

### Dictation Contest (PRJr, 初級) No. 918

Hello everyone! Welcome back to PRJr.

Jessica is at the amusement park. He sees the rides and games. The carousel has horses and chariots on it. There are so many balloons with different shapes and colors. There are also roller coasters that go up and down, but Jessica is nervous about them. Jessica likes the carousel best, because it goes round and round gently.

That's all for today, see you next time."

### Dictation Contest (PR 1, 中級) No. 918

Hi everyone! Welcome back to PR1. Let's take a listen to a story about our solar system.

Our solar system has nine planets, many moons, and one star. However, there are still many other things in this solar system.

Asteroids are big rocks that fly around the sun. They are smaller than moons, and they do not orbit planets. Most of the asteroids orbit between Mars and Jupiter. The circle of asteroids is called the asteroid belt. The asteroids are not like planets, so they move differently. Asteroids can move in closer or farther away from the sun. Sometimes they hit the planets. When we look at pictures of the moon, we see many holes on it. These holes are called craters, and they are where asteroids and comets hit the moon.

We will continue the story in the next video. That's it for today. See you!

## Dictation Contest (PR2 上級) No. 918

Hello everyone! Welcome back to PR2.

In this video, I will be talking about how mammals and birds control their core temperature.

Let's begin.

Mammals and birds generally maintain body temperature within a narrow range that is usually considerably warmer than the environment. Because heat always flows from a warm object to cooler surroundings, birds and mammals must counteract the constant heat loss. This maintenance of warm body temperature depends on several key adaptations. The most basic mechanism is the high metabolic rate of endothermy itself. Endotherms can produce large amounts of metabolic heat that replace the flow of heat to the environment, and they can vary heat production to match changing rates of heat loss. Heat production is increased by such muscle activity as moving or shivering. In some mammals, certain hormones can cause mitochondria to increase their metabolic activity and produce heat instead of ATP.

This non-shivering thermogenesis takes place throughout the body, but some mammals also have a tissue called brown fat in the neck and between the shoulders that is specialized for rapid heat production. Through shivering and NST, mammals and birds in cold environments can increase their metabolic heat production by as much as 5 to 10 times above the minimal levels that occur in warm conditions. Another major thermoregulatory adaptation that evolved in mammals and birds is insulation. Some examples of insulation are hair, feathers, and fat layers.

We will learn about it in detail in the next video.

That's it for today. See you soon!