Oxford Read and Discover

How We Make Products

Alex Raynham

Read and discover all about how we make products ...

- **How many parts are there in a car?**
- **How do we make chocolate bars?**

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Word count for this reader: 1,306

✔ Level 3 — 600 headwords

Level 4 — 750 headwords

Level 5 — 900 headwords

Level 6 — 1,050 headwords

Cover photograph: Science Photo Library (Car production line robots/George Steinmetz)

OXFORD UNIVERSITY PRESS

www.oup.com/elt

CEF B1 A2 A1

ISBN 978-0-19-464383-

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Contents

Introduction		3
1	Making Products by Hand	4
2	Clothes	6
3	Plastic Products	8
4	Cars	10
5	Food	12
6	Homes	14
7	Books	16
8	Electronic Products	18
9	Computer Games	20
10	Products and Our World	22
Activities		24
Projects		44
Picture Dictionary		46
About *Read and Discover*		48

OXFORD
UNIVERSITY PRESS

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Great Clarendon Street, Oxford OX2 6DP

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide in

Oxford New York

Auckland Cape Town Dar es Salaam Hong Kong Karachi Kuala Lumpur Madrid Melbourne Mexico City Nairobi New Delhi Shanghai Taipei Toronto

With offices in

Argentina Austria Brazil Chile Czech Republic France Greece Guatemala Hungary Italy Japan Poland Portugal Singapore South Korea Switzerland Thailand Turkey Ukraine Vietnam

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First published 2011
2015 2014 2013 2012 2011
10 9 8 7 6 5 4 3 2 1

ISBN: 978 0 19 464383 2

An Audio CD Pack containing this book and a CD is also available, ISBN 978 0 19 464423 5

The CD has a choice of American and British English recordings of the complete text.

An accompanying Activity Book is also available, ISBN 978 0 19 464393 1

Printed in China

This book is printed on paper from certified and well-managed sources.

ACKNOWLEDGEMENTS

Illustrations by: Finger Industries p.20, 40; Kelly Kennedy pp.9, 11; Dusan Pavlic/Beehive Illustration pp.26, 28, 42, 46, 47; Alan Rowe pp.24, 26, 27, 28, 40, 42, 46, 47; Jane Smith pp.8, 13.

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With thanks to Ann Fullick for science checking

Introduction

Products are things that we make and use, like clothes, chocolate, computers, and homes. People make lots of products with big machines in factories. People also make products by hand.

What products can you see here?
What products do you use every day?
How do we make these products?

Discover!

Now read and discover more about how we make different products!

1 Making Products by Hand

Making Jewelry by Hand

About 200 years ago, there weren't many factories or machines, and people made many products by hand. Today, some people still make products by hand. They use tools to make products like chairs, clocks, jewelry, and musical instruments. It takes years to learn how to make these things.

People make guitars from wood. They cut thin pieces of wood to make the front and back of the guitar. To make the sides, they put long, thin pieces of wood in water. Then they use hot tools to make the wood the right shape for the sides. They fix these pieces together with glue. Later, they make the neck of the guitar, and they put the strings on it.

Making a Guitar

Go to pages 24–25 for activities.

2 Clothes

Sewing Jeans in a Factory

We make clothes from lots of different materials like wool and cotton.

To make jeans, people use cotton fabric. They cut the fabric into different shapes for pieces of the jeans, like the legs and pockets. They use a sewing machine to sew these pieces together. Then they sew buttons and a zipper on the front of the jeans.

Knitting

People use wool to make clothes like hats or sweaters. At home, some people use wool and knitting needles to knit clothes. They knit different pieces of the clothes, like the arms, the front, and the back. Then they sew the pieces together. In factories, people use knitting machines to knit clothes.

Discover!

People don't only knit clothes. Lauren Porter knitted this amazing Ferrari with 19 kilometers of wool!

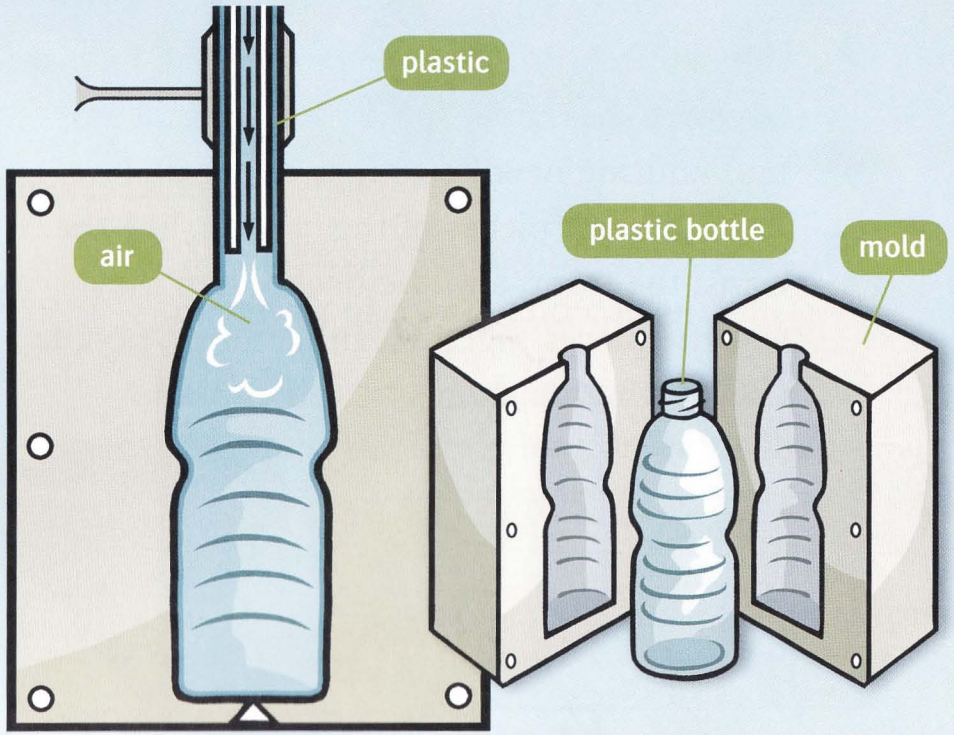
Go to pages 26–27 for activities.

3 Plastic Products

We make a lot of products from plastic, like bottles and toys.

To make a plastic product, machines put hot plastic in a mold. Then the plastic is the same shape as the mold. To make some products like bottles, machines also blow air into the molds.

How To Make a Plastic Bottle



Making Plastic Toys

To make a new plastic product like a toy, people draw it and then make a model of it. In a factory, people use the model to make a mold for each part of the toy. Machines put hot plastic in the molds to make plastic parts. People or machines fix the parts together, and they paint the toys. Then the toys go to stores.

Discover!

It's good to recycle plastic. We can make new things from plastic waste.

Go to pages 28–29 for activities.

4 Cars

To make a car, people use a metal called steel to make a strong chassis. People also use steel to make big shapes for the outside of the car. Then robots fix the outside to the chassis. A conveyor moves the chassis around the car factory, and people fix many parts on the chassis.

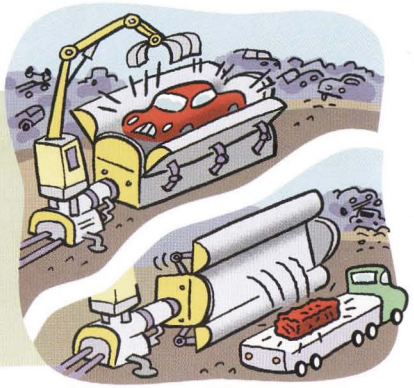
Fixing Parts on a Chassis

Fixing Doors on a Car

Later, other machines paint the car. Then, people fix other parts on the car, like the engine, doors, wheels, and seats for people to sit on. There are about 35,000 parts in a car!

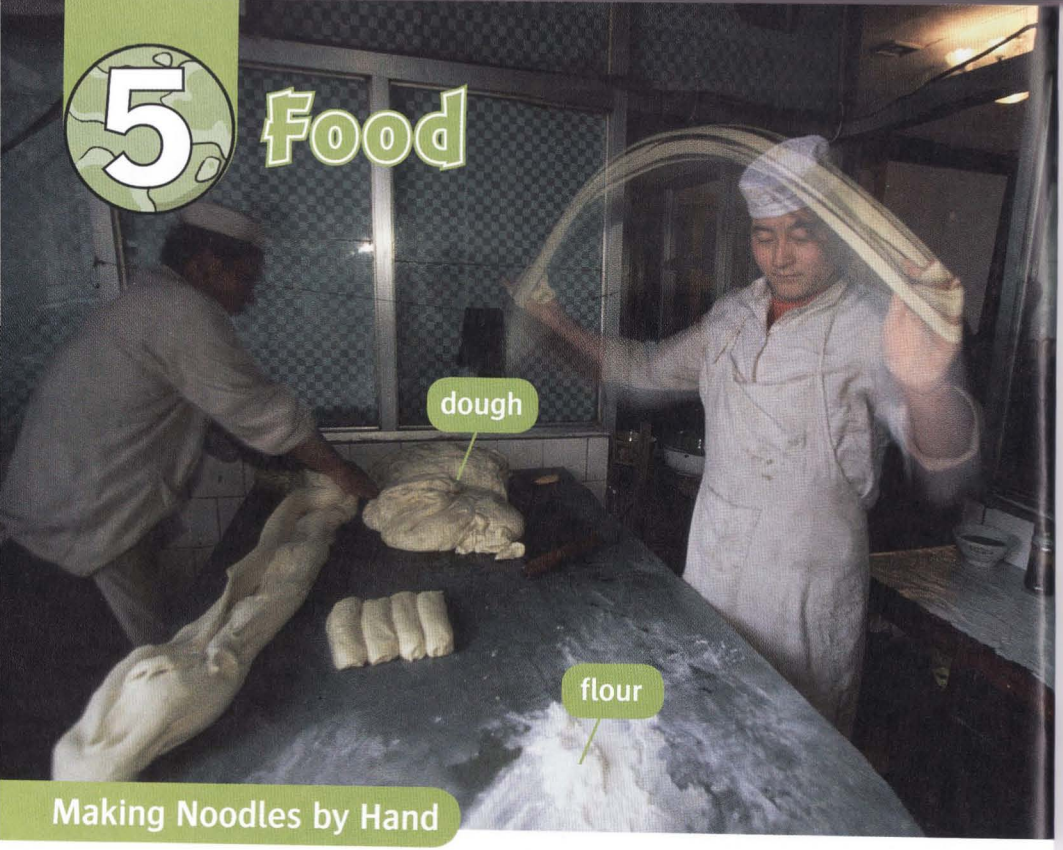
Discover!

Around the world, people make 48 million cars every year. This uses lots of steel. We can recycle steel from old cars, and use it again.



Go to pages 30–31 for activities.

5 Food



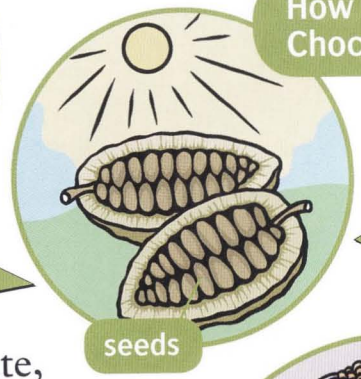
Making Noodles by Hand

Do you like noodles or chocolate? Do you know how people make this food?

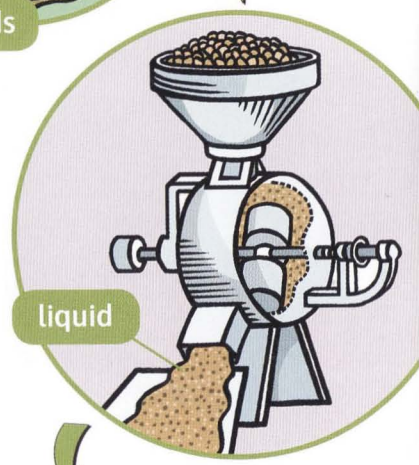
People make noodles from grains like rice or wheat. To make rice noodles, people grind rice into flour. Then they mix flour with water to make dough.

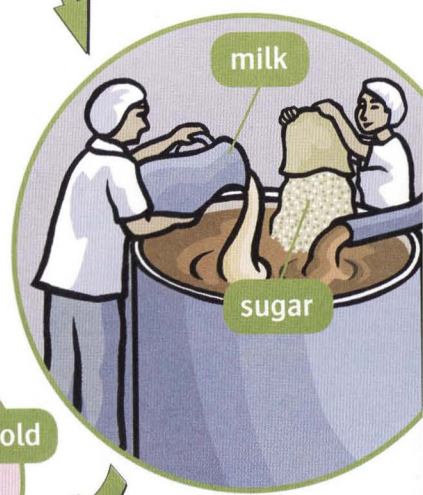
In factories, machines push dough through holes to make noodles. Some people make noodles by hand. They pull the dough between their fingers.

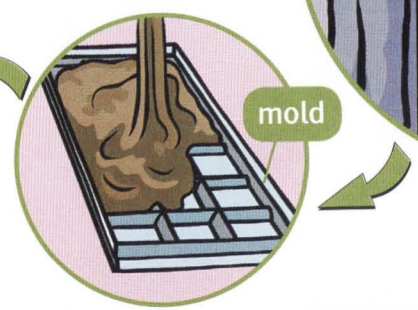
How To Make Chocolate Bars



To make chocolate, people take seed pods from cacao trees and leave them in the sun. Then they throw away the outside and keep the seeds. Machines grind and heat the seeds, and then the seeds become a liquid. Then people cook this liquid with sugar and sometimes milk. They put the liquid in molds to make chocolate bars.

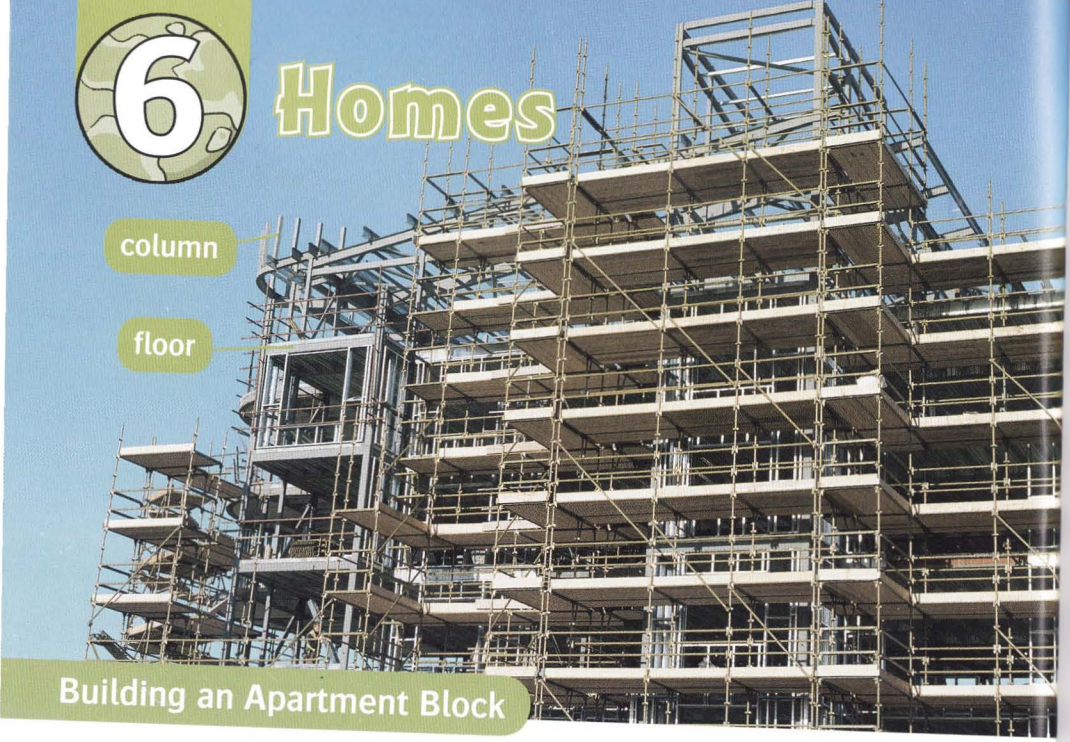






Go to pages 32–33 for activities.

6 Homes



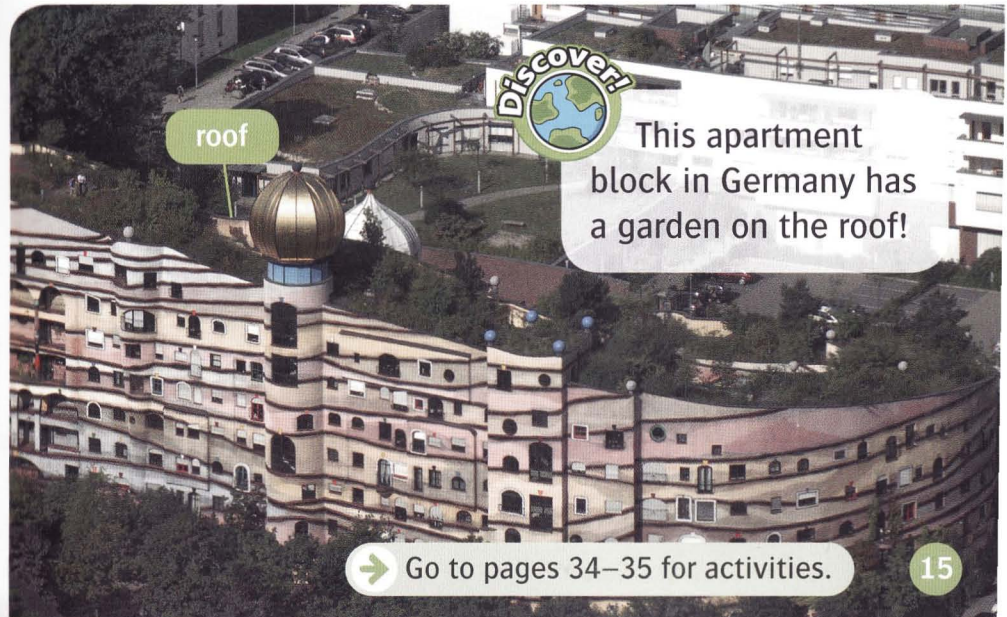
Building an Apartment Block

We build different homes in different ways. To build an apartment block, people make shapes for the floors and columns from long pieces of steel. Then people put wood around the shapes, and they put a liquid called concrete in them. When the concrete becomes hard like stone, they take the wood away.

Making a Concrete Floor

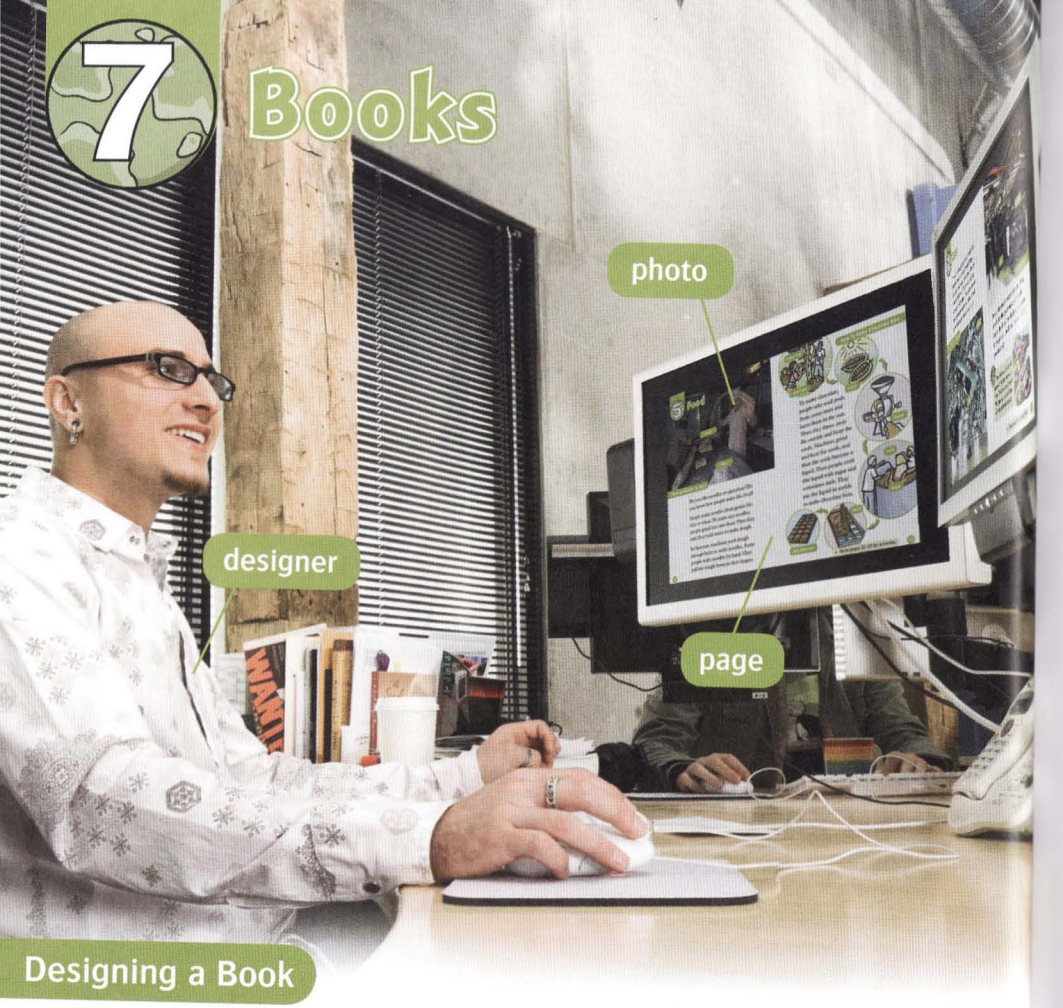
People build walls to make the rooms in each apartment. They put wires in the walls to carry electricity, and they put pipes in the walls and floors to carry water. They often fix tiles on the floors, and on the walls in the bathroom and kitchen. They put plaster on the walls. Then they can paint the walls.

Putting Plaster on a Wall



Go to pages 34–35 for activities.

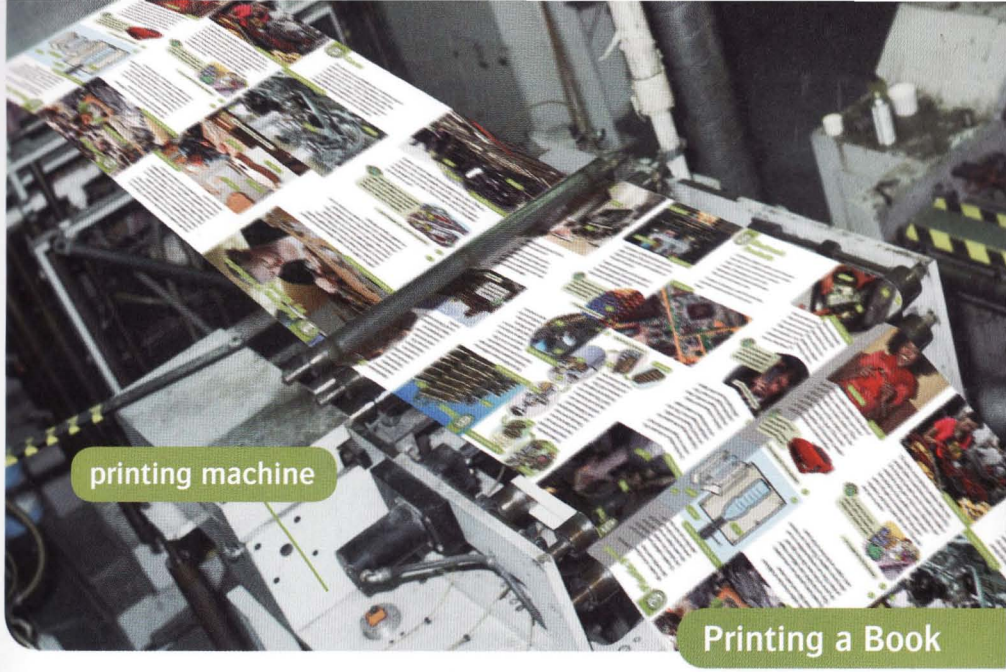
7 Books



Designing a Book

Many people made this book. Do you know how we make books?

An author writes the words, and an editor checks the words. Other people draw pictures or take photos for the book. Designers use a computer to put the words, photos, and pictures into pages.



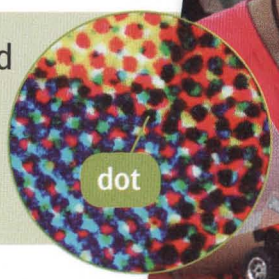
Printing a Book

In factories, printing machines print the pages on paper. They print 16 pages on one big piece of paper, then other machines cut the paper into pages.

People used machines to fix the pages of this book together. Sometimes people sew the pages together, then they fix them to the cover with glue.

Discover!

Every picture in a printed book is made of thousands of very small red, blue, yellow, and black dots.



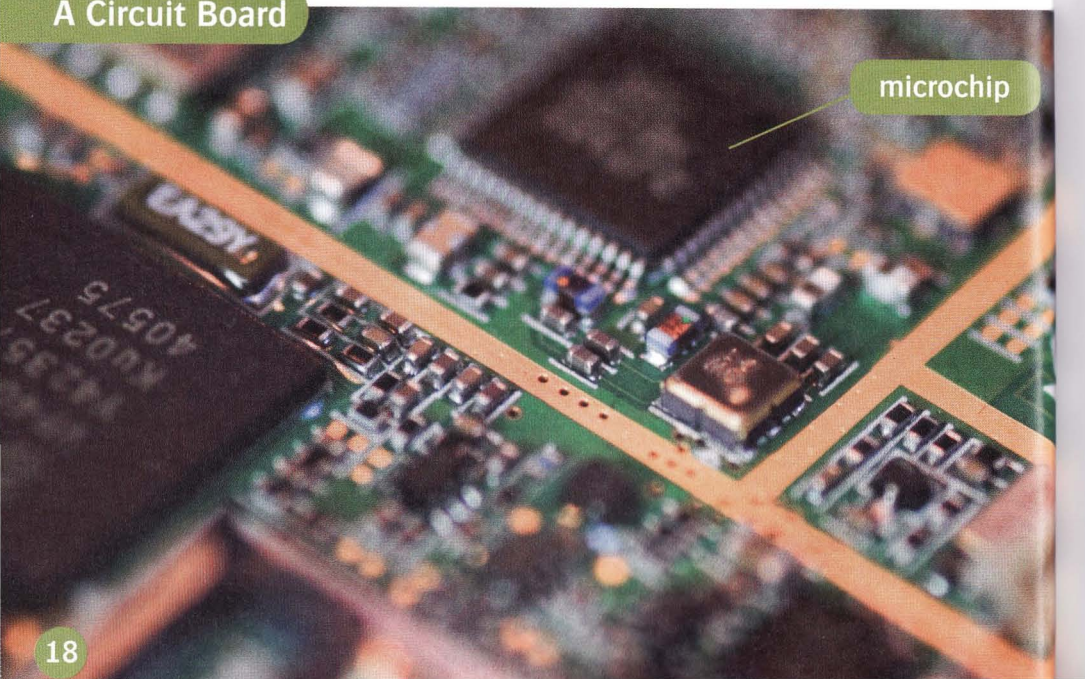
Go to pages 36–37 for activities.

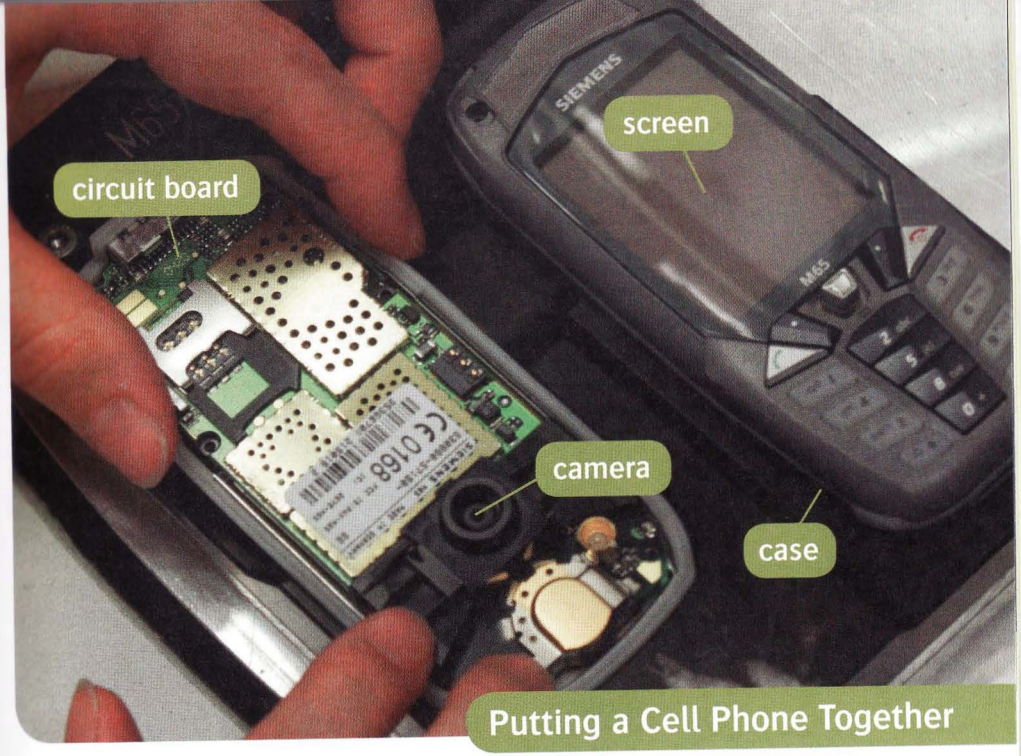
8 Electronic Products

Cell phones, digital cameras, and computers have lots of very small electronic parts inside them. Circuits carry electricity around a product. Microchips are parts with thousands of small circuits inside them. They make a product work.

To make a cell phone, people put computer programs on a microchip. Then they fix the microchip and other electronic parts on a circuit board.

A Circuit Board



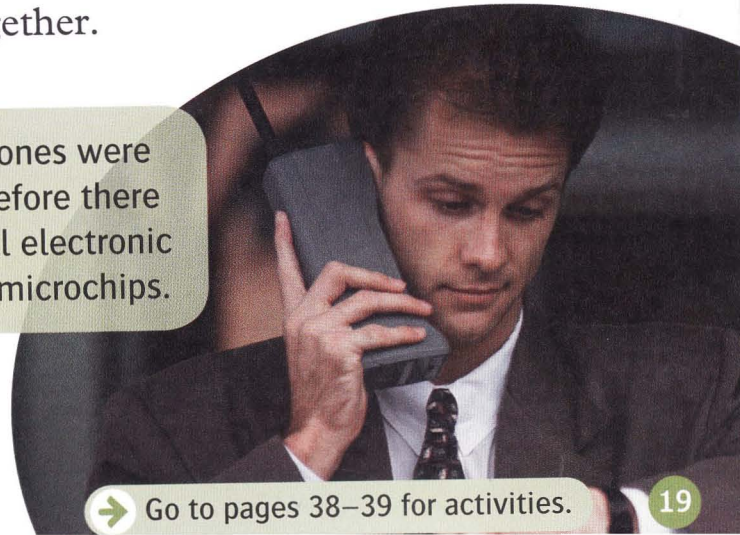


Putting a Cell Phone Together

People make the phone case from plastic. They fix the circuit board and parts like the screen and camera inside the case. Then they put the front and back of the case together.

Discover!

Cell phones were very big before there were small electronic parts like microchips.



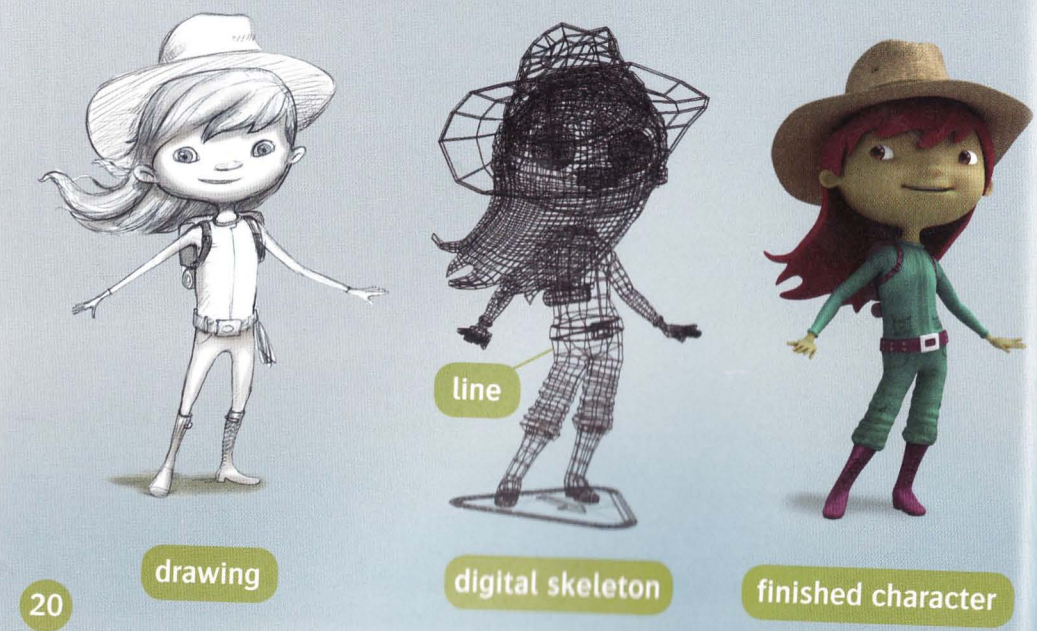
Go to pages 38–39 for activities.

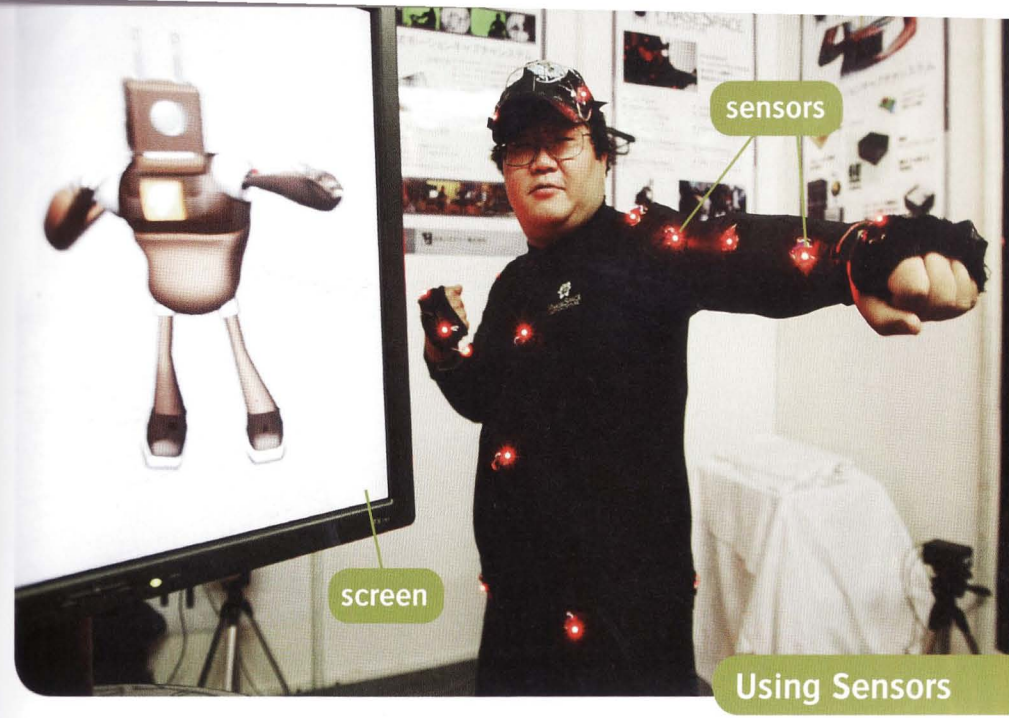
9 Computer Games

To make computer games, people write computer programs.

People also make digital characters for the games. To make a digital character, people make a drawing. Then they use a computer to make the picture into a digital skeleton, made of lines. On the computer, people can move the skeleton and they can see it from different sides. Then they add a face, clothes, and colors.

Making a Digital Character





Using Sensors

Sometimes, to help to make a digital character, people use machines called sensors. A person wears the sensors. The sensors tell a computer how the person moves, and the computer makes a moving picture of the character. Then computer programs move the characters on the screen when people play the game.

People play a new game to check it. Then they sell the game on the Internet or in stores.

Go to pages 40–41 for activities.

10 Products and Our World

When we make products, we use energy like electricity. To make one car, we use the same energy as someone watching television for 100 years! We also use materials and make waste. To make one car, we make about 28 metric tons of waste.

Every day, people throw away millions of products like toys, cans, and bottles. Most waste goes to landfills, and sometimes people throw waste in other places like rivers. This is bad for our world.

A Bag Made From Old Products

It's good to recycle old products. We can use materials from old products to make new things, like this bag.

We can recycle old products like plastic bottles, metal cans, and clothes. At recycling centers, people sort the old products. Then machines use the old products to make recycled materials. We can use these materials to make new products.

At a Recycling Center

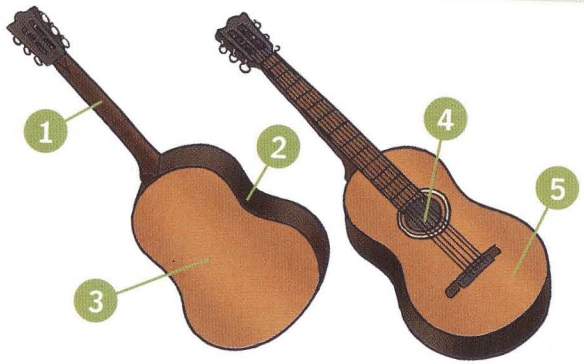
Go to pages 42–43 for activities.

1 Making Products by Hand

Read pages 4–5.

1 Write the words.

front ~~neck~~ back side strings



1 neck
2 _____
3 _____
4 _____
5 _____

2 Complete the sentences.

instruments ~~hand~~ tools jewelry factories

1 About 200 years ago, people made products by hand.
2 Today, people make lots of products in _____.
3 You can wear _____.
4 People make some musical _____ by hand.
5 They often use _____ to make things.

3 Match. Then write the sentences.

People make guitars	strings on the guitar.
They make	together with glue.
They cut	them by hand.
They fix the pieces	thin pieces of wood.
Then they put	from wood.

1 People make guitars from wood.
2 _____
3 _____
4 _____
5 _____

4 Circle the odd one out.

1 clocks chairs (factories) jewelry
2 neck back string front
3 fix make tools cut
4 wood glue water front

5 What do people make by hand? Write products from pages 4–5.

1 jewelry
2 _____
3 _____
4 _____

2 Clothes

Read pages 6–7.

1 Find and write the words.

c	p	y	c	b	v	z	m
l	z	f	a	b	r	i	c
o	a	n	i	v	j	p	s
t	d	t	c	h	y	p	t
h	r	p	o	c	k	e	t
e	g	w	t	q	s	r	k
s	b	u	t	t	o	n	s
p	w	o	o	l	d	n	u
j	e	a	n	s	w	v	m

1 cotton 2 _____

3 _____ 4 _____

5 _____ 6 _____

7 _____ 8 _____

2 Write *true* or *false*.

1 People use wool fabric to make jeans. false

2 People make some clothes by hand. _____

3 People sew a zipper on the back of the jeans. _____

4 People sew pieces of fabric together to make some clothes. _____

5 People use knitting machines to knit things in factories. _____

3 Complete the sentences.

needles pieces machines cotton

1 People use materials like _____ and wool to make clothes.

2 We use sewing _____ to make clothes like jeans.

3 Knitting _____ are tools that we use at home.

4 We sew the different _____ of wool clothes together.

4 Color. Then write the colors, clothes, and materials.

Jess is wearing a pair of jeans.

They are _____ and

they're made of _____.

She's also wearing a _____.

It's _____ and it's made of _____.

5 What clothes are you wearing today? What color are they, and what are they made of?

_____

_____

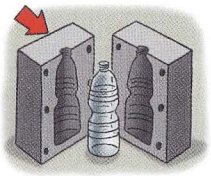
_____

3 Plastic Products

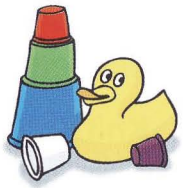
Read pages 8–9.

toys blow waste
model mold recycle

1 Write the words.


1 _____


2 _____


3 _____


4 _____


5 _____


6 _____

2 Find and write the words.

peopleshapestorepartsbottlemachineproductplastic

1 people
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____

3 Number the sentences in order.

How to Make a Plastic Toy:

They make a mold for each part. ☐
They make a model of the toy. ☐
People or machines fix the parts together. ☐
People draw a new toy. 1
Machines use hot plastic and molds to make plastic parts. ☐

4 Draw and write about two plastic products that you use at home.

This is a _____.
I use it to _____.
I like it because _____.
_____.

4 Cars

Read pages 10–11.

1 Find and write the words.

yorobotscisteelmidseatstkjsdoororchassispr

1 We use this metal to make car parts. _____

2 These machines help us to make cars. _____

3 You sit on these inside a car. _____

4 People fix parts on this. _____

5 You open this to get into a car. _____

2 Circle the correct words.

1 There are thousands of **parts** / **chassis** in a car.

2 A conveyor **fixes things together** / **moves things.**

3 Robots fix the outside of the car to the **chassis** / **engine.**

4 Other **people** / **machines** paint the car.

5 We **can** / **can't** recycle steel from old cars.

3 Complete the sentences.

parts wheels robots chassis
paint conveyor shapes

1 To make a car, people make a strong _____ .

2 People also make big _____ for the outside of the car.

3 Then _____ fix the outside to the chassis.

4 A _____ moves the chassis around the factory.

5 People fix many _____ on the chassis.

6 Later, other machines _____ the car.

7 Then people fix parts on the car like the _____ .

4 Answer the questions.

1 What is a car chassis made of?

A car chassis is made of steel.

2 How many parts are there in a car?

_____

3 How many cars do people make every year?

_____

4 What can people do with old cars?

_____

5 Food

Read pages 12–13.

1 Write the words.

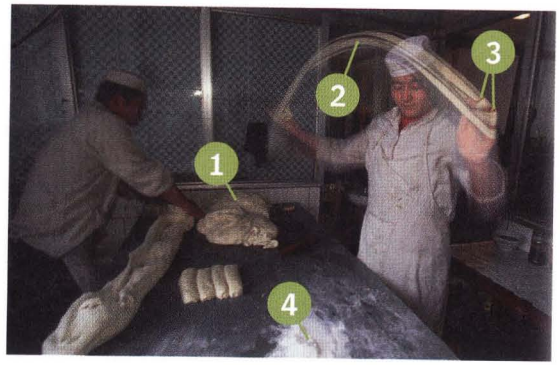
dough fingers noodles flour

1 _____

2 _____

3 _____

4 _____



2 Write *noodles* or *chocolate bars*.

1 We put liquid into molds to make these. chocolate bars

2 We use water to make these. _____

3 These are made from the seeds of trees. _____

4 These have sugar in them. _____

5 We can make these from grains. _____

3 Number the sentences in order.

How to Make Chocolate Bars:

People put sugar and milk into the liquid. ☐

People leave the seed pods in the sun. ☐

People take the seed pods from the cacao tree. ☐

They put the liquid in molds. ☐

Machines grind and heat the seeds. ☐

They throw away the outside and keep the seeds. ☐

4 Circle the correct words.

1 We grind **cacao** / **rice** to make flour.

2 We mix flour and **water** / **milk** to make dough.

3 In factories, machines push dough through **seeds** / **holes** to make noodles.

4 To make noodles, people **pull** / **push** the dough between their fingers.

5 What is your favorite food? When do you eat it?

_____

_____

_____

_____

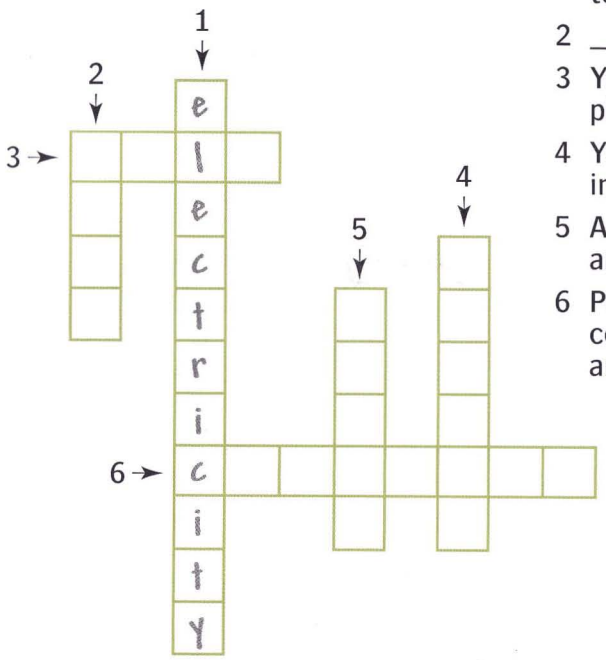
6 Homes

Read pages 14–15.

1 Match.

1 Tiles	can be a liquid.
2 Pipes	carry electricity.
3 Concrete	goes on walls.
4 Wires	go on walls and floors.
5 Plaster	carry water.

2 Complete the puzzle.



1 Things like lights and televisions use ___.
2 ___comes from trees.
3 You can put a picture on a ___.
4 You can find flowers in a ___.
5 A lot of people live in an apartment ___.
6 People make columns from steel and ___.

3 Write *true* or *false*.

1 We build all homes in the same way. _____
2 We use steel to build apartment blocks. _____
3 We build walls to make the rooms in an apartment. _____
4 Pipes carry electricity around a home. _____
5 We put plaster on the walls after we paint them. _____
6 You can put tiles on walls. _____

4 Answer the questions about your home.

1 Do you live in a house or an apartment?

_____

2 How many rooms are there in your home?

_____

3 What color are the walls?

_____

4 Do you have tiles in your home?

_____

5 What is your favorite room?

_____

7 Books

Read pages 16–17.

1 Complete the sentences.

print glue pages cover dots

1 There are 48 _____ in this book.

2 The _____ is the outside of a book.

3 We _____ the book on paper.

4 All the pictures in this book are made of _____.

5 Sometimes we use _____ to fix the book together.

2 Number the sentences in order.

How to Make a Book:

Designers put the words and pictures into pages. ☐

Other machines cut the paper into pages. ☐

Authors write the words. ☐

People fix the pages together. ☐

Machines print the pages. ☐

Other people draw pictures or take photos. ☐

Editors check the words. ☐

3 Find and write the words from pages 16–17.

1 three people who make books

author _____ _____

2 two machines that make books

_____ _____

3 two parts of a book

_____ _____

4 Answer the questions.

1 What do designers use to put the words and pictures into pages?

_____

2 How many pages do machines print on one piece of paper?

_____

3 What are the pictures in books made of?

_____

4 What do editors do?

_____

5 How did people fix the pages of this book together?

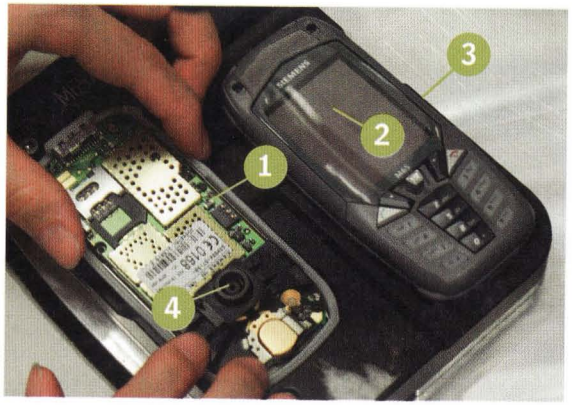
_____

8 Electronic Products

Read pages 18–19.

1 Write the words.

screen circuit board
camera case



1 _____

2 _____

3 _____

4 _____

2 Complete the sentences.

plastic cameras circuits
electronic electricity

1 Circuits carry _____ around a product.

2 There are lots of _____ parts inside cell phones.

3 Microchips have small _____ inside them.

4 People make cell phone cases from _____.

5 A lot of cell phones have _____.

3 Write *true* or *false*.

1 Electronic products have microchips. _____

2 Electronic parts are usually very big. _____

3 People make phone cases from metal. _____

4 The first cell phones had microchips. _____

4 Find and write the words.

a	n	m	i	s	f	d	t	h	o	e
j	g	i	w	k	x	q	p	y	c	l
v	m	c	e	l	l	p	h	o	n	e
r	b	r	u	z	l	o	p	i	j	c
p	r	o	g	r	a	m	n	g	c	t
b	c	c	i	r	c	u	i	t	a	r
y	p	h	y	c	a	d	t	h	m	o
n	s	i	s	k	s	c	r	e	e	n
a	n	p	n	i	e	s	c	p	r	i
r	o	h	t	d	f	s	i	n	a	c

1 cell phone

2 c _____

3 s _____

4 c _____

5 m _____

6 e _____

7 p _____

8 c _____

5 What electronic products do you use every day? What do you use them for?

_____

_____

_____

9 Computer Games

Read pages 20–21.

1 Write the words.

sensors digital character digital skeleton drawing

1 _____ 2 _____

3 _____ 4 _____

2 Match.

1 Computer games
2 Digital skeletons
3 People play new
4 Digital characters
5 Sensors

tell computers how a person moves.
are people in computer games.
are made with computer programs.
computer games to check them.
are made of lines.

3 Number the sentences in order.

How to Make a Computer Game:

People sell the game on the Internet or in stores. ☐

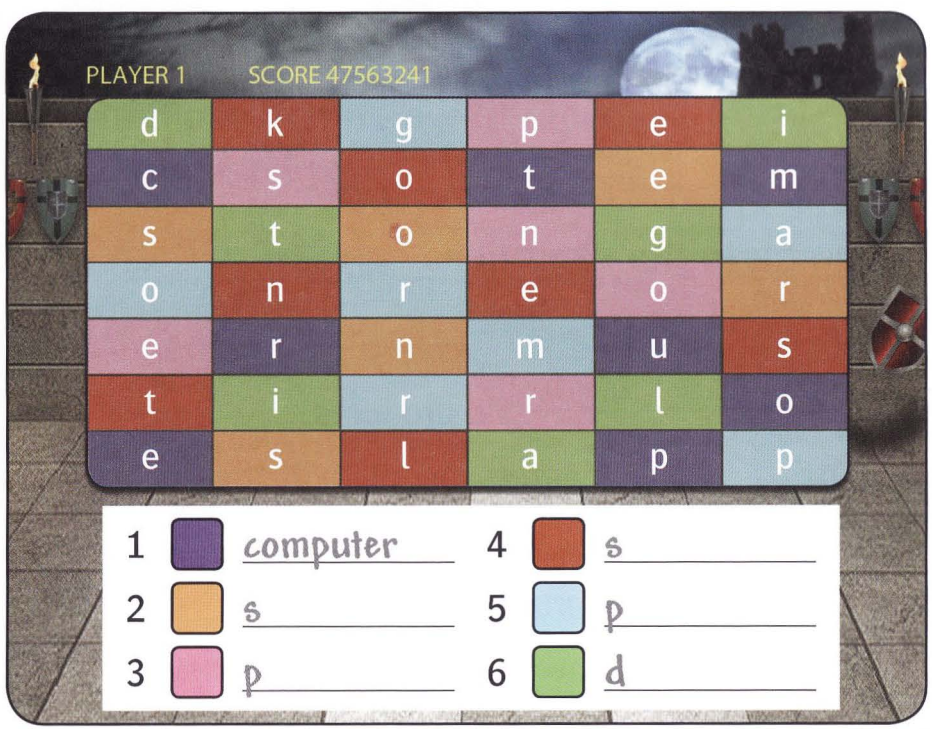
They use computers to make digital skeletons. ☐

People draw the characters in the game. ☐

They check the game. ☐

People add faces, clothes, and colors to the skeletons. ☐

4 Order the letters with the same color to find the words. Then write the words.



10 Products and Our World

Read pages 22–23.

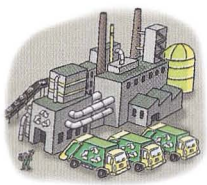
1 Write the words.

electricity landfill sort
river cans recycling center

1 _____

2 _____

3 _____



4 _____

5 _____

6 _____

2 Complete the sentences.

recycled recycling recycle products use

1 We can _____ old products.
2 At _____ centers, people sort the old products.
3 Machines _____ the old products to make _____ materials.
4 We use these new materials to make new _____.

3 Order the words.

1 we / products, / make / energy. / use / we / When
When we make products, we use energy.

2 millions / throw / Every / away / people / day, / products. / of
_____

3 waste / to / Most / goes / landfills.
_____

4 Some / goes / rivers. / in / waste
_____

5 can / products. / old / We / recycle
_____

4 Find these numbers in the book. Then write sentences.

1 (19)
There are 19 kilometers of wool in the Ferrari.

2 (35,000)
_____

3 (48,000,000)
_____

4 (16)
_____

5 (28)
_____

Project 1 A Product Poster

1 Choose a product in this book.

2 Answer these questions and write notes.

What is the product?

What material is it made of?

Is it made by hand or in factories?

How do people make it?

What is it used for?

3 Make a poster. Find or draw pictures of your product and write sentences.

4 Display your poster.

Project 2 Products in My Room

1 Write eight different types of product that are in your room at home. Complete the chart.

	What is it?	What's it made of?	What do you use it for?
1			
2			
3			
4			
5			
6			
7			
8			

2 Make a poster about products that are in your room. Find or draw pictures of the products.

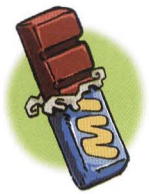
3 Display your poster.

Picture Dictionary


blow


buttons

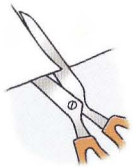

cans


chocolate


clothes


cotton

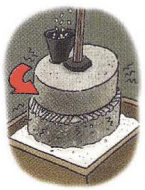

cover

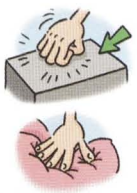

cut


electricity

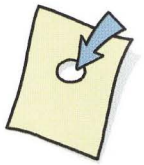

fabric


grains


grind


hard


heat


hole


landfill

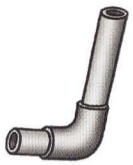

machine


metal

million


model


musical instruments


pipe


plastic

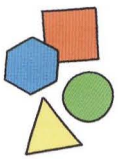

pocket


pull

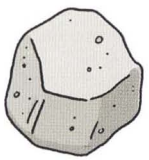

push


recycle


river


shapes


sort


stone


strings


throw away

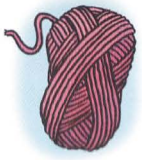

tiles


tools


waste


wheat


wood


wool


zipper

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