

5A

含读版

学科·英语整合课程

# Light Up 科学 Science

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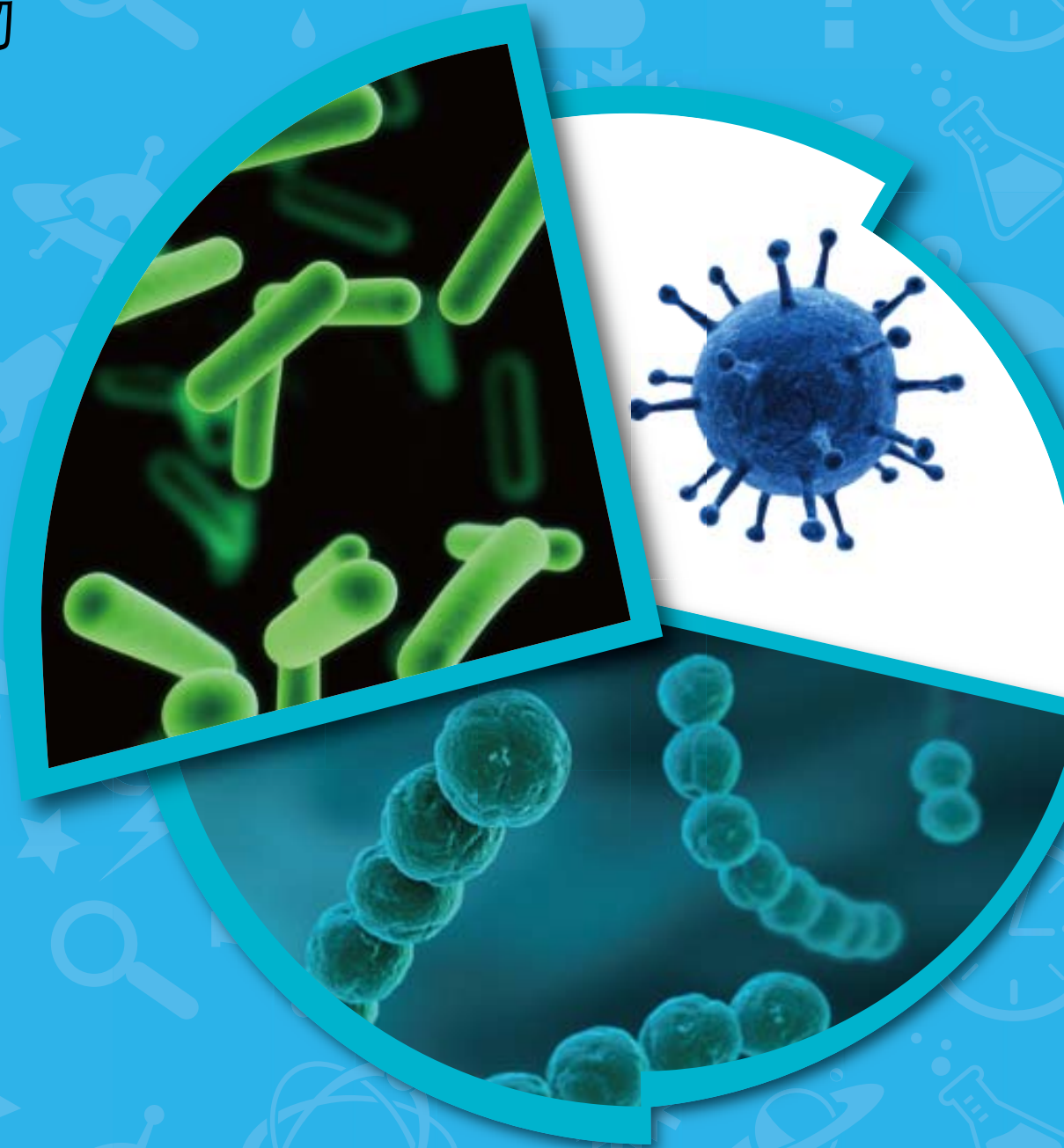
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## UNIT 3

# MICROBES

微生物



What tiny (微小的) things live on our skin?

What tiny things live in our food?

Let's find out if they are bad or good.



## Lesson 1

# Kinds of Microbes

Why should Tom wash his hands before eating?



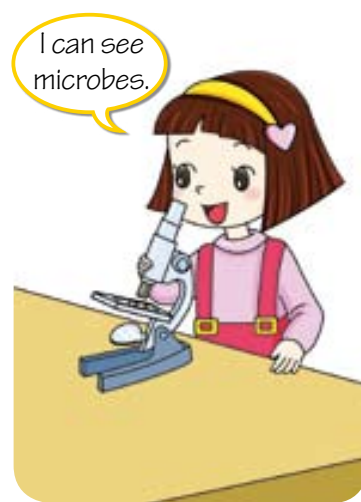
## Key Word

microbe (微生物)



## Activity 1

Microbes are very small living things (生物). We can use a microscope (显微镜) to see microbes.





Where can you find microbes? Circle the places.



## Activity 2

Which microbes are good? Which microbes are bad? Draw lines.



good microbes



bad microbes



## Activity 3

If we do not do these things, what will happen? Draw pictures.



Wash your hands  
before eating.



Put food into the  
fridge.



## Activity 4

What do you know about microbes? Sing the song.

### The Microbe Song

Molly is a microbe too small to see.

Molly and her microbes, feeding on the meat.

If Molly and her microbes are given some warm meat,

Then this warm meat will not be good to eat.

Marty is a microbe in a pack of (一包) yeast (酵母).

Marty and his microbes are good for us to eat.

For Marty and his microbes help the bread to rise (膨胀),

There are friendly (友好的) microbes.

Now that is a surprise (意想不到的事)!

### Now I Know ...

Microbes are very small living things. I can use a microscope to see them.

Some microbes are good. Some microbes are bad.

### How I Know ...

- ☐ I did an experiment.
- ☐ I observed microbes.
- ☐ I classified microbes.



## Find Out More!

How can microbes cause diseases (疾病)? A cough or sneeze (喷嚏) can spread microbes through the air for several metres (几米). What should Bob do? Draw in the circle.







## Lesson 2 Yeast

Why does the bread look so fluffy (松软的)?



### Key Words

cold (冷的)

sugar (糖)

warm (温暖的)

yeast (酵母)

### Activity 1

Use a hand lens to look at the dry (干的) yeast. Can you see living things (生物)?



Add some sugar to a cup of warm water. Then add some dry yeast. Stir (搅拌) and wait. What can you see?



+



+



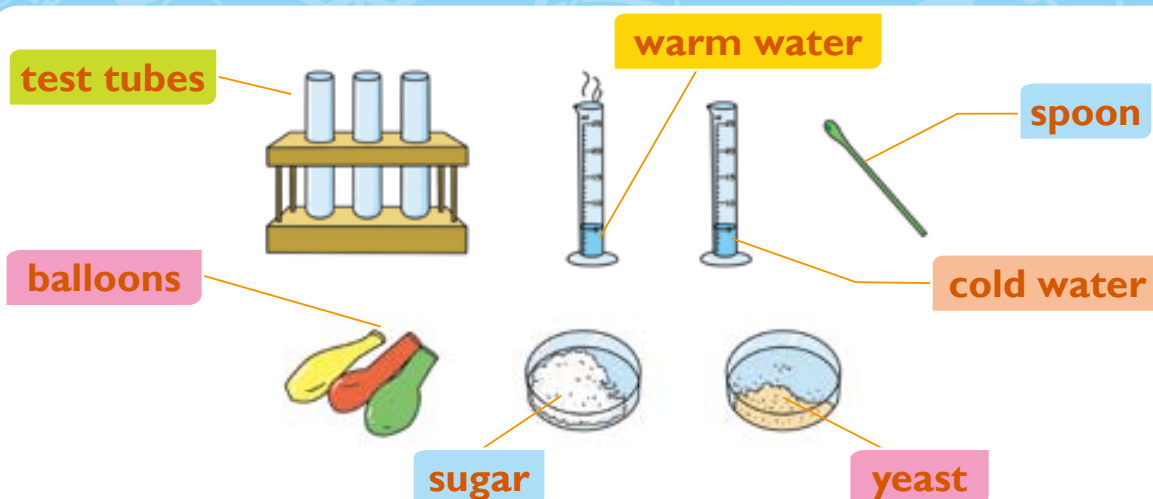


Yeast is a microbe. It uses sugar to grow. When yeast grows, it makes a gas.

## Activity 2

Does yeast need water to grow well?

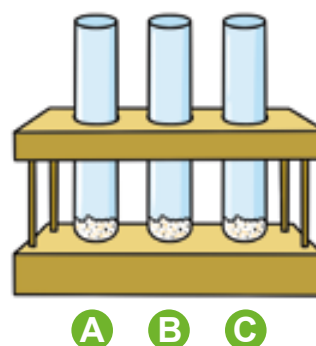
*You need*



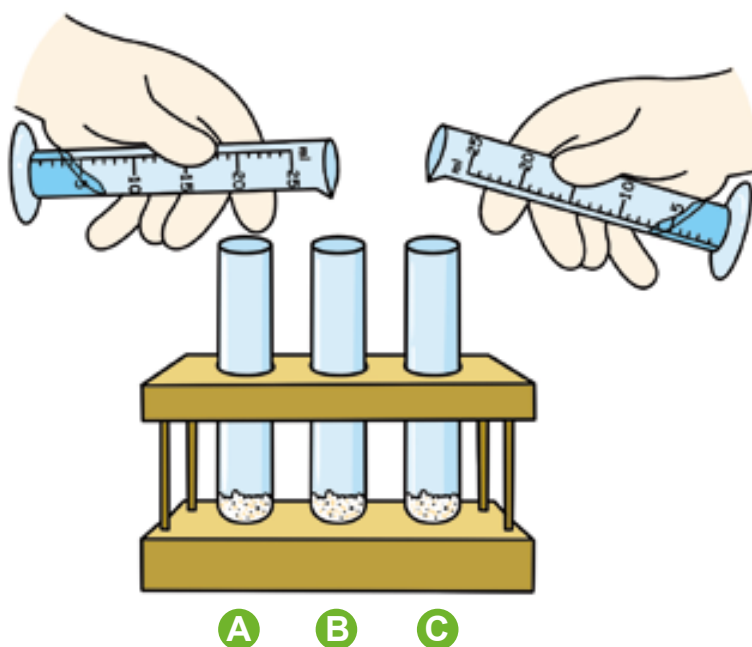
*What to do*

1

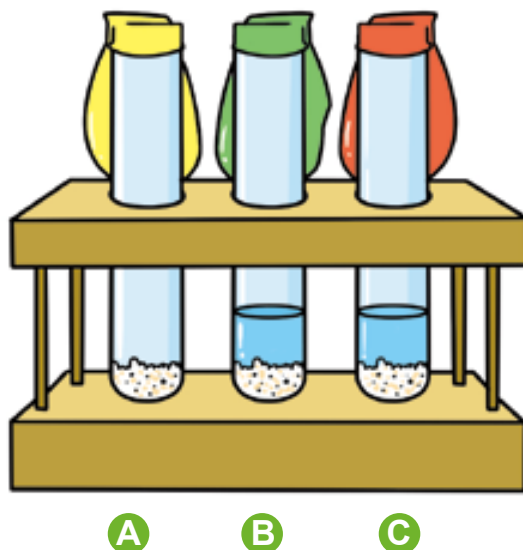
Add some sugar and yeast to the three test tubes (试管). Label (标记) them A, B and C.



- 2 Add 5 ml of warm water to B. Add 5 ml of cold water to C. Stir.



- 3 Put the balloons over the three tubes. Wait for 30 minutes.



### Results

What can you see after 30 minutes? Draw a picture.



### Conclusion

Yeast ( needs / does not need ) water to grow well.  
Yeast grows better in ( cold / warm ) water.

### Now I Know ...

Yeast is a microbe. When it grows, it makes a gas.  
Yeast needs sugar and warm water to grow well.

### How I Know ...

- ☐ I did a fair test.
- ☐ I saw yeast.
- ☐ I made a model.







## Lesson 3

# Microbes and Food

Why do you  
add dry (干的)  
yeast?



## Key Words

bread	(面包)
food	(食物)
microbe	(微生物)
rise	(膨胀)
yeast	(酵母)



## Activity 1

How can you make bread?

### You need



### What to do

1

Add the yeast to some warm water and sugar. Stir (搅拌) and wait for 5 minutes.



2



Add the sugar water with yeast to the flour.  
Mix (混合) to make a dough (生面团).

3

Knead (揉) the dough.



4



Leave the dough in a warm place for 20 minutes. What happens?



5

Bake (烘烤) your bread dough in an oven.



## Activity 2

Which foods are made with microbes? Tick (✓).



bread ☐



butter ☐



rice ☐



yoghurt ☐



cabbage ☐



beer ☐

### Now I Know ...

Yeast helps bread to rise.  
Some food is made with microbes.

### How I Know ...

- ☐ I made bread.
- ☐ I classified food.
- ☐ I did an experiment.



## Find Out More!

Microbes can make food go bad. Where are the microbes from?  
What did they need to grow?

1



Put a piece of bread into  
a plastic bag.

2



Add some water.

3



Seal (密封) the bag. Observe  
the bread each day. What  
can you see?



Throw (扔) the bag into  
the rubbish bin (垃圾桶).  
Do not open it.





# Unit Review



1

Why must Tom wash his hands before eating? Tick (✓).



- ☐ Because his mother told him to.
- ☐ Because water makes food taste good.
- ☐ Because there are microbes on his hands.
- ☐ Because there are microbes in his food.

2

Yeast is a microbe. What is yeast used for? Tick (✓).



- 3 Mary's mother wants to make bread. What will she need?  
Tick (✓).


☐

oven


☐

salt


☐

flour


☐

meat


☐

water


☐

jam


☐

sugar


☐

yeast

# Glossary



## Unit 1 Seeds

disperse	传播
germinate	发芽
grow	种植
heat	热量
light	光
sand	沙子
seed	种子
seedling	幼苗
soil	土壤
water	水

## Unit 2 Sound

ear protector	护耳器
gas	气体
high	高的
liquid	液体
low	低的
muffle	使声音减弱
pitch	音调
solid	固体
sound	声音
travel	传播
vibration	振动

## Unit 3 Microbes

bread	面包
cold	冷的
food	食物
microbe	微生物
rise	膨胀
sugar	糖
warm	温暖的
yeast	酵母

## Unit 4 Earth, Moon and Sun

day	天
earth	地球
galaxy	星系
moon	月亮
moon's phases	月相
orbit	轨道
planet	行星
rotation	自转
shine	照射
solar system	太阳系
star	恒星
sun	太阳
year	年

# Skills

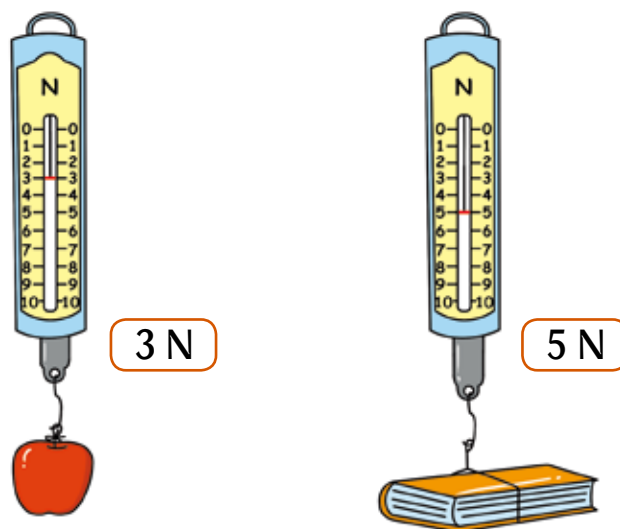


## Observe



When you study something (某事物) closely (仔细地), you are observing. You can use a tool (工具) such as a microscope (显微镜).

## Measure



A force meter is a measuring instrument (工具). When you use a measuring instrument, you are measuring. A measurement always has a number and a unit (单位).



## Compare

Some of my seedlings are only 2 cm tall.



My seedlings are tall and strong.



If you have two or more objects, you can observe or measure them to compare them.

## Classify



### Key

Does it have a backbone?

Yes

Vertebrate

No

Invertebrate

In science, we use keys to classify things.

## Sequence



small



big

Take some objects. Choose a feature (特征). Put the objects in order (按顺序). This is a sequence.

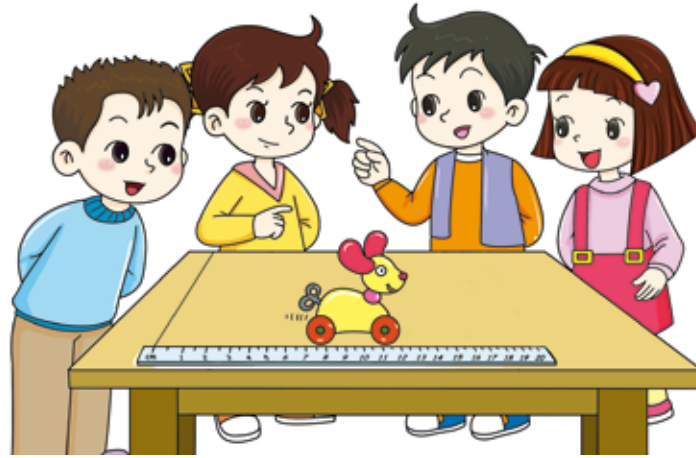
## Predict



I think my seedlings will grow better, because they have water, heat and light.

When you say what you think will happen, you are predicting.

## Experiment



Observe and measure something. Think about your results. Did you learn something about science? You are experimenting.

## Fair test



If you want to compare results, you should do a fair test. How do you make a fair test? Change only one condition (条件). Keep the other conditions the same.

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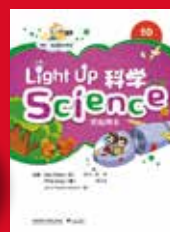
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