Story 3: *T-Rex* as a skilled predator

Why did *T-Rex* grow to such a large size?

故事三：霸王龙是熟练的捕猎者

为什么霸王龙长到这么大？

1. A fully grown *T-Rex* was about 12 metres long and probably somewhere between 10 and 20 metric tons! Scientists now realize that its size was linked to predation. How do you think the two things are linked together?

   一头完全成长的霸王龙了长约12米，大概10至20吨重！科学家们现在认识到，它的大小是与捕食有关系的。您如何看待这两件事情之间的联系？

2. Like the African lion in the jungle or the great white shark in the ocean, *T-Rex* was an apex predator. What does this expression mean?

   就像在丛林中的非洲狮、或海洋里的大白鲨一样，霸王龙是顶级掠食者。这个词汇是什么意思？

During the dinosaur-era (Mesozoic), size really mattered. In fact, there was something of an evolutionary 'arms race' amongst predators and prey during that period. Prey increased in size to avoid predation, but this meant that the predators also had to increase in size so that they could hunt and kill their prey.

在恐龙时代（中生代），体型大小至为关键。事实上，在那段时期的捕食者和猎物，进行着进化界的「军备竞赛」。虽然猎物为避免被捕食而增大体积，但这意味着掠食者也不得不长得更大，务求能够捕杀猎物。

Why did *T-Rex* grow to such a large size?
为什么霸王龙长到这么大？

3. Why did theropod dinosaurs become so large?

   兽脚类恐龙为何变得如此之大？

Scientists can find out how long and how fast dinosaurs grew by studying cross-sections of their bones, just like finding out the same things from tree rings. We now know that *T-Rex* lived for only about 28 years. To reach its huge size, it needed to put on the equivalent of about 2 kilograms every day!

科学家们可以通过研究恐龙的骨头横截面，找出牠们的成长期和速度，就像找出从树木年轮中得到的发展一样。我们现在知道，霸王龙的寿命只有28年。为了长到最大的体积，它每天需要长两公斤体重！

4. What might be some disadvantages of being so big?

   身型这么庞大有什么缺点？

5. Huge theropod dinosaurs like *T-Rex* got smaller and lighter before they evolved flight. Why was this important for their evolution?

   像霸王龙等巨大的兽脚类恐龙，在进化到可以飞行前，都变得更小和更轻。这为什么对进化来说是重要的？

ANSWER

Senior Secondary 高中

DINO ACADEMY 恐龍教室 奇妙的恐龙世界

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   The larger T-Rex was, the fewer predators that could eat it and the bigger the animals it could eat.

   霸王龙的体型越大，可以把牠们吃掉的天敌越少，而牠可以吃的动物就越大。

2. Like the African lion in the jungle or the great white shark in the ocean, *T-Rex* was an apex predator. What does this expression mean?

   就像在丛林中的非洲狮、或海洋里的大白鲨一样，霸王龙是顶级掠食者。这个词汇是什么意思？

   It was the largest predator so nothing else was big enough or strong enough to eat it.

   牠是最大的食肉动物，没有其它动物可以大到或强到足够把牠吃掉。

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   兽脚类恐龙为何变得如此之大？

   They needed to become larger and stronger in order to catch their prey such as hadrosaurs and sauropod dinosaurs.

   他们需要变得更大和更强，方能捕食如鸭嘴龙类和蜥脚类恐龙等猎物。

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4. What might be some disadvantages of being so big?

   身型这么庞大有什么缺点？

   It would need to eat a huge amount of food each day compared to smaller animals / It would become vulnerable if its food supply declined.

   相比起较小的动物，牠每天需要吃大量的食物， 如果食物供应减少，牠会变得衰弱。

5. Huge theropod dinosaurs like *T-Rex* got smaller and lighter before they evolved flight. Why was this important for their evolution?

   像霸王龙等巨大的兽脚类恐龙，在进化到可以飞行前，都变得更小和更轻。这为什么对进化来说是重要的？

   Being lighter was helpful as it made the first flight easier to achieve.

   身体更轻是有益的，因为能让牠第一次飞行更容易实现。