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国家地理
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英文注释

EVERYDAY SCIENCE

生活中的科学

Science
Around the

House



家小学问大

KATE BOEHM JEROME (美) 著

VINCE SIPKOVICH (美) 著



外语教学与研究出版社
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如果你希望在享受英语阅读乐趣的同时又能增长知识、开拓视野，由外语教学与研究出版社与美国国家地理学会合作出版的“国家地理科学探索丛书”（英文注释版）正是你的选择。

“国家地理科学探索丛书”（英文注释版）第二辑分为8个系列，共46本，内容涉及自然科学和社会研究，除对本套丛书第一辑已包含的“生命科学”、“物理科学”、“地球科学”和“文明的进程”4个系列进行了补充外，又推出了4个新的系列——“生活中的科学”、“科学背后的数学”、“专题研究”以及“站在时代前沿的科学家”。

这套丛书秉承《国家地理》杂志图文并茂的特色，在书中配有大量精彩的图片，文字地道易懂、深入浅出，将科学性和趣味性完美结合，称得上是一套精致的小百科全书。特别值得一提的是本套丛书在提高青少年读者英语阅读能力的同时，还注重培养他们的科学探索精神、动手能力、逻辑思维能力 and 沟通能力。

本套丛书既适合学生自学，又可用于课堂教学。丛书各个系列均配有一本教师用书，内容包括背景知识介绍、技能训练提示、评估测试、多项选择题及答案等详尽的教学指导，是对课堂教学的极好补充。

国家地理科学探索丛书（第二辑）

生活中的科学

家小学问大

怎样坐飞机？
奇趣水族馆
食品店里的学问
商场里的秘密
公园乐事多
五光十色的海滩
动物园里的科学
为什么眨眼睛？
为什么打呵欠？

站在时代前沿 的科学家

理解运动定律
寻找疫苗
揭示放射现象
解密 DNA 结构
揭秘晶体管

专题研究

探险热带雨林
了解海洋动物
窥视黑暗
亲历火山冰川
追踪迁徙动物

科学背后的数学

咀嚼数字
解读数据
多少蚂蚁是一家？
数字的奥妙
比比就知道
方圆之间
思前想后
机会几何？

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分类的线索
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生活周期

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岩石与矿物
恒星与星系
奇妙的水

物理科学

酸，还是碱？
化学变化
磁体的奥秘
牛顿定律

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You're a 21st Century Kid!

21世纪的孩子!

Do you know what that means? It means you are surrounded by science.

Most times you don't think about it. The alarm clock¹ goes off. The television turns on. Your voice seems louder in the shower.

Science is just a part of your everyday life. You hardly even notice it. But there are some pretty interesting things happening all around you.

1. alarm clock

闹钟



Did you ever wonder how a microwave oven works? What about a vacuum cleaner? And how does soap get things clean?

It's really no great mystery¹. The science behind these things makes a lot of sense. So are you ready to find out more? Then sit back and relax.

1. mystery

//.

神秘的事物



Or better
yet . . .

Explore on the Floor

查看地板



Look under the couch¹. Do you see any dust? Believe it or not, there are tiny creatures² living in those little specks³!

Millions of dust mites can live inside a home. But house dust mites are so small you can't see them with just your eyes. Good thing, too. The picture below shows what one kind of dust mite looks like close-up under a microscope⁴.

Even though they look scary⁵, dust mites can actually do some good. They help keep the house clean by eating lots of tiny garbage. For example, they eat dead skin that falls from

- | | | |
|---------------|-------------|-----|
| 1. couch | <i>n.</i> | 长沙发 |
| 2. creature | <i>n.</i> | 生物 |
| 3. speck | <i>n.</i> | 微粒 |
| 4. microscope | <i>n.</i> | 显微镜 |
| 5. scary | <i>adj.</i> | 吓人的 |

Dust mite

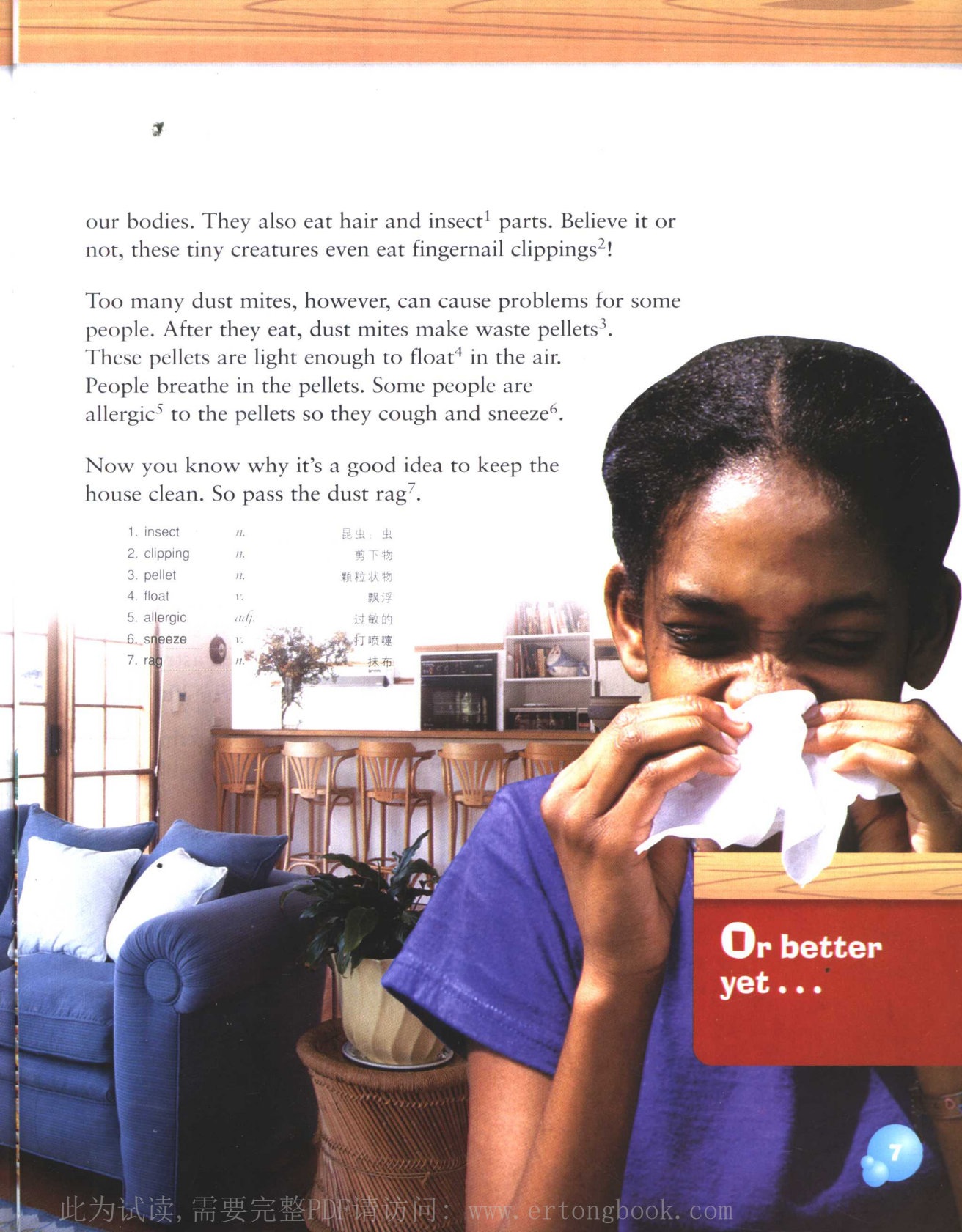


our bodies. They also eat hair and insect¹ parts. Believe it or not, these tiny creatures even eat fingernail clippings²!

Too many dust mites, however, can cause problems for some people. After they eat, dust mites make waste pellets³. These pellets are light enough to float⁴ in the air. People breathe in the pellets. Some people are allergic⁵ to the pellets so they cough and sneeze⁶.

Now you know why it's a good idea to keep the house clean. So pass the dust rag⁷.

- | | | |
|-------------|-------------|------|
| 1. insect | <i>n.</i> | 昆虫；虫 |
| 2. clipping | <i>n.</i> | 剪下物 |
| 3. pellet | <i>n.</i> | 颗粒状物 |
| 4. float | <i>v.</i> | 飘浮 |
| 5. allergic | <i>adj.</i> | 过敏的 |
| 6. sneeze | <i>v.</i> | 打喷嚏 |
| 7. rag | <i>n.</i> | 抹布 |



Or better
yet...

Get Out the Vacuum Cleaner

使用真空吸尘器



It's an amazing¹ machine. You plug² it in. You turn it on. Dirt and dust are sucked³ away!

How does this noisy thing work? It's all about airflow. There's a fan inside the vacuum cleaner. The fan moves air into and out of the vacuum cleaner.

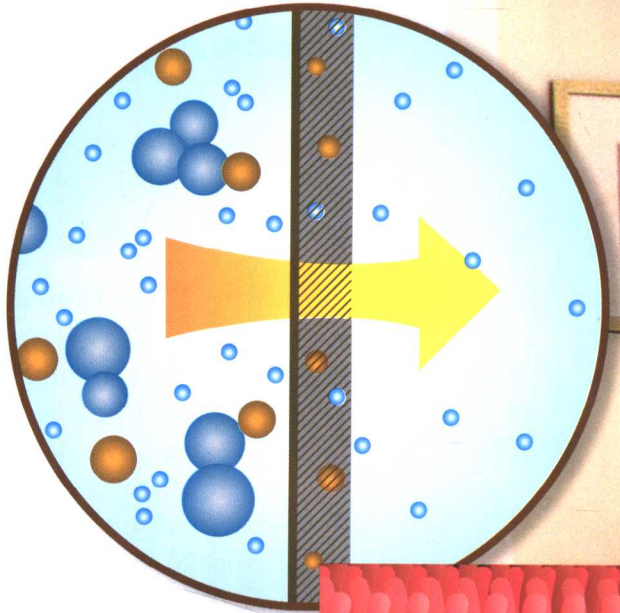
The air that goes in the machine takes dirt and dust with it. The dusty air passes through a bag. This bag has a filter⁴ that traps⁵ the dirt and dust. Clean air then blows out the back of the vacuum cleaner.

Easy-to-carry electric vacuum cleaners have been popular in United States homes since the 1920s. Although designs have changed, most homes still have them today. Even astronauts⁶ use special vacuum cleaners to tidy up their homes in space.

Speaking of space, did you know that there is something in your house that was first made for our space program? Go ahead. See if you can spot⁷ it. Look around.

- | | | |
|--------------|-------------|---------|
| 1. amazing | <i>adj.</i> | 令人惊奇的 |
| 2. plug | <i>v.</i> | 给……接通电源 |
| 3. suck | <i>v.</i> | 吸; 抽吸 |
| 4. filter | <i>n.</i> | 过滤器 |
| 5. trap | <i>v.</i> | 阻止; 挡住 |
| 6. astronaut | <i>n.</i> | 宇航员 |
| 7. spot | <i>v.</i> | 发现 |

The larger pieces of dust and dirt are trapped in the filter of a vacuum.



Or better yet . . .



Look Up at the Ceiling

瞧瞧天花板

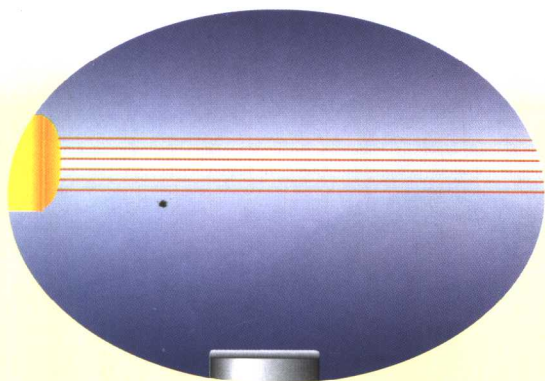


Yes, the ceiling. Can you find the smoke detector? This piece of science is brought to you by the U.S. space program.

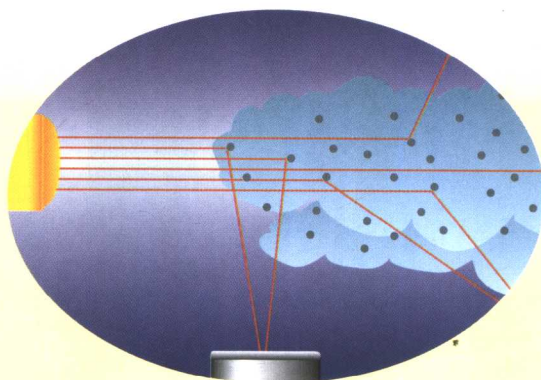
In the 1970s, the United States was ready to launch¹ its first space station². The station was called Skylab³. Scientists worried that a fire might start and damage⁴ the space station before anyone knew about it. They needed an early warning system. The smoke detector solved⁵ the problem.

Today there are many kinds of smoke detectors. One kind uses a special beam⁶ of light. When enough smoke enters the machine, the smoke scatters⁷ the light. This sets off⁸ an alarm⁹.

It's important to check the batteries in smoke detectors to make sure they are working. Although they make an awful¹⁰



Many smoke detectors have a light source¹¹ and a sensor¹² inside. When there is no smoke, the light doesn't hit the sensor.



When smoke enters the detector, the light bounces¹³ off the smoke and hits the sensor. Then the smoke detector makes a loud noise.

(注释见第11页)



noise, the loud sounds of smoke alarms have saved the lives of many people.

Good thing that every loud sound is not so scary. Some big sounds are just for fun. So go ahead and make some noise. Turn up your stereo. Raise your voice.

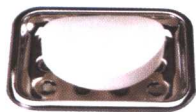
- | | | |
|------------------|-----------|---------------|
| 1. launch | v. | 发射 |
| 2. space station | | 航天站。宇宙空间站 |
| 3. Skylab | <i>n.</i> | (美国发射的) 太空实验室 |
| 4. damage | <i>v.</i> | 损坏 |
| 5. solve | <i>v.</i> | 解决 |
| 6. beam | <i>n.</i> | (光等的) 束。柱 |
| 7. scatter | <i>v.</i> | 使分散 |

- | | | |
|------------------|-------------|-------|
| 8. set off | | 触发。引起 |
| 9. alarm | <i>n.</i> | 警报 |
| 10. awful | <i>adj.</i> | 极讨厌的 |
| 11. light source | | 光源 |
| 12. sensor | <i>n.</i> | 传感器 |
| 13. bounce | <i>v.</i> | 反射 |

Or better yet...

Go Take a Shower

洗淋浴



When you sing in the shower your voice sounds louder and richer¹. Did you ever wonder why?

Your voice sounds loud in the bathroom because the room is small. Sound is a form of wave energy that can travel through air. But sound waves lose strength² as they move through the air. That means that it gets harder to hear a sound the farther you are from its source. In the bathroom, the sound waves do not travel very far. Sounds stay loud. You don't even need a microphone to feel like you're on stage at a music concert!

The walls, ceiling, and floor also help your voice sound better. Sound waves bounce off the hard surfaces in a bathroom and come back to you. This makes your voice sound louder and clearer.

The air in the bathroom really gets into the act³. Sound waves make the air vibrate⁴. In a small space, this lets your ears catch a lot of those song vibrations.

There's another kind of wave that gets things shaking in your house. Can you guess what it is? Take a trip to the kitchen.

- | | | |
|---------------------|-------------|-------|
| 1. rich | <i>adj.</i> | 深沉浑厚的 |
| 2. strength | <i>n.</i> | 强度 |
| 3. get into the act | | 参与 |
| 4. vibrate | <i>v.</i> | 振动 |





Or better
yet ...