


Classifying Organisms

Learning Objective:

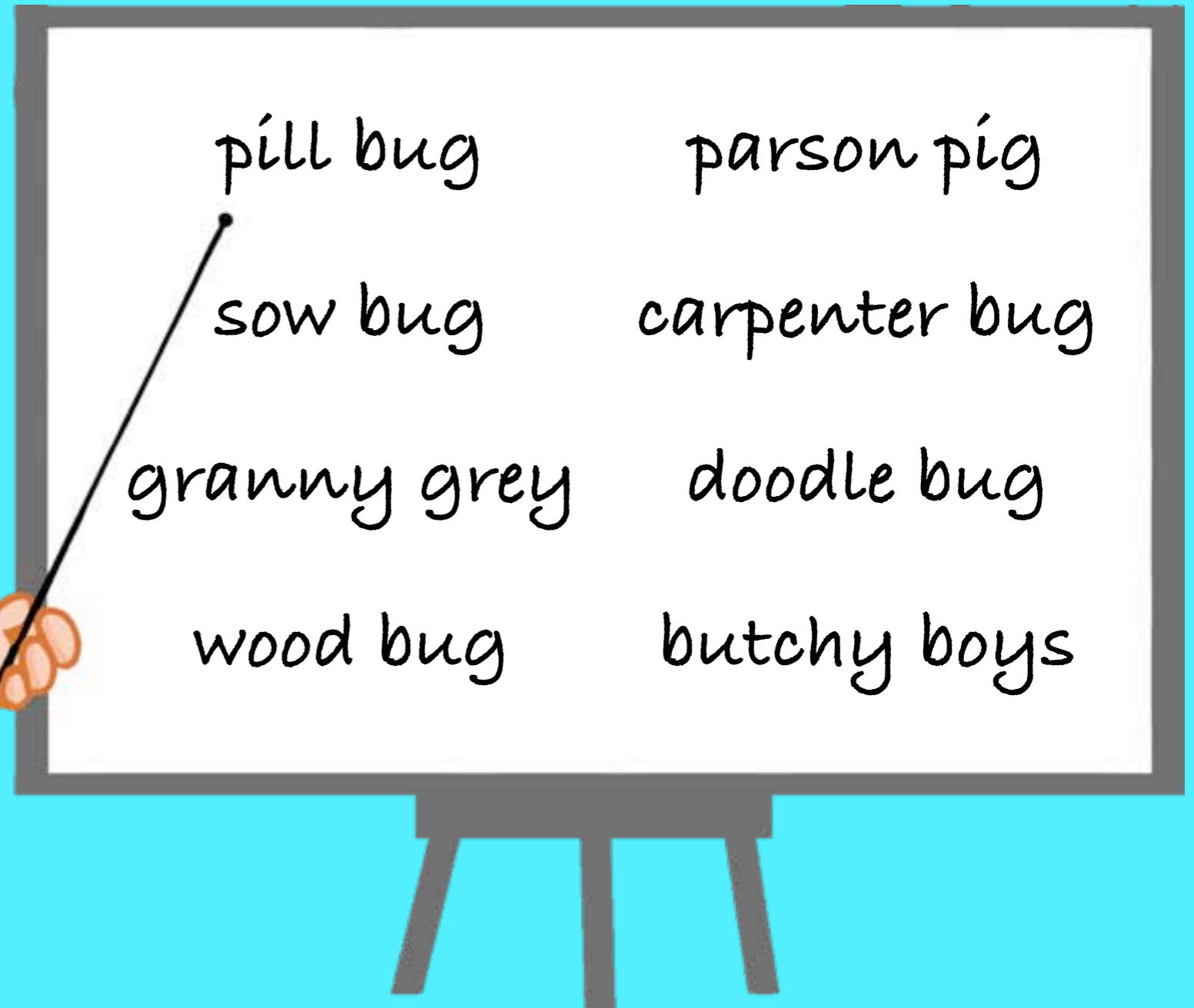
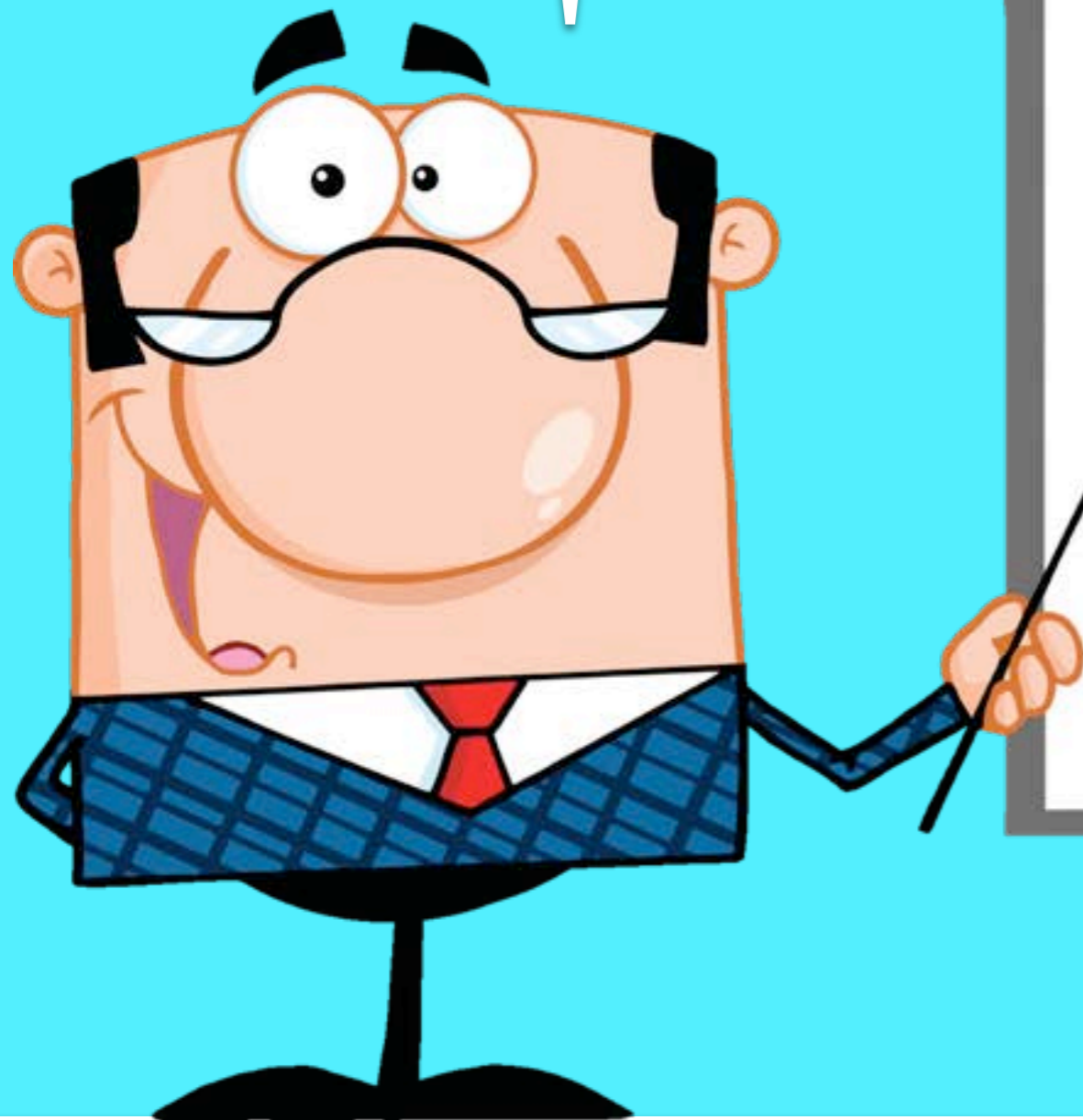
To find out about Carl Linnaeus and his classification system.



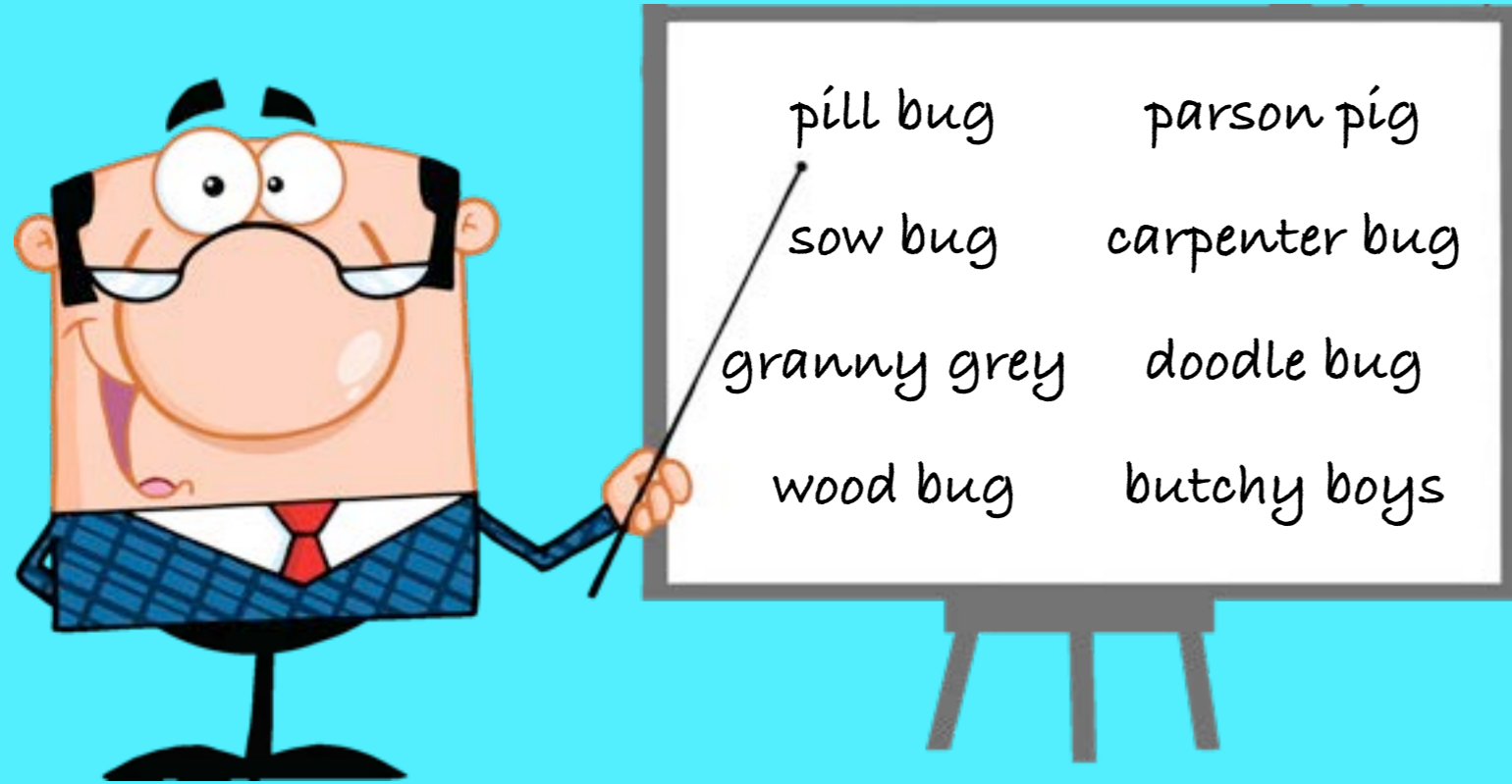
A cartoon character with a large brown nose, wide eyes, and a friendly smile. He is wearing a green suit jacket, a white shirt, and a green patterned tie. He is pointing his right index finger towards a purple speech bubble on the right. The background is a solid light blue color.

Why do you think being able to classify organisms is important?

Take a look at the names of these organisms. Do you know what kind of organism each one is?



These are actually all names for the same organism. We know it most commonly as a woodlouse but there are lots of different names for it in other parts of the world.



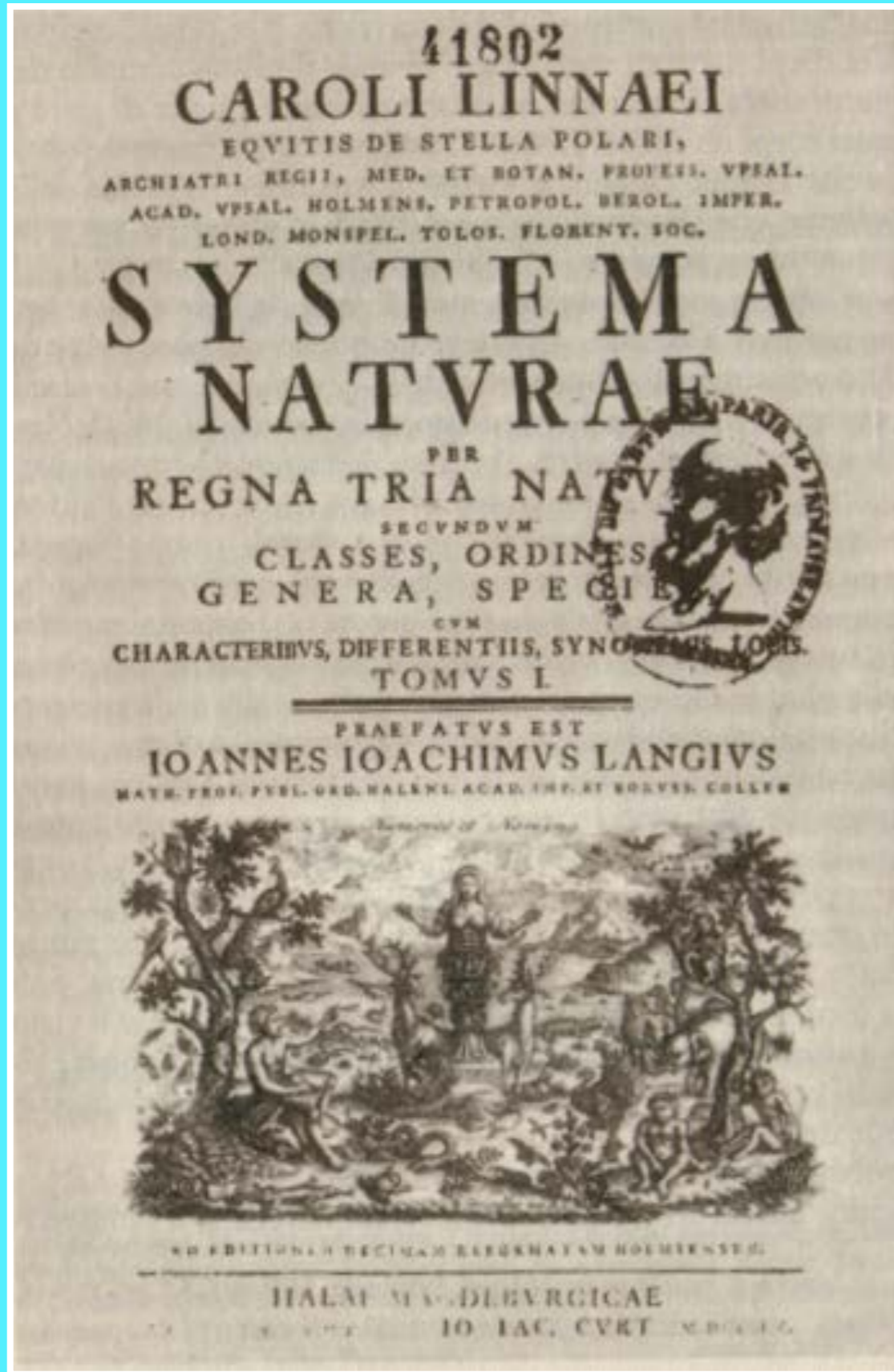
Before scientists classified organisms, there was no common way of identifying plants and animals. People in different parts of the world called the same plants and animals different names.





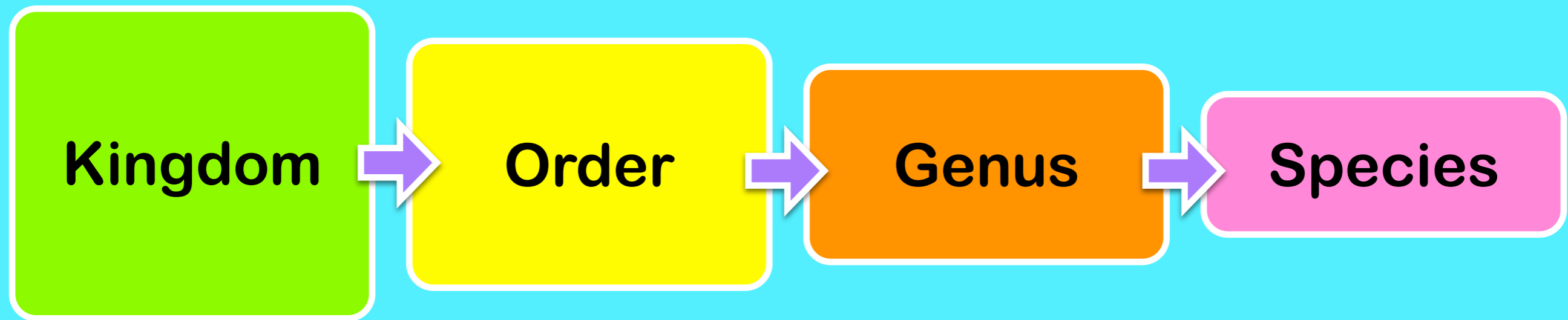
This is Carl Linnaeus. He was born in 1707 in Sweden. He is known as the Father of Taxonomy. Taxonomy is the science of identifying, naming and classifying organisms. He developed a system for classifying organisms which is the basis for how we classify organisms today.

From an early age, Linnaeus had a great love of plants and animals. His father taught him the names of all the plants he knew (which all had long Latin names that were hard to pronounce). As he got older, he spent many years travelling to different places to collect different species of plants.



Linnaeus created a system that would make it easier to identify organisms. In 1735, he published his 'Systema Natura' which was an 11-page booklet outlining his new system for classifying organisms. During his career, he added more and more organisms to his system until he had created two large books.

The Linnaeus classification system involved splitting organisms into groups according to the features Linnaeus observed. The first step was splitting them into kingdoms: plants, animals and minerals. Next, he split them into orders, then into genera (genus), then into species.



He also came up with a new way of naming organisms. He still named them in Latin so there was a common name that could be understood by scientists all over the world, but he limited the name to two words. The first part of the name was the genus the organism belonged to. The second part was the species. This system is known as binomial nomenclature.



Let's look at the tomato as an example of binomial nomenclature...

Latin name before Linnaeus:

“Solanum caule inermit herbaceo, foliis pinnatis incisiss, racemis simplicibus”



Latin name after Linnaeus:

“Solanum lycopersicum”

‘Solanum’ is the genus and ‘lycopersicum’ is the species.

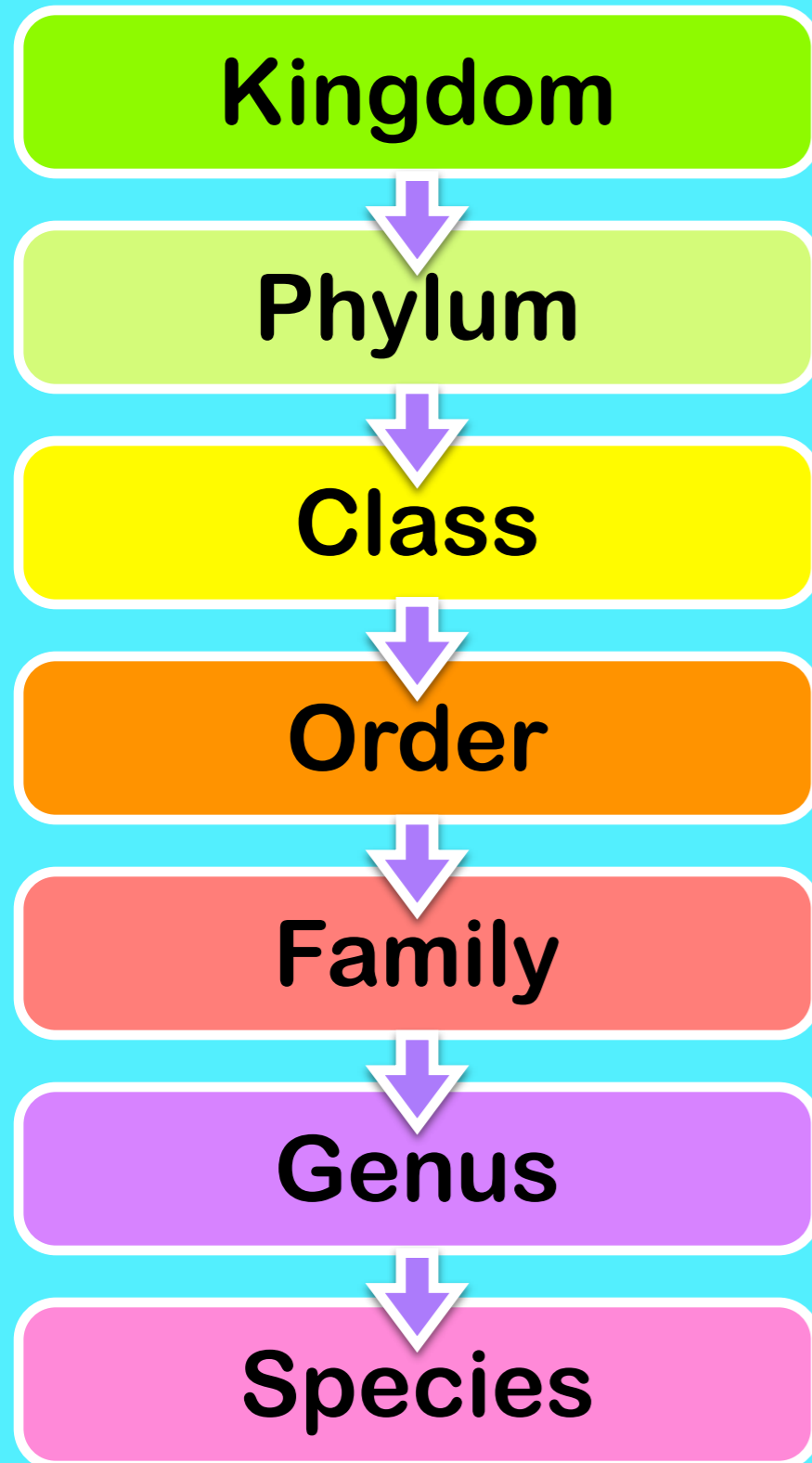


Other scientists started using Linnaeus' system until it became a universal way of classifying and naming organisms. Thanks to him, scientists all over the world have a common name for organisms, no matter what language they speak.

Since Linnaeus, his classification system has been developed and added to. Let's have a look at how the classification system works today...



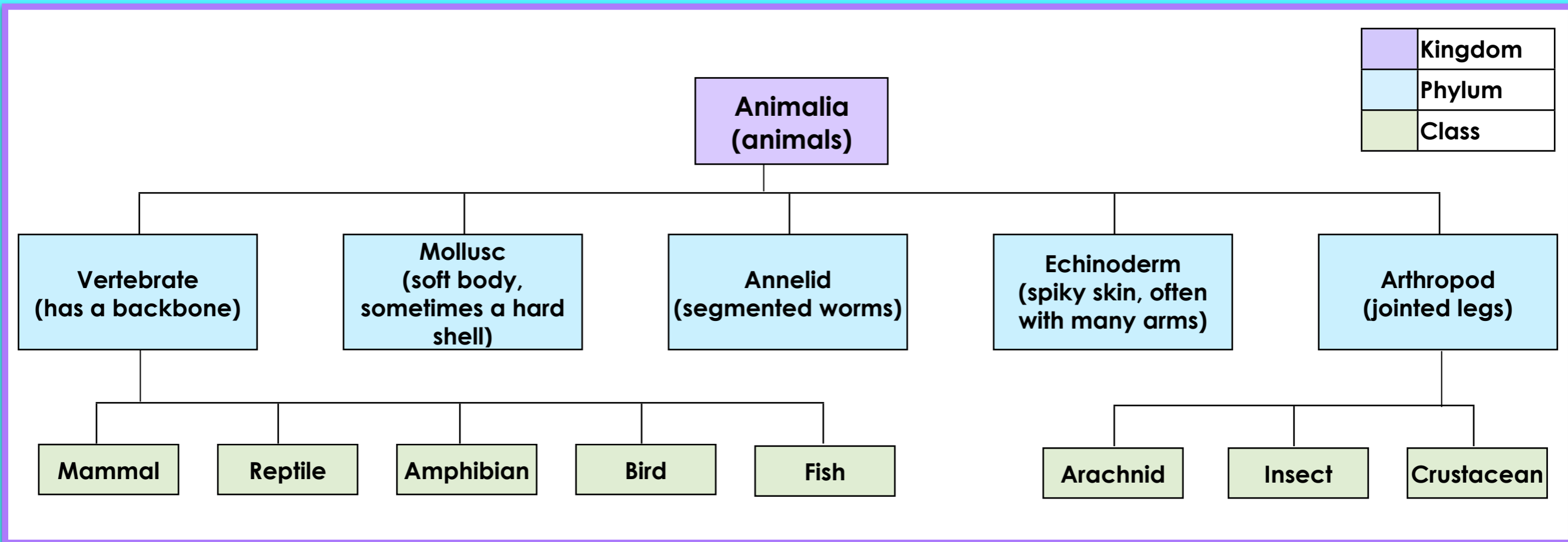
There are now seven levels on the classification system:



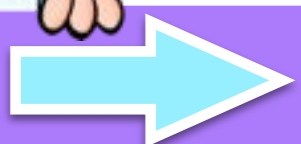
The levels start off with very broad groupings, such as 'animals' and 'plants' as kingdoms. They then get more and more specific until you reach the species.



This classification key shows you some of the phylums and classes you are familiar with. Each class has many orders and subsequent families, genera and species...far too many to include in one key!



Let's have a look at some specific examples...



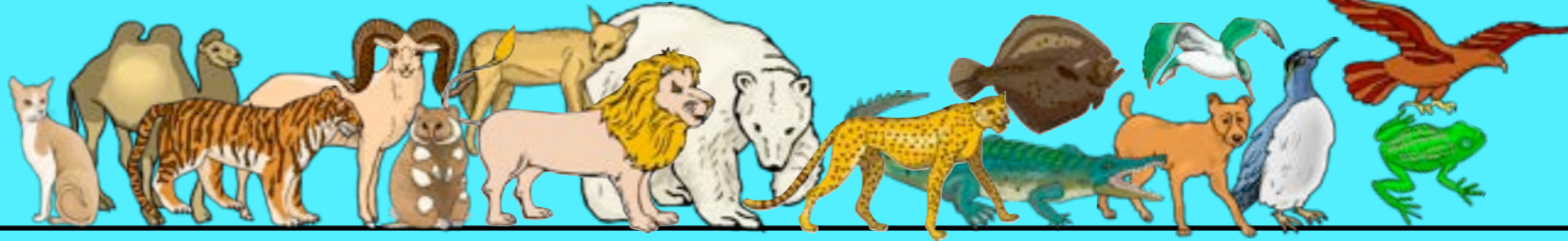
**Kingdom
'Animalia'**

All animals



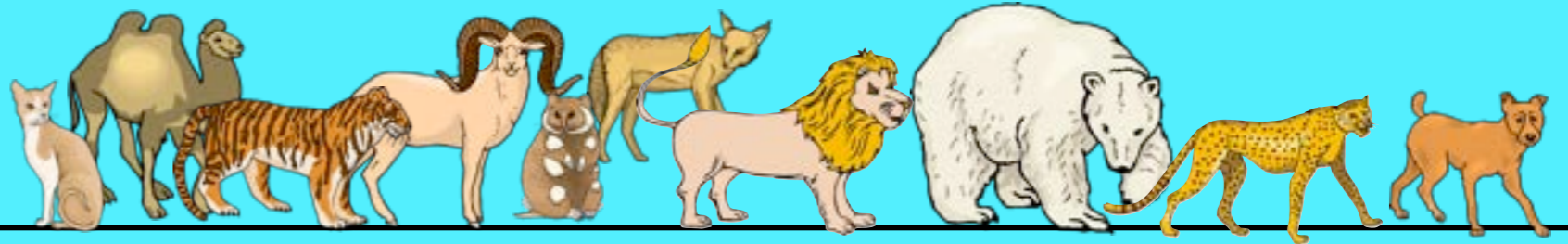
**Phylum
'Chordata'**

Vertebrates



**Class
'Mammalia'**

Mammals



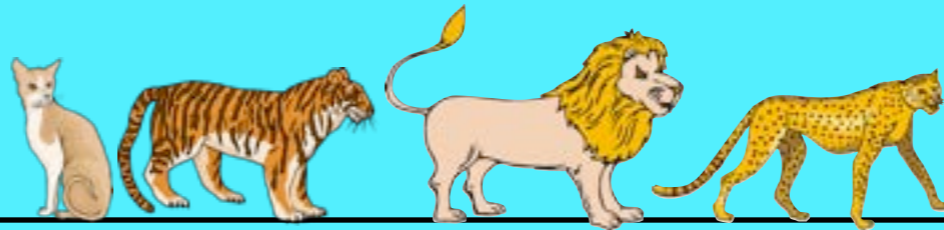
**Order
'Carnivora'**

Meat-eaters



**Family
'Felidae'**

Cats



**Genus
'Panthera'**

A type of cat



**Species
'Panthera leo'**

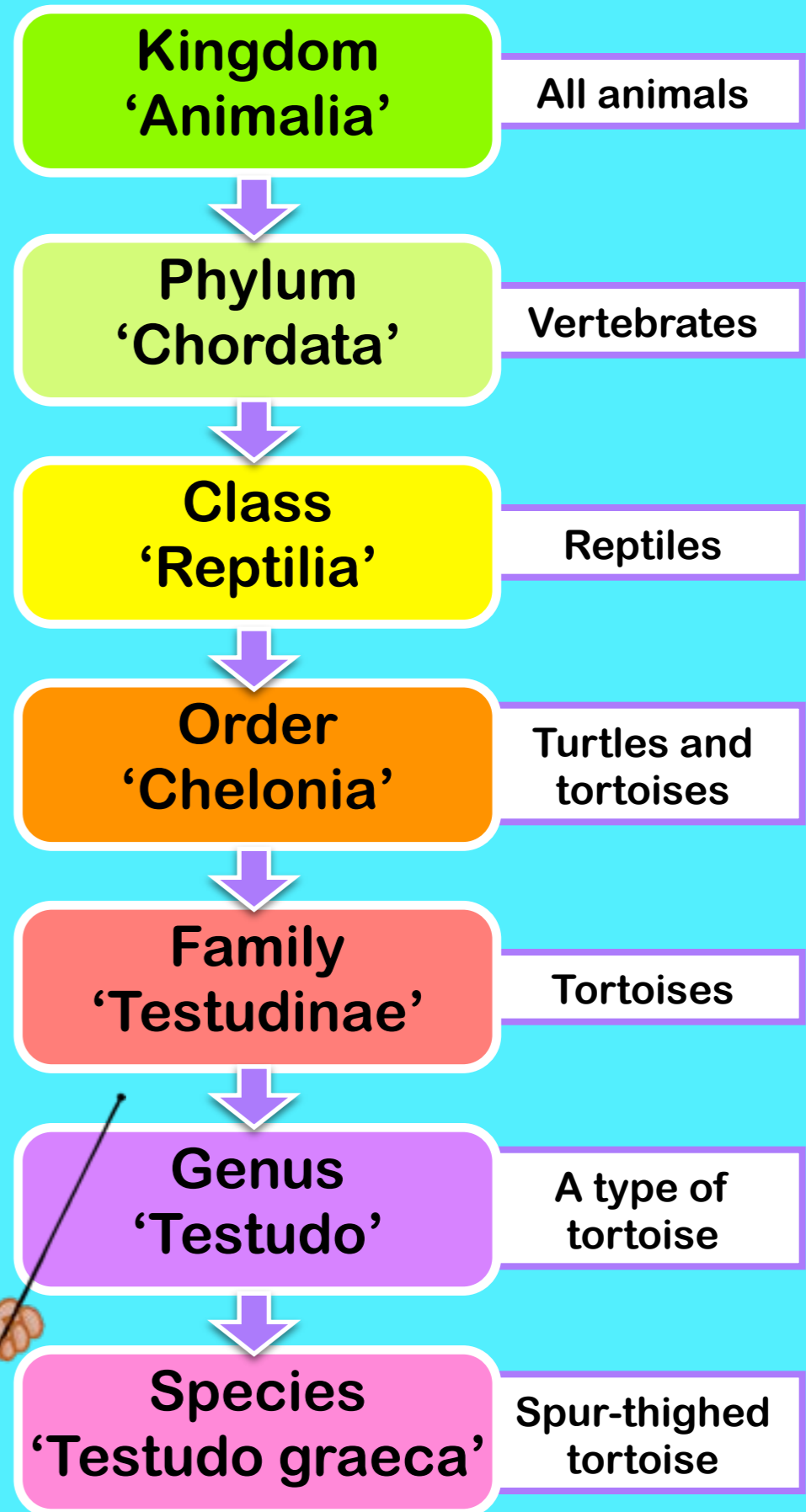
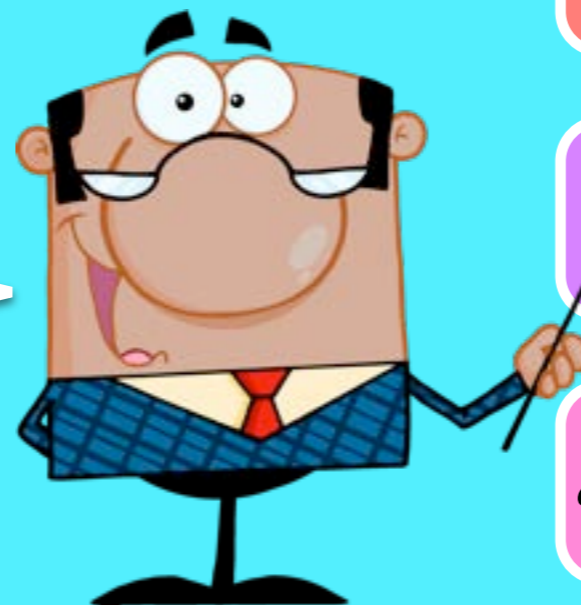
Lion



'Testudo graeca' - spur-thighed tortoise



Can you think of any other animals that would belong to the same class and order as this tortoise?



'Apis mellifera' - European honey bee



Did you know that there are about 20,000 species of bee in the family 'Apidae'? That's a lot of bees!

