Ø	V
Cities				
45	Jodhpur	Learn about the fascinating world of langurs in Jodhpur, India. Discover how the resident alpha male defends his territory against a gang of bachelor langurs. Uncover the surprising relationship between langurs and the people in the Temple Gardens, where langurs are revered and given abundant food.	⊘	⊘
All Courses	Course Overview	B B C BITESIZE	°ENI	'LID\

Nugget Number	Nugget Name	Nugget Summary		ble for Secondary
46	New York	Explore how animals adapt to urban environments, such as the peregrine falcons in New York City. Despite the bustling and unnatural surroundings, the city provides an ideal habitat for these falcons, with tall buildings offering nesting sites and high perches for catching wind. The city also provides an abundance of prey, particularly near the water. In just forty years, the peregrine falcons have established themselves and are more successful than their counterparts in the wilderness.	⊘	✓
47	Rome And Townsville	Uncover the fascinating behaviours of starlings in Rome during the winter months. Discover how they gather in large numbers for safety and perform mesmerising aerobatics. Explore the importance of warmth in the city for survival. Learn about the great bowerbird in Australia and its elaborate courtship display using carefully chosen objects. Witness the risks and challenges it faces in impressing a female. Will its efforts be successful?	⊘	\checkmark
48	Toronto And Jaipur	Witness the challenges faced by a mother raccoon as she moves her young from their rooftop home to ground level. Raccoons are opportunistic and eager to explore their new environment, but must also learn quickly to navigate the hazards. Uncover the problem-solving abilities of urban raccoons compared to their country counterparts. Learn about the enterprising rhesus macaque monkeys in Jaipur, India, and how they navigate the urban jungle to get their share of juicy fruit.	\checkmark	\checkmark
49	Harar	Discover the fascinating relationship between humans and spotted hyenas in the city of Harar, Ethiopia. Explore how these feared animals have become trusted companions, as they feast on the ancient meat market's carcasses. Uncover the unique belief that hyenas protect the town from bad spirits. Despite their ferocious reputation, within the city walls, these hyenas behave peacefully, showcasing a remarkable bond with humans.	\bigcirc	\checkmark
50	Albi	Discover the surprising relationship between pigeons and wels catfish in urban environments. Pigeons, the most successful urban bird, come to the river to bathe and cool down. However, their lack of fear has attracted the attention of wels catfish, who have developed a taste for pigeon. Using their barbels to sense movement, these fish have adapted to a new hunting strategy.	\checkmark	\checkmark
51	Lighting	Explore how the invention of electric light has impacted wildlife in cities. Discover how the bright lights confuse and disorient animals, leading to dangerous situations. Uncover the challenges faced by animals, such as hawksbill turtles, as they navigate their way towards the sea. Learn about the risks they encounter, including predators and road hazards. The urban environment has caused many species, like the hawksbill turtle, to struggle to survive.	⊘	\checkmark

Nugget Number	Nugget Name	Nugget Summary		econdary
52	Urban Greening	Uncover the idea of building cities in harmony with nature and inviting wildlife back. Discover how cities like Milan and Singapore are greening their buildings and creating habitats for animals. Learn about the vertical forest in Milan and the grove of Supertrees in Singapore. Explore the potential for animals to thrive in urban environments.	\checkmark	✓

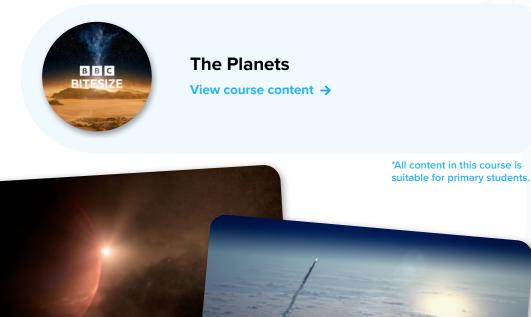


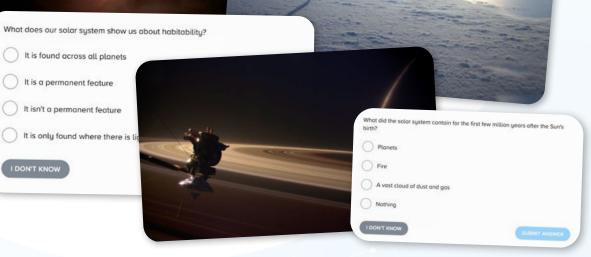
Course Overview

The Planets

This stunningly ambitious series brings to life the most memorable events in the history of the solar system, by using breathtaking visual effects to tell the thrilling story of all eight planets.

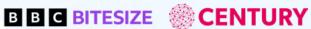
Transporting you to the surface of these dynamic worlds to witness the moments of high drama that shaped each one, The Planets reveals how the latest science allows us to unlock their past lives. It pieces together clues of magnificent lost waterfalls on Mars, the mass planetary migrations as they jostled for position early in their history, and even the distant fate of Saturn as one of its moons awakens to form a beautiful water world.











Course Content

All Courses

The Planets



Suita	ble for
Primary I	Secondary

lugget Number	Nugget Name	Nugget Summary	Suitable fo Primary I Second	
A Moment I	n The Sun - The Terrestrial I	Planets		
1	Titan	Explore the possibility of life on Titan, one of Saturn's moons. Although scientists believe that life cannot exist on Titan's surface today, the presence of organic compounds suggests a different story in the future. As the Sun ages and warms Titan, its icy mountains may melt, creating oceans of liquid water. This combination of hydrocarbons and water could provide the perfect conditions for life.	⊘	(
2	Habitability	Discover the dynamic nature of solar systems and the possibility of habitable worlds beyond Earth. Explore the amazing fact that almost all stars have their own solar systems, with hundreds of billions of planets in our galaxy alone. Learn about the belief that there are likely many habitable worlds in the universe.	⊘	(
3	Early Universe	Uncover the birth of the Sun and the formation of the rocky planets closest to it. Discover the dramatic stories of Mercury, Venus, and Mars, as they become more or less hospitable over time, with the exception of the only habitable planet in our solar system, Earth.	⊘	(
4	Chemistry of Mercury	Learn about the mysteries of Mercury, the most cratered planet in the solar system. Discover its unusual orbit and disproportionately large core. Uncover the clues found in Mercury's chemistry that challenge previous theories of its formation. Explore the possibility that Mercury formed closer to Earth and how it ended up in its current orbit.	Ø	
5	Future Habitable Zone	Explore the possibility of life existing on the moons of gas giants in our solar system, such as Enceladus, Europa, and Titan. The Cassini spacecraft was sent on a mission to orbit Saturn and investigate Titan, a moon with a thick atmosphere and a mysterious surface. The Huygens probe was deployed to descend through Titan's atmosphere and land on its surface, providing us with the first images and data.	\checkmark	



Course Overview



get Number	Nugget Name Young Venus	Nugget Summary		Suitable for Primary I Secondary	
6		Witness the mysterious world of Venus, located 50 million kilometres beyond Mercury. Discover its unbroken blanket of clouds and the extreme conditions that make it uninhabitable. Uncover the secrets of Venus's past, when it was once a wetter and potentially habitable planet. Learn about the Soviet Venera program's missions to Venus and their groundbreaking discoveries.	\checkmark	V	
7	Surface of Mercury	Discover the surprising discoveries made about our sister worlds and their potential to support Earth-like conditions. Learn about the challenges of exploring Mercury and how the Messenger spacecraft overcame them. Explore the importance of gravity in controlling the spacecraft's trajectory. Uncover the excitement of the first image acquired from orbit around Mercury and its implications for our understanding of the planet's formation.	\bigcirc	√	
8	Mars	Uncover the effects of the Sun's brightness on the terrestrial planets. Discover how Mars, despite having rivers and seas, struggles to retain its atmosphere due to its smaller size and lack of a protective magnetic field. Learn about the solar wind and its role in stripping away Mars' atmosphere, leaving little to protect its water. Explore the delicate balance of habitability and how the fate of the planets is tied to their parent star.	⊘	\checkmark	
9	Venus	Explore the fascinating history of the planet Venus. Discover how Venus was once similar to Earth, with oceans and a temperate climate, making it a potential place for life to thrive. Uncover the changes that occurred over time, as the sun grew brighter and Venus's surface temperatures heated up. Learn about the runaway greenhouse effect that caused Venus to lose its oceans and become the hot, inhospitable planet it is today.	\checkmark	√	
ne Two Sis	ters - Earth and Mars				
10	Life on Earth and Mars	Learn about the conditions needed for life to start and how they may have existed on early Earth and Mars. Discover the possibility of life starting under the oceans in deep-sea hydrothermal vents. Uncover the role of NASA's Mars Reconnaisance Orbiter in searching for conditions where life could have begun on Mars, including discovering ancient seabeds and mineral deposits formed in deep-sea hydrothermal environments.	\checkmark	\checkmark	
11	Future of Mars	Discover the fascinating story of Mars, from its birth to its current state as a rusted and desolate planet. Explore the exciting missions that are searching for signs of life on Mars, such as the European Space Agency's Exomars and NASA's Orion. Learn about the potential consequences of finding life on Mars and how it could change our understanding of the universe.	Ø	V	





Nugget Number	Nugget Name	Nugget Summary		Suitable for Primary Secondary	
12	Changing Climate of Mars	Witness the transformation of Mars' climate and the processes that caused it. Discover the catastrophic flooding and the formation of the largest waterfall in the solar system. Uncover the role of NASA's Maven probe in understanding Mars' climate change. Learn about Maven's elliptical orbit and its instruments for measuring the behavior of atoms and molecules in Mars' atmosphere. Understand the gas loss from Mars' atmosphere and its impact on the planet's climate.	\checkmark	V	
13	Early Mars and Earth	Understand the fascinating history of Mars and Earth. Discover how Mars was once a water world, with evidence suggesting the presence of a vast sea. Learn about Earth's current status as the only blue planet, with 70% of its surface covered by ocean. Uncover the early conditions of Earth, when it was unrecognisable and its atmosphere was poisonous.	Ø	√	
14	Mars Exploration	Explore the journey of Mariner 4 to Mars and the groundbreaking discoveries made by rovers like Spirit, Opportunity, and Curiosity. Uncover the evidence of flowing water on Mars and the possibility of life evolving on the planet. Discover the challenges faced by spacecraft in landing on Mars and the successful landing of Curiosity. Learn about the analysis of Martian soil and the discovery of organic matter, providing clues in the search for life.	Ø	\checkmark	
15	Late Heavy Bombardment	Uncover the violent past of the moon and the impact of the Late Heavy Bombardment. Discover how the rocky planets, including Earth, were hit by fragments and rocks from other places in the solar system. Explore the chaos caused as rocks resurfaced Earth and Mars, and obliterating a significant portion of their crusts. Learn about the critical event in the history of the terrestrial planets and the lasting effects of the Late Heavy Bombardment.	\checkmark	V	
16	Birth of Mars	Discover the fascinating history of Mars and Earth, two planets that were once identical but have evolved in different ways. Explore how Mars was once a vibrant world with rivers and oceans, but now lies barren and dry. Uncover the reasons behind these changes and learn about the factors that have shaped the planets' destinies.	Ø	V	
17	Solar Wind and Magnetic Field	Learn about the reasons behind Mars' loss of water and atmosphere, leading to its frozen and dry state. Uncover the importance of Earth's magnetic field in shielding us from solar wind and ionising radiation. Learn about how Mars once had a magnetic field like Earth. Delve into the differences between Mars and Earth in terms of size and distance from the sun, which ultimately led to Mars losing its protective shield.	Ø	V	



Suitable for **Nugget Summary** Primary | Secondary The Godfather - Jupiter Uncover the incredible journey of the Juno Spacecraft as it travels to Jupiter to uncover the secrets of its formation. Witness the breathtaking images captured by Juno's camera, revealing the 18 Juno Great Red Spot and blue poles of Jupiter. Discover how Juno's mission helps us understand the planet's interior structure and its early moments in the solar system. By analysing magnetic and gravitational fields. Juno reveals the core of Jupiter, providing valuable insights into its origins. Delve into the fascinating world of the asteroid belt and its role in the solar system's evolution. Discover how the asteroid belt separates the inner and outer solar system, and why it is not as 19 **Asteroid Belt** densely packed as people think. Uncover the mission of the spacecraft Dawn, as it investigates the asteroids Vesta and Ceres. Learn about the surprising discoveries made on Ceres, including bright spots and evidence of a former global ocean. Explore the fascinating story of Ceres, a dwarf planet in our solar system. Discover how Ceres was once on its way to becoming a fully-fledged world, with a deep salt water ocean. Uncover the role 20 Ceres of Jupiter in disrupting the asteroid belt and starving Ceres of material, halting its growth. Learn how Ceres is now a cold, barren rock, unable to become a full-fledged planet. Understand the fascinating influence of Jupiter and the asteroid belt on other planets. Learn about The Influence of Jupiter's potential to fling asteroids towards Earth. Explore how a collision with a massive asteroid 21 **Asteroids** led to the extinction of dinosaurs and paved the way for human existence. Scientists believe that Jupiter continues to protect us from future asteroid impacts. Witness the incredible power of Jupiter. Discover how Jupiter acted as a shield against a comet called Shoemaker-Levy 9. Learn about the exciting moment when Galileo witnessed the fragments 22 Comet Shoemaker Levy 9 of the comet crashing into Jupiter, creating big flashes and a giant dark cloud. This unique opportunity allowed scientists to study the destructive impact and understand how Jupiter protects Earth from potential collisions. Explore the formation of our solar system, starting with a distant exploding star that sent a shock-Jupiter's Influence on wave across the galaxy. Discover how Jupiter played a crucial role in shaping the solar system and 23 learn about the formation of the four rocky planets in the inner solar system. Investigate the anomthe Solar System alies found on Venus and Mars that hint at a catastrophic event that shaped our solar system.



24				
	Fate of Jupiter	Learn about the fascinating story of Jupiter, the oldest and largest planet in our solar system. Discover how Jupiter's youth caused chaos for some planets, but cleared the way for others to thrive. Jupiter's unpredictable nature could have dire consequences for the inner solar system, including Earth.	Ø	\checkmark
25	Jupiter's Effect on the Planets	Understand how Jupiter's journey through the solar system has had a significant impact on the formation of other planets. Jupiter's immense gravity scatters material, preventing Mars from growing larger and potentially stopping the formation of super-Earths. However, Saturn's arrival changes everything as the two planets lock into a special configuration and reverse their migration course. This allows for the formation of the inner planets, including Earth.	\checkmark	V
26	Jupiter	Discover the fascinating world of Jupiter, the Godfather of the Planets. Explore its serene appearance that hides a planet in turmoil, with violent storms and deep clouds. Uncover the dark past of Jupiter and its influence on Earth, as seen through the evidence of Barringer Crater. Learn about spacecraft missions, like Pioneer and Voyager, that have provided us with detailed images and knowledge about Jupiter's atmosphere, moons, and rings.	⊘	V
27	lo	Delve into the fascinating world of Jupiter's moon, Io. Discover why Io is the most volcanic world in the solar system, with hundreds of active volcanoes erupting at once. Learn about the constant tug from Jupiter and its other moons, causing friction and heat inside Io. This tidal heating process raises the temperature to over 1200 degrees Celsius, creating lava lakes and volcanic plumes that reach up to 300 kilometres into space.	Ø	\checkmark
28	Galileo	Uncover Galileo's incredible discoveries about Jupiter and its moon Europa. Discover the powerful winds and lightning on Jupiter, as well as the mysterious fractured surface of Europa. Explore the surprising fact that Europa is an ice moon with an ocean deeper than Earth's. Sadly, Galileo's mission comes to an end, but it leaves behind a legacy of successful exploration.	\checkmark	\checkmark
Life Beyond	The Sun - Saturn			
29	Cassini	Explore the transformation of Saturn, from a small body to a gas giant planet, in just a few million years. Discover the mysteries beneath Saturn's hazy exterior and the secrets of its massive storms. Uncover the challenges faced in building the Cassini probe and its journey to Saturn, including fly-bys past other planets. Learn about the breathtaking images and new insights into Saturn's mysteries that Cassini provides.	\bigcirc	\checkmark



Nugget Number	Nugget Name Voyager	Learn about the Voyager probes, two spacecraft that embarked on a remarkable journey to explore the distant worlds of our solar system. Witness the awe-inspiring images of Saturn and its rings, revealing its banded structure and intricate details. These photographs provide critical evidence of Saturn's evolution and composition, shedding light on the early solar system. Discover how the Voyager probes have transformed our understanding of this magnificent planet.	Suitable for Primary Secondary	
30			Ø	✓
31	Death of Cassini	Explore the incredible journey of the Cassini spacecraft as it ends its mission in a spectacular fashion, diving into Saturn's atmosphere. Witness the uncertainty and triumph as Cassini survives its approach to Saturn and continues to communicate with Earth. Experience the bittersweet moment as the spacecraft loses control and disintegrates. Reflect on the legacy of Cassini's data and the potential for life on Saturn.	Ø	V
32	Enceladus	Understand the fascinating moon Enceladus, one of Saturn's moons. Despite its small size, Enceladus is alive with activity, with geysers ejecting ice and water vapour into space. Cassini, a spacecraft, made multiple flybys and discovered a subterranean ocean beneath the icy surface, along with complex organic compounds. The moon's interaction with Saturn creates hydrothermal vents, similar to those on Earth that support life. Scientists speculate that Enceladus may be a potential habitat for extraterrestrial life.	\checkmark	V
33	Formation of Saturn	Discover the mysteries of Saturn, a planet with a unique ring made of frozen water. Explore the stunning vistas created by trillions of pieces of ice sculpted by gravitational forces. Uncover the secrets of Saturn's size, weather, and the origin of its rings. Learn about the possibility of finding life on Saturn and how this incredible planet formed from ice and rock.	Ø	V
34	Rings of Saturn	Dive into the fascinating world of Saturn and its iconic rings. Discover the mystery behind the sparkling brilliance of the rings and why they appear so bright. Uncover the surprising fact that the rings are actually much younger than previously thought. Learn about the role of Saturn's moons in the formation of the rings and how they provide clues about the history and evolution of the planet. Could the rings have once been a moon?	Ø	✓
35	Transformation of Saturn	Explore the fascinating story of how Saturn's iconic rings were formed. Discover how an ice moon, too close to Saturn, was pulled apart by its immense gravitational force, resulting in the creation of the rings. Learn about the evolution of the rings and the surprising vertical structures within them. Cassini's mission has provided us with incredible images and deepened our understanding of Saturn, but there is still more to uncover beyond the rings.	V	✓



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36	Weather on Saturn	Uncover the fascinating features of Saturn's atmosphere, including the giant hexagon formation. Unlike Earth, Saturn's weather is not driven by the sun, but by an internal heat source. Cassini's observations reveal extreme pressure, lightning, and even diamond rain within the planet. At 30,000 kilometres deep, the atmosphere behaves like a liquid metal, releasing incredible amounts of heat.	Ø	\checkmark	
Into the Dar	kness - Ice Worlds				
37	Climate of Neptune	Learn about the fascinating discoveries made by Voyager as it reached Neptune, a planet with swirling clouds and incredibly fast winds. Voyager found an immense dark vortex, a storm the size of Earth, and even discovered that Neptune is warmer than Uranus. The lack of obstacles in Neptune's atmosphere allows for supersonic winds that outpace those on Jupiter and Saturn.	⊘	✓	
38	Triton	Explore the fascinating moon Triton. Voyager's images of Triton reveal huge geysers erupting 8 km high. The cracks and pits on Triton's surface may be linked to its unusual orbit around Neptune, suggesting that Triton may have formed as a wandering object before being drawn in by Neptune's gravity. Over time, Triton's orbit becomes more circular, resulting in its rugged surface.	⊘	\checkmark	
39	Rings of Uranus	Discover the fascinating world of Uranus. Explore its unique features, such as its cold temperatures and lack of storms. Uncover the surprising existence of rings and moons around Uranus, and learn about their role in shaping the planet's ring system. Delve into the mystery of Uranus' tilted axis and how it may have been caused by a massive collision.	Ø	\checkmark	
40	Outer Solar System	Understand the mysterious planets of Uranus and Neptune, located far beyond Mars and Saturn. These planets are incredibly cold and distant, but humans have managed to send a mission there once. By taking advantage of a rare planetary alignment, we can use the gravity of each planet to accelerate the spacecraft and shorten the trip time. Voyager will travel 1.4 billion kilometres before reaching the icy worlds.	Ø	V	
41	Scale Model of the Solar System	Explore the solar system at scale! Discover the incredible size of the Sun, which is 1.4 million kilometres in diameter. Uncover the rocky inner worlds and the gas giants like Jupiter and Saturn. Learn about the reflective rings of Saturn and the vast distances between the planets. Finally, reach the outermost planet, Neptune, and realise the immense journey Voyager has taken.	⊘	\checkmark	



Nugget Number	Nugget Name	Nugget Summary		ole for Secondary
42	New Horizons	Dive into the fascinating discoveries made by the New Horizons spacecraft during its visit to Pluto. Uncover the touching story of Clyde Tombaugh, the discoverer of Pluto, and how his ashes were sent on the spacecraft's journey. Learn about the surprising image of Pluto's glowing atmosphere and the hidden ocean of water beneath its surface. New Horizons continues its exploration of the Kuiper Belt, providing insights into the origins of our solar system.	\checkmark	⊘
43	New Horizons Exploring Pluto	Uncover the fascinating world of Pluto with New Horizons. Discover the surprising features of Tombaugh Regio, including the heart-shaped region and the mysterious Sputnik Planitia. Explore the strange patterns on the frozen nitrogen surface and learn about the theory of a hidden ocean beneath. Find out how the heat from Pluto's interior creates these unique phenomena.	\checkmark	⊘
44	Kuiper Belt	Discover the Kuiper belt, the remotest part of the solar system, where trillions of frozen lumps of water, ammonia, and methane circle the distant sun. Uncover the mission of NASA's New Horizons spacecraft as it embarks on a decade-long voyage to explore the Kuiper belt and visit the planet Pluto.	Ø	V
45	The Story of the Planets	Explore the incredible journey of planetary exploration, from our first steps into space to landing robotic explorers on distant planets. Discover the limitless wonder and beauty of our solar system, with more surprises and discoveries waiting to be uncovered. Join us in piecing together the amazing story of the planets.	\checkmark	⊘



