



揭开地球的奥秘

英语科普注释读物

**DISCOVERING
THE EARTH**

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[英]罗杰·克莱尔著

张云泉 注释

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注释者的话

四季更迭，日行星移，……这是什么道理？温泉，冰窟，幽谷，峻岭，洪波，潜流，……它们如何形成？飞禽，走兽，珊瑚，水母，……它们怎样生活？美国火口湖中的“鬼舟”，希腊雅典城里的巴台农神庙，它们何以成为奇观胜迹？从冰河期的皑皑雪原到当今的繁华世界，地球本身和地面上的一切，发生了多大变化？而人类又在这变化中发挥了多大作用？

是的，对于地球，你可能想得很远，很多，想得废寝忘食，因为地球还有不少奥秘要人们去揭开，有大量资源期待人们去开发和利用。如果你想打开这地球之门，《揭开地球的奥秘》可说是一本入门书。

本书原文是英国罗杰·克莱尔 (Roger Clare) 著的科普读物，于1974年由麦克唐纳有限公司出版。它内容丰富，文字简明，是一本有益于巩固基础英语，扩大地球知识的读物。

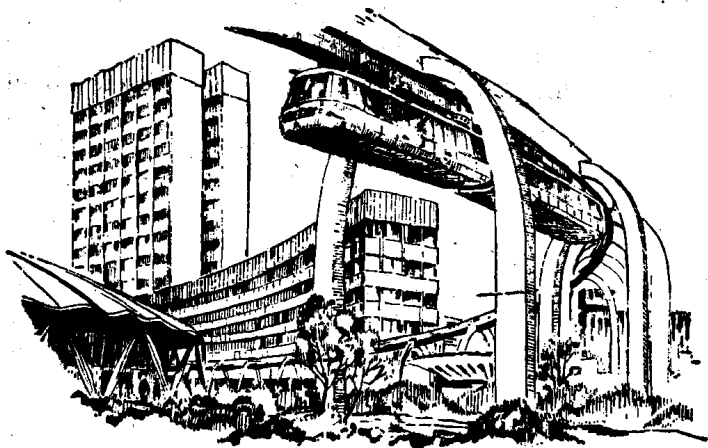
张云皋

一九七九年十月

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DISCOVERING THE EARTH



A train *glides by on a monorail*¹. The people *inside*² are moving along quickly and in comfort. Through the windows they can see their city. There are tall skyscrapers and new buildings *shaped like mushrooms*³. There are parks with trees and flowers. *Is this what a city of the future will look like?*⁴ *It may be.*⁵ The future depends on how we use the Earth now⁶.

The Earth has a long history. But people *have only*

1. 在一条单轨车道上滑行而去. glide by: 滑行过去. 2. 意为 inside the train. 3. 形如蘑菇的. “形容词+介词短语”仅修饰 buildings. 4. 这是否就是将来的城市面貌呢? of the future: 关于将来的. 5. 这是可能的. It 指上句中的未来城市. 6. 有赖于我们现在怎样使用地球. 疑问副词 how 引起方式状语从句, 作介词 on 的宾语.

*been*⁷ on it for a very short time. In that short time they have *found out*⁸ many things about the Earth. They have explored its oceans, mountains and air. They have learned to use the soil, the minerals and many of the other things the Earth provides. This book is about the Earth and some of the things that people have discovered about it.

7. 只不过存在…… *been* 相当于 *existed*. 8. 发现. 它在本书中经常出现, 具有找出、查明、弄清楚……等意思.

MEET PLANET EARTH

What do you know about *planet Earth*¹? *Probably quite a lot.*² You see it every day. You walk on it and dig into it and breathe its air.

*Take a good look at*³ the Earth around you. It may not look like a huge ball or sphere *racing through*⁴ space. But it is. Our Earth is one of nine planets that travel round the Sun. *The Sun and these nine planets are called the Solar System.*⁵ Our Solar System is just one of many in the Universe.

The Earth's neighbours

Can you name the planets in our Solar System? *They are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto.*⁶ Most of them are *named after the gods and goddesses*⁷ of people who lived long ago.

The planet Mercury is the smallest. It is named after the Roman god Mercury. He was the messenger of the gods.

The largest planet is Jupiter. It is named after Jupiter, the ruler of the gods.

1. 地球行星。 2. 省略句,完整的句子为 *Probably you know quite a lot of things about the Earth.* 也许你懂得很多关于地球的事。 3. 仔细看一看…… 4. 快速穿越空间的。 5. 太阳和这九颗行星被称为太阳系。 6. 它们是水星、金星、地球、火星、木星、土星、天王星、海王星和冥王星。 7. (仿)照神和女神的名字命名。 *after prep.* 仿效,

The Earth

The Earth is the fifth largest planet. It is the third from the Sun. The Earth has one Moon that travels round it. As the Earth circles the Sun, the Moon goes round the Earth. The Sun shines on both the Earth and the Moon.

The Shape and Size of the Earth

Long ago people *thought*⁸ the world was flat. *Sailors going on sea journeys were afraid they might fall off the edge.*⁹ They thought that there were huge monsters in the oceans. One monster was called *Balena*¹⁰. Sailors thought it had teeth and claws like a lion. It was probably a huge whale. *Ziphius*¹¹ was another monster. *It was supposed to have webbed feet and a beak.*¹²

*Christopher Coloumbus braved the seas and monsters.*¹³ He sailed across the Atlantic Ocean in 1492. *Ferdinand Magellan*¹⁴ sailed right round the world in 1522. He proved the world was not flat. But sailors still thought there were mermaids and serpents in the sea.

8. 其后面的连接词 *that* 往往被省略。 9. 航行在海上的海员生怕自己会从海边跌下去。 *go on journey*: 在旅途上。 10. 古代传说中, 一种有狮爪狮牙、鱼身鱼尾的海怪。 11. 古代传说中, 一种有蹼足、禽嘴的海怪。 12. 人们猜测它有蹼膜脚和猛禽嘴。不定式短语作复合谓语。 13. 哥伦布敢冒汪洋大海和海怪巨兽之险。 *Christopher Columbus* [kə'ləmbəs] 意大利人, 1492—1502 年横渡大西洋, 抵南美。 14. *Ferdinand Magellan* [mə'dʒelən] 麦哲伦, 葡萄牙人。

Is the Earth round?

We now know that the Earth is shaped like a round ball, *called a sphere or a globe*¹⁵. But it is not perfectly round. Instruments on spacecraft have shown that it is a bit flat at the North Pole and South Pole. It also bulges a little at the middle.

The size of the Earth

On maps of the Earth, a line called the Equator marks the middle, *half way between the Poles*¹⁶. If you go *all the way*¹⁷ round the Earth at the Equator, you will cover about 40 thousand kilometres. *But if you could burrow straight through the Earth, you would have to make a tunnel about 13 thousand kilometres long to reach the other side.*¹⁸

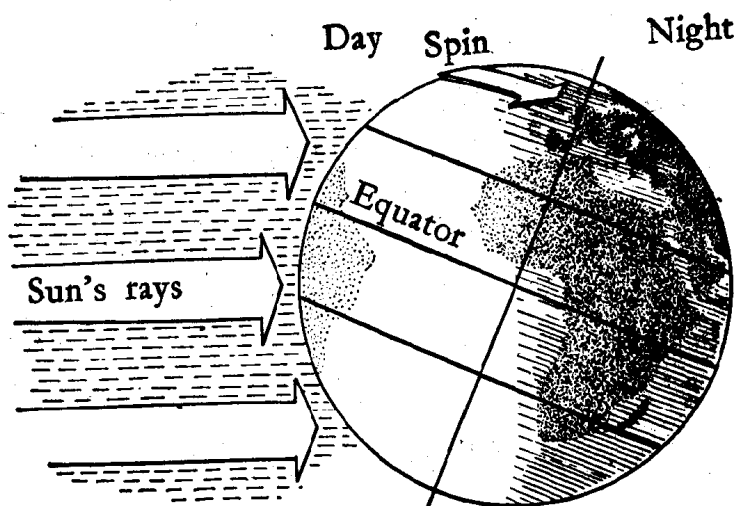
The Movement of the Earth

Day and night

The Earth is like a giant *spinning top that is tilted at an angle*¹⁹. It spins on an imaginary line that *cuts through*²⁰ the Earth from the North Pole to the South Pole. This line is called the axis. As the Earth spins it is also moving round the Sun. This path around the Sun is called the orbit.

15. 叫做球体或圆球。 16. 即两极的对半, 作 the middle 的同位语。 17. 全部路程。 18. 不过, 假如你能笔直地掘穿地球, 你得开凿一条长约 13,000 公里、直达对面的隧道。本句虚拟语气, 表示事实上不能做到。 19. 向一个角度倾斜的陀螺。 spinning top: 陀螺。 20. 贯穿。

*The Sun only shines on half of the world at a time.*²¹ Places facing the Sun have day. As the Earth spins toward the east, these places enter the area of shadow and it becomes night. Places where it was night move into the daylight.



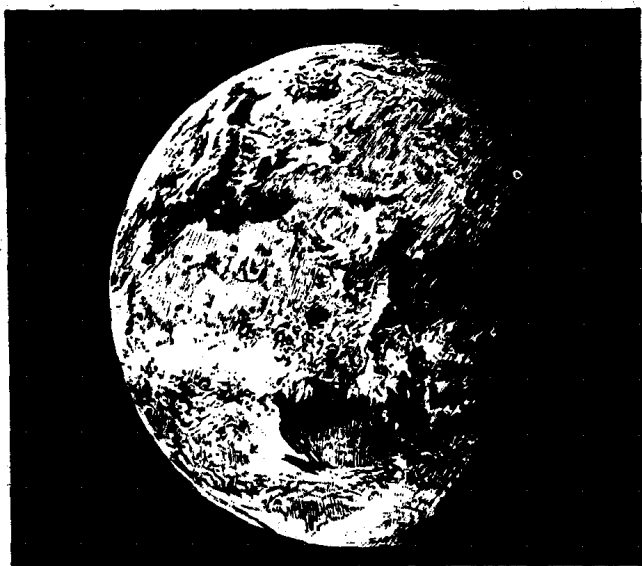
The Earth spins round once in 24 hours, but all places do not have 12 hours of day and 12 hours of night. Because the Earth is tilted, the land at the North and South Poles has 24 hours of daylight for some months of the year. In these months the Sun never sets.

What time is it now? That depends where you are. The world has been *divided up into 24 time zones*²². Each

21. 太阳一次只能照着半个世界。the world 指地球表面。at a time: 一次。

22. 以 24 个时区均分殆尽。divide ... into: 把……分成……

of these zones has its own time.



This picture from space shows daytime over Africa

The seasons

The Earth travels round the Sun. *It takes a bit more than a year, or 365 days, to go round the Sun.²³ So every fourth year we add an extra day to the month of February to keep the calendar correct.²⁴ That is a leap year²⁵.*

The year is divided into seasons. For some months *half²⁶* the Earth leans towards the Sun. It has a summer

23. 环绕太阳走一圈要花一年多一点的时间或 365 天。it 是不定式短语的先行代词。 24. 所以，我们每隔四年就把多余的一天加给二月，才保持历法正确无误。add ... to: 把……附加给…… 25. 闰年。 26. of 被省略。

season. *The half leaning away*²⁷ is colder. Here it is winter. Between summer and winter, spring and autumn are the seasons.

The Moon

*The Earth has the Moon as a companion*²⁸ as it travels round the Sun. The Moon travels round the Earth and is *carried along with it*²⁹. It *keeps to*³⁰ the same path, or orbit, round the Earth. The Moon takes 27 days and 8 hours to travel round the Earth. This is called a lunar month.

Eclipses

Sometimes the Moon passes between the Sun and the Earth. *It may then blot out the Sun's rays so that the day becomes dark.*³¹ The Earth is then in the Moon's shadow. *At other times*³² the Earth passes between the Sun and the Moon. The curved shadows of the Earth may then pass across the Moon. These events are called eclipses.

The Full Moon

The Moon is a quarter of the size of the Earth. *The Moon is covered with dust and pitted with craters.*³³ *We can see it because it shines in the light of the Sun.*³⁴ *At Full Moon*³⁵

27. 那背阳倾斜的一半。 28. 地球有月球作旅伴。 29. 且为地球随带着。
along with: 一起。 30. 保持在…… 31. 那时, 月亮会遮住太阳的光线, 结果白天变得黯然无光。 blot out: 遮暗。 so that 引起结果状语从句。 32. 在另一些时候。 33. 月球浑身尘埃, 遍体坑穴。 covered with: 由……复盖。 pitted with: 由……成麻点(坑)。 34. 我们能够看见它, 因为它在太阳光下闪耀。 in the light of ...: 根据。 35. 在满月时。

nights we can see only part of it. On other nights we cannot see the Moon at all.

The Earth's Big Pull

When you drop a piece of paper, *why does it fall down and not up³⁶*? Why do people and animals and houses stay on the world *instead of drifting off into space³⁷*? The answer to both questions is gravity. Gravity is a force which pulls things towards each other. Everything has gravity. *The bigger a thing is, the stronger its pull.³⁸*

The Earth's gravity is very strong. When you we can see the whole side that is in sunlight. On some jump up, it pulls you down again. *It keeps things from falling off the Earth.³⁹* The Sun has gravity too. *It keeps all the planets in orbit.⁴⁰* *Without it⁴¹* they would drift off into space.

A Hidden Force

A magnetic force⁴² we cannot see lies around the Earth. It is centred on the magnetic poles, *which are near the North and South Poles⁴³*. People cannot feel the Earth's magnetic pull. But scientists think some birds may be able to.

36. 它为什么向下掉而不往上(升)呢? 37. 而不漂离而去, 升入太空呢? instead of ...: 而不, 代替. 38. 物体愈大, 其引力愈强. "the + 形容词或副词比较级 + 从句", 表示"越……, 越……", 其中 "the" 是副词. 前句是从句, 后句是主句(省略 is). 39. 它使物体不离开地球. 40. 它保持全部行星遵循轨道运行. 41. 倘若没有它, without it 往往代替虚拟条件句. 42. 磁力. 43. 它们靠近北极和南极. which 前有逗号, 作为附带说明或扩展性描述, 为非限制性定语从句.

In cloudy or foggy weather, homing pigeons may use the Earth's magnetic force to find their way home from far away.⁴⁴ In good weather they look for landmarks to guide them⁴⁵.

Compasses

Thousands of years ago⁴⁶, the Chinese found a kind of rock called lodestone that was magnetic. When allowed to swing freely⁴⁷, it pointed in a southnorth direction. Lodestones were used to make the first compasses. A compass needle points to the magnetic poles. A compass can help you find which way you are going.⁴⁸

Continents and Countries

Nearly three-quarters of the face of the Earth are covered by seas and oceans. Most of these are found south of the Equator. Most of the land is found north of the Equator. The land is *formed mainly of*⁴⁹ large masses which are called continents. They are Europe, North America, South America, Africa, Asia, Australia and Antarctica. Asia is the largest continent and Aus-

44. 信鸽会在多云重雾之天,利用地球的磁力,从遥远的地方找到自己的归途。to find one's way home: 找到去家的路途。 45. 寻找指引它们的路标。注意区别: ①前句中“to find...”是目的状语;本句中“to guide”是修饰 landmarks 的定语。② to find: 找到; to look for: 寻找(未必找到)。 46. 几千年以前。 47. 当让它随便摆动时, when 后省略了 it was, 当从句的主语和主句的主语一致时,从句的主语和部分谓语可以省略。 48. 罗盘会帮助你找出你要走哪一条路。help 的复合宾语第二部分的不定式有时被省去 to。 49. 主要由……构成。

tralia the smallest. Many smaller land areas, or islands, rise from the floors of the oceans⁵⁰.

People around the Earth have grouped together to form nations⁵¹. They have divided up the land areas to make countries⁵². Mountains and rivers sometimes mark the boundaries of these countries.

50. 从洋底隆起。 51. 形成部落。 52. 形成国家。

THE LAND

The land, the air and the oceans

Living things are found on the land, in the water and in the air that surround the Earth. Some creatures and plants live in only one of these three zones. For example, fishes live in the sea. Other creatures and plants may live in more than one zone¹. Birds live in the air, on the water and on land².

The Earth is covered by a crust of solid rock³. But less than half of it⁴ is dry land. The rest⁵ is covered by water. Surrounding the planet⁶ is a thin layer of air called the atmosphere. Without this air there would be no life on Earth⁷.

Read on to find out⁸ about the land, the air and the oceans.

Lands of Ice and Snow

Lands near the North and South Poles are cold because the Sun never rises high in the sky. For part of the year it does not rise at all. But for at least one day a year⁹

1. 不止一个区域。 2. on land (= on the land): 在陆地上。 3. 覆盖着由坚固的岩石组成的地壳。 4. 不到其一半。 5. 剩余的部分。 6. 围绕这星球的。动名词短语作主语。 7. on Earth (= on the earth): 在地球上, 在世上。 8. 请继续不断地读下去, 以便弄清……的真相。read on, 此处意为 go on to read and ... 9. 就一年至少有一天来说。for prep. 就……而论。