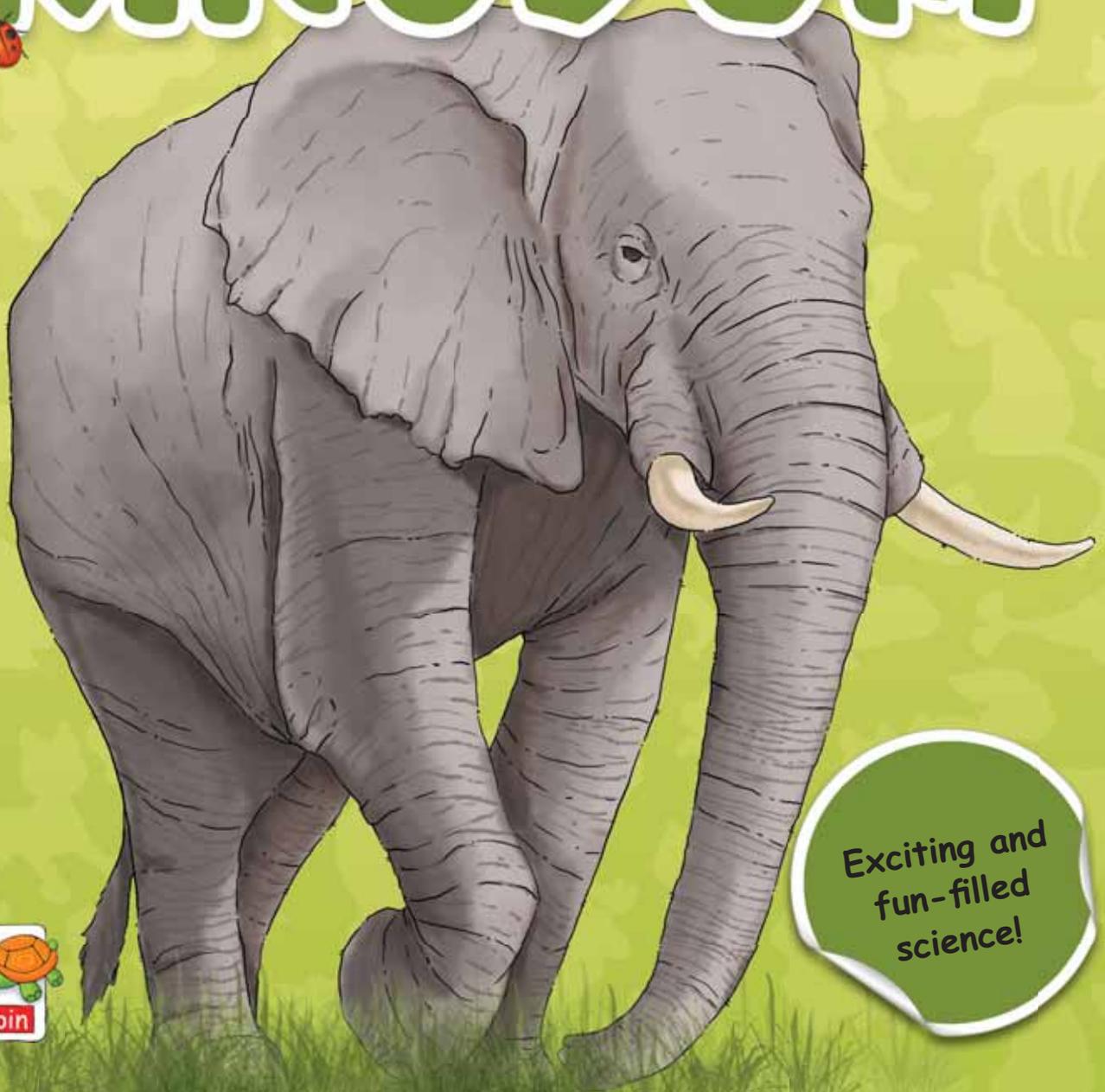


+ SCIENCE IN OUR ENVIRONMENT +

ANIMAL KINGDOM



Exciting and
fun-filled
science!





An imprint of The Energy and Resources Institute

© The Energy and Resources Institute, 2011

First published in 2011 by
The Energy and Resources Institute
TERI Press

Darbari Seth Block, IHC Complex, Lodhi Road, New Delhi 110 003, India
Tel. 2468 2100/4150 4900, Fax: 2468 2144/2468 2145
India +91 ■ Delhi (0)11
Email: teripress@teri.res.in ■ Website: <http://bookstore.teriin.org>

ISBN 978-81-7993-344-2
ISBN 978-81-7993-357-2 (set of 6 books)

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.

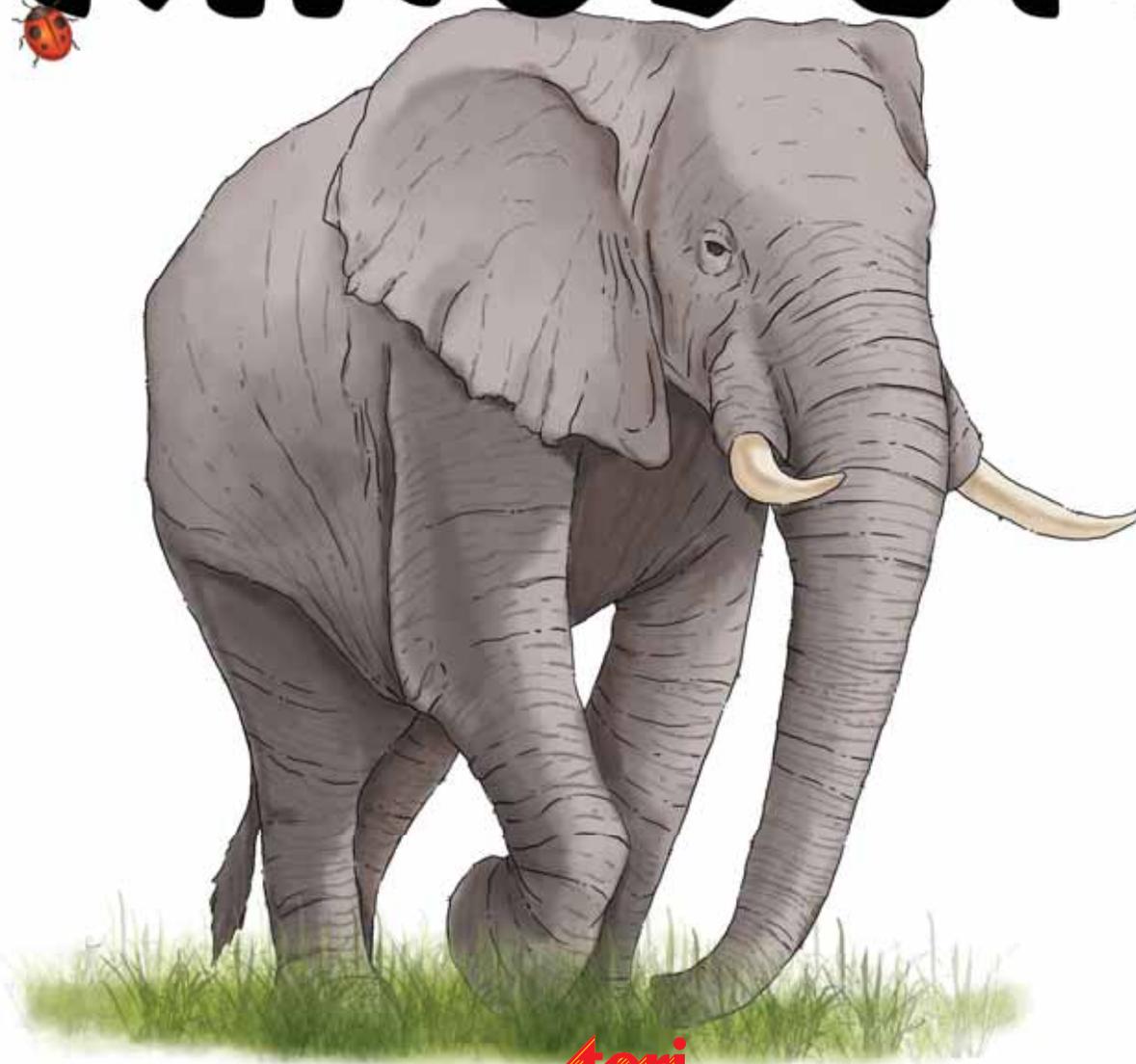
All export rights for this book vest exclusively with The Energy and Resources Institute (TERI). Unauthorized export is a violation of terms of sale and is subject to legal action.

Author: Aanchal Broca Kumar
Managing Editor: Anupama Jauhry
Series Editor: Arshi Ahmad
Design: Santosh Gautam
Image Research: Yukti Garg
Illustrations: Yatindra Kumar, Vijay Nipane, Neeraj Riddlan
Production head: T Radhakrishnan

Printed and bound in India

This book is printed on recycled paper.

ANIMAL KINGDOM



A note by Dr R K Pachauri

The field of science has witnessed remarkable advancements during the past century. We have made breakthroughs in space exploration, reduced global distances through innovations in communications, and unravelled mysteries of the human body while continuously adding to our knowledge of the plant and animal kingdoms. Some of these advancements, however, have had adverse effects on the environment, and have endangered the lives of those they were supposed to benefit.

This series throws light on the basic concepts of science while relating them to the environment. For example, what are the various sources of energy we use in our daily lives? What is clean energy? How was our universe formed? How have humans changed the way they communicate over the ages? Who are the members of the plant and animal kingdoms, and what are their special features?

Exploring the world around us through the eyes of budding scientists, these books intend to inform, inspire, and inculcate a spirit of scientific discovery. This series encourages young readers to keep a balance between scientific growth and the environment as they innovate and add to the ever-growing list of scientific inventions that make our lives better.



R K Pachauri
Director-General, TERI
Chairman, Intergovernmental Panel on Climate Change

CONTENTS

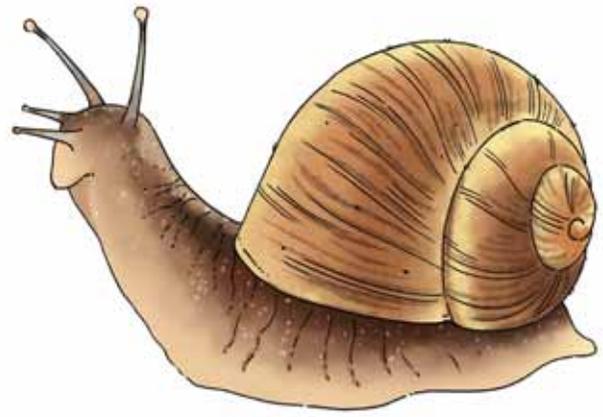
ALL CREATURES GREAT AND SMALL	6
GROUPS OF ANIMALS	8
WITH OR WITHOUT THE BACKBONE	10
A LOOK AT INVERTEBRATES	12
THOSE WITH BACKBONES	14
SOMETHING FISHY!	16
ON LAND AND IN WATER	18
CREEPY CRAWLIES!	20
UP IN THE AIR!	22
THE MIGHTY MAMMALS	24
MORE ABOUT MAMMALS	26
LET'S SAVE THE ANIMAL KINGDOM	28
GLOSSARY	30

ALL CREATURES GREAT AND SMALL

If you had to list all the animals that you know of, how many would you be able to name? Whatever the number, it will be well short of what scientists estimate is the number of animals on the earth—at least three million different kinds. And we are one of them!

Where do all these animals live? They are found everywhere. It is only in the coldest areas of the North and South Poles or in a few barren deserts and mountains that there are no animals at all. In all other places, you will find animals. If you examine a drop of water under a microscope, you will find many tiny organisms. These are called micro-organisms. Some micro-organisms like amoeba are made of a single cell only. A handful of mud in your garden is also full of insects, their eggs, and larvae!

Animals learn to adapt to their surroundings. Snails can live even in temperatures that are below freezing, while camels survive in the blazing heat of the desert!

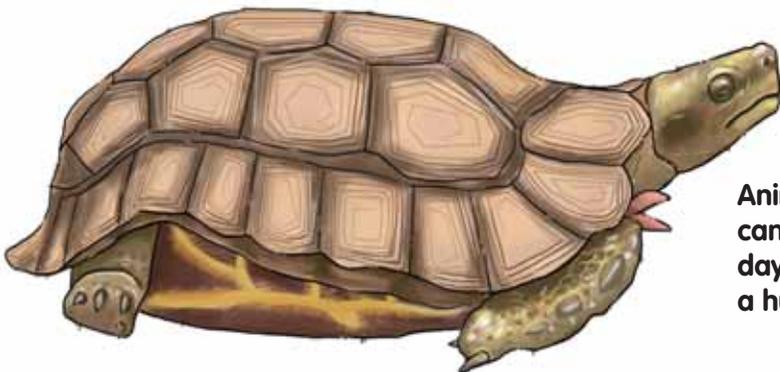


Snails have a protective shell, which helps them survive in freezing cold.



**Smarten
Up!**

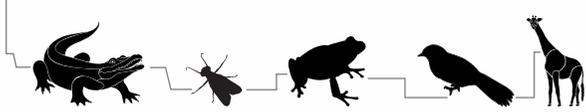
The African elephant is the giant among land animals. No other land animal comes close to its size. The largest African elephant weighs as much as six full-size pick-up trucks or 165 full-grown men!



Animals' lifespan can be from a few days to more than a hundred years!



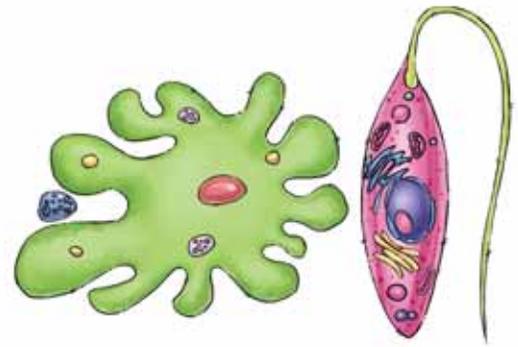
REMEMBER Every animal is unique and has its own characteristics.



Question time!



Which are the biggest and the smallest animals in the world?

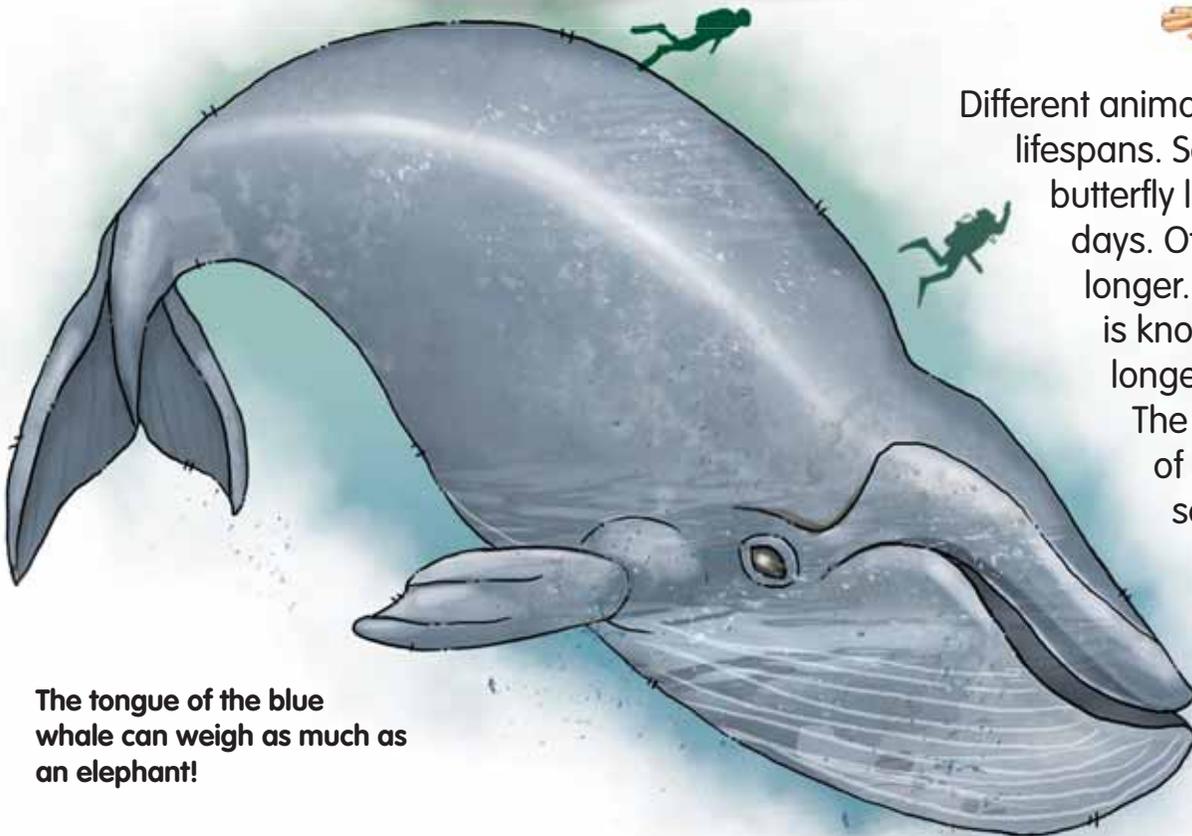


Protozoa—you cannot see them without a microscope, but these tiny creatures breathe, move, and reproduce.

The blue whale, which is nearly a hundred feet long (that's the size of a ten-storey building) is the biggest animal! The smallest are single-celled animals like amoeba, which can only be seen under powerful microscopes.



Different animals have different lifespans. Some like the butterfly live only for a few days. Others live much longer. The giant tortoise is known to have lived longer than 150 years! The average lifespan of humans is about seventy years.



The tongue of the blue whale can weigh as much as an elephant!

GROUPS OF ANIMALS

With so many different kinds of animals, it becomes necessary to divide them into groups so that scientists can study them. Similar organisms are put into groups depending on their structure and origin. This method of naming and organizing them is called taxonomy.

The Animal Kingdom is divided into groups. Each of these is called a phylum. Every phylum is further divided into classes. Every class is divided into orders, and so on, like this:
KINGDOM – PHYLUM- CLASS- ORDER- FAMILY- GENUS- SPECIES.

Scientists name an animal by the last two parts of the classification—genus and species. For example, humans belong to the genus *Homo* and species *sapiens*. Thus, the scientific name for humans is *Homo sapiens*. Dogs are called *Cannis familiaris*, and domestic cats are *Felis domesticus*.

How do scientists find names for all the animals?

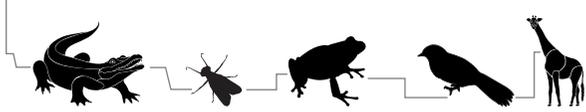
Traditionally, the scientist who discovers or studies the animal gets to name it. He might name it after someone, the location where the animal was found or any other characteristic. *Panthera tigris corbetti*, a sub-species of the tiger, is named after conservationist Jim Corbett.



 Question time!



REMEMBER Scientific names tell us about the characteristics of animals.

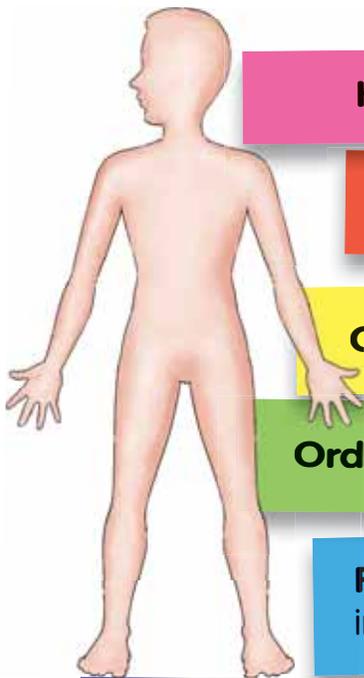


Smarten
Up!

'Taxonomy' is a Greek word that can be broken into 'taxis', meaning 'arrangement' and 'nomos' meaning 'law' or 'science'. A scientist called Carolus Linnaeus is known as the father of taxonomy.

Scientific names are Latin in origin. There are rules for writing these names. The genus of the animal is always spelt with a capital letter, and both names are in italics. Sometimes, the genus is abbreviated followed by a dot, for example, the scientific name for humans will be *H. sapiens*.

The reason why there are groups and sub-groups is that each sub-group tells us something specific about the animal. Taking the example of humans, let's see what taxonomy tells us!



Kingdom: Animalia Man belongs to the Animal Kingdom.

Phylum: Chordata Man is an animal with backbone.

Class: Mammalia Man is warm-blooded and gives birth to young ones.

Order: Primates Man has well-developed hands and feet, and a large brain.

Family: Hominidae Man belongs to the natural family of primates, including modern man and some extinct ancestors of man.

Genus: *Homo*

Species: *sapiens*

Science in our Environment : Animal Kingdom



Publisher : TERI Press

ISBN : 9788179933442

Author : Aanchal Broca
Kumar

Type the URL : <http://www.kopykitab.com/product/8445>



Get this eBook