

Essential Science Plus 4 PRIMARY

Teacher's Resource Book

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Introduction

Essential Science Plus 4 Teacher's Resource Book provides a wide variety of photocopiable worksheets designed to complement **Essential Science Plus 4 Student's Book** and **Essential Science Plus 4 Teacher's Book**.

These worksheets facilitate a flexible approach in the classroom. Students in the same class can be given different worksheets. Stronger students can expand on the material learnt in class. Weaker students can use the worksheets to revise. Alternatively, students can work together with stronger peers to complete the tasks. In addition, these worksheets can be photocopied and used for homework.

There are five categories of worksheets: **Reinforcement**, **Extension**, **Culture & Festivals**, **Investigate!** and **Assessment**. Answer keys are provided at the back of this book.

Reinforcement and Extension worksheets

There are twenty-four **Reinforcement worksheets** and twelve **Extension worksheets**. The Reinforcement worksheets are designed to provide additional support for students in need of further practice. They can be used after the relevant section in the Student's Book, before the *Show what you know* sections, or as extra preparation for the Unit assessment. Depending on the students, they can complete the worksheets with or without consulting their Student's Books, in the classroom or at home, individually or in pairs.

The Extension worksheets can be used for fast finishers or to expand on the material covered in class.

1

We grow and change

Name _____

Date _____

1 Read the sentences and write the correct stage of life.




	stage of life
Our bodies stop growing.	
Our bodies are small.	
Our bodies become weaker.	
Our bodies begin to change.	

2 Copy each sentence under the correct picture.

Babies make sounds, but they can't talk.

Babies wear a nappy.

Babies crawl on their hands and knees.

3 Complete the text about adolescence.

hips

adolescents

breasts

voice

chest


shoulders

hair

When children become _____ their bodies begin to change.

They grow _____ in some places on their bodies. Girls grow _____ and their _____ get wider.

Boys also change. Their _____ and _____ get wider. Their _____ becomes deeper.



6

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1

We grow and change


Name _____

Date _____

1 Read the text and answer the questions.

Talking with our bodies

We constantly use our body to communicate with other people. This form of nonverbal communication is called body language. Our brain controls all our movements, including our facial gestures. These physical movements send messages to other people. Sometimes we say things more accurately with our body than with words. Body language expresses our emotions, for example, when we are happy, we smile. Sometimes, body language may hurt people's feelings, like rolling our eyes or turning our back on someone. In other instances, body language can let others know that we like them. So remember, even when you are silent, your body never stops talking!



2 Complete the table about how you use your body to communicate. Then, compare with a partner.

my body language	
When I'm happy, I...	_____
When I'm angry, I...	_____
When I'm excited, I...	_____
When I'm tired, I...	_____
_____	_____
_____	_____

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Culture & Festivals worksheets

There are twelve **Culture & Festivals worksheets**, one for each unit. Some of these worksheets expand on a variety of cultural topics. Others focus on typical annual festivals in various countries. Students have the opportunity to relate their learning to the real world.

1

We grow and change


Name _____
Date _____

Languages of the world

More than 6,500 languages are spoken in the world! They are grouped into families, for example, English and Spanish belong to the Indo-European family of languages.

Many more languages exist in Asia than in Europe. Additionally, a lot of languages are disappearing due to the advance of the most spoken languages, such as Chinese, English and Spanish. In fact, around 2,000 of the world's languages have fewer than 1,000 speakers. These languages may soon disappear.

In the 19th century, a Russian man created an international language called Esperanto. He wanted everyone in the world to be able to communicate together. Esperanto is easy to learn due to its regular grammatical rules. It is an auxiliary language in about 115 countries, mainly in Europe, East Asia and South America, but it is not the official language of any country.



1 Read the text. Then, cross out the wrong words and rewrite the sentences.

a. Spanish and Arabic belong to the Indo-European family of languages.

b. English and Spanish are two of the least spoken languages in the world.

c. Around 1,000 of the world's languages may disappear in the near future.

d. Esperanto has complicated grammatical rules.

2 Do some research on the Internet to learn some expressions in Esperanto. Then, complete the table.

	Esperanto
hello	_____
goodbye	_____
please	_____
thank you	_____

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Investigate! worksheets

There are twelve **Investigate! worksheets**, one for each unit. These worksheets provide opportunities for students to carry out simple investigative tasks, either in the classroom or at home.

1


We grow and change

Name _____
Date _____

1 Are you carrying too much weight on your back?

Instructions

1. Work with a partner.
2. Take turns and measure your weight on some scales. Then, measure the weight of your school bag.
3. Complete the first two columns of the table with your results.
4. Calculate the recommended weight of your school bag: divide your weight by ten. Include your results in the third column of the table.
5. Repeat the same operation for your partner and record the results in the table.



	weight	weight of school bag	recommended weight of school bag
you	_____	_____	_____
partner	_____	_____	_____

6. Compare your results and answer the questions.

a. How many classmates carry too much weight on their back?

b. What problems do you think this can cause?

I can / cannot calculate how much weight to carry in my school bag.

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Assessment worksheets

There are twelve double-page **Assessment worksheets**, one for each unit. These worksheets can be given to students once the unit has been completed, as a revision test, or to check progress at any point during the year.

1 We grow and change

Name _____ Date _____

1 Circle the stages of life and write a sentence about each one.

old age adolescence childhood adulthood

2 Write a sentence with each group of words.

a. newborn babies eat food

b. learn sit up six months old

c. babies real words one year old

3 Read about adolescents and write yes or no.

	girls	boys
Their voice changes.		
Their hips get wider.		
Hair grows in some places on their body.		
They grow breasts.		
Their shoulders and chest get wider.		

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1 Use the colour key and circle the characteristics.

sex / gender → green height / weight → red

body shape → blue individual characteristics → orange

37 kilograms dark skin 1 m 20 cm long legs
short breasts beard blue eyes
wide hips shoe size red hair thin

2 Write four healthy habits. Tick (✓) the ones you do on a regular basis.

_____ ☐

_____ ☐

_____ ☐

_____ ☐

3 Complete the sentences with the correct words.

energy rest healthy tired survive grow recover sleep

a. After a busy day, we feel _____


b. Our body needs to _____
and _____

c. Animals and people need to sleep in order
to _____

d. Sleep keeps our body _____
and gives it _____

e. Sleep also helps us _____

f. Newborn babies need 16 hours _____



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Digital resources

i-solutions

The **i-solutions** pack contains 4 CDs:

CD 1

Digital Flashcards, Digital Posters and Web bank

The digital flashcard bank offers over 100 images to project onto an interactive whiteboard or to print out. There are four digital posters which can be printed out. The web bank includes some of the best free web links for teaching Science, Geography and History.

CD 2

IWB Activities

The Interactive Whiteboard Activities CD contains three interactive activities per unit to help reinforce the Student's Book content in a fun way.

CD 3

i-book

The i-book contains the core course material in digital format: Student's Book, Activity Book and Teacher's Book. It can be used on an interactive whiteboard in the classroom or for class planning.



CD 4

Teacher's resources and maps

This CD contains the PDFs of this Teacher's Resource Book. In addition, there are printable blank and filled-in maps of Spain.

Name _____ Date _____

1 Read the sentences and write the correct stage of life.

	stage of life
Our bodies stop growing.	
Our bodies are small.	
Our bodies become weaker.	
Our bodies begin to change.	

2 Copy each sentence under the correct picture.

Babies make sounds, but they can't talk.
Babies crawl on their hands and knees.

Babies wear a nappy.



3 Complete the text about adolescence.

hips adolescents breasts voice chest shoulders hair

When children become _____, their bodies begin to change.

They grow _____ in some places on their bodies. Girls grow

_____ and their _____ get wider.

Boys also change. Their _____ and _____

get wider. Their _____ becomes deeper.



4 Complete the table with information about a friend.

height / weight	body shape	individual characteristics
He is tall and thin.	He has got broad shoulders.	He has got curly hair.
_____	_____	_____
_____	_____	_____

5 Match to make sentences about healthy habits.

- | | |
|--------------------------|------------------------------|
| a. We need to exercise | our backs. |
| b. We must eat | enough water. |
| c. We need to look after | hours of sleep a night. |
| d. We need ten | regularly. |
| e. We must drink | a healthy and balanced diet. |

6 Copy the words in the correct order to make sentences about why we need to rest.

a. survive All to sleep need in order to animals and people

b. to stay enough sleep healthy We to get need

c. energy We to give need to get our body enough sleep

Name _____ Date _____

- 1 Use the colour key and circle the words. Then, underline the foods we should eat less often.

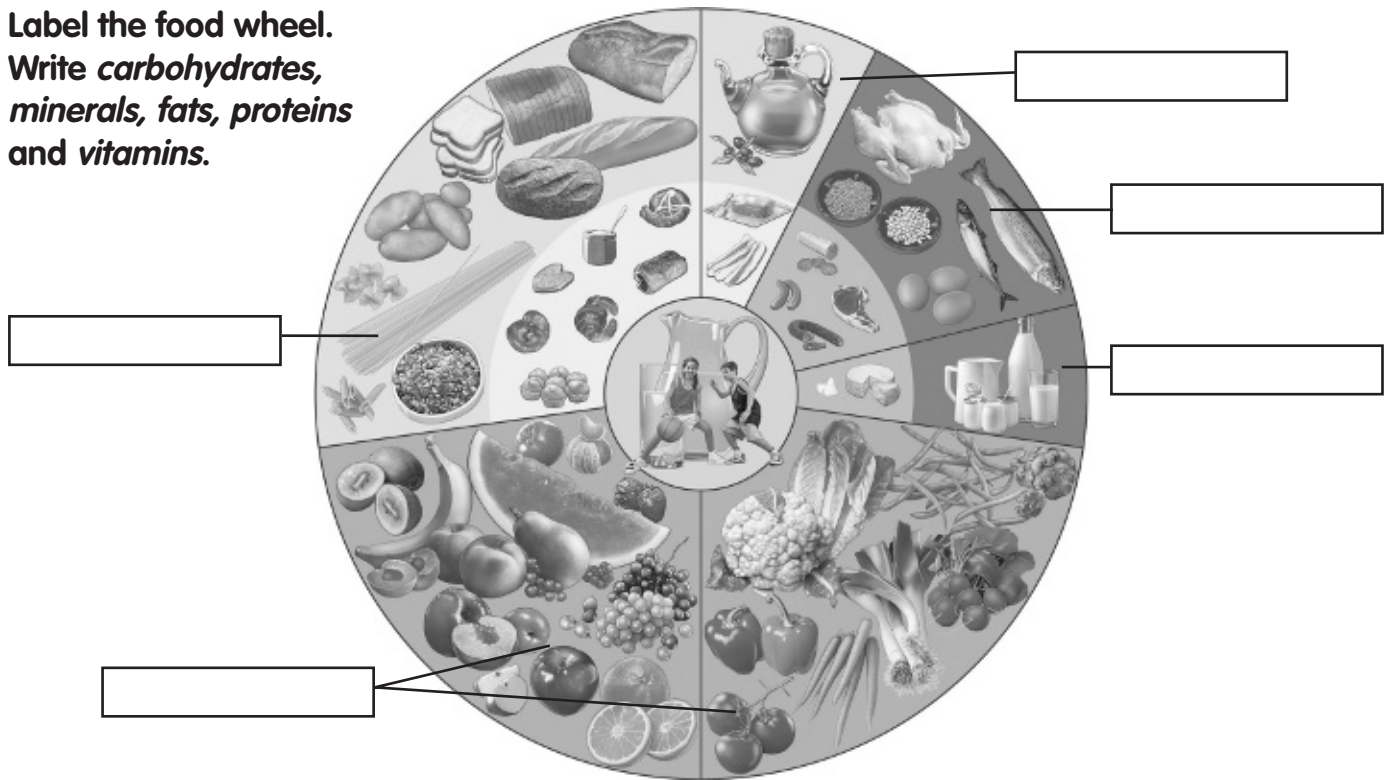
give us energy → red

help us grow → blue

keep us healthy → green

sardines yoghurt grapes eggs rice olive oil pasta bacon
milk carrots bread butter strawberries lettuce cheese

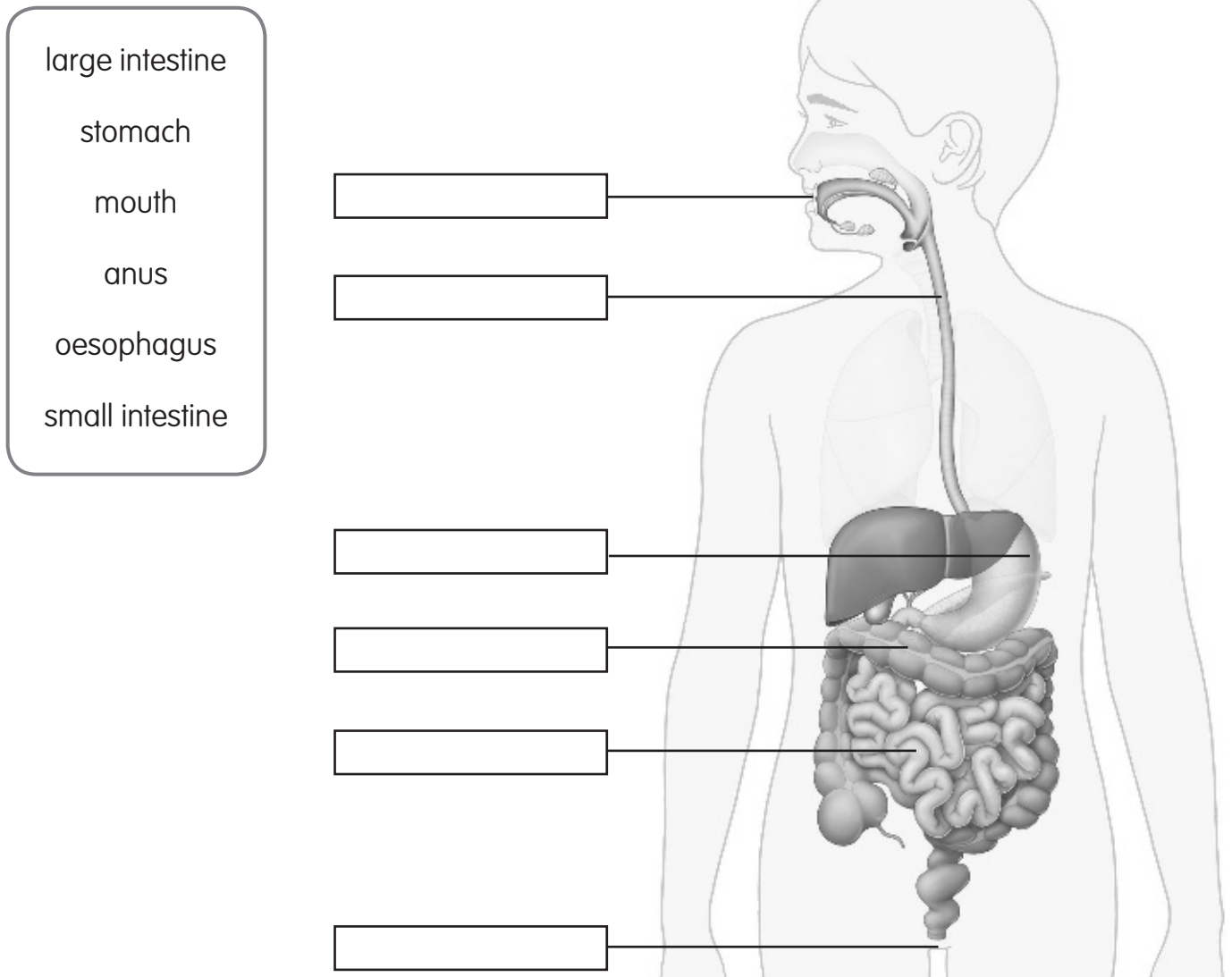
- 2 Label the food wheel.
Write *carbohydrates*,
minerals, *fats*, *proteins*
and *vitamins*.



- 3 Use the food wheel to complete the table with healthy, balanced meals.

breakfast	lunch	mid-afternoon snack	dinner
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

4 Label the diagram of the digestive system.



5 How does digestion work? Match the sentence halves and put them in order from 1 to 6.

- | | |
|--|--|
| <input type="checkbox"/> Parts of food our body does not need | the oesophagus to the stomach. |
| <input type="checkbox"/> Food mixes with gastric juices, | into the blood in the small intestine. |
| <input type="checkbox"/> Solid waste from food | continue into the large intestine. |
| <input checked="" type="checkbox"/> 1 Teeth cut and chew food, | which break down the food. |
| <input type="checkbox"/> Food travels down | and the tongue mixes it with saliva. |
| <input type="checkbox"/> Nutrients from food are absorbed | leaves our body through the anus. |

Name _____ Date _____

1 Unscramble the letters and complete the sentences with the correct words.

r e c a t a h

t o h m u

s g l u n

o r h i n b c

e n s o

- a. The _____ are two small tubes.
- b. When we breathe in, air goes down the _____.
- c. Air enters and leaves our body through
our _____ and _____.
- d. Oxygen passes into our blood in our _____.

**2 Circle the parts of the circulatory system and write three sentences about this system.**

capillaries blood vessels arteries heart veins

3 Complete the parts of the excretory system using the clues. Then, number the sentences in order.




- ☐ Urine goes down through these two tubes. _____ r _____
- ☐ Urine leaves the body through this tube. _____ h _____
- ☐ Blood is filtered and useful nutrients are reabsorbed here. _____ d _____
- ☐ Urine is collected and stored here. _____ d _____

4 Complete the text about the skin.

cool skin protects sweating
waste sensitive healthy nerves

Our body eliminates _____ through our _____. _____ helps our body to keep _____ and _____. Our skin also _____ our body from infections and injuries. It is very _____ and has many _____ that send messages to our brain.

5 Look at the pictures and complete the table about how to look after our bodies.

circulatory system	respiratory system	excretory system
		
_____	_____	_____
_____	_____	_____

6 Copy the words in the correct order to make sentences about the benefits of exercise.

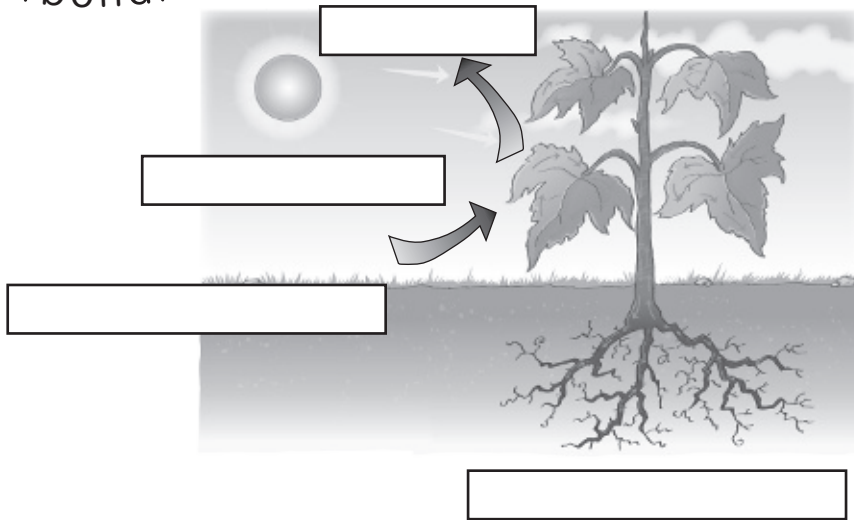
a. muscles our it bones and strengthens

b. correct the helps weight to stay at us it

Name _____ Date _____

- 1** Circle the words about photosynthesis and label the diagram.

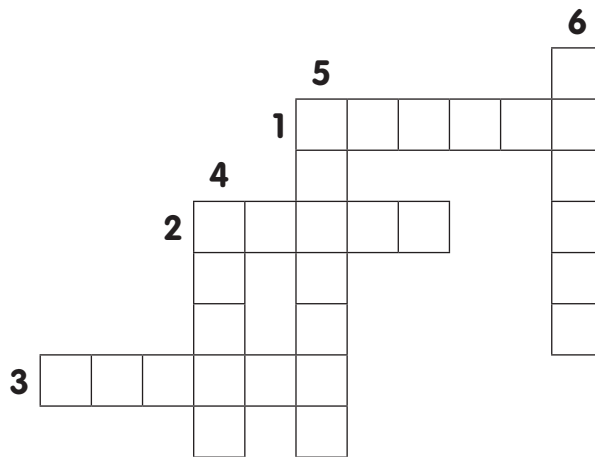
carbondioxidewaterandmineralsoxygen
sunlight



- 2** Complete the crossword about the reproductive parts of plants.

ACROSS

1. Top of the carpel.
2. Contains the ovules.
3. Yellow grains that fertilize the ovules.



DOWN

4. Gets fertilized by pollen.
5. Male reproductive organs of the plant.
6. Female reproductive organ of the plant.

- 3** Write *pollination*, *fertilization* or *germination* next to each sentence.

- a. Pollen reaches the ovule inside the ovary: _____
- b. Small roots grow down into the ground: _____
- c. Animals carry pollen from one plant to another: _____
- d. The fertilized ovule grows into a seed: _____

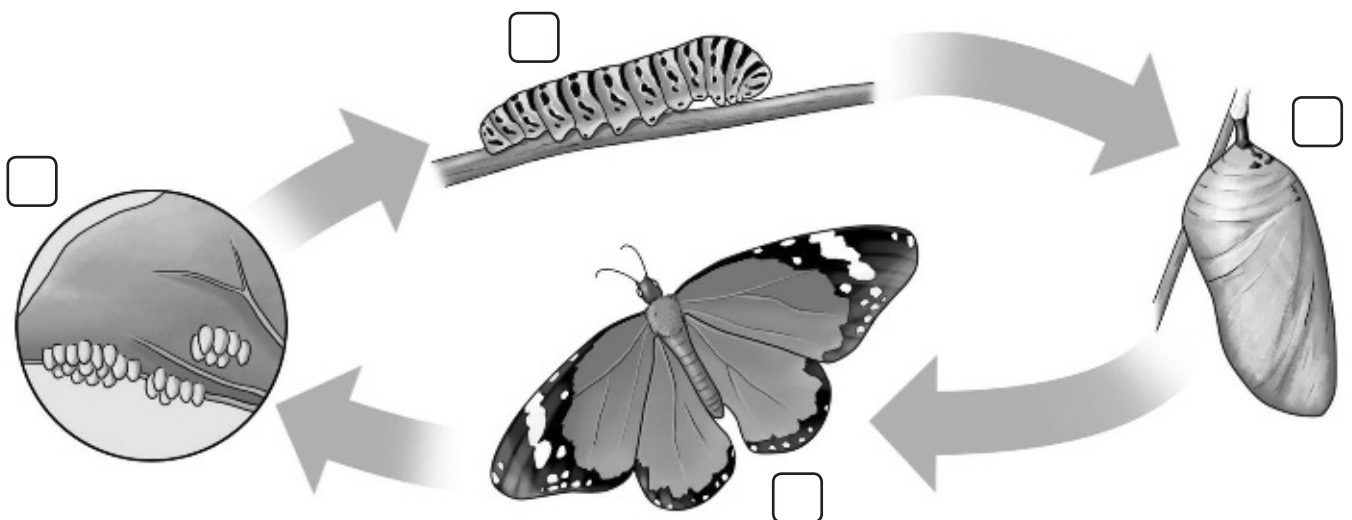
4 Complete the text about how vertebrates reproduce.

feed	viviparous	abandon	hatch	mother's milk
developed	eggs	oviparous	mother's womb	born

_____ vertebrates grow inside their _____. They are _____ when they are fully _____. These babies drink their _____. _____ vertebrates are born from _____ that _____. Birds _____ their babies. Most reptiles, amphibians and fish _____ their eggs.

5 Complete the sentences for each stage of the life cycle of a butterfly. Then, number the diagram and the sentences in order.

- ☐ The grown caterpillar changes into a pupa, called a _____.
- ☐ Larvae stage: the _____ comes out of the egg, eats and _____.
- ☐ _____ stage: the adult _____ butterfly lays eggs on a _____.
- ☐ Adult stage: the chrysalis _____. The adult butterfly comes out and _____.



Name _____ Date _____

- 1** Write living things you can see in this ecosystem.

living things



- 2** Give examples. Then, use the colour key to circle the consumers.

Producers _____

Consumers _____

carnivores → red

herbivores → green

omnivores → blue

- 3** Complete each sentence and match it to the correct picture. Then, circle examples of cooperation in blue and examples of competition in red.

- a. Many birds build their nest in _____.
- b. Some predators hunt for the same _____.
- c. Many animals protect each other in _____.
- d. Some plants compete for _____.



4 Circle eight ecosystems. Classify them. Then, tick (✓) the freshwater ecosystems.

terrestrial ecosystems

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

aquatic ecosystems

5 Read the sentences. Then, write *deciduous forest* or *tropical rainforest*.

- They are home to owls, squirrels and ferns: _____
- They need hot, wet weather: _____
- They are home to monkeys and dense vegetation: _____
- The trees grow new leaves every spring: _____

6 Complete the text about damage to ecosystems.

cities	wood	water	human activity	pollute
roads	air	paper	building	cut down

_____ can damage ecosystems.
 We _____ the _____
 and _____. We build
 _____ and _____
 in the countryside.
 We _____ forests to use
 the _____ for _____
 and to make _____.



Name _____ Date _____

1 Circle five minerals and write a property of each one.

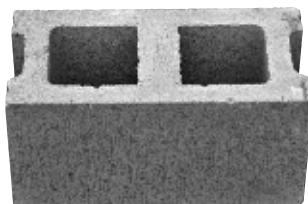
g y p s u m m a l a c h i t e p y r i t e d i a m o n d q u a r t z

2 Write one mineral that you can find in these objects.

A



B



C



D



E



F



3 Read the sentences and write an example of each type of rock.

a. It is made up of one mineral.

b. It is hard and black.

c. It is made up of three minerals.

d. It is very soft.

4 Complete the sentences about uses of rocks. Then, write C (construction), F (fuel), I (industry) or D (decoration).

- a. Slate is used to make _____.
- b. Marble is used to make _____ and _____.
- c. Clay is used to make _____.
- d. Petroleum and coal are used to produce _____.
- e. Granite is used to make _____.
- f. Petroleum is used to make _____, _____ and _____.

☐
☐
☐
☐
☐
☐

5 Complete the text about soil.

people	top layer	humus	sand	animals
minerals	rocks	remains	dead	plants

Soil is the _____ of the Earth's surface.
 It is made up of _____, _____,
 _____, air, water and _____.
 Humus is the _____ of _____
 plants and animals. Soil is very important
 for _____,
 and _____.



6 Write a sentence about each type of soil.

Fertile soil	_____
Poor soil	_____
Arid soil	_____

Name _____ Date _____

1 Read the definitions and write the word.

a. A ball of ice and dust that orbits the Sun:

b. A non-luminous body that orbits a planet:

c. A celestial body similar to a planet, but smaller:

d. A celestial body that gives off heat and light:

e. A large celestial body, made of rock or gas, that orbits the Sun:

**2 Circle the planets and classify them in order from the Sun. Tick (✓) the planet with a ring.****inner planets**

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

outer planets

3 Complete the sentences.

a. The Earth's axis is an imaginary line _____

_____.

b. The Equator is an imaginary line _____

_____.



4 Read the sentences. Then, write *rotation* or *revolution* next to each one.

- a. The Earth revolves around the Sun: _____
- b. The Earth rotates anticlockwise on its axis: _____
- c. This movement causes day and night: _____
- d. The Earth takes 365 days to orbit the Sun: _____

5 Look at the diagram and answer the questions.



- a. Is it day or night in Spain? _____
- b. Is it day or night in China? _____
- c. Is it summer or winter in France? _____
- d. Is it summer or winter in Brazil? _____

6 Complete the text about the Moon.

reflects	satellite	phases	28 days
water	non-luminous	smaller	atmosphere

The Moon is the Earth's _____. It takes _____ to orbit the Earth. It has no _____ or _____. It is much _____ than the Earth. The Moon is a _____ body that _____ light from the Sun. This causes the _____ of the Moon.



Name _____ Date _____

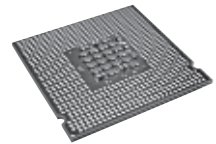
- 1** Name the materials used to make these objects. Then, write *N* (natural) or *M* (man-made) next to each material.


☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

☐ _____

- 2** Circle six properties of materials. Then, name a material that has each property.

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

- 3** Name two uses of these materials.

Plastic

Metal

4 Complete the crossword about simple machines. Then, write an example of each.

ACROSS

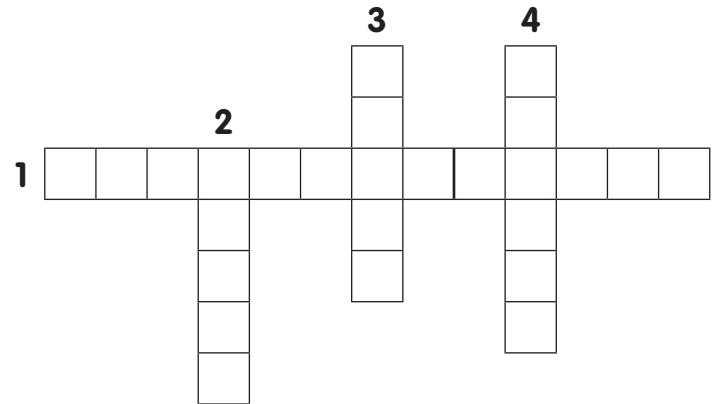
1. A ramp (two words).

DOWN

2. A rigid bar.

3. A solid disk that turns on an axle.

4. A wheel with a rope around it.



5 Circle eight complex machines. Then, classify them in the table.

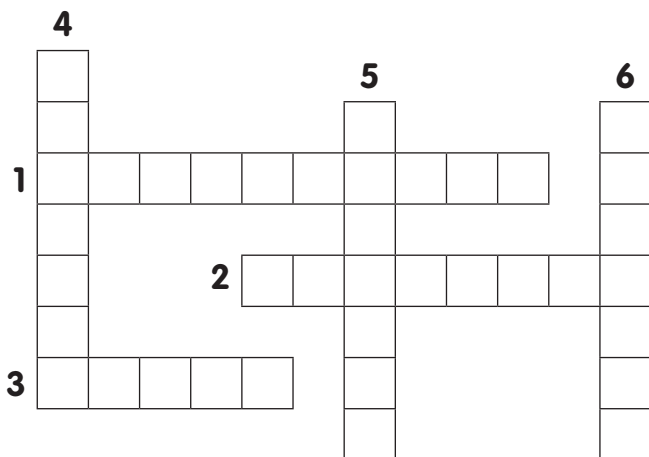
bicycle light tractor lamp computer watch car mobile phone

motors	gears	electric circuits	electronic components
<hr/>	<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>	<hr/>

6 Which machines do they use? Write an example. Then, write *human energy*, *electricity* or *petrol* next to each machine.

- Secretaries: _____
- Nurses: _____
- Firefighters: _____
- Drivers: _____
- Chefs: _____

Name _____ Date _____

1 Complete the crossword about forms of energy.**ACROSS**

1. Energy that makes a computer work.
2. Energy in a pizza.
3. Energy from a lamp.

DOWN

4. Energy produced by a radiator.
5. Energy in a ball that is falling.
6. Energy inside uranium.

2 Circle six energy sources and classify them.

sun petroleum wind natural gas coal water

renewable energy sources	non-renewable energy sources
_____	_____
_____	_____
_____	_____

3 Use the clues to write the properties of light.

- a. Light travels at 300,000 kilometres per second: _____
- b. Light cannot move around objects: _____
- c. When you switch on a light in a room, light travels to every part of the room: _____

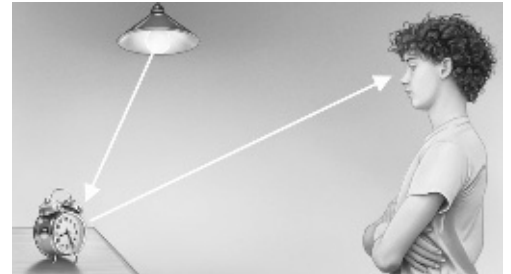
4 Complete the text about the reflection of light.

eyes	sources of light	reflection	reflect	dull and dark
light	bounces off	reflected	see	smooth and shiny

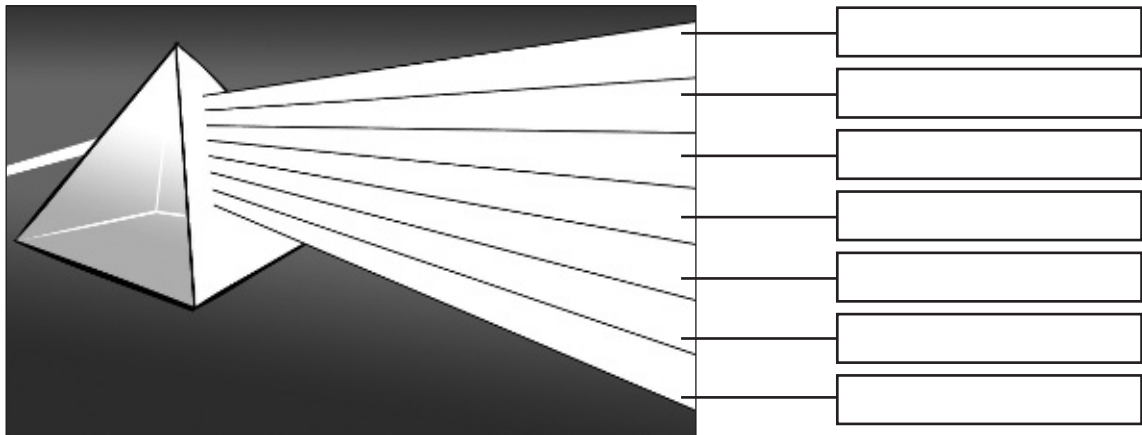
Most objects are not _____. We can only see them because they _____ light. When _____ hits an object, it _____ the object.

This is called _____.

The _____ light enters our _____. This is how we _____ objects. _____ surfaces reflect light better than _____ surfaces.



5 Colour the diagram. Then, label the colours of light.



6 Circle the words related to gravity in red and the ones related to friction in blue. Then, write two sentences about gravity and friction.

rough	fall	slow down	rub	float	smooth	centre of the Earth
-------	------	-----------	-----	-------	--------	---------------------

Name _____ Date _____

1 Complete the table with jobs from the tertiary sector.

health care	education	trade	tourism	communications	transport
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

2 Match the three columns to make sentences about trade.

Sales people

obtain and make

the finished product.

Consumers

distribute

the products or services to consumers.

Transporters

sell

products to sell.

Producers

buy

the products to the shops.

3 Why are these places good for tourism? Who works in each place? Write your answers.



- 4** Circle eight means of communication and classify them. Then, tick (✓) the means of communication you use daily.

personal communication

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

mass communication

- 5** Circle the words related to the Internet. Then, write three uses of the Internet.

network television personal communication search engines radio
letter mass communication websites emails chatting

- 6** Write an advertisement for this toy.



Name _____ Date _____

1 Label the map. Then, circle the names of the Spanish territories.



2 Circle four Autonomous Communities and complete the table.

extremadura galicia aragon basque country

Autonomous Community	capital city	province(s)
_____	_____	_____ _____
_____	_____	_____ _____ _____
_____	_____	_____ _____ _____
_____	_____	_____ _____ _____ _____

3 Read the definitions and write the words.

a. A political system where all citizens are equal:

b. The Head of State in Spain:

c. This institution represents the Spanish people: _____

d. This institution runs the country and serves the people: _____

e. The most important law in Spain: _____

f. This institution makes sure that laws are obeyed: _____



4 Write a sentence with each group of words.

a. election manifesto list ideas

b. general elections vote political party

c. Government represents democracy

d. municipal elections councillors Town Hall

5 Write *right* or *obligation*.

a. Vote in elections: _____

d. Obey the law: _____

b. Pay taxes: _____

e. Respect each other's beliefs: _____

c. Receive medical services: _____

f. Receive free education: _____

Name _____ Date _____

1 Match. Then, label the timeline of the periods in history.

a. The Modern Age

over 5,000 years ago

b. Ancient history

about 200 years ago

c. The Middle Ages

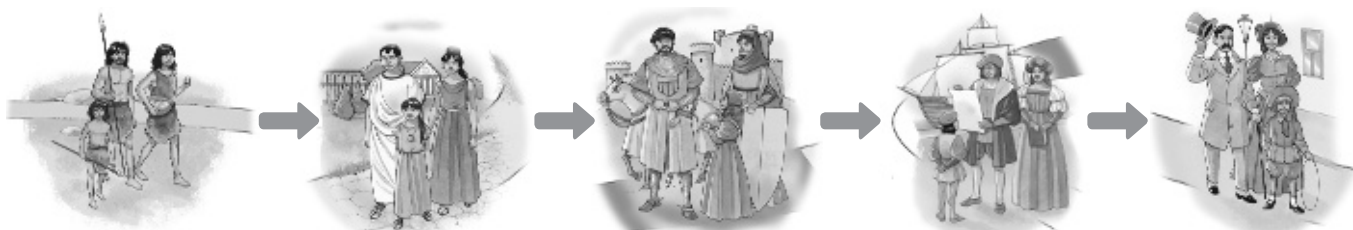
over 1,000 years ago

d. Prehistory

about 500 years ago

e. The Contemporary Age

about 2 million years ago



2 Complete the sentences about Prehistory.

- a. The first human beings were _____, and they lived in _____.
- b. They made _____ using stone, wood and _____.
- c. Much later, human beings lived in _____ made of branches and skins.
- d. They cultivated _____ and _____ animals.

3 Complete the sentences about Roman architecture.

- a. Rich people lived in _____, and poor Romans lived in _____.
- b. _____ carried water to their cities.
- c. The Romans watched gladiator fights in _____.

4 Write a sentence about the Middle Ages with each group of words.

a. Middle Ages Christian Kingdoms north

b. Christian kings noblemen land

c. peasants land taxes

5 Read and write the correct inventions. Then, classify them.

a. Instrument to help find north:

b. Made machines work in mines and factories:

c. Instrument to calculate a ship's position at sea: _____

d. Machine to print books: _____

e. Saved lives from a deadly disease called smallpox: _____

• The Modern Age: _____

• The Contemporary Age: _____



6 Complete the table.

invention	year	who invented it	how it changed life
printing press			
steam engine			
smallpox vaccine			

Name _____ Date _____

Talking with our bodies

We constantly use our body to communicate with other people. This form of nonverbal communication is called body language.

Our brain controls all our movements, including our facial gestures. These physical movements send messages to other people. Sometimes we say things more accurately with our body than with words.

Body language expresses our emotions, for example, when we are happy, we smile. Sometimes, body language may hurt people's feelings, like rolling our eyes or turning our back on someone. In other instances, body language can let others know that we like them. So remember, even when you are silent, your body never stops talking!

**1 Read the text and answer the questions.**

- What form of communication is body language? _____
- What organ controls our physical movements? _____
- What can we express with body language? _____
- What kind of body language can hurt others? _____

2 Complete the table about how you use your body to communicate. Then, compare with a partner.

my body language	
When I'm happy, I...	_____
When I'm angry, I...	_____
When I'm excited, I...	_____
When I'm tired, I...	_____
_____	_____
_____	_____

Name _____ Date _____

Pizza, glorious pizza!

Pizza has been around for a long time! The Romans, for example, ate flatbread made of flour and water, and topped it with olive oil and herbs.

When tomatoes were introduced from the New World, the people of Naples, in Italy, added them to their pizzas.

One day in 1889, Queen Margherita of Italy went to Naples and ordered a special lunch. The restaurant owner made a pizza with the colours of the Italian flag to honour the queen. He used tomatoes for red, mozzarella cheese for white and basil for green. The queen loved it, so the dish was named Pizza Margherita.

Early in the 20th century, Italian immigrants to New York City started to make a new version of pizza which became very popular all over the United States. Today, pizza is an international dish that can have many different toppings, such as tuna, mushrooms and olives.

**1 Read the text and answer the questions.**

- What ingredient did the people of Naples add to pizzas? _____
- What are the ingredients of Pizza Margherita? _____
- Why is it called Pizza Margherita? _____
- Where is pizza eaten today? _____
- What are some of the toppings pizza can have? _____

2 Draw and write about your favourite pizza.

Name: _____

Ingredients: _____

Main nutrients: _____

Name _____ Date _____

What is asthma?

Asthma is a very common illness among children. The bronchi become inflamed, so air cannot travel freely to the lungs. Children who have asthma experience wheezing (a whistling sound in the chest), coughing and difficulty breathing.

Asthmatic children usually carry an inhaler. This is a small tube with medicine in it. The medicine helps to open the bronchi. People with asthma also have to be careful about their environment. Many different things can cause an asthma attack: cold air, exercise, tobacco smoke, cat hairs and even swimming pools!

But children with asthma can do everything other children can do. They just need to take precautions. In fact, many Olympic champions and other athletes have had asthma, for example, David Beckham and Miguel Indurain.

**1 Read and write T (true) or F (false). Then, correct the false sentences.**

- a. Asthma is a disease of the circulatory system. ☐
- b. An inhaler helps asthmatic children to breathe. ☐
- c. The environment affects asthma a lot. ☐
- d. Children with asthma cannot play like other children. ☐

2 Use the code and find a tip for asthma prevention.

• = A ^ = B ≈ = C ♣ = D ∪ = E ⊃ = I
 ♥ = K ♦ = M ♠ = O ∅ = S * = T ≅ = V

• ≅ ♠ ⊃ ♣ * ♠ ^ • ≈ ≈ ♠ ∅ ♦ ♠ ♥ ∪
 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ !

3 Interview your classmates. Find out what allergies they have.

Name _____ Date _____

Do animals sleep?

Like humans, all animals need to sleep in order to restore their energy. When there is not much food available, animals save energy by sleeping. However, animals do not sleep when it is too cold or too hot, or when they feel threatened.

The amount of sleep animals need varies. Koala bears can sleep up to 20 hours a day, while giraffes only sleep for about two hours. In general, predators sleep longer than herbivores. Herbivores must be alert, so they cannot sleep for long periods of time.

Some animals are *diurnal*, which means they are awake during the day. Others are *nocturnal*, which means they are awake all night.

Each animal has a particular sleeping routine. Many animals sleep lying down. Koalas bears curl around tree trunks, sloths hang from branches, rabbits hide in burrows, horses sleep standing up, bats sleep upside down, cows sleep with their eyes open, and seals sleep under water.

**1 Read the text and answer the questions.**

- Why do animals sleep when there is no food? _____
- Do animals sleep when they sense danger? _____
- Can you name three diurnal animals? _____
- Can you name three nocturnal animals? _____
- How do rabbits protect themselves while they sleep? _____

2 Search the Internet for information on animal sleeping habits and complete the table.

animal	when they sleep	how they sleep	how many hours they sleep

Name _____ Date _____

Life at the top of the Earth

Tundras are one of the coldest and harshest ecosystems on Earth. They are found in the Arctic, where the weather is extremely cold, dry and windy. They are treeless areas with low plants that grow in rock cavities. The Arctic tundra has average temperatures of -12°C to -6°C . This means that the top layer of the soil, called the permafrost, is almost always frozen.



In the winter, the permafrost is covered with a thick layer of snow, and no plants are visible. However, during the summer, which is a short season of about 50 to 60 days with 24 hours of sunlight, the surface of the permafrost melts. Wildflowers appear everywhere.

The Arctic tundra is home to several animal species, including Arctic foxes, polar bears, caribous, snow geese and musk-oxen. Unfortunately, as a result of global warming, temperatures are rising. This is causing the permafrost to melt. The Arctic tundra is in danger.

1 Read the text and circle the correct word.

- Tundra ecosystems are found in the Arctic / Antarctic.
- Rainfall in tundra ecosystems is high / low.
- The top layer of the soil is the tundra / permafrost.
- Winter in the Arctic tundra is longer / shorter than summer.
- Global warming / Acid rain is threatening the Arctic tundra.

2 Search the Internet for three animal species from the Arctic tundra. Write what they eat.

fauna	food
_____	_____
_____	_____
_____	_____

Name _____ Date _____

Fossils: footprints of the past

Fossils, often found in rocks, are the preserved remains of plants and animals that lived on Earth millions of years ago. Fossils can give us information about climate and the environment in the past. For example, where a fossil of a marine animal is found tells us that this area was probably under the sea a long time ago.

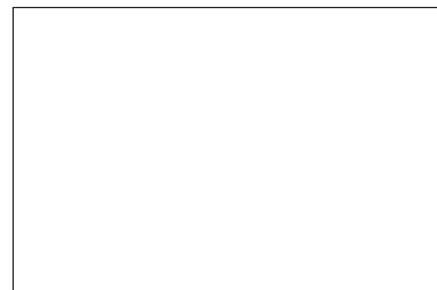
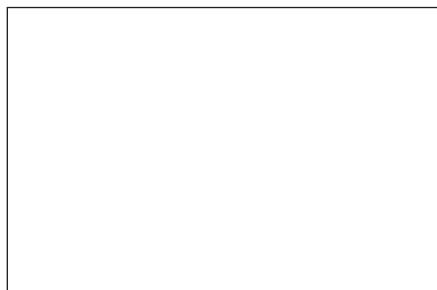


Fossils can be remains of plant parts, such as leaves, or animal parts, such as bones, skeletons or teeth. However, they can also be remains of animal footprints, such as dinosaur footprints, which are called ichnites.

In Spain, there are several spectacular ichnite routes in the provinces of Soria, Rioja, Teruel and Asturias. In particular, the coastal area of Asturias between Gijon and Ribadesella is known as Dinosaur Coast. The Jurassic Museum of Asturias (MUJA), built in the shape of a giant ichnite, is located here. Its collection of dinosaur ichnites is impressive!

1 Read the text and answer the questions.

- What information do fossils provide? _____
- What is an ichnite? _____
- Where can you find ichnites in Spain? _____
- What is the MUJA? _____

2 Search the Internet for pictures of plant and animal fossils. Print out three photos, cut them out, paste them in the boxes and label them.

Name _____ Date _____

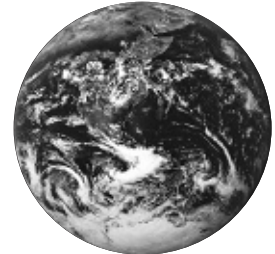
Eclipses

Eclipses are spectacular events that involve three celestial bodies: the Sun, the Earth and the Moon. They can be solar or lunar.

A solar eclipse happens during the day when the Moon passes between the Earth and the Sun. If the Moon blocks out the whole Sun, the eclipse is total. If the Moon blocks out part of the Sun, the eclipse is partial.

A lunar eclipse happens at night when the Earth passes between the Moon and the Sun, and the Earth's shadow darkens the Moon. It can also be a total or partial eclipse, depending on how much of the Moon is obscured. A total lunar eclipse can only happen when the Moon is full.

Solar eclipses are more dramatic since the sky gets darker during the day. Watching a solar eclipse can hurt your eyes, so you need to use special equipment.

**1 Read and write T (true) or F (false). Then, correct the false sentences.**

- a. The Earth passes between the Moon and the Sun in a solar eclipse. ☐
- b. In a lunar eclipse, the Earth's shadow makes the Moon dark. ☐
- c. A solar eclipse can make the sky dark in the middle of the day. ☐
- d. It is always safe to watch a solar eclipse. ☐

2 Search the Internet and make a two-year calendar of the next total lunar and solar eclipses.

type of eclipse	date
_____	_____
_____	_____
_____	_____
_____	_____

Name _____ Date _____

Plastic: good and bad

Plastic is an inexpensive and versatile material used to make many objects. It is good for making containers because it is resistant. It is a good insulator because it does not conduct electricity. It is also used for making bags because it is strong and lightweight.

However, not everything about plastic is good. Plastic is not biodegradable, which means it stays in the environment for hundreds of years. Plastic bags wash up on beaches and pollute coastlines. Sadly, marine animals frequently eat plastic bags because they mistake them for food. Then the animals die from intestinal blockage.



There are now gigantic islands of plastic rubbish in our oceans. These islands are called Plastic Continents. They are found in both the Pacific Ocean and the Atlantic Ocean. One way to decrease this pollution is to practise 'the three Rs': reduce, reuse and recycle. However, since plastic is not easy to recycle, we should start by using it less!

1 Read the text and answer the questions.

- What are some advantages of plastic? _____
- What are some disadvantages of plastic? _____
- What does *biodegradable* mean? _____
- What are Plastic Continents? _____

2 Use the code and find a way to use less plastic.

• = A	∩ = B	≈ = E	♣ = G	◇ = H	⊃ = I	~ = M
⊂ = N	∧ = O	∨ = P	∅ = S	* = T	♥ = U	◆ = Y

♥ ∅ ≈ ∅ ◇ ∧ ∨ ∨ ⊃ ⊂ ♣ ∩ • ♣ ∅ ~ • ⊂ ◆ * ⊃ ~ ≈ ∅ !
 _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ !

Name _____ Date _____

Friction in sports

Friction is a force that slows down the movement of an object (or a person) in contact with a surface or another object.

Surface friction affects sports in which an object, such as a ball, wheel or sled, rolls or slides. Friction differs depending on the surface: the smoother the surface, the less friction there is. Air resistance, another form of friction, plays a big role in ball sports or in sports in which a person moves through the air, like running or cycling.

In some sports, it is advantageous to decrease friction, for example, in skiing or ice skating. Skis are treated with wax so that they slide faster, or skate blades are sharpened to reduce friction. In other sports, it is better to increase friction. For example, in football, players wear shoes with studs, and goalkeepers wear special gloves.

**1 Read the text and answer the questions.**

a. When does friction occur?

b. Is friction a bad thing or a good thing?

c. Is friction greater on ice or on sand?

d. Why do skiers wax their skis?

e. Why do goalkeepers wear special gloves?

2 Search the Internet to find out how friction affects another sport. In your notebook, write a paragraph describing how friction is increased or decreased to gain advantage.

Name _____ Date _____

Satellite communication

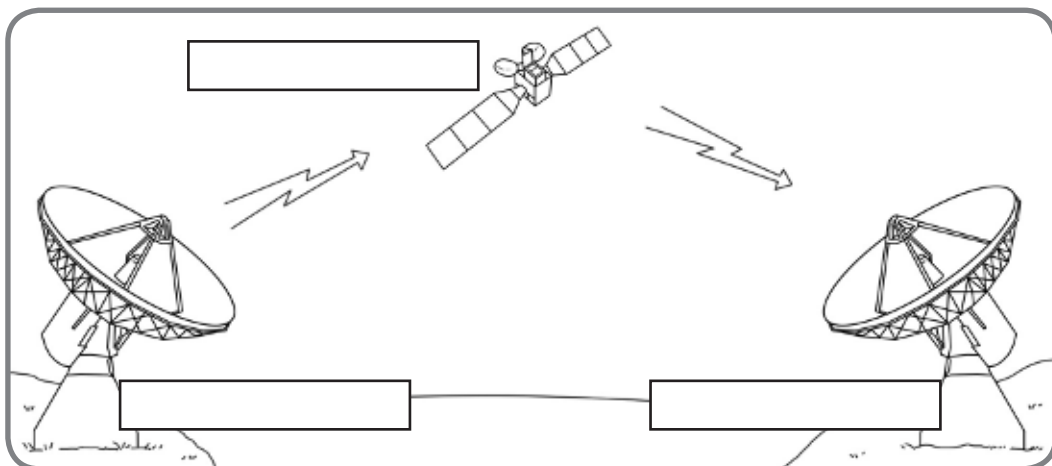
Satellite communication is essential for sending information between different parts of the world. Nowadays, there are thousands of artificial satellites orbiting the Earth. First, a signal is sent from a ground station to a man-made satellite. Then, the satellite amplifies the signal and sends it to a different location on Earth, or to many locations. This technology is especially useful for communication in isolated areas of the world.

Communication satellites are used for many different services, such as telephone, Internet, radio and television. They have to be lightweight for launching. However, they also have to be resistant because of the extreme temperatures and radiation in space. Satellites are powered by solar energy, but they work on batteries when the Earth blocks the Sun's light.

**1 Read the text and answer the questions.**

a. Where is satellite communication most useful?

b. What are some of the characteristics of artificial satellites?

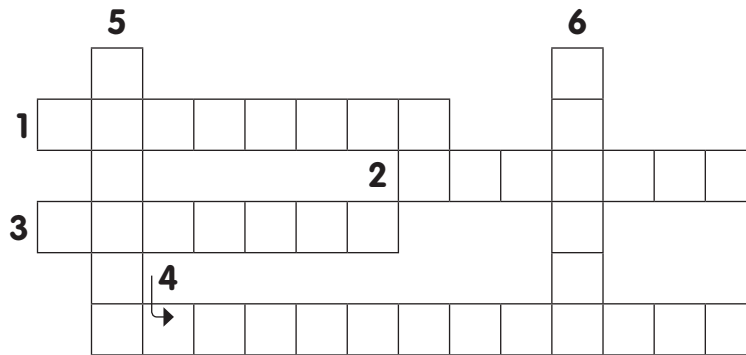
2 Label and colour the diagram.

Name _____ Date _____

Autonomous Communities

Each of the 17 Autonomous Communities of Spain has a unique identity and its own flag, coat of arms and an anthem for special occasions. Spanish is the official language but some Autonomous Communities have a second official language, such as Basque, Catalan, Galician or Valencian.

Some Autonomous Communities have their own cuisine with typical dishes, for example, *fabada* from Asturias and *paella* from the Community of Valencia. There are traditional dances and music from each region, for example, the *sardana* from Catalonia, the *jota* from Aragon and the *muñeira* from Galicia. Cities also have their own festivals. Most have a religious origin, like *El Pilar* in Zaragoza, but others are non-religious, like the *Semana Grande* in Bilbao.

**1 Read the text and complete the crossword.****ACROSS**

1. An official language spoken in Galicia.
2. A dance from Galicia.
3. A dance from Catalonia.
4. A non-religious festival in Bilbao (two words).

DOWN

5. A typical dish from the Principality of Asturias.
6. A typical dish from the Community of Valencia.

2 Write about your Autonomous Community.

Language(s): _____

Traditional dance: _____

Traditional festival: _____

Typical dish: _____

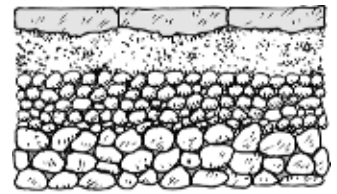
Name _____ Date _____

Roman roads

The Romans built a network of roads across the entire Roman Empire. They first built roads for their armies. However, these roads soon became very important because Rome was the centre of trade, politics and culture in the Mediterranean. Paved roads covered more than 80,000 kilometres and connected important cities and regions to Rome.

The Romans built their roads using many layers of stone:

First, they dug a deep trench and filled it with a thick layer of stones called the *statumen*. Then, they laid down a layer of sand or gravel called the *rudus*. Next, they put a layer of crushed stones mixed with white lime on top. This layer was called the *nucleus*. Finally, they covered everything with paving stones called the *pavimentum*.



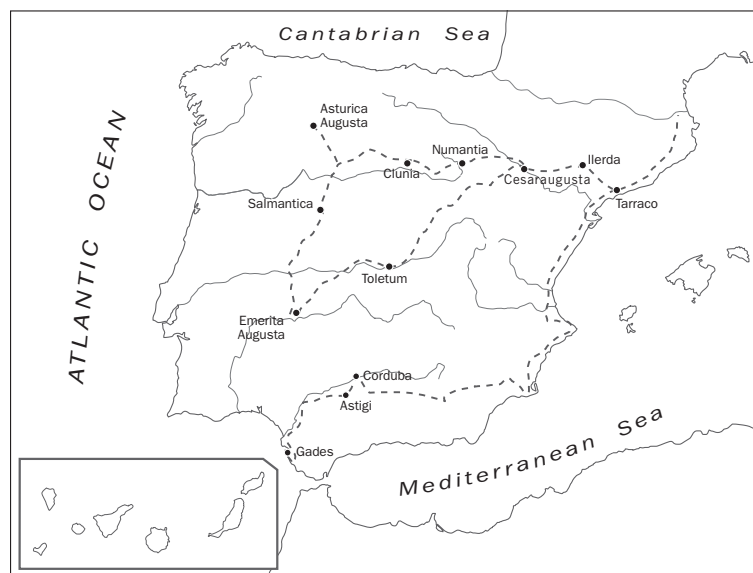
1 Use the colour key and read the descriptions to mark the Roman roads on the map.

red Via Augusta. It connected the cities of *Tarraco*, *Corduba*, *Astigi* and *Gades*.

green Via de la Plata. It went from *Emerita Augusta* to *Asturica Augusta*.

yellow Via of the Ebro Valley. It connected *Asturica Augusta* to *Tarraco*.

orange Via Meseteña. It joined *Cesaraugusta* and *Emerita Augusta*.



Name _____ Date _____

Languages of the world

More than 6,500 languages are spoken in the world! They are grouped into families, for example, English and Spanish belong to the Indo-European family of languages.

Many more languages exist in Asia than in Europe. Additionally, a lot of languages are disappearing due to the advance of the most spoken languages, such as Chinese, English and Spanish. In fact, around 2,000 of the world's languages have fewer than 1,000 speakers. These languages may soon disappear.

In the 19th century, a Russian man created an international language called Esperanto. He wanted everyone in the world to be able to communicate together. Esperanto is easy to learn due to its regular grammatical rules. It is an auxiliary language in about 115 countries, mainly in Europe, East Asia and South America, but it is not the official language of any country.

**1 Read the text. Then, cross out the wrong words and rewrite the sentences.**

a. Spanish and Arabic belong to the Indo-European family of languages.

b. English and Spanish are two of the least spoken languages in the world.

c. Around 1,000 of the world's languages may disappear in the near future.

d. Esperanto has complicated grammatical rules.

2 Do some research on the Internet to learn some expressions in Esperanto. Then, complete the table.

	Esperanto
hello	
goodbye	
please	
thank you	

Name _____ Date _____

Food around the world

All around the world, people enjoy food which varies according to culture, availability and even religion. Some foods can be quite unusual. For example, Eskimos eat whale blubber, Japanese eat raw fish, Canadians eat reindeer meat, Indonesian people eat monkey toes, and people in Thailand eat insects!



Food is not only important for nutrition. It is also part of many social celebrations. On New Year's Day, people in China eat long noodles for long life. In other countries, people eat green, leafy vegetables as a symbol of economic success because their green leaves look like folded money. In other countries, people eat pulses, which look like little coins, and are also considered a symbol of money.

At weddings, Italians and Greeks serve sugar-coated almonds which, being both sweet and bitter, represent the highs and lows of marriage. Traditional wedding cakes in England contain fruits and nuts, symbols of fertility and good fortune.

1 Circle the correct words.

- Based on weather / culture, people eat different foods around the world.
- Reindeer meat / Raw fish is an unusual food eaten in Canada.
- An unusual food eaten in Thailand is insects / monkey toes.
- Foods like reindeer meat and insects mainly provide carbohydrates / proteins.
- In England, fruits and nuts are symbols of fertility / prosperity and good fortune.

2 Search the Internet for other foods for special celebrations. Then, complete the table.

country	celebration	food	symbolic of

Name _____ Date _____

Why do people have different skin colour?

Human skin colour varies greatly around the world. It can range from a very dark brown to yellow. Skin colour is controlled by genes, like other human characteristics such as eye colour and hair type. However, skin colour has also been influenced by the environment over thousands of years. There are many different skin colours today because people have adapted to different environments.

The Sun gives us light and heat, but it also emits harmful rays. Some regions of the Earth receive more harmful sun rays than others. This difference directly affects skin colour.

Skin colour depends on how much melanin we have in our skin. Melanin is a brown pigment that works as a natural sun cream, and protects skin from the harmful rays of sunlight. Over time, people who moved to areas of less sunlight developed lighter coloured skin, and people who lived closer to the Equator had darker skin with more melanin.

**1 Read the text and complete the sentences.**

- Skin colour is controlled by _____.
- The Sun _____ harmful rays.
- Skin colour depends on the _____ of melanin.
- Melanin _____ the skin from the harmful rays of sunlight.
- People with lighter skin have _____ melanin.

2 Search the Internet or magazines for photos of three famous people with different skin colour. Write their names and the continent they come from.

dark skin	medium skin	light skin
_____	_____	_____
_____	_____	_____

Name _____ Date _____

An unusual mammal

The platypus is unique. It is a small, semi-aquatic mammal that lays eggs! When the females are going to have babies, they hide in burrows. There, they lay up to three eggs that hatch about ten days later. Platypuses are mammals, so the babies drink their mother's milk.

Platypuses look like beavers. Their body and tail are covered with brown, waterproof fur that keeps them warm in cold water. They have four webbed feet and a duck-like bill with no teeth.



Platypuses are originally from Australia, and they live on land. They walk and run and can dig with the long nails they have on each foot. They are excellent swimmers and spend lots of time in streams and rivers. They eat small aquatic animals, such as worms, insect larvae and shrimps. They have a very sensitive bill that helps them feel for food on riverbeds.

1 Read the sentences and circle the correct words.

- The platypus is a freshwater / saltwater mammal.
- It lays eggs in water / burrows.
- Its body is covered with fur / feathers.
- It has teeth / a bill.
- It is a carnivore / herbivore.

2 Search the Internet for information about another unusual animal and complete the index card.

Name: _____

Description: _____

Habitat: _____

Diet: _____

Reproduction: _____

Name _____ Date _____

Celebrating the Earth

Earth Day, 22nd April, is an environmental celebration. It started in 1970 to increase appreciation for nature and to teach ways to protect our planet. Different events are held in more than 175 countries every year. Earth Day has its own Ecology Flag which displays thirteen alternating green and white stripes, with a symbol (Θ) that is a combination of the letters E (Environment) and O (Organism).

This yearly celebration reminds us to take care of our planet. However, in order to make a difference, we should treat every day as Earth Day. Every day, when possible, we should walk, cycle or ride the bus, recycle at home and at school, avoid using too much paper, use reusable shopping bags and water bottles, switch off the tap while brushing our teeth, take shorter showers, use rechargeable batteries and turn off lights when they are not in use.

**1 Read and write T (true) or F (false). Then, correct the false sentences.**

- a. Earth Day is a cultural celebration. ☐
- b. It is celebrated every year in many countries of the world. ☐
- c. The symbol of the Ecology Flag combines three letters. ☐
- d. There are few actions we can take daily to take care of our planet. ☐
- e. Every day should be treated as Earth Day. ☐

2 Use the code and write an Earth Day pledge.

• = A	≈ = C	∪ = E	~ = F	♣ = I	◇ = L	◆ = M
∧ = N	∨ = O	∴ = P	♠ = R	∅ = S	* = T	♥ = U

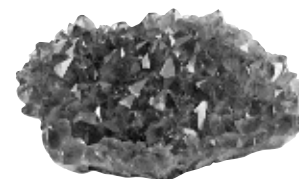
♣ ∴ ♠ ∨ ◆ ♣ ∅ ∪ * ∨ ≈ • ♠ ∪ ~ ∨ ♠ ∨ ♥ ♠ ∴ ◇ • ∧ ∪ *

Name _____ Date _____

Birthstones

Birthstones have been used in different cultures for thousands of years. There is a different gem for each month of the year, and they all have a special meaning. Some people think birthstones give special powers or good luck, and many people wear them as jewellery. Whatever we believe, it is true that birthstones are beautiful!

month	birthstone	colour	meaning
January	garnet	dark red	loyalty
February	amethyst	purple	sincerity
March	aquamarine	light blue	courage
April	diamond	no colour	innocence
May	emerald	green	success in love
June	pearl	white	good health
July	ruby	red	happiness
August	peridot	light green	friendship
September	sapphire	dark blue	love
October	opal	multi-colour	hope
November	topaz	yellow	fidelity
December	turquoise	greenish blue	prosperity

**1 Answer the questions using the table.**

- a. Which is your birthstone? _____
- b. What is its meaning? _____

2 Complete the table for three important people in your life.

name	birthday	birthstone

Name _____ Date _____

Solstice celebrations

Solstices happen when the Sun is furthest away from the Equator. They occur twice a year, in winter and in summer.

The winter solstice is the shortest day of the year. The North Pole is tilted away from the Sun and the Sun appears at its lowest position in the sky. It marks the first day of winter, on or around 21st December in the Northern Hemisphere. In addition, the winter solstice marks the beginning of shorter nights and longer days. It is a time to celebrate light and the rebirth of the Sun.

The summer solstice is the longest day of the year. The North Pole is tilted towards the Sun and the Sun appears at its highest position in the sky. It marks the first day of summer, on or around 21st June in the Northern Hemisphere. This means the beginning of longer nights and shorter days. There are many festivals to celebrate this solstice, which is sometimes called Midsummer's Eve.

**1 Read the text. Then, cross out the wrong words and rewrite the sentences.**

- Solstices happen when the Sun is closest to the Equator.
- The winter solstice is the longest night of the year.
- Solstices mark the beginning of spring and autumn.
- The summer solstice is the longest day of the year.

2 Search the Internet for information about a particular solstice celebration and complete the index card.**A solstice celebration**

Type of solstice: _____ Country: _____

Description of the celebration: _____

Name _____ Date _____

Levers over time

Did you know that our arms are levers? Yes, these simple machines are as old as human beings. However, animals were the first to make use of levers. Sea otters use rocks to open seashells, and orangutans use sticks to open fruit. Human beings also used objects as levers for these simple tasks. Later, they started to use trees as levers to move heavy rocks.



Ancient Egyptians used levers to build the pyramids and to draw water from rivers. Later in Ancient Greece, Archimedes wrote the Law of the Lever, which explains how levers work. Ancient Romans found new uses for levers: they used scissors to make clothing, and catapults to fight enemy armies.

Nowadays, we use objects as levers in many different ways, for example, a hammer to bang in a nail, a bottle-opener to open a bottle or a screwdriver to pry the lid off a tin of paint.

1 Complete the timeline to show how levers developed over time.

<div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div>	<div></div> <div></div> <div></div> <div></div>
Ancient Egypt	Ancient Greece	Ancient Rome

2 Complete the table with examples of how we use levers nowadays.

at school	at home	in the playground
<div></div> <div></div>	<div></div> <div></div>	<div></div> <div></div>

Name _____ Date _____

Festivals of light around the world

People celebrate light in festivals all over the world. Some of them are cultural celebrations and others are religious celebrations.

In Sweden, St. Lucia's Day is celebrated on 13th December. The oldest girl in each family represents St. Lucia and wears a white robe and a crown with candles on her head.

In Holland, St. Martin's Day is celebrated on 11th November.

Children go from house to house carrying lanterns and singing songs. In exchange, they get sweets or other treats. People in many countries celebrate Christmas. They burn candles and decorate Christmas trees and houses with lights.

In India, people celebrate a festival of lights, known as Diwali, which symbolises the triumph of good over evil. It takes place every year in October or November. People light up their houses with oil lamps.

**1 Read the text and complete the table about the festivals of light.**

name	where	when
_____	_____	_____
_____	_____	_____
_____	_____	_____

2 Search the Internet to find information about one of these festivals of light and complete the index card.**A festival of light**

Name & country: _____ Date: _____

Description of the festival: _____

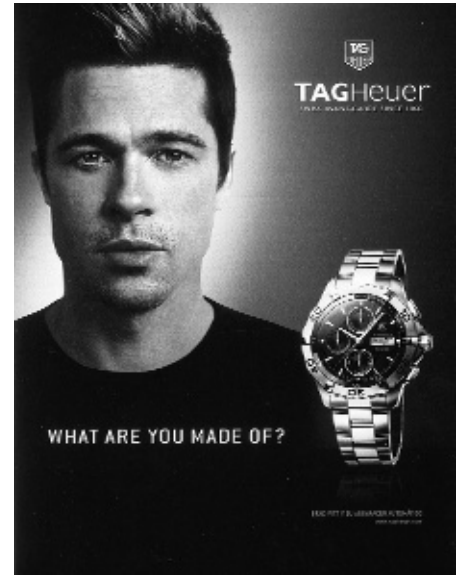
Name _____ Date _____

Advertisements everywhere!

We see and hear a lot of advertisements every day – on TV, on the radio, on the Internet, in the street and even on our mobile phones. Advertisements tell us about products and try to influence how we behave. They affect the way we think, feel and act through their messages. However, not all these messages are truthful!

Sometimes, advertisements use famous people to make us interested in a product. Other times, they exaggerate the benefits of something. They can also make us think that we will look better if we use a certain shampoo, wear certain clothes, etc.

We should remember that the end purpose of advertisements is to make us want to buy something. Children are particularly sensitive to advertisements. For this reason, in Sweden and Norway, companies cannot show television advertisements that are directed at children under the age of twelve.



- 1 Read the text and write two tips that can help you to be less influenced by advertisements.**

- 2 Complete the table to record the number of advertisements you see in a week. Then, answer the questions.**

billboards	buildings	buses	magazines	radio	television	Internet	other

- a. How many advertisements did you see in a week? _____
- b. Where is advertising most frequent? _____
- c. What is your favourite advertisement? Why? _____

Name _____ Date _____

Universal Children's Day

Universal Children's Day is celebrated on 20th November, the date of the anniversary of the Declaration of the Rights of the Child, adopted by the United Nations in 1959. This celebration is to honour children. It also encourages understanding among children worldwide, and it promotes their welfare. Unfortunately, there are many children in the world who live in poverty, live on the streets or are victims of abuse. Some are forced to work or even to fight in wars.



UNICEF, the United Nations Children's Fund, promotes and coordinates this celebration and works towards improving the life of every child in the world. Universal Children's Day is celebrated worldwide with different events, such as sport competitions, tours to museums or zoos and other cultural activities.

1 Read the text and answer the questions.

a. How many years ago was the Declaration of the Rights of the Child adopted? _____

b. What is the purpose of celebrating Universal Children's Day?

c. What are some of the problems some children have?

d. What are some ways people celebrate Universal Children's Day?

2 Use the key to find a right of the child.

• = A	≈ = C	∩ = D	∪ = E	♣ = G	◇ = H	⊃ = I	⊂ = L
∧ = N	∨ = O	♥ = P	♠ = R	* = T	≅ = V	♦ = Y	

≈ ◇ ⊃ ⊂ ∩ ♠ ∪ ∧ ◇ • ≅ ∪ * ◇ ∪ ♠ ⊃ ♣ ◇ * * ∨ ♥ ⊂ • ♦

Name _____ Date _____

Child labour during the Industrial Revolution

In the 19th century, machines powered by steam engines led to a dramatic increase in the number of factories and coal mines throughout Britain. This period is known as the Industrial Revolution. Cities grew very quickly as people moved from the countryside to work in factories. Children worked long hours for almost no pay, sometimes only enough to buy food. Many children started to work at five years old, and they were often treated very badly. Many of the jobs they did were dangerous, for example crawling under machines in factories to fix them. Others worked in coal mines, pushing heavy coal trucks through mine tunnels.



Fortunately, new laws were passed to stop child labour and make it illegal. Today, in many countries there are strict laws that limit the age and number of hours that children can work.

1 Read the text and answer the questions.

a. What invention started the Industrial Revolution?

b. Why did cities grow during the Industrial Revolution?

c. What were the working conditions like for children?

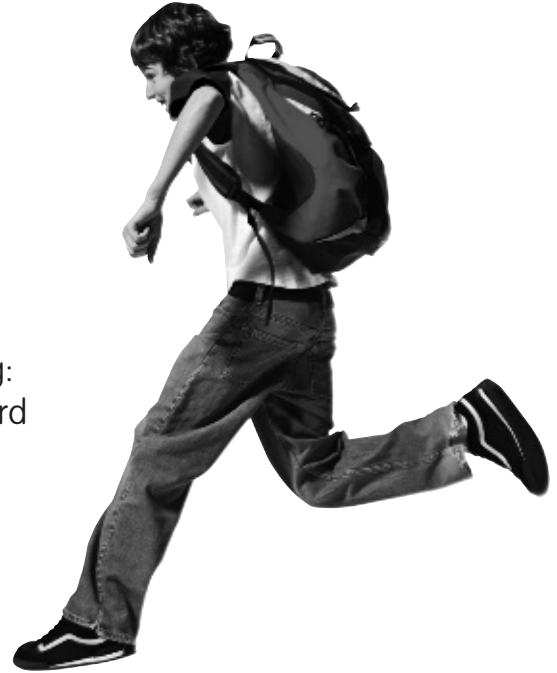
2 Search the Internet for information about other jobs children did during the Industrial Revolution and complete the table.

job	description

Name _____ Date _____

1 Are you carrying too much weight on your back?**Instructions**

1. Work with a partner.
2. Take turns and measure your weight on some scales. Then, measure the weight of your school bag.
3. Complete the first two columns of the table with your results.
4. Calculate the recommended weight of your school bag: divide your weight by ten. Include your results in the third column of the table.
5. Repeat the same operation for your partner and record the results in the table.



	weight	weight of school bag	recommended weight of school bag
you	_____	_____	_____
partner	_____	_____	_____

6. Compare your results and answer the questions.
 - a. How many classmates carry too much weight on their back?

- b. What problems do you think this can cause?

I can / cannot calculate how much weight to carry in my school bag.

Name _____ Date _____

1 Which foods contain fat?**Instructions**

1. In pairs, select five or six different foods, for example, an apple, chips, a banana, biscuits, a carrot, bread or cheese. Cut them into pieces.
2. Cut some brown wrapping paper into five 10 cm squares.
3. Rub a piece of each food on a square until it leaves a mark. Label the squares and allow them to dry.
4. When dry, hold the squares against the light. If there is a greasy spot, the food contains fat. Measure the diameter of each grease spot with a ruler. The size of the grease spot tells us how much fat there is in the food.
5. Complete the table.



food	diameter of grease spot	fat	no fat

6. Analyse your results and answer the questions.
 - a. Which food leaves the biggest grease spot? _____
 - b. Which is the food with the least fat? _____
 - c. Which is the food with the most fat? _____

I can / cannot determine which foods contain fat.

Name _____ Date _____

1 Can you calculate your heart rate?**Instructions**

1. Work with a partner.
2. Insert an elastic plastic tube in the narrow end of a funnel. Secure with tape.
3. Place the end of the elastic tube in your ear.
4. Place the funnel over your chest and move it about until you hear your heart. Count your heartbeats for 20 seconds.
5. Calculate your heart rate by multiplying your heartbeats by three.
6. Repeat the activity with your partner.
7. Run in place for two minutes and repeat steps 1-6.
8. Complete the table.



	your heart rate	your partner's heart rate
at rest	_____	_____
after running	_____	_____

9. Compare your results and answer the questions.

a. Is your heart rate the same as your partner's?

b. Is your heart rate faster or slower after running?

c. What do you think your heart rate is when you are sleeping?

I can / cannot count my heartbeats, and I can / cannot calculate my heart rate.

Name _____ Date _____

1 What do plants need to grow?**Instructions**

1. Work in groups of four. Each group has four small plants, a paper bag, a transparent plastic bag and water.
2. Label the plants as follows: 1. no water; 2. no light; 3. no air; 4. control plant.
3. Place the paper bag over plant number 2, so it doesn't receive any light.
4. Place the plastic bag over plant number 3, so it doesn't get any air.
5. Put the plants on a windowsill and water them regularly, except for plant number 1. Make sure the control plant has air, light and water.
6. Observe the growth of the plants over the next four weeks and record your observations. Complete the table.



week	plant 1	plant 2	plant 3	plant 4
1				
2				
3				
4				

7. Compare your results and answer the questions.
 - a. Did all the plants grow the same? _____
 - b. Which plant was the healthiest? _____
 - c. Which plant was the least healthy? _____

Plants need _____, _____ and _____ to grow.

Name _____ Date _____

1 Does colour protect animals from being seen by predators?**Instructions**

1. Work with a partner. You need two pieces of white, green and brown card, some scissors and a stopwatch.
2. Cut one piece of each coloured card into 5 cm squares.
3. Place a whole piece of card on the table, to serve as a background.
4. Ask your partner to close their eyes while you scatter different coloured squares on the background card.
5. Ask your partner to open their eyes and pick up as many squares as they can in ten seconds. Record your results in the table.
6. Repeat with the other two pieces of card as different backgrounds.



white background	green background	brown background
white squares: _____	white squares: _____	white squares: _____
green squares: _____	green squares: _____	green squares: _____
brown squares: _____	brown squares: _____	brown squares: _____

7. Analyse your results and answer the questions.
 - a. Which squares were the easiest for your partner to see? _____
 - b. Which squares were the hardest for your partner to see? _____
 - c. Can you name an animal protected by its colour for each background?

Colour can / cannot protect animals from being seen by predators.

Name _____ Date _____

1 How hard are rocks?**Instructions**

1. Work in groups of four. You need four different rocks numbered from 1 to 4. Each student has a different rock. Take turns to do this hardness test.
2. Try to scratch your rock with your fingernail. Next, try to scratch it with a coin. Finally, try with a nail. Record your results.

	fingernail	coin	nail
rock 1			
rock 2			
rock 3			
rock 4			

3. Analyse your results and answer the questions.

a. Write how many rocks can be scratched with:

☐

a fingernail.

☐

a coin.

☐

a nail.

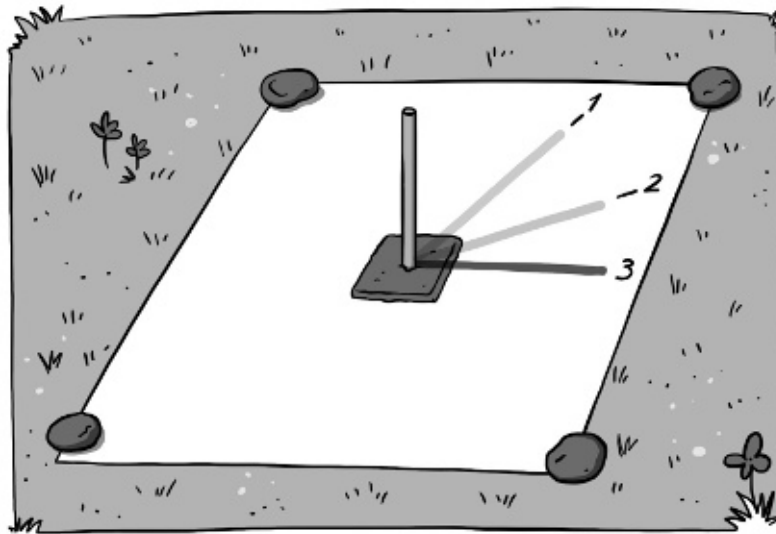
b. Which rock is the hardest? _____

c. Which rock is the softest? _____

d. Do any rocks give the same results? What can you do to tell which is harder?

I can / cannot determine the hardness of different rocks.

Name _____ Date _____

1 Can you follow the rotation of the Earth? Make a sundial.**Instructions**

1. Work in groups of four. Each group has a white card, a stick, some plasticine and rocks.
2. Find a location in the playground where the Sun shines most of the day. Fix the white card to the ground with rocks.
3. Make a stand out of the plasticine and push the stick into the plasticine so it stays upright.
4. Draw the shadow of the stick on the card and write the time next to it.
5. Repeat every hour.
6. Make a drawing with your results.
7. Analyse your drawing and answer the questions.

- a. Why do you see the shadow of the stick? _____
- b. Does the shadow change over time? _____
- c. At what time is the shadow the longest? _____
- d. At what time is the shadow the shortest? _____

I can / cannot follow the rotation of the Earth.

Name _____ Date _____

1 What simple and complex machines do you use in everyday life?**Instructions**

1. Work in groups of four to make a poster.
2. Go through some magazines and catalogues to find pictures of simple and complex machines used in everyday life. Cut the pictures out and sort them into two piles: simple and complex machines.
3. Divide a piece of card into two sections. Write two titles: *Simple machines* and *Complex machines*. Glue the pictures to the corresponding section and label them.
4. Next to each picture, write the energy source each machine needs to work.
5. Once the poster is finished, complete the table.
You can also add other machines which do not appear on your poster.

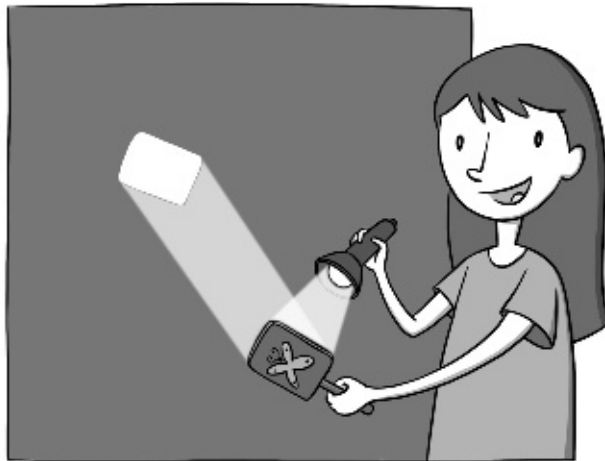


machines I use in everyday life	
simple machines	complex machines
_____	_____
_____	_____
_____	_____

6. Analyse your table and draw conclusions.
 - I mainly use simple / complex machines in everyday life.
 - I mainly use machines that need human energy / electricity / petrol to work.
7. Compare your conclusions with your group.

I can / cannot recognise the simple and complex machines I use every day.

Name _____ Date _____

1 Which surfaces reflect light best?**Instructions**

1. Work with a partner. You need a torch, a mirror and some aluminium foil.
2. Cut out two pieces of the foil.
3. Crumple one of the pieces of foil, then flatten it out.
4. Stand next to a wall. Hold the mirror in one hand and direct the light from the torch towards the mirror so the reflection shines on the wall.
5. Repeat with the smooth and crumpled pieces of the aluminium foil.
6. Complete the table.

	reflects light well or poorly?
mirror	_____
smooth foil	_____
crumpled foil	_____

7. Analyse your results and answer the questions.
 - a. Which surface reflects light best? _____
 - b. Which surface reflects the least light? _____
 - c. Can you name other surfaces that reflect light well? _____

Shiny and smooth surfaces reflect / do not reflect light best.

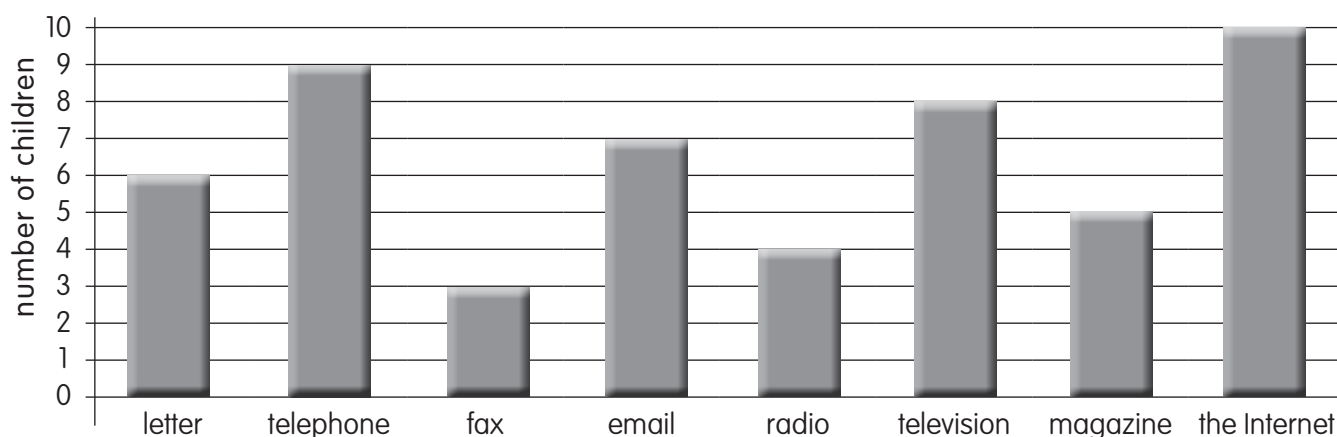
Name _____ Date _____

1 What means of communication do you and your classmates use? Do a survey.**Instructions**

- Interview your classmates about the means of communication they use regularly.
- Tally their answers in the table below.

means of personal communication				means of mass communication			
letter	telephone	fax	email	radio	television	magazine	the Internet

- Make a bar chart like this one, with the class results.



- Analyse the chart and answer the questions.

- What is the most popular means of communication?
- What is the least popular means of communication?
- How many people regularly use means of personal communication?
- How many people regularly use means of mass communication?



My classmates most frequently use means of personal communication / mass communication.

Name _____ Date _____

INVESTIGATE!

1 Which municipal services are available in your town or city?



Instructions

1. Work in groups of four. You need a large sheet of card, brochures from your town or city and some local maps.
2. Find out about the municipal services in your town or city. Use brochures, the Internet, maps or other resources that can help you identify these services.
3. Make a poster entitled *Municipal services in our town/city*. Divide the card into six sections and label the services: *Health care, Environmental, Police and fire service, Cultural and leisure, Town planning and Education*. Include relevant information and photos in each of the sections.
4. Use your research and poster to answer the questions.
 - a. Which services are most common in your town or city?

- b. Which services are least common?

- c. Are there enough municipal services in your town or city?

- d. Think of another municipal service to make your town or city better.

Our town / city has few / lots of municipal services.

Name _____ Date _____

1 Can you identify historical periods in Spain? Make a brochure.**Instructions**

1. Work with a partner.
2. Search the Internet for information about five historical objects in Spain: a building, a monument or a painting from each of the five periods in history.
3. Make a tourist brochure. Fold a piece of paper in three sections. Write *Walking through history in Spain* on the title page. Label each of the five pages: *Prehistory*, *Ancient history*, *The Middle Ages*, *The Modern Age* and *The Contemporary Age*.
4. Include photos and relevant information about each historical object on the corresponding page.
5. Present your tourist brochure to the class.



I can / cannot identify historical objects in Spain and say which period they are from.

Name _____ Date _____

- 1** Circle the stages of life and write a sentence about each one.

old age adolescence childhood adulthood

- 2** Write a sentence with each group of words.

a. newborn babies eat food

b. learn sit up six months old

c. babies real words one year old

- 3** Read about adolescents and write *yes* or *no*.

	girls	boys
Their voice changes.		
Their hips get wider.		
Hair grows in some places on their body.		
They grow breasts.		
Their shoulders and chest get wider.		

4 Use the colour key and circle the characteristics.

sex / gender → green

height / weight → red

body shape → blue

individual characteristics → orange

37 kilograms dark skin 1 m 20 cm long legs
 short breasts beard blue eyes
 wide hips shoe size red hair thin

5 Write four healthy habits. Tick (✓) the ones you do on a regular basis.

_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>
_____	<input type="checkbox"/>

6 Complete the sentences with the correct words.

energy rest healthy tired survive grow recover sleep

- After a busy day, we feel _____.
- Our body needs to _____
and _____.
- Animals and people need to sleep in order
to _____.
- Sleep keeps our body _____
and gives it _____.
- Sleep also helps us _____.
- Newborn babies need 16 hours _____.



Name _____ Date _____

1 How much should you eat? Write *more* or *less*.

- a. If you are overweight, you should eat _____.
- b. If you are underweight, you should eat _____.
- c. If you do a lot of exercise, you should eat _____.
- d. If you are old, you should eat _____.
- e. If you are young, you should eat _____.

2 Find and circle four nutrients. Then, write them under the correct picture.

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



- Which main nutrient is missing in the wordsearch? _____

3 Cross out the least healthy food for each meal. Write a healthier option.

- a. Breakfast: orange juice, toast, cereal, a piece of cake.
- _____

- b. Lunch: salad, chicken, chips, peas.
- _____

- c. Dinner: a hamburger, carrot soup, an omelette, fish.
- _____

4 Write a sentence with each group of words.

a. mouth tongue teeth

b. teeth shell enamel

c. clean teeth meal



5 Read the definitions and write the words related to the digestive system.

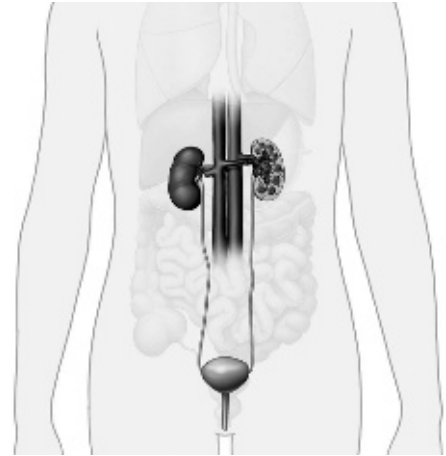
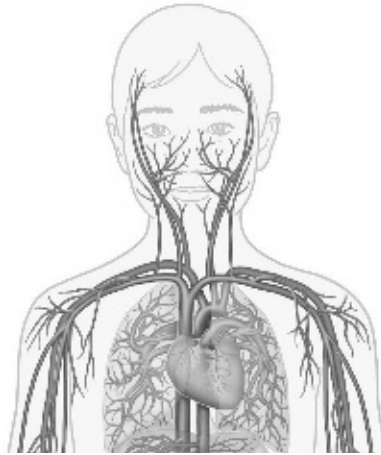
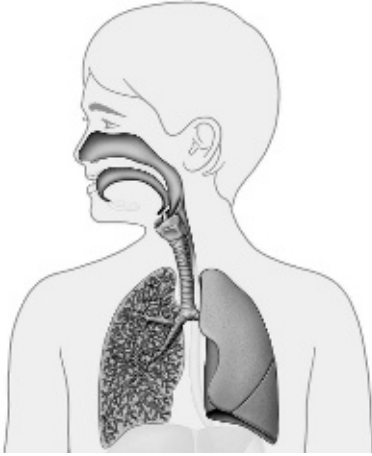
- a. Part of the body where digestion ends: _____
- b. Substances in the stomach that break food down: _____
- c. A long, thin organ where nutrients are absorbed: _____
- d. A substance in the mouth that mixes with food: _____
- e. A long tube from the mouth to the stomach: _____

6 Read and write *T* (true) or *F* (false). Then, rewrite the false sentences.

- a. We need to drink six to eight glasses of water a day. ☐
- b. We use our tongue to cut and chew our food. ☐
- c. We break down food in our stomachs. ☐
- d. Nutrients are absorbed into the blood in the large intestine. ☐
- e. Food travels from our mouth to the oesophagus. ☐

Name _____ Date _____

1 What system is it? Label the diagrams.



2 Complete the definitions with the correct words.

trachea lungs heart capillaries kidneys urethra

- They filter the blood and reabsorb nutrients: _____
- This pumps blood around our body: _____
- This is where oxygen passes into our blood: _____
- Urine leaves our body through this tube: _____
- These vessels connect arteries and veins: _____
- Air travels down this tube from our nose and mouth: _____

3 Match the two halves of the sentences.

- Blood circulation is
- The excretory system keeps
- When we breathe out,
- Blood carries oxygen and nutrients
- When we breathe in,

- to different parts of our body.
- our ribs move up and out.
- the movement of blood around our body.
- our blood clean.
- carbon dioxide leaves our body.

4 Write a sentence with each group of words.

a. sweat water salt waste products

b. sweating body healthy cool

c. skin protects infections injuries

d. skin nerves message brain

5 Write an example of how to look after each system.

Respiratory system: _____

Circulatory system: _____

Excretory system: _____

6 Complete the sentences with the correct words.

protective clothing warm up helmet stretch knee pads elbow pads

a. It is important to wear _____ when doing exercise.

b. When we ride a bicycle, we must wear a _____, _____ and _____.

c. We should _____ before exercise.

d. We should _____ after exercise.



Name _____ Date _____

1 Complete the text about plant nutrition.

leaves	carbon dioxide	oxygen	minerals	photosynthesis
roots	raw sap	water	sunlight	elaborated sap

Plants make their own food through _____.
 They absorb _____ and _____
 from the soil through their _____. This mixture
 is the _____ that travels up the stem
 to the _____. With _____ and
 _____ from the air, the leaves transform the raw
 sap into _____, the plant's food. Additionally, during
 photosynthesis plants release _____ into the air.

**2 Unscramble the letters and label the diagram with the correct words.**

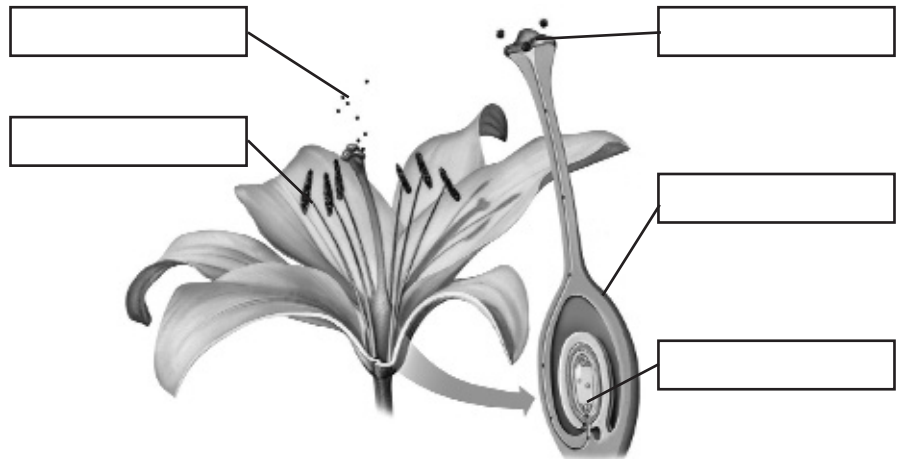
lonelp

gasmit

nmesat

ulove

yroav

**3 Complete the sentences.**

- Pollen travels from the _____ of one plant to the _____ of another.
- _____ fertilizes the _____ inside the ovary and it grows into a seed.
- The seed _____ in wet ground and _____ into a new plant.

4 Match the two halves of the sentences about how animals eat and breathe.

- | | |
|---|--------------------------------------|
| a. Mammals have teeth | and breathe with their lungs. |
| b. Birds have beaks | and they breathe through their skin. |
| c. Amphibians do not have teeth | and some have teeth. |
| d. All fish breathe through their gills | and some have teeth. |
| e. Reptiles breathe through their lungs | and breathe with their lungs. |

5 Classify the words.

birds are born hatch mother's milk eggs mother's womb mammals amphibians

viviparous vertebrates	oviparous vertebrates
_____	_____
_____	_____
_____	_____
_____	_____

6 Complete the words using the clues. Then, write a sentence with each word.

- | | |
|---------------------------------|-------------------------|
| a. Animals that lay eggs. | ___ _ p ___ _ _ _ _ |
| b. Baby insects. | ___ _ r ___ _ _ |
| c. Process of changes in shape. | ___ _ _ _ m ___ _ _ _ _ |

Name _____ Date _____

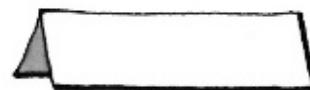
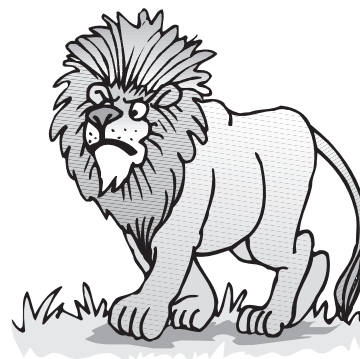
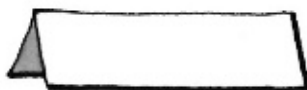
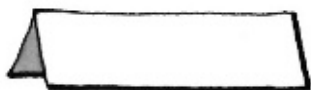
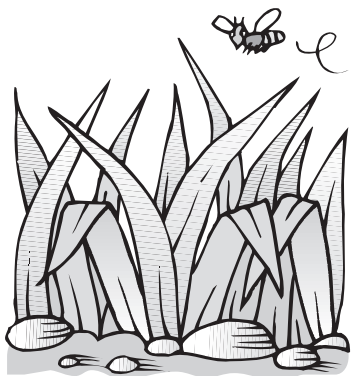
1 Write a sentence with each group of words.

a. ecosystems large rainforest pond

b. Earth giant ecosystem

c. habitats places plants and animals survive

2 Label the food chain and complete it with arrows. Then, answer the questions.



- Which is the producer? _____
- Which are the consumers? _____

3 Write an example of each type of relationship.

a. Competition: _____

b. Cooperation: _____

4 Tick (✓) the correct boxes.

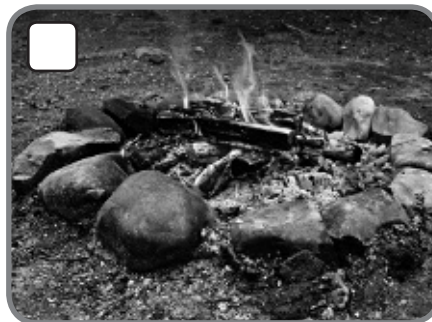
	coast	open sea	deep sea
The water is very cold.			
It is home to crabs and starfish.			
There is a lot of sunlight.			
There is little food.			
It is home to dolphins, whales and sharks.			
The water is warm and shallow.			

5 Circle the words related to deciduous forests in green, and the ones related to tropical rainforests in orange. Then, write a sentence about each type of forest.

wet parrots owls mild temperatures dense vegetation
 deciduous trees lots of insects very fertile soil ferns hot
 Equator a lot of rain monkeys squirrels

6 Complete the rules to protect ecosystems. Then, match them to the pictures.

- a. Don't light _____.
- b. Don't drop _____.
- c. Don't pick _____ or _____.



Name _____ Date _____

1 Complete the sentences with *minerals* or *rocks*.

- Granite is made up of three _____.
- Pyrite and diamond are shiny _____.
- Marble and granite are hard _____.
- _____ are made of _____.
- Talc and gypsum are very soft _____.
- _____ are made up of only one substance.
- Coal and petroleum are black _____.
- _____ can be distinguished by their shape, colour, lustre and hardness.

2 Write one use for each of these minerals.



quartz



copper



graphite



emerald

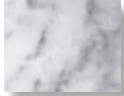
3 Read the descriptions and tick (✓) the correct word.

- | | |
|---|--|
| a. A rock made up of feldspar, mica and quartz. | d. The hardest mineral. |
| marble <input type="checkbox"/> | diamond <input type="checkbox"/> |
| granite <input type="checkbox"/> | gypsum <input type="checkbox"/> |
| b. A black, liquid rock. | e. A green, dull mineral. |
| petroleum <input type="checkbox"/> | emerald <input type="checkbox"/> |
| coal <input type="checkbox"/> | malachite <input type="checkbox"/> |
| c. A shiny mineral with a regular shape. | f. A rock made up of only one mineral. |
| quartz <input type="checkbox"/> | marble <input type="checkbox"/> |
| pyrite <input type="checkbox"/> | clay <input type="checkbox"/> |

4 Write one use for each of these rocks.



slate



marble



clay



petroleum

5 Unscramble the letters and label the diagram. Then, circle the layer that contains most humus in brown, and the layer that has no living things in blue.

bosilus

dobrekc

liposto

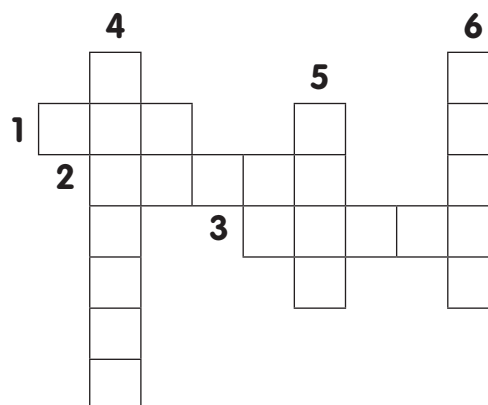


6 Answer the questions.

- What type of soil can you find in a desert? _____
- What type of soil is ideal for growing crops? _____
- In which type of soil can you grow olive trees? _____

Name _____ Date _____

- 1 Complete the crossword about celestial bodies. Circle the luminous body. Then, complete the sentences.**



ACROSS

1. The star in the Solar System.
2. A dwarf planet.
3. A ball of ice and dust that orbits the Sun.

- a. _____, _____, _____
and _____ orbit the _____.
- b. The _____ orbits the Earth.

DOWN

4. The fifth planet from the Sun.
5. The Earth's satellite.
6. The planet between Venus and Mars.

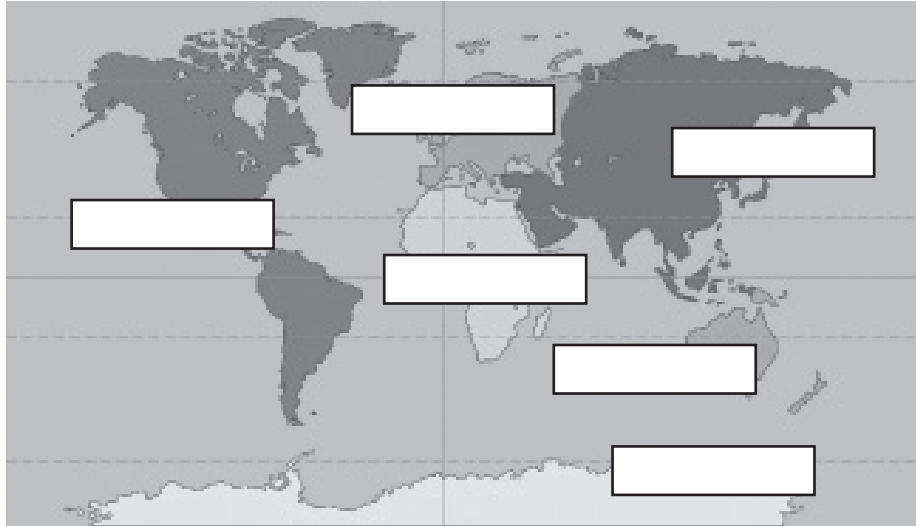
- 2 Complete the sentences about the Solar System.**

furthest rock elliptical tails eight Moon inner gas satellites

- a. There are _____ planets in the Solar System.
- b. The _____ planets are closest to the Sun and are made of _____.
- c. The outer planets are _____ from the Sun and are made of _____.
- d. _____ orbit planets. The Earth has one: the _____.
- e. Comets orbit the Sun in an _____ path. Sometimes we can see their bright _____.

- 3 Circle the continents and label the map.**

africa oceania america europe antarctica asia



- 4 Classify the words. Then, tell your partner about rotation and revolution.**

orbit	day and night	around the Sun	24 hours
axis	365 days	one day	one year

Rotation: _____

Revolution: _____

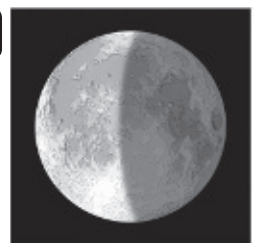
- 5 Match. Then, number each phase of the Moon in order, starting with the new Moon.**

full Moon

waxing Moon

waning Moon

new Moon



Name _____ Date _____

- 1 Write two examples of these materials. Then, write an object made from each material.**

Natural materials

Man-made materials

- 2 Name two properties of the materials used to make these objects.**



- 3 Match the three columns about materials. Then, write sentences.**

metals

tables and chairs

hard and rigid

green materials

gates and bridges

strong and heavy

plastics

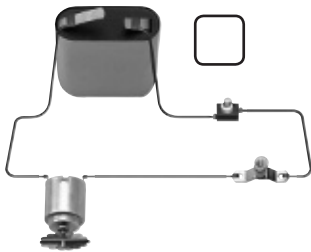
playground toys

strong and light

4 Complete the descriptions and match them to the pictures. Then, label each picture.

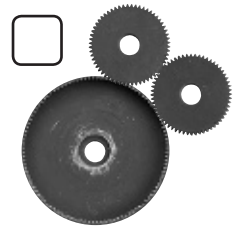
electricity lift disk wires wheels rope lower axle

- They are _____ with teeth.
- They have switches and _____ through which _____ passes.
- It is a wheel with a _____ around it used to _____ and _____ objects.
- It is a solid _____ that turns on an _____.









5 Define simple machines and give two examples.

6 Define complex machines and give two examples.

Name _____ Date _____

1 Read and write the correct form of energy. Then, circle the forms of energy found in fire.

- Energy in food, fuel and batteries: _____
- Energy caused by heat: _____
- Energy from light sources: _____
- Energy from inside substances: _____
- Energy in moving objects: _____
- Energy converted from many sources such as wind and fossil fuels: _____



2 Complete the sentences with *renewable energy sources* or *non-renewable energy sources*.

- _____ are consumed faster than they are made.
- Sun, water and wind are _____.
- _____ will never run out.
- _____ release carbon dioxide when they burn.
- Coal, natural gas and petroleum are _____.
- _____ do not cause pollution.



3 Cross out the wrong words and rewrite the properties of light.

- Light travels in one direction: _____
- Light travels in wide circles: _____
- Light travels at 200,000 metres per hour: _____

- 4 Write *transparent*, *translucent* or *opaque* under each picture.



- 5 Unscramble the letters and write *P* (primary colour) or *S* (secondary colour). Then, label and colour the diagram.

wolyel

☐

acny

☐

lebu

☐

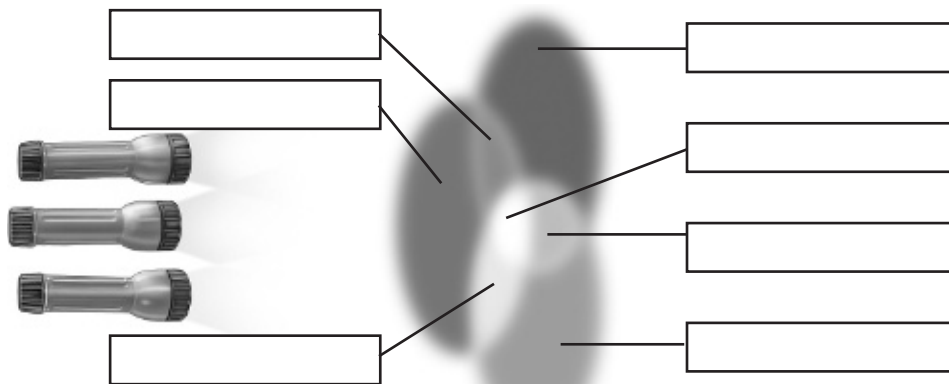
enger

☐

der

☐

etnagam

☐


- 6 Write a sentence with each group of words.

a. gravity pulls objects centre of the Earth

b. friction acts between two surfaces rub

Name _____ Date _____

1 Write the type of service being used.

- a. Taking piano lessons: _____ d. Going to the doctor's: _____
- b. Watching television: _____ e. Buying an ice cream: _____
- c. Visiting an art museum: _____ f. Travelling by train: _____

2 How do jeans reach the consumer? Number the pictures in order and circle the producers. Then, complete the paragraph describing the stages.

Farmers grow _____. In factories, people make _____ from denim cloth. _____ distribute the jeans to the shops.

Here, _____ sell the jeans, and _____ buy the jeans.

3 Complete the text about tourism in Spain.

tourism

large cities

tourism

small villages

jobs

islands

beaches

climate

diverse

mountains

_____ is very successful in Spain. There are

many _____,

_____ and

_____ to visit. The _____

is generally good. It is also a culturally _____

country. _____ provides many

_____ in the service sector.



4 Write *personal communication* or *mass communication* next to each action.

- a. Talk to your friend on the phone: _____
- b. Watch your favourite television show: _____
- c. Write an email to your cousin: _____
- d. Listen to your favourite music on the radio: _____
- e. Read a digital magazine: _____
- f. Write a letter to your grandmother: _____



5 Write a sentence with each group of words.

a. Internet network telephone lines

b. search engines websites information

c. Internet emails chatting

6 Cross out the wrong words and rewrite the sentences.

a. Advertising is present in all means of personal communication.

b. Advertisements are used only to inform consumers.

c. We can see advertisements in very few places.

d. Responsible consumers buy things that they don't really need.

Name _____ Date _____

1 Complete the table.

Spain	
Spanish territories	Bordering countries
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2 In Activity 1, circle the territories surrounded by water in red and the ones located on a different continent in blue.**3 Circle the words related to municipalities and write them next to the correct definition.**

local council municipality councillor town hall comarca mayor

- The smallest administrative division: _____
- The head of the local council: _____
- A group of people who govern a municipality: _____
- People on the local council: _____
- The place where the mayor and councillors work: _____
- A group of municipalities: _____

4 Complete the text.

Constitution Courts of Justice President democracy law
Congress Senate rights and obligations ministers Parliament

Spain is a _____. Therefore, all citizens have the same _____ which are written in the _____. The Constitution is the most important _____ in Spain.

It establishes the national institutions: the Head of State, the

_____, the Government and the _____.

The Government is made up of the _____ and

_____. The Parliament consists of the _____

and the _____.



5 Read the sentences and underline the mistakes. Then, write the sentences correctly.

a. In a democracy, citizens are represented by the Courts of Justice.

b. An election manifesto is a list to explain how to vote.

c. In municipal elections, citizens vote for the members of Parliament.

6 Match five Rights of the Child.

The right to grow up

The right to receive

in a tolerant society.

protection and safety.

food, water, housing and medical services.

with love and understanding.

free education.

Name _____ Date _____

1 Read the descriptions and write the correct period in history. Then, number them in order.

- a. New inventions helped sailors: _____ ☐
- b. There were two main civilizations: _____ ☐
- c. There were important scientific discoveries: _____ ☐
- d. Human beings did not know how to write: _____ ☐
- e. Many important civilizations developed: _____ ☐

2 Write a sentence about Prehistory with each word.

- a. tribes: _____
- b. fire: _____
- c. sedentary: _____
- d. clay: _____
- e. metal: _____

3 Complete the text about the Romans.

roads	insulae	cities	amphitheatres	Latin
aqueducts	theatres	circuses	temples	domus

Romans spoke _____. They built many _____. They also built _____ to carry water into the cities and _____ to connect their cities. Their cities had _____,

_____ and _____ for different kinds of entertainment.

Romans worshipped their gods in _____. Rich people lived in _____,

and poor people lived in _____.



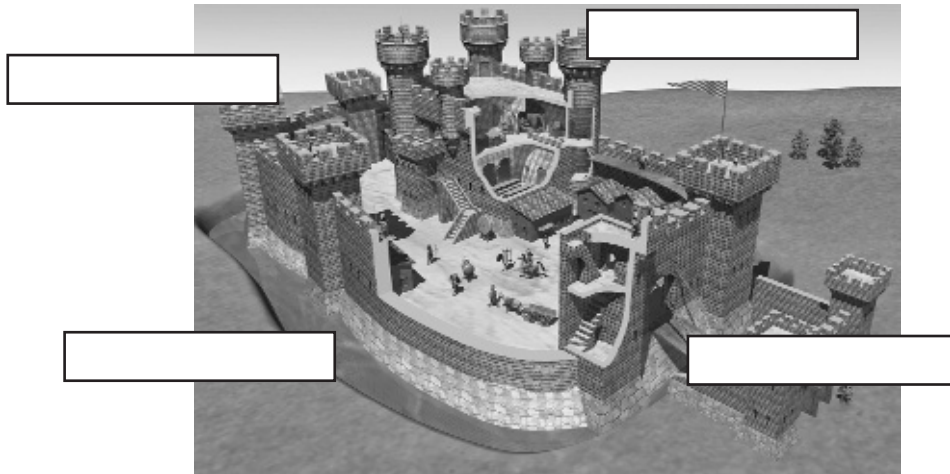
4 Unscramble the letters and label the picture.

rgbdiadewr

atom

lemtenbstat

wetros



5 Match the columns and say sentences in pairs.

1492

Vasco da Gama

America

1498

Johannes Gutenberg

printing press

1440

Christopher Columbus

new route to India

6 Name each invention and write *500 years ago* or *200 years ago* under each picture.









Answer keys

Reinforcement & Extension

Reinforcement

1. WE GROW AND CHANGE

PAGE 6

1. Read the sentences and write the stages of life.

adulthood; childhood; old age; adolescence.

2. Copy each sentence under the correct picture.

Babies wear a nappy; Babies crawl on their hands and knees; Babies make sounds but they can't talk.

3. Complete the text about adolescence.

When children become adolescents, their bodies begin to change. They grow hair in some places on their bodies. Girls grow breasts and their hips get wider. Boys also change. Their shoulders and chest get wider. Their voice becomes deeper.

PAGE 7

4. Complete the table with information about a friend.

Open Answer (OA)

5. Match to make sentences about healthy habits.

- We need to exercise regularly.
- We must eat a healthy and balanced diet.
- We need to look after our backs.
- We need ten hours of sleep a night.
- We must drink enough water.

6. Copy the words in the correct order to make sentences about why we need to rest.

- All animals and people need to sleep in order to survive.
- We need to get enough sleep to stay healthy.
- We need to get enough sleep to give our body energy.

2. FOOD AND NUTRITION

PAGE 8

1. Use the colour key and circle the words. Then, underline the foods we should eat less often.

give us energy (red): pasta; rice; bread; butter; olive oil; cheese.

help us grow (blue): sardines; eggs; bacon.

keep us healthy (green): yoghurt; grapes; milk; carrots; strawberries; lettuce.

2. Label the food wheel. Write *carbohydrates, minerals, fats, proteins and vitamins*.

left, top to bottom: carbohydrates; vitamins.

right, top to bottom: fats; proteins; minerals.

3. Use the food wheel to complete the table with healthy, balanced meals.

OA

PAGE 9

4. Label the diagram of the digestive system.

mouth; oesophagus; stomach; large intestine; small intestine; anus.

5. How does digestion work? Match the sentence halves and put them in order from 1 to 6.

- Teeth cut and chew food, and the tongue mixes it with saliva.
- Food travels down the oesophagus to the stomach.
- Food mixes with gastric juices, which break down the food.
- Nutrients from the food are absorbed into the blood in the small intestine.
- Parts of food our body does not need continue into the large intestine.
- Solid waste from food leaves our body through the anus.

3. HOW OUR BODY WORKS

PAGE 10

1. Unscramble the letters and complete the sentences with the correct words.

- The bronchi are two small tubes.
- When we breathe in, air goes down the trachea.
- Air enters and leaves our body through our nose and mouth.
- Oxygen passes into our blood in our lungs.

2. Circle the parts of the circulatory system and write three sentences about this system.

capillaries; blood vessels; arteries; heart; veins.

Model answer (MA). The circulatory system moves blood around our body.

MA. The heart pumps blood around our body.

MA. Veins carry blood back to the heart.

3. Complete the parts of the excretory system using the clues. Then, number the sentences in order.

- Blood is filtered and useful nutrients are reabsorbed here. (kidneys)
- Urine goes down through these two tubes. (ureters)
- Urine is collected and stored here. (bladder)
- Urine leaves the body through this tube. (urethra)

Reinforcement

PAGE 11

4. Complete the text about the skin.

Our body eliminates waste through our skin. Sweating helps our body to keep cool and healthy. Our skin also protects our body from infections and injuries. It is very sensitive and has many nerves that send messages to our brain.

5. Look at the pictures and complete the table about how to look after our bodies.

Do regular exercise; Breathe clean air; Drink lots of water.

6. Copy the words in the correct order to make sentences about the benefits of exercise.

- It strengthens our muscles and bones.
- It helps us to stay at the correct weight.

4. PLANTS AND ANIMALS

PAGE 12

1. Circle the words about photosynthesis and label the diagram.

carbon dioxide; water and minerals; oxygen; sunlight.

top to bottom: oxygen; sunlight; carbon dioxide; water and minerals.

2. Complete the crossword about the reproductive parts of a plant.

- stigma; 2. ovary; 3. pollen; 4. ovule; 5. stamens; 6. carpel.

3. Write *pollination*, *fertilization* or *germination* next to each sentence.

- fertilization; b. germination; c. pollination; d. germination.

PAGE 13

4. Complete the text about how vertebrates reproduce.

Viviparous vertebrates grow inside their mother's womb. They are born when they are fully developed. These babies drink their mother's milk. Oviparous vertebrates are born from eggs that hatch. Birds feed their babies. Most reptiles, amphibians and fish abandon their eggs.

5. Complete the sentences for each stage of the life cycle of a butterfly. Then, number the diagram and the sentences in order.

- Egg stage: the adult female butterfly lays eggs on a leaf.
- Larvae stage: the caterpillar comes out of the egg, eats and grows.

3. The grown caterpillar changes into a pupa, called a chrysalis.

4. Adult stage: the chrysalis opens. The adult butterfly comes out and mates.

diagram (clockwise, starting from the eggs on the leaf): 1; 2; 3; 4.

5. ECOSYSTEMS

PAGE 14

1. Write living things you can see in this ecosystem.

trees; grass; plants.

2. Give examples. Then, use the colour key to circle the consumers.

OA

3. Complete each sentence and match it to the correct picture. Then, circle examples of cooperation in blue and examples of competition in red.

- Many birds build their nest in trees. (blue)
 - Some predators hunt for the same food. (red)
 - Many animals protect each other in groups. (blue)
 - Some plants compete for sunlight. (red)
- photos: a, b, d, c.

PAGE 15

4. Circle eight ecosystems. Classify them. Then, tick (✓) the freshwater ecosystems.

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

freshwater ecosystems: pond; lake; river.

5. Read the sentences. Then, write *deciduous forest* or *tropical rainforest*.

- deciduous forest; b. tropical rainforest; c. tropical rainforest; d. deciduous forest.

Reinforcement

6. Complete the text about damage to ecosystems.

Human activity can damage ecosystems. We pollute the air and water. We build cities and roads in the countryside. We cut down forests to use the wood for building and to make paper.

6. MINERALS AND ROCKS

PAGE 16

1. Circle the five minerals and write a property of each one.

gypsum; malachite; pyrite; diamond; quartz.

MA. gypsum: soft; malachite: green; pyrite: a regular shape; diamond: shiny; quartz: hard.

2. Write one mineral that you can find in these objects.

a. diamond; b. calcite; c. silver; d. copper; e. gypsum; f. graphite.

3. Read the sentences and write an example of each type of rock.

a. marble; b. coal; c. granite; d. clay.

PAGE 17

4. Complete the sentences about uses of rocks. Then, write C (construction), F (fuel), I (industry) or D (decoration).

- Slate is used to make roof tiles. (C)
- Marble is used to make statues and ornaments. (D)
- Clay is used to make bricks. (C)
- Petroleum and coal are used to produce heat. (F)
- Granite is used to make walls. (C)
- Petroleum is used to make plastics, paint and fertilizers. (I)

5. Complete the text about soil.

Soil is the top layer of the Earth's surface. It is made up of rocks, sand, minerals, air, water and humus. Humus is the remains of dead plants and animals. Soil is very important for plants, animals and people.

6. Write a sentence about each type of soil.

MA. Fertile soil contains lots of water, air and humus.

MA. Only a few plants grow well in poor soil.

MA. Arid soil is made up of rocks and sand.

7. THE EARTH, THE SUN AND THE MOON

PAGE 18

1. Read the definitions and write the word.

a. comet; b. satellite; c. dwarf planet; d. star; e. planet.

2. Circle the planets and classify them in order from the Sun. Tick (✓) the planet with a ring.

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

inner planets: Mercury; Venus; Earth; Mars.

outer planets: Jupiter; Saturn (✓); Uranus; Neptune.

3. Complete the sentences.

- The Earth's axis is an imaginary line through the centre of the Earth from the North Pole to the South Pole.
- The Equator is an imaginary line around the middle of the Earth.

PAGE 19

4. Read the sentences. Then, write rotation or revolution next to each one.

a. revolution; b. rotation; c. rotation; d. revolution.

5. Look at the diagram and answer the questions.

a. It is day in Spain; b. It is night in China; c. It is winter in France; d. It is summer in Brazil.

6. Complete the text about the Moon.

The Moon is the Earth's satellite. It takes 28 days to orbit the Earth. It has no atmosphere or water. It is much smaller than the Earth. The Moon is a non-luminous body that reflects light from the Sun. This causes the phases of the Moon.

8. MATERIALS AND MACHINES

PAGE 20

1. Name the materials used to make these objects. Then, write N (natural) or M (man-made) next to each material.

top, left to right: fibreglass, (M); leather, (N).

bottom, left to right: wool, (N); wood, (N); plastic, (M); silicon, (M).

Reinforcement

2. Circle six properties of materials. Then, name a material that has each property.

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

MA. waterproof: plastic; transparent: glass; elastic: rubber; light: aluminium; strong: iron; fragile: glass.

3. Name two uses of these materials.

MA. plastic: playground toys; plastic bags.

MA. metal: gates; aeroplanes.

PAGE 21

4. Complete the crossword about simple machines. Then, write an example of each.

1. inclined plane; 2. lever; 3. wheel; 4. pulley.

OA

5. Circle the eight complex machines. Then, classify them in the table.

bicycle; light; tractor; lamp; computer; watch; car; mobile phone.

motors	gears	electric circuits	electronic components
tractor	bicycle	light	computer
car	watch	lamp	mobile phone

6. Which machines do they use? Write an example. Then, write human energy, electricity or petrol next to each machine.

MA. a. computers, electricity; b. thermometers, human energy; c. fire engines, petrol; d. car, petrol; e. whisk, human energy.

9. ENERGY AND FORCE

PAGE 22

1. Complete the crossword about forms of energy.

1. electrical; 2. chemical; 3. light; 4. thermal; 5. kinetic; 6. nuclear.

2. Circle six energy sources and classify them.

sun; petroleum; wind; natural gas; coal; water.

renewable energy sources: the Sun; water; wind.

non-renewable energy sources: coal; natural gas; petroleum.

3. Use the clues to write the properties of light.

a. Light travels very fast; b. Light travels in a straight line; c. Light travels in all directions.

PAGE 23

4. Complete the text about the reflection of light.

Most objects are not sources of light. We can only see them because they reflect light. When light hits an object, it bounces off the object. This is called reflection. The reflected light enters our eyes. This is how we see objects. Smooth and shiny surfaces reflect light better than dull and dark surfaces.

5. Colour the diagram. Then, label the colours of light.

top to bottom: red; orange; yellow; green; blue; indigo; violet.

6. Circle the words related to gravity in red and the ones related to friction in blue. Then, write two sentences about gravity and friction.

gravity (red): centre of the Earth; fall; float.

friction (blue): rough; slow down; rub; smooth.

MA. Gravity pulls objects to the centre of the Earth.

MA. Friction slows down moving objects.

10. WORK AND TECHNOLOGY

PAGE 24

1. Complete the table with jobs from the tertiary sector.

MA. health care: doctor; dentist; nurse.

MA. education: teacher; cleaner; head teacher.

MA. trade: sales person; factory worker; farmer.

MA. tourism: waiter; travel agent; tour guide.

MA. communications: DJ; journalist; writer.

MA. transport: train driver; pilot; ticket inspector.

Reinforcement

2. Match the three columns to make sentences about trade.

Sales people sell the products or services to consumers.

Consumers buy the finished product.

Transporters distribute the products to the shops.

Producers obtain and make products to sell.

3. Why are these places good for tourism? Who works in each place? Write your answers.

OA

PAGE 25

4. Circle eight means of communication and classify them. Then, tick (✓) the means of communication you use daily.

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

personal communication: letter; telephone; fax; email.

mass communication: radio; television; newspaper; Internet.

5. Circle the words related to the Internet. Then, write three uses of the Internet.

network; search engines; mass communication; websites; emails; chatting.

MA. The Internet can be used for collecting information, sending emails and chatting online.

6. Write an advertisement for this toy.

OA

11. WHERE WE LIVE

PAGE 26

1. Label the map. Then, circle the names of the Spanish territories.

left, top to bottom: Portugal; Spain; Ceuta; Canary Islands.

right, top to bottom: France; Balearic Islands; Melilla; Morocco.

2. Circle four Autonomous Communities and complete the table.

Extremadura; Galicia; Aragon; Basque Country.

Autonomous Community	capital city	province(s)
Extremadura	Merida	Caceres, Badajoz
Galicia	Santiago de Compostela	A Coruña, Lugo, Orense, Pontevedra
Aragon	Zaragoza	Huesca, Teruel, Zaragoza
Basque Country	Vitoria	Alava, Guipuzcoa y Vizcaya

PAGE 27

3. Read the definitions and write the words.

a. a democracy; b. the King; c. Parliament; d. the Government; e. the Constitution; f. the Courts of Justice.

4. Write a sentence with each group of words.

- An election manifesto is a list to explain ideas to people.
- In general elections citizens vote for a political party.
- A government represents citizens of a country in a democracy.
- Municipal elections choose councillors of a Town Hall.

5. Write right or obligation.

a. right; b. obligation; c. right; d. obligation; e. obligation; f. right.

12. LEARNING FROM HISTORY

PAGE 28

1. Match. Then, label the timeline of the periods in history.

a. about 500 years ago; b. over 5,000 years ago; c. over 1,000 years ago; d. about 2 million years ago; e. about 200 years ago.

Prehistory; Ancient history; The Middle Ages; The Modern Age; The Contemporary Age.

Reinforcement

2. Complete the sentences about Prehistory.

- The first human beings were nomads, and they lived in tribes.
- They made simple tools using stone, wood and animal bones.
- Much later, human beings lived in huts made of branches and skins.
- They cultivated crops and domesticated animals.

3. Complete the sentences about Roman architecture.

- Rich people lived in domus, and poor Romans lived in insulae.
- Aqueducts carried water to their cities.
- The Romans watched gladiator fights in amphitheatres.

PAGE 29

4. Write a sentence about the Middle Ages with each group of words.

- In the Middle Ages there were Christian Kingdoms in the north of the Iberian Peninsula.
- Christian kings and noblemen owned most of the land.
- Peasants farmed the land and paid taxes.

5. Read and write the correct inventions. Then, classify them.

- a. compass; b. steam engine; c. astrolabe; d. printing press; e. vaccines.

The Modern Age: compass; printing press; astrolabe.

The Contemporary Age: steam engine; vaccines.

6. Complete the table.

invention	year	who invented it	how it changed life
printing press	1440	Johannes Gutenberg	made many copies of books
steam engine	1769	James Watt	created many new jobs
smallpox vaccine	1796	Edward Jenner	saved lives

Extension

1. WE GROW AND CHANGE

PAGE 30

1. Read the text and answer the questions.

- a. Body language is non-verbal communication.
- b. Our brain controls our physical movements.
- c. We can express our emotions with body language.
- d. Rolling our eyes or turning our back can hurt others.

2. Complete the table about how you use your body to communicate. Then, compare with a partner.

OA

2. FOOD AND NUTRITION

PAGE 31

1. Read the text and answer the questions.

- a. The people of Naples added tomatoes to pizzas.
- b. Tomatoes, mozzarella cheese and basil are the ingredients of Pizza Margherita.
- c. Because it was made for Queen Margherita.
- d. Pizza is eaten all over the world.
- e. Pizza can have toppings such as tuna, mushrooms and olives.

2. Draw and write about your favourite pizza.

OA

3. HOW OUR BODY WORKS

PAGE 32

1. Read and write *T* (true) or *F* (false). Then, correct the false sentences.

- a. F; b. T; c. T; d. F.

Asthma is a disease of the respiratory system.

Children with asthma can play like other children.

2. Use the code and find a tip for asthma prevention.

Avoid tobacco smoke!

3. Interview your classmates. Find out what allergies they have.

OA

4. PLANTS AND ANIMALS

PAGE 33

1. Read the text and answer the questions.

- a. Animals sleep when there is no food to save energy.

- b. No, they don't.

- c. Dogs, rabbits and cats are diurnal animals.

- d. Bats, foxes and moles are nocturnal animals.

- e. Rabbits hide in burrows to protect themselves while they sleep.

2. Search the Internet for information on animal sleeping habits and complete the table.

OA

5. ECOSYSTEMS

PAGE 34

1. Read the text and circle the correct word.

- a. Tundra ecosystems are found in the Arctic.
- b. Rainfall in tundra ecosystems is low.
- c. The top layer of the soil is the permafrost.
- d. Winter in the Arctic tundra is longer than summer.
- e. Global warming is threatening the Arctic tundra.

2. Search the Internet for three animal species from the Arctic tundra. Write what they eat.

OA

6. MINERALS AND ROCKS

PAGE 35

1. Read the text and answer the questions.

- a. Fossils provide information about climate and the environment in the past.
- b. An ichnite is the remains of an animal footprint.
- c. You can find ichnites in Soria, Rioja, Teruel and Asturias.
- d. The MUJA is the Jurassic Museum of Asturias.

2. Search the Internet for pictures of plant and animal fossils. Print out three photos, cut them out, paste them in the boxes and label them.

OA

7. THE EARTH, THE SUN AND THE MOON

PAGE 36

1. Read and write *T* (true) or *F* (false). Then, correct the false sentences.

- a. F; b. T; c. T; d. F.

The Moon passes between the Earth and the Sun in a solar eclipse.

Watching a solar eclipse can hurt your eyes.

Extension

2. Search the Internet and make a two-year calendar of the next total lunar and solar eclipses.

OA

8. MATERIALS AND MACHINES

PAGE 37

1. Read the text and answer the questions.

- a. It is resistant, a good insulator, strong and lightweight.
- b. It isn't biodegradable and it harms marine animals.
- c. It means a material doesn't stay in the environment for long.
- d. They are islands of plastic rubbish in the oceans.

2. Use the code and find a way to use less plastic.

Use shopping bags many times!

9. ENERGY AND FORCES

PAGE 38

1. Read the text and answer the questions.

- a. When an object or person comes in contact with a surface or another object.
- b. It can be a good thing or a bad thing.
- c. Friction is greater on sand.
- d. Skiers wax their skis so they can slide faster.
- e. Goalkeepers wear special gloves to increase friction.

2. Search the Internet to find out how friction affects another sport. In your notebook, write a paragraph describing how friction is increased or decreased to gain advantage.

OA

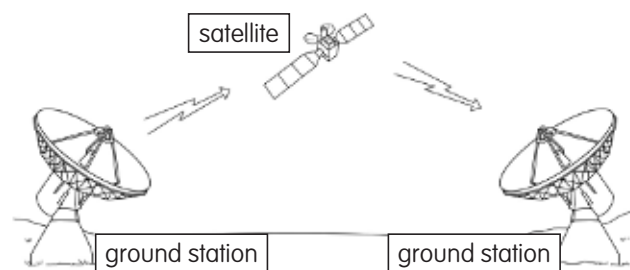
10. WORK AND TECHNOLOGY

PAGE 39

1. Read the text and answer the questions.

- a. Satellite communication is most useful in isolated areas of the world.
- b. Artificial satellites have to be lightweight and resistant.

2. Label and colour the diagram.



11. WHERE WE LIVE

PAGE 40

1. Read the text and complete the crossword.

1. Galician; 2. Muneira; 3. Sardana; 4. Semana Grande; 5. Fabada; 6. Paella.

2. Write about your Autonomous Community.

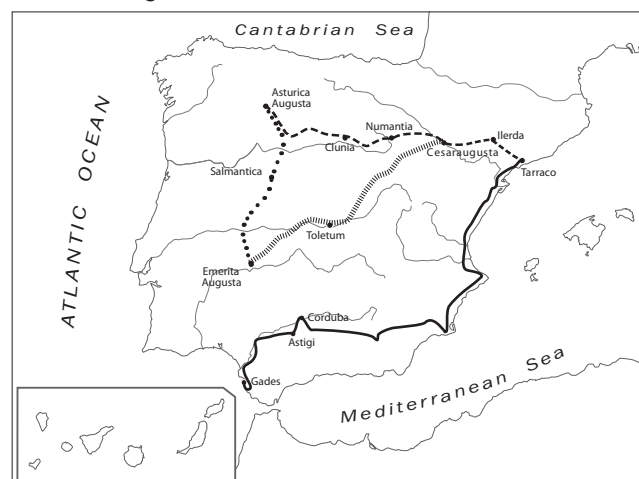
OA

12. LEARNING FROM HISTORY

PAGE 41

1. Use the colour key and read the descriptions to mark the Roman roads on the map.

Key: red —————
green
yellow - - - - -
orange |||





Culture & Festivals Investigate! & Assessment

1. WE GROW AND CHANGE

PAGE 42

1. Read the text. Then, cross out the wrong words and rewrite the sentences.
 - a. Spanish and English belong to the Indo-European family of languages.
 - b. English and Spanish are two of the most spoken languages in the world.
 - c. Around 2,000 of the world's languages may disappear in the near future.
 - d. Esperanto has regular grammatical rules.
2. Do some research on the Internet to learn some expressions in Esperanto. Then, complete the table.

hello: saluton; goodbye: adiaŭ; please: bonvolu; thank you: dankon.

2. FOOD AND NUTRITION

PAGE 43

1. Circle the correct words.
 - a. Based on culture, people eat different foods around the world.
 - b. Reindeer meat is an unusual food eaten in Canada.
 - c. An unusual food eaten in Thailand is insects.
 - d. Foods like reindeer meat and insects mainly provide proteins.
 - e. In England, fruits and nuts are symbols of fertility and good fortune.
2. Search the Internet for other foods for special celebrations. Then, complete the table.

OA

3. HOW OUR BODY WORKS

PAGE 44

1. Read the text and complete the sentences.
 - a. Skin colour is controlled by genes.
 - b. The Sun emits harmful rays.
 - c. Skin colour depends on the amount of melanin.
 - d. Melanin protects the skin from the harmful rays of sunlight.
 - e. People with lighter skin have less melanin.
2. Search the Internet or magazines for photos of three famous people with different skin colour. Write their names and the continent they come from.

OA

4. PLANTS AND ANIMALS

PAGE 45

1. Read the sentences and circle the correct words.
 - a. The platypus is a freshwater mammal.
 - b. It lays eggs in burrows.
 - c. Its body is covered with fur.
 - d. It has a bill.
 - e. It is a carnivore.
2. Search the Internet for information about another unusual animal and complete the index card.

OA

5. ECOSYSTEMS

PAGE 46

1. Read and write T (true) or F (false). Then, correct the false sentences.
 - a. F; b. T; c. F; d. F; e. T.
 - a. Earth Day is an environmental celebration.
 - c. The symbol of the Ecology Flag combines two letters.
 - e. There are lots of actions we can take daily to take care of our planet.
2. Use the code and write an Earth Day pledge.

I promise to care for our planet.

6. MINERALS AND ROCKS

PAGE 47

1. Answer the questions using the table.
 - a. OA
 - b. OA
2. Complete the table for three important people in your life.

OA

7. THE EARTH, THE SUN AND THE MOON

PAGE 48

1. Read the text. Then, cross out the wrong words and rewrite the sentences.
 - a. Solstices happen when the Sun is furthest from the Equator.
 - c. Solstices mark the beginning of summer and winter.

Culture & Festivals

2. Search the Internet for information about a particular solstice celebration and complete the index card.

OA

8. MATERIALS AND MACHINES

PAGE 49

1. Complete the timeline to show how levers developed over time.

Ancient Egypt: People used levers to build pyramids and draw water from rivers.

Ancient Greece: Archimedes explained how levers worked.

Ancient Rome: People built catapults and used scissors to make clothing.

2. Complete the table with examples of how we use levers nowadays.

MA. at school: scissors, stapler; at home: nail clipper, bottle opener; in the playground: seesaw, swing.

9. ENERGY AND FORCES

PAGE 50

1. Read the text and complete the table about the festivals of light.

name	where	when
St. Lucia's Day	Sweden	13 th December
St. Martin's Day	Holland	11 th November
Diwali	India	October or November

2. Search the Internet to find information about one of these festivals of light and complete the index card.

OA

10. WORK AND TECHNOLOGY

PAGE 51

1. Read the text and write two tips that can help you to be less influenced by advertisements.

Remember that not all of the messages are truthful. They exaggerate the benefits of products.

2. Complete the table to record the number of advertisements you see in a week. Then, answer the questions.

OA

11. WHERE WE LIVE

PAGE 52

1. Read the text and answer the questions.

- a. It was adopted 53 years ago (in 2012).
- b. The purpose of Universal Children's Day is to honour children.
- c. Some children live on the streets, are victims of abuse or are forced to work or fight in wars.
- d. Universal Children's Day is celebrated with sports competitions or tours to museums and zoos.

2. Use the key to find a right of the child.

Children have the right to play.

12. LEARNING FROM HISTORY

PAGE 53

1. Read the text and answer the questions.

- a. The steam engine started the Industrial Revolution.
- b. Because people moved to work in factories.
- c. Living conditions for children were bad, unfair and dangerous.

2. Search the Internet for information about other jobs children did during the Industrial Revolution and complete the table.

OA

1. WE GROW AND CHANGE

PAGE 54

1. Are you carrying too much weight on your back?

Investigate!: OA

Statement: I can calculate how much weight to carry in my school bag.

2. FOOD AND NUTRITION

PAGE 55

1. Which foods contain fat?

Investigate!: OA

Statement: I can determine which foods contain fat.

3. HOW OUR BODY WORKS

PAGE 56

1. Can you calculate your heart rate?

Investigate!: OA

Statement: I can count my heartbeats, and I can calculate my heart rate.

4. PLANTS AND ANIMALS

PAGE 57

1. What do plants need to grow?

Investigate!: OA

Statement: Plants need water, light and air to grow.

5. ECOSYSTEMS

PAGE 58

1. Does colour protect animals from being seen by predators?

Investigate!: OA

Statement: Colour can protect animals from being seen by predators.

6. MINERALS AND ROCKS

PAGE 59

1. How hard are rocks?

Investigate!: OA

Statement: I can determine the hardness of different rocks.

7. THE EARTH, THE SUN AND THE MOON

PAGE 60

1. Can you follow the rotation of the Earth? Make a sundial.

Investigate!: OA

Statement: I can follow the rotation of the Earth.

8. MATERIALS AND MACHINES

PAGE 61

1. What simple and complex machines do you use in everyday life?

Investigate!: OA

Statement: I can recognise the simple and complex machines I use every day.

9. ENERGY AND FORCES

PAGE 62

1. Which surfaces reflect light best?

Investigate!: OA

Statement: Shiny and smooth surfaces reflect light best.

10. WORK AND TECHNOLOGY

PAGE 63

1. What means of communication do you and your classmates use? Do a survey.

Investigate!: OA

Statement: MA. My classmates most frequently use mass communication.

11. WHERE WE LIVE

PAGE 64

1. Which municipal services are available in your town or city?

Investigate!: OA

Statement: MA. Our city has lots of municipal services.

12. LEARNING FROM HISTORY

PAGE 65

1. Can you identify historical periods in Spain? Make a brochure.

Investigate!: OA

Statement: I can identify historical objects in Spain and say which period they are from.

Assessment

1. WE GROW AND CHANGE

PAGE 66

1. Circle the stages of life and write a sentence about each one.

old age; adolescence; childhood; adulthood.

MA

In old age, adults' bodies become weaker.

Adolescence is when children's bodies change.

In childhood, children have to learn about the world around them.

Adulthood is when we stop growing.

2. Write a sentence with each group of words.

- Newborn babies can't eat solid food.
- They learn to sit up when they are about six months old.
- Babies don't say real words until they are about one year old.

3. Read about adolescents and write yes or no.

	girls	boys
Their voice changes.	no	yes
Their hips get wider.	yes	no
Hair grows in some places on their body.	yes	yes
They grow breasts.	yes	no
Their shoulders and chest get wider.	no	yes

PAGE 67

4. Use the colour key and circle the characteristics.

sex / gender (green): breasts; wide hips; beard.

height / weight (red): 37 kilograms; 1m 20cm.

body shape (blue): short; thin.

individual characteristics (orange): dark skin; long legs; blue eyes; shoe size; red hair.

5. Write four healthy habits. Tick (✓) the ones you do on a regular basis.

MA

Eat a healthy, balanced diet; Drink enough water; Have good hygiene; Rest and get enough sleep.

6. Complete the sentences with the correct words.

- After a busy day, we feel tired.
- Our body needs to rest and recover.
- Animals and people need to sleep in order to survive.

d. Sleep keeps our body healthy and gives it energy.

e. Sleep also helps us grow.

f. Newborn babies need 16 hours sleep.

2. FOOD AND NUTRITION

PAGE 68

1. How much should you eat? Write *more* or *less*.

a. less; b. more; c. more; d. less; e. more.

2. Find and circle four nutrients. Then, write them under the correct picture.

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

left, top to bottom: vitamins; proteins.

right, top to bottom: minerals; fats.

missing nutrient: carbohydrates.

3. Cross out the least healthy food for each meal. Write a healthier option.

MA

a. Breakfast: orange juice, toast, cereal, yoghurt.

b. Lunch: salad, chicken, potatoes, peas.

c. Dinner: vegetables, carrot soup, an omelette, fish.

PAGE 69

4. Write a sentence with each group of words.

a. Inside our mouth we have a tongue and teeth.

b. Our teeth are covered with a hard shell called enamel.

c. We need to clean our teeth after every meal.

5. Read the definitions and write the words related to the digestive system.

a. anus; b. gastric juices; c. small intestine; d. saliva; e. oesophagus.

6. Read and write *T* (true) or *F* (false). Then, rewrite the false sentences.

a. T; b. F; c. T; d. F; e. T.

We use our teeth to cut and chew our food.

Nutrients are absorbed into the blood in the small intestine.

3. HOW OUR BODY WORKS

PAGE 70

1. What system is it? Label the diagrams.

respiratory system; circulatory system; excretory system.

2. Complete the definitions with the correct words.

a. kidneys; b. heart; c. lungs; d. urethra; e. capillaries;
f. trachea.

3. Match the two halves of the sentences.

- Blood circulation is the movement of blood around our body.
- The excretory system keeps our blood clean.
- When we breathe out, carbon dioxide leaves our body.
- Blood carries oxygen and nutrients to different parts of our body.
- When we breathe in, our ribs move up and out.

PAGE 71

4. Write a sentence with each group of words.

- Sweat contains water, salt and other waste products.
- Sweating keeps our body healthy and cool.
- Our skin protects our body from infections and injuries.
- When something touches our skin our nerves send a message to our brain.

5. Write an example of how to look after each system.

MA

Respiratory system: Breathe clean air.

Circulatory system: Do regular exercise.

Excretory system: Drink enough water.

6. Complete the sentences with the correct words.

- It is important to wear protective clothing when doing exercise.
- When we ride a bicycle, we must wear a helmet, kneepads and elbow pads.
- We should warm up before exercise.
- We should stretch after exercise.

4. PLANTS AND ANIMALS

PAGE 72

1. Complete the text about plant nutrition.

Plants make their own food through photosynthesis. They absorb water and minerals from the soil through their roots. This mixture is the raw sap that travels up the stem to the leaves. With sunlight and carbon dioxide from the air, the leaves transform the raw sap into elaborated sap, the plant's food. Additionally, during photosynthesis plants release oxygen into the air.

2. Unscramble the letters and label the diagram with the correct words.

left, top to bottom: pollen; stamen.

right, top to bottom: stigma; ovary; ovule.

3. Complete the sentences.

- Pollen travels from the stamens of one plant to the stigma of another.
- Pollen fertilizes the ovule inside the ovary and it grows into a seed.
- The seed lands in wet ground and grows into a new plant.

PAGE 73

4. Match the two halves of the sentences about how animals eat and breathe.

- Mammals have teeth and breathe with their lungs.
- Birds have beaks and breathe with their lungs.
- Amphibians do not have teeth and they breathe through their skin.
- All fish breathe through their gills and some have teeth.
- Reptiles breathe through their lungs and some have teeth.

5. Classify the words.

viviparous vertebrates	oviparous vertebrates
mother's womb	hatch
mother's milk	amphibians
are born	eggs
mammals	birds

Assessment

6. Complete the words using the clues. Then, write a sentence with each word.

a. oviparous; b. larvae; c. metamorphosis.

MA. All invertebrates are oviparous; When baby insects hatch from their eggs, they are called larvae; When invertebrates change shape in stages, it is called metamorphosis.

5. ECOSYSTEMS

PAGE 74

1. Write a sentence with each group of words.

a. Ecosystems can be as large as a rainforest or as small as a pond; b. The Earth can be seen as a giant ecosystem; c. Habitats are places where plants and animals survive.

2. Label the food chain and complete it with arrows. Then, answer the questions.

grass; zebra; lion.

Grass is the producer; The zebra and the lion are the consumers.

3. Write an example of each type of relationship.

a. OA; b. OA.

PAGE 75

4. Tick (✓) the correct boxes.

	coast	open sea	deep sea
The water is very cold.			✓
It is home to crabs and starfish.	✓		
There is a lot of sunlight.		✓	
There is little food.			✓
It is home to dolphins, whales and sharks.		✓	
The water is warm and shallow.	✓		

5. Circle the words related to deciduous forests in green, and the ones related to tropical rainforests in orange. Then, write a sentence about each type of forest.

deciduous forests (green): owls; mild temperatures; deciduous trees; very fertile soil; ferns; a lot of rain; squirrels.

tropical rainforests (orange): Equator; wet; parrots; dense vegetation; lots of insects; hot; monkeys.

MA. Deciduous forests consist of trees that lose their leaves in winter; Tropical forests have very dense vegetation.

6. Complete the rules to protect ecosystems. Then, match them to the pictures.

- a. Don't light fires. (middle photo.)
b. Don't drop rubbish. (left-hand photo.)
c. Don't pick flowers or plants. (right-hand photo.)

6. MINERALS AND ROCKS

PAGE 76

1. Complete the sentences with *minerals* or *rocks*.

a. minerals; b. minerals; c. rocks; d. rocks, minerals; e. minerals; f. minerals; g. rocks; h. minerals.

2. Write one use for each of these minerals.

MA. quartz: digital watches; copper: electric cables; graphite: pencils; emerald: jewellery.

3. Read the descriptions and tick (✓) the correct word.

a. granite; b. petroleum; c. pyrite; d. diamond; e. malachite; f. marble.

PAGE 77

4. Write one use for each of these rocks.

MA. slate: to make roof tiles; marble: to make statues; clay: to make bricks; petroleum: to make plastics.

5. Unscramble the letters and label the diagram. Then, circle the layer that contains the most humus in brown, and the layer that has no living things in blue.

top to bottom: topsoil; subsoil; bedrock.

Topsoil contains the most humus (brown). Bedrock has no living things (blue).

6. Answer the questions.

a. arid soil; b. fertile soil; c. poor soil.

7. THE EARTH, THE SUN AND THE MOON

PAGE 78

1. Complete the crossword about celestial bodies. Circle the luminous body. Then, complete the sentences.

1. Sun; 2. Pluto; 3. comet; 4. Jupiter; 5. Moon; 6. Earth.

a. Jupiter, Earth, Pluto and comets orbit the Sun.

b. The Moon orbits the Earth.

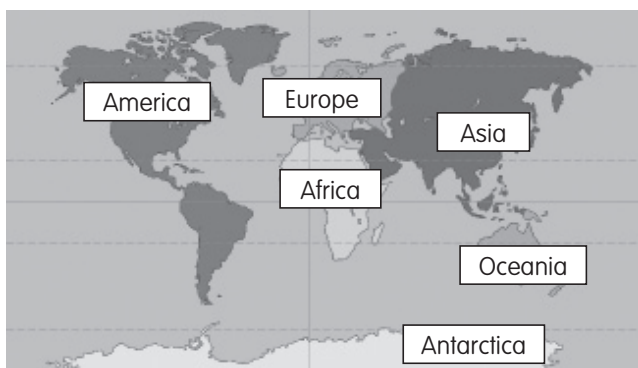
Assessment

2. Complete the sentences about the Solar System.

- There are eight planets in the Solar System.
- The inner planets are closest to the Sun and are made of rock.
- The outer planets are furthest from the Sun and are made of gas.
- Satellites orbit planets. The Earth has one: the Moon.
- Comets orbit the Sun in an elliptical path. Sometimes we can see their bright tails.

PAGE 79

3. Circle the continents and label the map.



4. Classify the words. Then, tell your partner about rotation and revolution.

Rotation: axis; day and night; one day; 24 hours.

Revolution: orbit; around the Sun; one year; 365 days.

5. Match. Then, number each phase of the Moon in order, starting with the new Moon.

photos, left to right: full Moon: 3; new Moon: 1; waxing Moon: 2; waning Moon: 4.

8. MATERIALS AND MACHINES

PAGE 80

1. Write two examples of these materials. Then, write an object made from each material.

MA. Natural materials: wood, furniture; leather, shoes.

Man-made materials: fibreglass, surfboards; silicon, chips for computers.

2. Name two properties of the materials used to make these objects.

waterproof, flexible; transparent, fragile; light, flexible; strong, heavy.

3. Match the three columns about materials. Then, write sentences.

MA. Metals used for gates and bridges are strong and heavy; Green materials used for tables and chairs are strong and light; Plastics used for playground toys are hard and rigid.

PAGE 81

4. Complete the descriptions and match them to the pictures. Then, label each picture.

- They are wheels with teeth.
- They have switches and wires through which electricity passes.
- It is a wheel with a rope around it used to lift and lower objects.
- It is a solid disk that turns on an axle.

photos, left to right: electrical circuit: b; wheel: d; pulley: c; gear: a.

5. Define simple machines and give two examples.

MA. Simple machines have few moving parts. (wheel; pulley)

6. Define complex machines and give two examples.

MA. Complex machines are made up of two or more simple machines working together. (motors; gears)

9. ENERGY AND FORCES

PAGE 82

1. Read and write the correct form of energy. Then, circle the forms of energy found in fire.

- chemical energy; b. thermal energy; c. light energy; d. nuclear energy; e. kinetic energy; f. electrical energy.

forms of energy found in fire: chemical energy; thermal energy; light energy.

2. Complete the sentences with *renewable energy sources* or *non-renewable energy sources*.

- non-renewable energy sources; b. renewable energy sources; c. renewable energy sources; d. non-renewable energy sources; e. non-renewable energy sources; f. renewable energy sources.

3. Cross out the wrong words and rewrite the properties of light.

- Light travels in all directions.
- Light travels in a straight line.
- Light travels at 3,000 kilometres per second.

Assessment

PAGE 83

4. Write *transparent*, *translucent* or *opaque* under each picture.

glass: transparent.

bowl: opaque.

lampshade: translucent.

5. Unscramble the letters and write *P* (primary colour) or *S* (secondary colour). Then, label and colour the diagram.

left, top to bottom: yellow, (S); blue, (P); red, (P).

right, top to bottom: cyan, (S); green, (P); magenta, (S).

left, top to bottom: magenta; red; yellow.

right, top to bottom: blue; white; cyan; green.

6. Write a sentence with each group of words.

- Gravity pulls all objects towards the centre of the Earth.
- Friction acts between two surfaces that rub against each other.

10. WORK AND TECHNOLOGY

PAGE 84

1. Write the type of service being used.

- education; b. communication; c. tourism; d. health; e. trade; f. transport.

2. How do jeans reach the consumer? Number the pictures in order and circle the producers. Then, complete the paragraph describing the stages.

photos, left to right: 3; 2; 4; 1; 5.

producers: from left to right, photos two and four

Farmers grow cotton. In factories, people make jeans from denim cloth. Transporters distribute the jeans to shops. Here shop assistants sell the jeans, and consumers buy the jeans.

3. Complete the text about tourism in Spain.

Tourism is very successful in Spain. There are many mountains, beaches, islands, small villages and large cities to visit. The climate is generally good. It is also a culturally diverse country. Tourism provides many jobs in the service sector.

PAGE 85

4. Write *personal communication* or *mass communication* next to each action.

- personal communication; b. mass communication; c. personal communication; d. mass communication; e. mass communication; f. personal communication.

5. Write a sentence with each group of words.

MA

- The Internet is a network of computers connected by telephone lines; b. Search engines can be used to find websites and access information; c. The Internet is used for sending and receiving emails and for chatting.

6. Cross out the wrong words and rewrite the sentences.

- Advertising is present in all means of mass communication.
- Advertisements are used to persuade consumers.
- We can see advertisements everywhere.
- Responsible consumers only buy things that they need.

11. WHERE WE LIVE

PAGE 86

1. Complete the table.

Spanish territories	Bordering countries
most of the Iberian Peninsula	France
the Balearic Islands	Andorra
the Canary Islands	Portugal
Ceuta	Morocco
Melilla	

2. In Activity 1, circle the territories surrounded by water in red and the ones located on a different continent in blue.

surrounded by water (red): Balearic Islands; Canary Islands.

located on a different continent (blue): Ceuta; Melilla.

3. Circle the words related to municipalities and write them next to the correct definition.

local council; municipality; councillors; town hall; comarca; mayor.

- municipality; b. mayor; c. local council; d. councillors; e. town hall; f. comarca.

PAGE 87

4. Complete the text.

Spain is a democracy. Therefore, all citizens have the same rights and obligations which are written in the Constitution. The Constitution is the most important law in Spain. It establishes the national institutions: The Head of State, the Parliament, the Government and the Courts of Justice. The Government is made up of the President and ministers. The Parliament consists of the Congress and the Senate.

5. Read the sentences and underline the mistakes. Then, write the sentences correctly.

- a. In a democracy, citizens are represented by the Government.
- b. An election manifesto is a list to explain the ideas of a party.
- c. In municipal elections, citizens vote for the mayor and local councillors.

6. Match the five Rights of the Child.

The right to grow up: in a tolerant society; with love and understanding.

The right to receive: protection and safety; food, water, housing and medical services; free education.

12. LEARNING FROM HISTORY

PAGE 88

1. Read the descriptions and write the correct period in history. Then, number them in order.

- a. The Modern Age, 4.
- b. The Middle Ages, 3.
- c. The Contemporary Age, 5.
- d. Prehistory, 1.
- e. Ancient History, 2.

2. Write a sentence about Prehistory with each word.

MA

- a. Human beings lived in small groups called tribes.
- b. They discovered fire.
- c. People became sedentary.
- d. People made pots out of clay.
- e. People learnt how to make tools out of metal.

3. Complete the text about the Romans.

Romans spoke Latin. They built many cities. They also built aqueducts to carry water into the cities and roads to connect their cities. Their cities had theatres, circuses and amphitheatres for different kinds of entertainment. Romans worshipped their gods in temples. Rich people lived in domus and poor people lived in insulae.

PAGE 89

4. Unscramble the letters and label the picture.

left, top to bottom: battlement; moat.

right, top to bottom: towers; drawbridge.

5. Match the columns and say sentences in pairs.

a. 1492, Christopher Columbus, America; b. 1498, Vasco da Gama, new route to India; c. 1440, Johannes Gutenberg, printing press.

6. Name each invention and write 500 years ago or 200 years ago under each picture.

navigation map, 500 years ago; magnetic compass, 500 years ago; steam engine, 200 years ago.

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