ontents

Invertebrates	4
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Energy	50
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Invertebrates

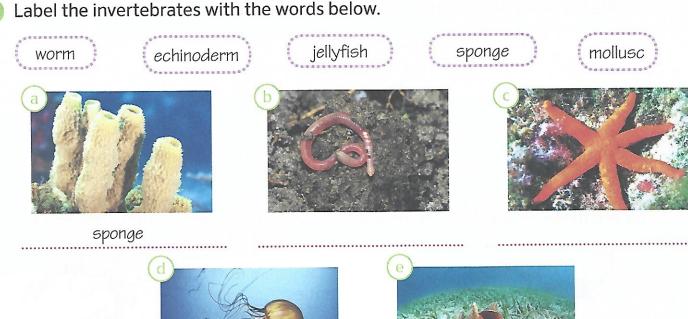
- Match the correct parts of the sentences.
 - Animals with no internal skeleton •
 - Animals with an internal skeleton
 - Viviparous animals •
 - Oviparous animals •

- are called vertebrates.
- lay eggs.
- give birth to their babies.
- are called invertebrates.
- Listen and circle the animal you hear described.
- a) wolf/spider
 - b) spider / wolf
 - c) crab / butterfly
 - d) starfish / sea urchin
 - e) mussel / octopus
- Complete the table. Tick the characteristics for each animal.

	Vertebrate	Invertebrate	Oviparous	Viviparous
常				

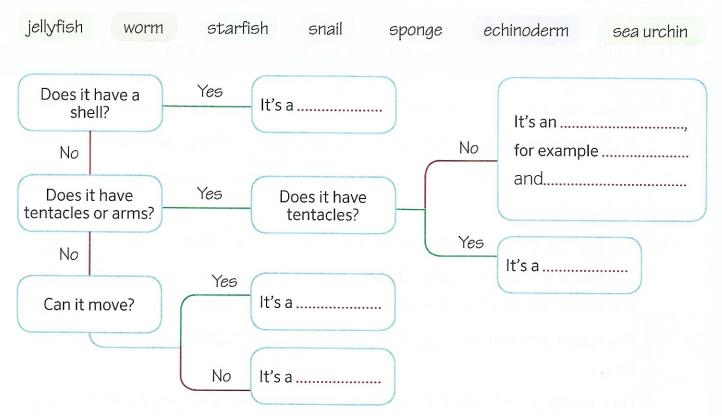
Oomplete the sentences. Lister		
a) A spider	has eight legs.	
b) A	has six legs.	
c) A	has six legs.	
d) A	has ten legs.	
Compare these two animals. Th	าen write at which group	p each animal belongs to.
	Similarities:	
Differences:		Differences:
It belongs to the group.		It belongs to the group.
Draw an insect and label its par	ts; you can use the word	

Label the invertebrates with the words below.



- Answer the following questions.
 - a) Which invertebrates have a shell?Molluscs
 - Which invertebrates cannot move?
 - Which invertebrates are poisonous?

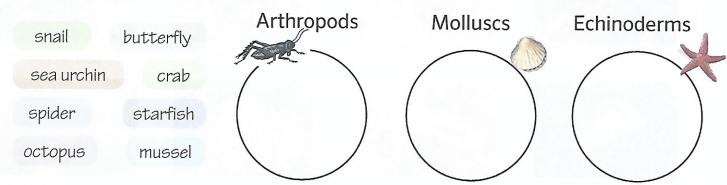
Use the words below to complete the puzzle.



Now complete the fact file.

Worm		It has a long, soft body. It doesn't have
		Its body is made up of
	•	It doesn't haveor arms.
Sponge	•	
	0	It lives at the bottom

Classify the animals! Put these invertebrate animals in the correct circle.



External exams

13 Look and read. Choose the correct word and write them on the lines. There is one example.

THE HALL OF THE STOUP OF AFILLIANS THAT HAVE SOLVE HILL CHIAI SINCICIOLI,	1.	The name of the	group of anim	als that have	got an int	ernal skeleton.	vertebrates
---	----	-----------------	---------------	---------------	------------	-----------------	-------------

- 2. The name of the group of animals that haven't got an internal skeleton.....
- 3. This group of invertebrates has an external skeleton, jointed legs and different body sections.
- 4. A grasshopper, a butterfly and an ant belong to this group.
- 5. The name of the arthropods that have their body divided into cephalothorax and abdomen; but they haven't got antennae or wings.
- 6. The name of the arthropods that have ten legs, two antennae but don't have wings.
- 7. This animal is part of the molluscs group, has a shell and lives on land......
- 8. This looks like a rock but it's an animal.....
- 9. This animal floats in the sea and looks like a bell with long arms. It has poisonous tentacles.
- 10. This animal is part of the echinoderm group and looks like a star.





arthropods



jellyfish



arachnids



molluscs



invertebrates



snail



starfish



sponge



insects



sea urchin



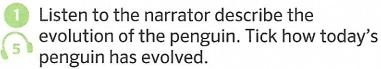
crustaceans

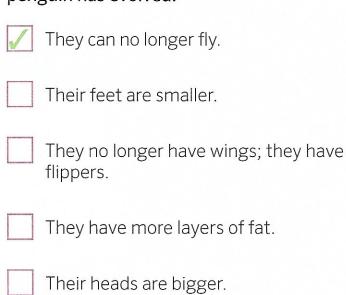


Example	Y N
There are lots of invertebrates in the picture.	
There are also many different vertebrates.	
	Interested Interested
Questions	
1. All the invertebrates in the tree are arthropods.	
2. The girl who has got blond hair is looking at a crustacean.	
3. There are five examples of arthropods in the picture.	
 There are four animals that belong to the echinoderm group. 	
5. The animal on the tree is an arachnid.	
6. The animal the boy is touching is a ladybird, and example of arthropod.	
7. The girl who is wearing a summer dress is looking at a jellyfish.	
8. The boy who is wearing blue shorts is looking at a mollusc.	
9. There are two different types of molluscs in the picture.	
10. Sponges are not invertebrate animals.	



Vertebrates

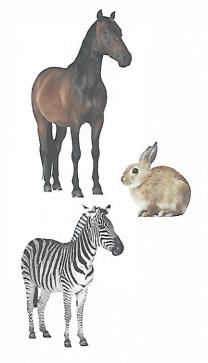








2 Find these animals in the wordsearch and complete the sentence.



Н	0	R	S	E	L	1
Α	L	Α	Κ	С	l	L
Ζ	E	В	R	Α	0	Е
D	0	В	Ν	М	Ν	W
С	U	1	K	Ε	S	S
S	0	Т	Т	L	С	V
S	D	Е	R	V	А	В

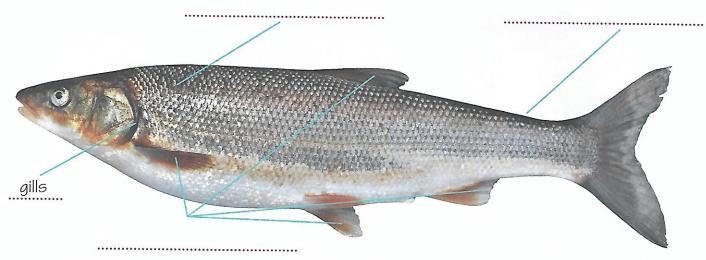




They only eat plants so they are

Label the parts of the fish. Then, listen and check.





- Answer these questions about fish.
 - a) What do fish eat? Fish can be carnivores, herbivores or omnivores.
 - b) How do fish give birth?....
 - c) Where do fish live?....





A dolphin isn't a fish. Why?



Dolphins live in the ocean but they are mammals.

6 Look at the frog and complete the text with the words below.



A frog's skin is	moist It uses it to take in	
Its tongue is	so it can catch its	It has four
	. that help it to jump high.	
Frogs have big	to see in the dark.	

- Look at the tadpole and the frog. Write three differences between them.
 - i)



b)



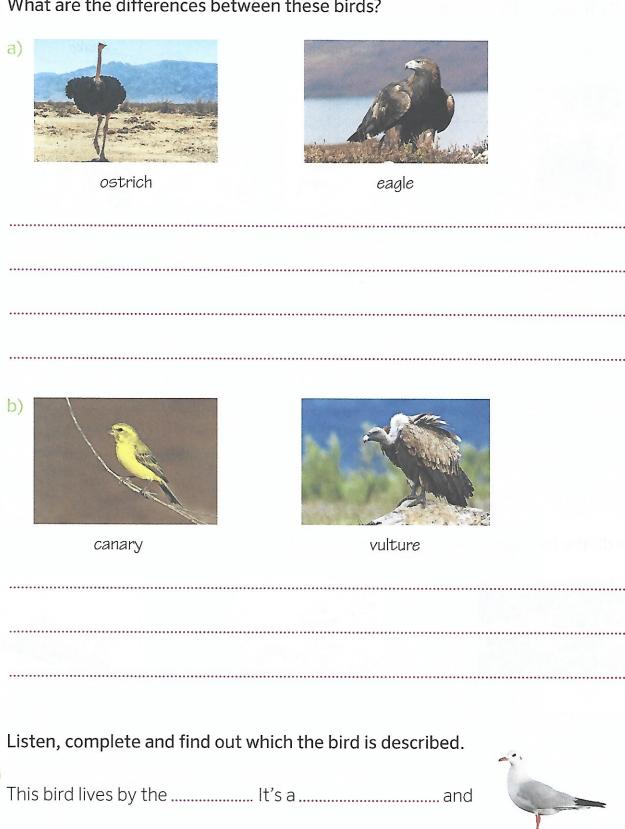


- 8 Draw the life cycle of a frog. Listen and check.
- 7

9	Classify these reptiles as o	carnivores or herbivores. Write	what each animal eats.
	iguana	crocodile	Snake
	herbivore		
	It eatsplants.	It eats	It eats
10	Explain why a snake prefe	rs shade when it's hot.	
11	What do the following animal	mals have in common?	c)
12	Listen. Which animal abov	e is being described?	

It's

What are the differences between these birds?



it loves to eat crabs and small fish. Its feathers are basically and grey.

It's a





- 15 A mammal or a fish? Listen and write.
- 16 Find the words in the wordsearch.

G		L	L	S	F	Е	Е	Т	Т
G	Α	М	U	С	V		Ν	М	0
E	С	В	Ε	А	K	Α	Ε	Т	Ν
С	В	0	В	L		М	В	А	G
Α	F	Т	Ε	E	Т	Н	F	l	U
R	N		K	S	G	Ν	U	L	Е
U	L	F	Ν	H	Α	1	R	Е	L
F	Е	А	T	Н	Е	R	0	Р	- 1
S	G	R	Α	S	Н	Е	L	L	Р
В	0	М	Е	Т	W	1	Ν	G	S

tail feather lips beak lungs hair fur feet scales limb gills shell tongue egg leg wings skin teeth

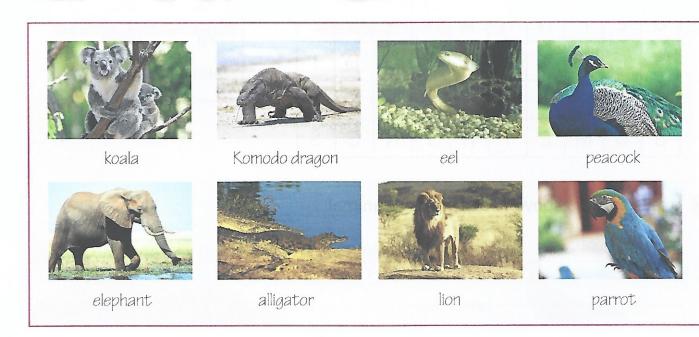
17	Use the words above to describe this animal.
----	--



External exams

18 Read the text and complete it with the words from the box.

The appealing feathers of thepeacock are those of the males.
The (1) has a long, flat head, scaly skin and a huge
muscular tail. It can eat animals as big as a water buffalo.
The (2)
in trees, and like other animals from Australia, it carries its babies in a pouch.
The (3) looks a lot like a snake but it is in fact a fish.
There are a few differences between the (4) and the
crocodile. The first animal has a shorter, wider head and its scaly skin is darker.
The (5) , well known for its mane, is mainly nocturnal.
The (6) can imitate human voices.



Now choose the best title for the text. Tick one box
 Parrots and lions

Animals in the jungle

Surprising animal facts

Read the text. Choose the right words and write them on the lines.

Amazing adaptations

The marine iguana is the only iguana that spends most of its time in water.

Iguanas are traditionally land

(1) from South

America. At one point in time, they began searching for (2) in the surrounding water. Over time, their bodies adapted to help them



spend more time in the water. They developed a flatter tail to help them swim and sharper (3) to hold onto rocks when the water current is strong. They have also developed salt glands that purify the blood by taking away the sea salt.

However, there are still some similarities with land iguanas that remain. Marine iguanas (4) through lungs and they are

(5), choosing to eat algae found at the bottom of the ocean.

Exampl	e: spent	spend	spends
1	mammals	reptiles	amphibian
2	food	water	frogs
3	claws	fins	legs
4	eat	swim	breathe
5	carnivores	herbivores	omnivores

To sum up

Complete the mind map with the words given below.

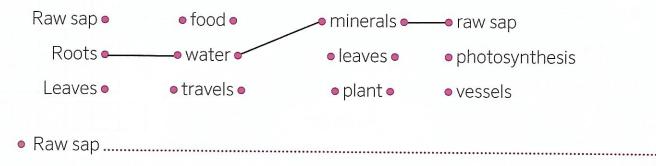
fish • mammals • shell • carnivores • birds • herbivores • wings • viviparous • sticky • mammary glands • omnivores • gills • oviparous • feathers

They have: scales, fins, a tail and They are oviparous. Can be: carnivores, herbivores or omnivores. Parts: moist skin, four limbs, a long and tongue, and some of them have a tail. **Amphibians** They are oviparous. Nearly all are carnivores. Parts: covered by dry, scaly skin or a hard They are Reptiles Near all are, but some are herbivores. Parts: a beak, and covered in They are oviparous. Can be: carnivores, herbivores or classification by what they eat omnivores. Parts: teeth, lips, Carnivores (females), four limbs, hair or fur. Nearly all are Can be: carnivores, herbivores or omnivores.

21	Complete the sentences with the words provided.	
	Both and fish are oviparous and their bodies are covered in breathe through their lungs and skin and fish breathe through	gills reptiles scales amphibians
2>	manual moist moist manual manu	metamorphosis amphibians skin
3	Nearly all reptiles are but there are a few	Carnivores herbivores
4>	Birds have at the front of the body. They are all and breathe through lungs. Most birds use their to fly, but some birds, like the, can't fly.	feathers oviparous beak ostrich wings
5	Mammals can be	lungs female glands carnivores milk omnivores herbivores viviparous mothers

1	Compl	ete the sentences below	. More than	one wor	rd is needed.	
	• Plant	ts use	to mal	ke food.		
	• Plant	ts are living		the	ey reproduce and	d they
	• Plant	ts live	and I	have roc	ots, a stem and l	eaves.
	CI :					
2	Classif	y the words below.				
	cher	rry tree fern	lemon tr	ree a	apple tree	moss
	1994	Flowering plants			Non-flowering plants	AND CHANGE OF THE PARTY OF THE
						. Tl
		and number the sentendestions.	es as you he	ear the v	word they refer	to. Then, answei
9 11 1			المحاد المحاد المحاد		مام مع مع مع مع مع مع مع	
	*******	The roots take in the wa				
	•••••	A plant makes its own for				
	•••••	Stems are the part that				
	•••••	Herbaceous plants have		are very	/ thin and flexible	e.
	•••••	Woody plants have a ha	rd stem.			
	a) Who	en they talk about lavend	ler, which ty	pe of wo	oody plant are th	ney referring to?
	1	- L - L - L - L - L - L - L - L - L -		•••••		
	b) Wh	at kind of plants is this?				

Match the words to connect the information. Then, using the information, write the sentences on the lines below.

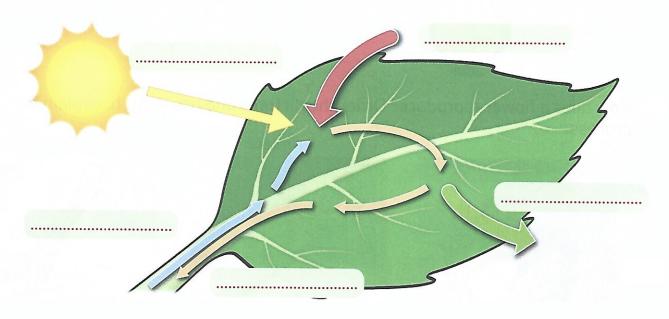


0	Leaves

Write the name of the process or product explained in the listening.

12 a)	
b)	
c)	

6 Label the picture and explain the process of photosynthesis.



Photosynthesis:	

Read the definitions and write the words, or complete the definition	if the v	vord	is g	ive
It holds up the anther.	L	M		Ν
Name for a coloured leaf.	Р			
A collection of green leaves.		A		
Thein a flower.		А		E
Ovules are found here.	0		Α	
The female reproductive organ in a flower.			Т	
The name given toin the calyx				
B Label the pictures of the different parts of the flower. 1 How does a flower reproduce? Order the pictures and use them to process.	expla	in th	e	
				•••••
	••••••	•••••	•••••	•••••

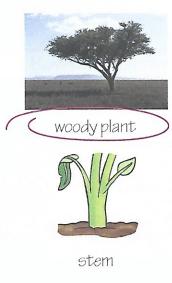
Label the pictures. Then listen and number them. Look at the words in the previous activity that refer to the process of reproduction. Which part of the process is missing? Explain in your own words what this process consists of. Classify the words into the three columns. pollen wind animals fruit grain ovule new plant ovary pistil bees ripe seed **Pollination**

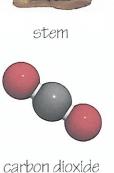
External exams

Look and read. Choose the correct words and write them on the lines. There is one examp

1. Plants that have a hard stem like	trees and bushes	woody plants
--------------------------------------	------------------	--------------

- 2. Plants that have a thin flexible stem.
- 3. This is the part of the plant that absorbs water and minerals from the soil.....
- 4. The ducts that carry raw sap to the leaves.
- 5. The name of the gas that the leaves take in.
- 6. The process by which a plant makes its own food.
- 7. The name of the sap that result from photosynthesis, that travels to the whole plant.....
- 8. The name for the group of petals on a flowering plant.....
- 9. The part of the plant that contains the seeds.
- 10. The process by which seeds grow in the soil to form a new plant.







photosynthesis



fruit





oxygen



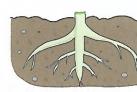
elaborated sap



corolla



germination



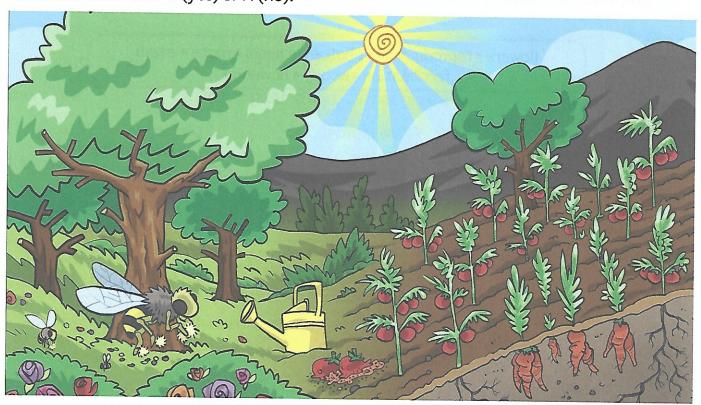


vessels



herbaceous plants

Look and read. Mark Y (yes) or N (no).



Example	ΥN
Plants need sun and water to grow.	
Plants can't make their own food.	
Questions	
1. All plants in the picture are flowering plants.	
2. The trees and bushes in the image are all flowering plants.	
3. You can see only woody plants.	
4. Some roots of plants are edible.	
The farmer has watered the plants because they need water to do photosynthesis.	
6. Bees are carrying pollen on their legs.	
7. The pollen grain is falling to the ground.	
8. The tomato is the plant's fruit.	
9. The two tomatoes on the ground will grow a new plant.	
10. The fruit on the ground has the seeds that will germinate in the soil	

To sum up

(15) Complete the following mind map with the words given below.

flowers • reproduction • photosynthesis • roots • stem fertilisation • woody • flowering Germination Leaves Stem Pollination **Parts** Classification Nutrition according to through Non-flowering plants Herbaceous 16 Complete the sentences with the words provided.

	flexible
Plants are that have some common characteristics: all of	attached
them are to the ground and they all have a	stem leaves
	hard
their own	thin flowering
Plants can be classified according to the look and theof stem	Гуре
they have. Woody plants have a stem, but herbaceous plants have a stem.	food n-flowering
Plants can be also classified by their flowers. If they don't have	n sinv
flowers, they are called plants; if they have flowers,	
are calledplants.	
	Committee to the committee of the commit

4	
	Plants get the they need through a process called
	Photosynthesis occurs in the
	Plants in carbon dioxide from the air which is mixed
	with sap with the help of the from the sun. A
	new, substance is created called sap.

photosythesis
nutrients
breathe
raw
leaves
elaborated
sweet
energy

Plants reproduce through a step process: pollination,
and germination. During pollination pollen is moved
from one to another. Fertilisation is the joining of the
and the to make a seed. Germination refers
to the moment when fall from fruit and
begin forming a new plant.

ripe three plant seeds pollen ovule fertilisation

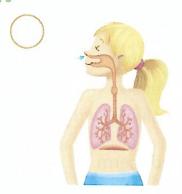


The human body

1	Read the definitions and match the circulatory system they refe		to the corresponding par
	Relaxes	gets smaller ———	heart heart
	Contracts	transports ————	
	Carries	gets bigger and wider	
2	Write true (T) or false (F). Circle The heart relaxes and fills up	with blood coming from	
	The heart pumps blood arous	nd the body through the	e blood vessels
	☐ The heart relaxes and pushes	s blood through the vein	is to the rest of the body
3	Which part of the circulatory sy		
	b)	()	f)
4	Look at the pictures and explain		

(4

Listen to the sentences and number the pictures. Then label each picture with the stage of respiration it shows.



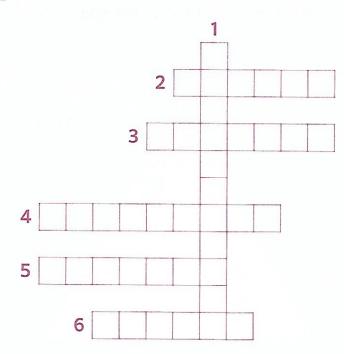




6 Now explain the following processes in your own words:

Gas exchanges:	

Read and solve the crossword puzzle.



Down:

1. Heats, moistens and filters the air that comes into the body.

Across:

- 2. Contains the vocal cords.
- 3. Is a rigit tube which carries air to the bronchi.
- **4.** Muscle which helps the lungs to move in a way necessary for breathing.
- **5.** Tubes which carry air from the trachea to the lungs.
- **6.** Allows the air to flow from the mouth and the nose to the lungs.

Write true (T) or false (F). Then correct the false sentences.
Pregnancy normally lasts 7 months.
The umbilical cord connects the baby to its mother.
The baby gets food and oxygen through the amniotic sac
Ovaries are external organs that produce millions of cells called sperm
The amniotic sac contains liquid that keeps the baby warm and protects it
The arminotic sac contains liquid triat the periods of the last years.
The uterus is where the baby develops until it is born.
The baby goes out through the mother's vagina.
Explain your own reproductive system.
Listen to the conversation between a mother and her son and fill in the spaces to
complete the timeline.
2 months 8 months 9 months 11 months 1 year
Which were the first two words that John's parents could understand?

17	Listen to the sentences and circle if it is a healthy on what you would suggest, to change unhealthy hab	or an unhealthy habit. Then explain its into healthy ones.
	a) healthy/ unhealthy	
	b) healthy/ unhealthy	
	c) healthy/ unhealthy	
	d) healthy/ unhealthy	
	e) healthy/ unhealthy	
	f) healthy/ unhealthy	
12	Write what these unhealthy habits may cause.	
	a) Poor hygiene:	
	b) Unhealthy diet:	
	c) Bad posture:	
	d) Sleep deprivation:	
	e) Lack of exercise:	
13	 Make a list of four things you can do every day to pregiven to you as an example. Brush my teeth. 	
14	Explain what this pyramid shows and what healthy h	
	TABLES A.	
	Health	ıy habit:

External exams

15 Look and read. Choose the correct words and write them on the lines. There is one examp

-	They transpo	rt blood	around	our bod	y. blood vessels
---	--------------	----------	--------	---------	------------------

- 2. This is a muscle in our bodies that pumps blood.
- 3. These are tubes that transport blood away from our heart.....
- 4. This is the movement of the heart as it relaxes and contracts.
- 5. This is the system that allows us to breathe air.
- 6. These are two large spongy organs.....
- 7. This is the tube that takes air from the larynx to the bronchi......
- 8. These are two small external organs that are part of the male reproductive system.
- 9. These are two internal tubes that join the ovaries to the uterus.
- 10. This is when a new baby is growing inside a mother.



heartbeat



pregnancy



arteries



Fallopian tubes



respiratory system



testicles



reproductive system





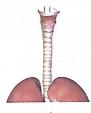
larynx



lungs

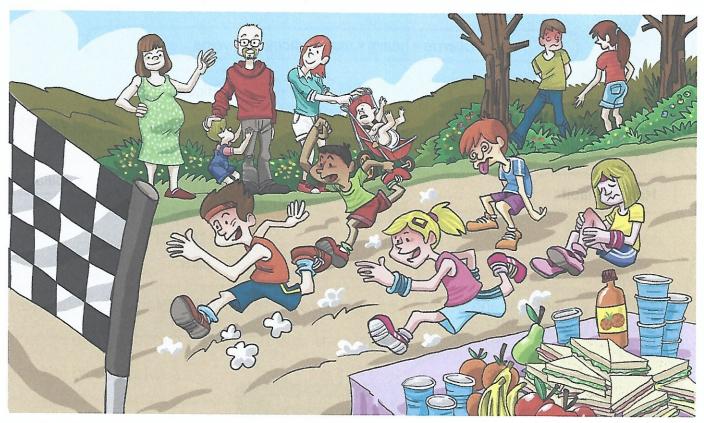


heart



trachea

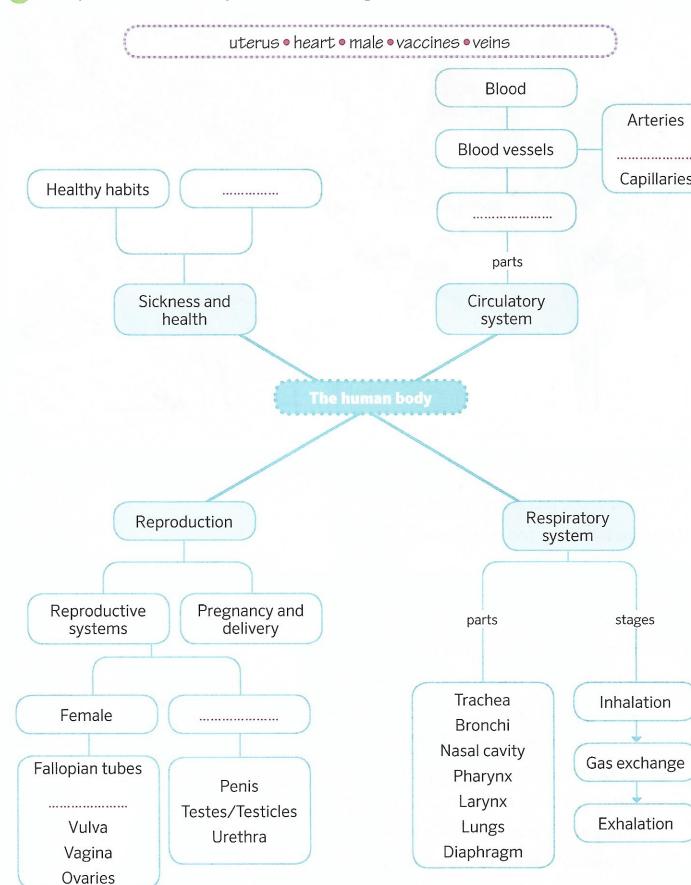
16 Look and read. Mark Y (yes) or N (no).



Example	YN
Everyone in the picture is breathing clean air.	1
They are watching too much television.	1
Questions	
1. The children's hearts are beating fast as they run.	
2. Two boys can't breathe very well.	
3. The girl who is on the ground has hurt her knee.	
4. They are going to eat sweets after the race.	
5. There is a lot of healthy food on the table.	
6. The pregnant woman watching the race is in the first month of pregnancy.	
7. The little boy can't say his first words yet.	
8. The baby in the pushchair can't walk yet.	
9. The boy who is talking to the girl is ready to run away quickly.	
10. All the children in the race are doing exercise	

To sum up

17 Complete the mind map with the words given below.



18	Complete the sentences with the words provided.	
1>	The system distributes and to different parts of the body and removes all the substances. It is made up of blood, blood vessels and the heart. The heart and to move the blood.	Oxygen contracts nutrients unwanted relaxes circulatory
2>	The system delivers to all parts of the body	^o xygen
	The system delivers to all parts of the body.	gas
	It is made up of the and the The stages of	airways respiratory
	respiration are inhalation, exchange and exhalation. The process of respiration takes place inside the lungs. Oxygen passes	Journal allovia
	into the blood and goes out of the body.	lungs
3>		
	The male and the female systems are different but	umbilical
	both are necessary to make other beings.	pregnancy human amniotic
	The stage of is when a baby forms and	grows
	inside the mother. During this stage the body	reproductive
	develops the sac and the cord.	
4>		
	There are habits that keep our body working at an	exercice healthy
	optimal level. They keep us feeling strong and help us to avoid	vaccines
	Physical and a healthy are some	diet defensos
	important habits protect us by making the body build	illnesses

.....necessary to fight illness.



Interaction and health

1 Complete the table with the senses and the organs we use in each case.

	SENSE	ORGAN
Drinking a cup of coffee	smell / taste	nose / tongue
Watching a movie		
Enjoying a cup of warm milk		
Riding a bike		
Hugging someone		

Explain what is happening in the pictures and how a person that notices the fire winteract.





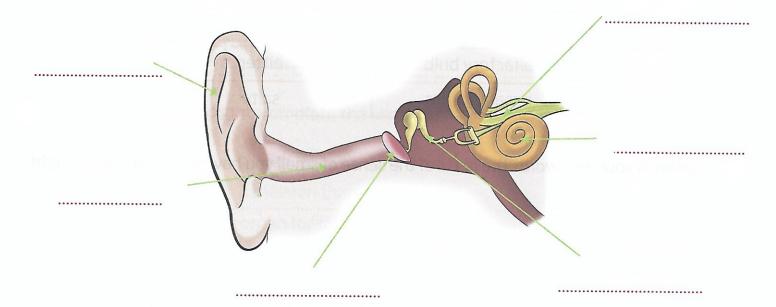


Listen to the sentences and decide whether they are true (T) or false (F). Then co

	raise offes.
-	

4 Listen and write which part of the eyes they are.

6 Label the picture.



6 Classify the words from the previous activity in the columns.

Outer ear	Middle ear	Inner ear	

Explain the process for this boy listening to the music that comes out of the earphones. Use the words in activity five and six to help you.





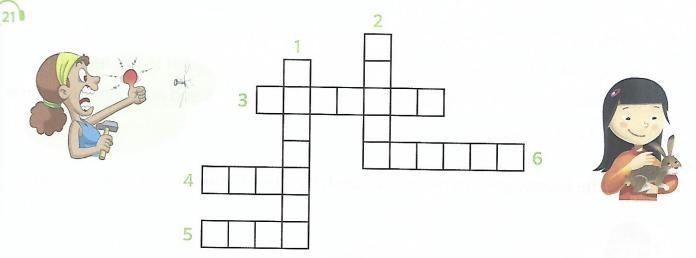
8 Complete the table below.

	Sense of	Sense of
Organ		
Distinguish		
	Parts:	Can be:
	olfactory bulb	bitter
	nasal septum	salty

9	Explain in your own words the parts of the sense of smell you have got from activity
	•
	•
	•
	•
10	Listen and circle the words that are being referred to.
	Olfactory bulb Masal contum Mostrils

Olfactory bulb a) Nasal septum Nostrils Nostrils Air Nasal cavity b) Nasal septum Nasal cavity Olfactory bulb C) Sense of touch Sense of hearing d) Sense of taste Eyes Tongue Ear e) Air Saliva Dust f)

Listen to the clues. Use the answers to complete the crossword.



- 12 Find the words needed to complete the sentences.
 - a) The allows us to experience hot and cold.
 - b) Dark skin has melanin than skin.
 - c) is the sense organ for touch.
 - d) gives skin its colour.
 - e) Through we can also feel and the of an object.
 - f) Melanin is also responsable for the colour of your
- Explain what the people in the pictures feel. Then answer the question.





•	What else can you feel through the sense of touch? Give some examples.

Read the sentences and circle the correct words.

The nervous system is the body's *control centre / waste system*. Here, message come in / go out, decisions are made and ideas / orders are given to the rest of the body to smell / react. Memory, intelligence / family, feelings and emotions also from our nervous system.

(I) Complete the following sentences and match them with the corresponding ima

	•	The olfactory nerve carries information about from the to the
	•	The optic nerve carries from to the brain.
	•	The auditory nerve carries information about s from the
*		The taste buds carry information about
	•	The receptors in the

 ${f 16}$ Listen and tick to say whether the sentence is true or false. Correct the false on

	No. 4 - Laboratory / Activity of the Company		
).	TRUE	FALSE	
· messes	1		
2.			
3.			
4.			
5.			

Read the sentences and complete the	e table, tick the correct option
-------------------------------------	----------------------------------

The	send vibrations to the brain through the nerves.	
1116	send vibrations to the nerves through the brain.	
	carry information from the brain	
The	to the sense organs.	
The	carry information from the sense	
	organs to the brain.	
ı		
	produces responses and sends them	
The	to the sense organs.	
The	produces responses and sends them	
	to the musculoskeletal system.	
	, and the second	
	carries out the order from the brain.	
The	sames sat the order north the brain.	
	carries out the order from the sense organs.	
	sames out the order from the sense organs.	

18 Explain what has happened in the picture.



7	
0	
2.	
3.	
4.	

Write the definition and	d function of skeleton and muscles with the words pro
Skeleton structur	re bones shape protect
Muscles	messages brain joint
Listen and number the where the muscle can be	muscles you hear being described. Then add a descrip be found in the body.
Quadriceps	
Abdominals	
Gluteus	
Biceps	
Jaw muscle	
Calf muscles	
21 Match the word to the	definition.
Involuntary	These are controlled and slow movements tha deliberately.
Muscles	Certain parts of the body are connected throug They enable our body to move in different v
Joints	These are rapid movements that we do autom such as blinking our eyes.
Voluntary	These contain nerves that carry messages to a the brain. They are flexible and soft and help your body.

the	ten to the interview with the nutritionist. What four things does he recommend to woman and why?
1.	To eat a
2.	To try to eat
3.	To avoid
4.	To make sure her diet includes
) Ca sys	tegorise the following habits if they are related to the senses (S), the nervous stem (N) or muscles and skeleton (M). Then, give more examples of healthy habits.
1.	Sleep nine hours a day.
2.	Eat healthy food.
3.	Avoid looking directly at the sun.
4.	Carry your bag on your back using both shoulders and avoid carrying too much weig
5.	Spend time with your family and friends.
6.	Don't spend excessive time watching TV, playing computer games or talking on the phone.
	Brush your teeth after every meal.
8.	Maintain good posture by sitting up and walking straight.
9.	Protect your skin from the sunlight.

External exams

Look and read. Choose the correct words from below. The first one has been done for you.

1. The sense that tells us the colour, shape and size of objects.
2. This is a small opening in the eye that lets in light.
3. This is the part of our body that allows us to hear
4. We use our noses for this sense
5. This sense allows us to perceive different flavours
6. The body's control centre where messages come in through the different
nerves
7. The nerve that carries information about sound to the brain.
8. This system in our bodies is made up of our bones and muscles.
9. These bones form a cage and protect the lungs and heart.
10. These are soft and flexible and help our bodies to move.



muscles



musculoskeletal system



smell



ribs



nervous system



taste



tongue



ears



eyes



25 Look and read. Mark Y (yes) or N (no).

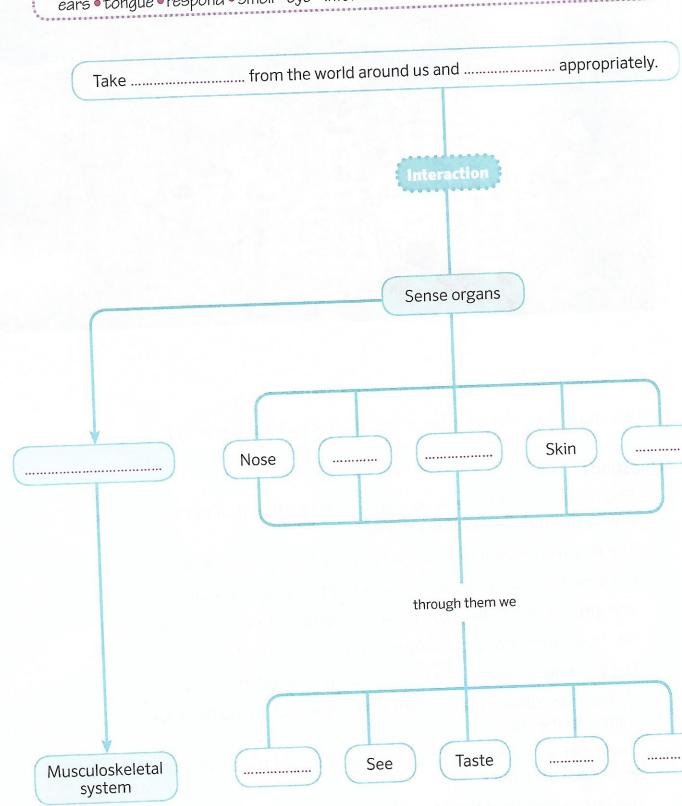


Example	ΥN
The family is interacting with the world around them.	
Their musculoskeletal system is telling them about the world.	1
Questions	
 The mother's brain has received the information that her baby is crying through her auditory nerve. 	
2. The boy who is eating ice cream is using his sense of taste.	
3. His nose tells him whether the ice cream is sweet or sour.	
4. The girl who is smelling the flowers is using her sense of touch.	
5. Her brain is receiving the information through her taste bud.	
6. The girl who is listening to music is using her sense of hearing.	
 It's her musculoskeletal system that allows her to tap her foot in time to the music. 	
8. The father is responding to a stimulus. He sees the storm coming and he is starting to pack.	
9. The family spending time together is looking after their nervous system.	
10. This family has healthy habits, such as eating fruit.	

To sum up

26 Complete the mind map with the words given below.

ears • tongue • respond • smell • eye • information • hear • nervous system • touch



Complete the sentences with the words provided.

Human beings have five senses: sight,, smell, taste and respond interaction touchappropriately. This is known as hearing organs The are the sense organs that allow us to see. Our ears are hear the sense that allow us to eyes fragances The sense of helps us distinguish and and taste odours We experience different through the sense of flavours smell pain texture temperatures and of things through touch. skin touch brain The nervous system is in charge of sending, making orders decisions and giving to the rest of the body to react. The messages nerves main parts are the and the muscles The musculoskeletal system is made of and and bones

and our muscles and in order to stay healthy.

senses

healthy habits

bones

Energy

Say what kind of energy can be observed in these examples:







Listen and number the type of energy when it is described.

25	Kinetic energy	 Light energy	
	Sound energy	 Heat energy	.1
	Electrical energy	 Chemical energy	

Complete the sentences that are examples of the types of energy. Name them if necessary.

Kinetic energy	Youa ball and it
energy	You bang on a drum, its membraneand people can
Electrical energy	You move a switch, the flows andto work.
energy	Youin the mirror and you can
energy	Youan ice-cream cone in the sun and it melts.
Chemical energy	This type of energy isinside objects until ahappens. For example, a battery.

Complete the sentences. Then	give the groups a title.																			
energy sources:																				
To produce energy from the su	n, solar pa	nels.																		
To																				
											is found when we drill									
											is found when we d									
												ang In the ground. I	t 13 u3eu t0							
Read the sentences and tick th	e correct column.																			
	Renewable sources	Non-renewable source																		
One example is the sun.																				
One example is coal.																				
This kind of energy source cannot run out.																				
This kind of energy source is constantly renewed.																				
This kind of source takes a long time to be created.																				
In what ways could you reduce you form the sentences. Can yo switch / lights sweater / hea	walk / school	s nun opudoją estu in vicad																		
a) l could																				
b) I could																				
c) I could		***************************************																		
c) I couldd) I could																				
c) couldd) coulde)																				

7	Complete the words how thi	_	state diagram and give an example. Then explain with your own
	Getting colde	er	
	Gas	Liquid	
	to		
	Liquid	Solid	
	Getting hotte	er	
	Liquid	Gas	
	to	of page 5	
	Solid	Liquid	
8 26	Listen and cir the question.		ange of state that the people are talking about. Then answer
	a) condensat	ion / evap	oration d) evaporation / solidification
	b) fusion / th		
	c) fusion / sc	lidification	
	• Which type	es of chang	ge are they talking about?
9	Look at the p	icture and	answer the questions below. a) What has happened in the experiment?
			what has happened in the experiment.
			b) How do we call this phenomena?
	san'		c) What type of change it is?

10	Listen and decide whether the sentences are true or false	. Then write t	he correct
6	ones and correct the wrong ones.		

	True	False	
1			
2			
3			
4			
5			
6			

I	Classify the objects as transparent, opaque or translucent. Then give some more
	examples of objects for each category.

a)







Draw the pencil in the mirror to show what happens. Then answer the question.



a) Flat mirror



b) Concave mirror



Convex mirror

d) How do we call this property of light?	••••••
---	--------

e) Explain wha	at happens there	 	•••••

f)	What does it allow us to see?

) for the sentences below. , travels in all directions and in a straight line.
Sound is transmitte	d faster through the air
Through our eyes w	ve can perceive sound, a form of energy
Decide which quality of	sound each picture represents. Then explain each term.
Give the definition of values talking about noise po	what we consider 'noise pollution'. Then listen to the people llution and complete the table.
Noise pollution	
D 11	Whore?

	Problem	Where?	Solution
1	Loud music		Turn down the volume.
2		In the street	
3	Children shouting		Tell them to be quiet.
4		In the city	
5	The dog barking	In the house	

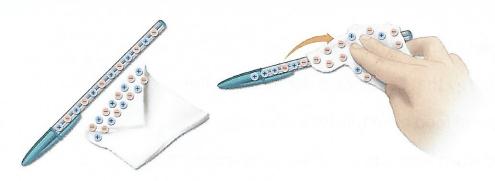
16 What does the picture show? You have some words to help you.

Attraction

Repulsion

Positive charge

Negative charge





Read the clues and complete the crossword.



Down:

l.

2. This allows the electricity to flow through the circuit.

Across:

3. It opens or closes a circuit.

4.	 									

- 18 Listen and complete the text.

External exams

19 Look and read. Choose the correct words from below. The first one has been done for you.

1. The energy that objects in movement create. kinetic
2. This is the type of energy that illuminates, for example fire
3. Objects like animals and food have this type of energy
4. Energy that is created when vibrations occur, like a volcano erupting.
5. The type of energy source that will run out in the end.
6. The type of energy source that will never run out.
7. The name of the energy produced from the heat of the sun.
8. Energy transferred from on object to another colder one
9. This is what occurs when heat is applied to an object producing a change in
volume
10. This is the change of direction of light when it passes through a translucent or





wind energy



renewable energy



transparent object.

light energy



heat



non-renewable energy



solar energy



refraction



chemical energy



expansion



sound energy



electrical energy

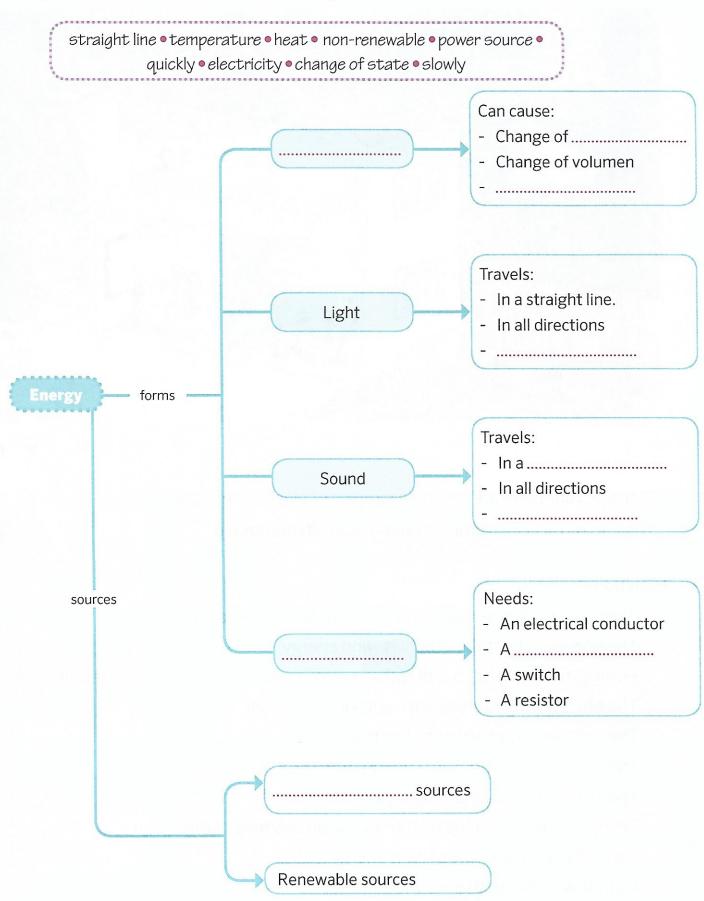
20 Look and read. Mark Y (yes) or N (no).



Example	Υ	N
In the picture there are several examples of electrical energy.	1	
The two musical instruments emit a high pitched sound.	discontinue de la continue de la con	1
Questions		
1. They are using renewable energy to illuminate the school.		
2. The energy to heat the school is wind energy.		
3. Putting milk into a hot cup of coffee is an example of change of temperature.		
4. The boys playing football are using kinetic energy.		
5. The aeroplane is producing chemical energy.		
6. The lights in the school are coming from an artificial light source.		
7. The volume of the birds singing is louder than the aeroplane.		
8. There is a rainbow in the picture that is an example of refraction.		
9. Lightning is an example of light energy.		
10. Light travels faster than sound.		

To sum up

Complete the mind map with the words given below.



2	Complete the sentences with the words provided.	
7	There are many different kinds of energy, they are called:	electrical chemical non-renewab sound
	All objects have a Heat is the transfer of energy from one body to another. When an object is heated, three things can temperature, and state.	change Volume temperature
>	Light sources can be classified as or artificial. Light moves at a speed, in a line and in directions is when light hits an object and changes direction is when light passes from one medium to another.	high natural reflection refraction straight all
>	Sound is a form of energy produced by the of bodies. Sound travels in a straight line and in all directions, but it travels	vibration slowly timbre
>	Electrical is a property that causes attraction and repulsion between some objects. When an electric charge moves, it creates an electric current. An electric current can be used to produce many different kinds of	energy charge



Matter and forces

1	Identify the	instrument or	object and sa	ay which propei	rty it measu	ıres.
	a)	b)		c)		d)
			100/1- 35 55 56 57 57	4000	1000 1000 1000 1000 1000 1000 1000 100	1 PINIT 10 pin 10 pi
30	which you h	decide which e ear the descrip	otions in.		escribing. N	lark the order in
3				ite definitions i ume has been c	-	words and describ as an example.
	comparing	g two quantitie ne two containe	s of lemonade	e in containers of	f different si:	e listening track was ze and shape. Even of lemonade were
	b) Density is	·				
	······································					

Name each material in the images below. Then select and write the properties from the coloured boxes for each material.

insulating	flexi	ble	fragile	rigid	
	soft	conductive	resist	ant	strong
	•••••••••••••••••••••••••••••••••••••••	•••••		***************************************	
•••••			•••••	***************************************	
Now choose fo certain objects	our materials fi s we use.	rom above and e	xplain why ea	ach material i	s used to make
support a lot o	f weight	make buildings b			
		1			

Identify in the picture the pure substances, homogeneous mixtures and heterogeneous mixtures they talk about. Then answer the question

No. of		
		(
C	9	

ricterogeneoi	אווות כג	.ui C5 ti	icy tain ab	out. Their answer the question.
	NE S			Pure substances:
				Heterogeneous mixtures:
				Homogeneous mixtures:
				healthy'. What is he refering to and what is it
Compete the				
c) A solute is	• ••••••	•••••		
Match the sep				their descriptions.
decantation	•	<u> </u>	water will e	eneous mixture is heated. After a while, the vaporate and the solid component of the be left behind.
distillation	•	C. C.		ures will separate themselves according to he substance.
evaporation	٠	; • t	Pour a hete through a fi the bigger p	rogeneous mixture (such as sand and water) unnel containing filter paper. The paper will trap particles in the mixture and let the water pass o the beaker.
filtration	•	, 1	the liquids of	neous mixture of liquids is heated until one of evaporates. It is collected in liquid form after condensing in the tube between the two

A homog the liquid cooling a beakers.

9 Lis	ten to the clues and use the answers to complete the puzzle.
32	2
3	
4	
	5
	6
10 Wh	at type of change can be seen in the picture? Explain what is happening.
Lool re-w	k at the statements below. Decide whether they are true (T) or false (F) and then write the incorrect ones correctly.
	Substances which undergo chemical changes are called reagents
	Fermentation needs oxygen in order to occur.
	Iron oxide is made from certain metals exposed to oxygen in the air and water.
And the second second	The new substance made in a physical reaction is called a material.

Look at the diagram of the bicycle and try to predict how forces might affect how each labelled part moves or what happens.

handlebars



• The brakes:	
	gh contract en consultation

Listen and complete the table.

Number	Body type	Example	Result when force applied
1	Rigid		
2			Returns to original shape when force removed.
3		Clay model	

(33)

Look at the materials you can see in the picture of a car and say why you the are used for each part. The first example has been done for you.



Example: Bumpers are made of plastic to be lighter and can be shaped to fit different car shapes.

(The seats are	e made of	. because it is	for people of different
	and to			

• The body is made of because it is	
-------------------------------------	--

• The windscreen	•••••	 ******************************

The steering wheel

The lights	

Suspension	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

Listen and fill in the missing information in the table. Then record which parts of the car have changed in design over the years and why.

Car part	Reason why the material was chosen	
In case of impact. The fabric is flexible so when it inflates with can change shape easily.		
	Originally wood, changed to metal springs for durability when going over uneven surfaces.	
In case the car collides with something. Changed from meta plastic to be lighter and could be shaped.		

External exams

16 Look and read. Choose the correct words to complete the sentences.

1.	This is what everything around us - clothes, water, air - is made up of
2.	The amount of matter of an object measured in grams and kilograms.
3.	Something used to measure the volume of an object.
4.	The name of a mixture when you can see the two substances that make up the mix.
5.	The solvent in the homogeneous mix of hot chocolate
6.	The name of the process to separate two homogeneous mixes.
7.	The name of the process that occurs when a gas becomes a liquid
8.	The name of the process that occurs when a substance combined with oxygen
	becomes a new substance.
9.	The property of materials that do not allow liquid to pass through them.
10.	The property of materials that return to their previous shape when the force is
	no longer applied



17 Look and read. Mark Y (yes) or N (no).

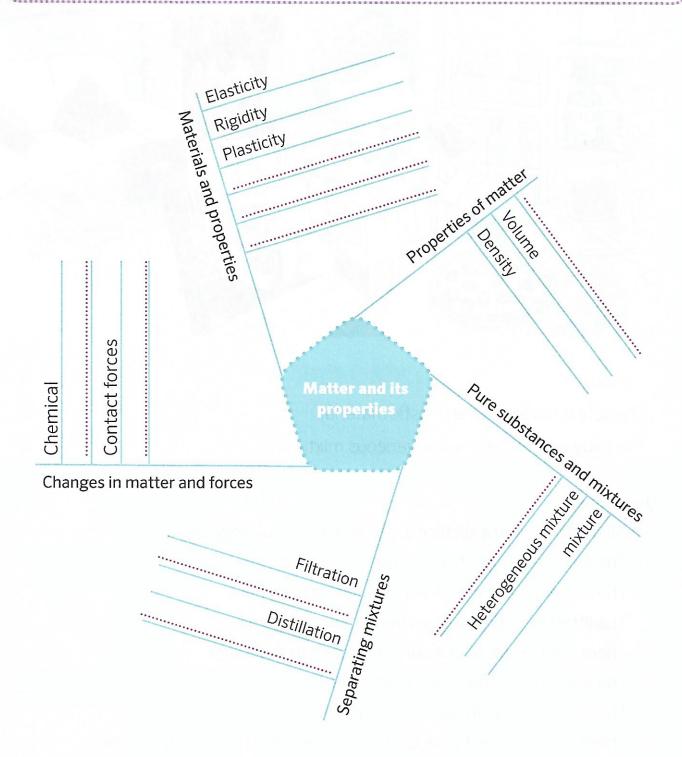


Example	Y	N
The sofa is made from an elastic material.	1	
The baby is drinking a heterogeneous mixture.		1
Questions		
1. All the foods in the picture are examples of heterogeneous mixtures.		
2. The girl is drinking a homogeneous mixture.		
3. The countertop is made of an insulating material.		
4. The little boy is drinking a homogenous mixture.		
5. There is an example of a pure substance in the fridge.		
6. The high chair is made of a rigid material.		
7. There is a chemical reaction going on.		
8. There are two objects made of a transparent material on the table.		
9. The ice in the glass is an example of condensation.		
10. There are three examples of physical changes.		

To sum up

Complete the mind map with the words given below.

mass • strength • physical • impermeability • non-contact forces • decantation • pure substances • homogeneous • evaporation • transparency



19	Complete the sentences with the words provided.	
1>	Everything around us is made of	properties matter volume material object density
2>	mixtures:	homogeneous separate heterogeneous filtration substances mixture decantation
3	Matter can undergo and chemical changes. Physical changes do not alter the of matter but chemical changes do. In chemical reactions, the components called are turned into components called	composition products reactants physical
4	Forces can be defined as between bodies. They can be contact or forces and can cause a body to or speed.	directions interactions non-contact move
3)	The materials we use have different which make them different to others. We can classify materials according to impermeability, and transparency.	strength properties elasticity

Classify the words in the correct column.

shovel	bicycle	television	wheel	car	pencil sharpener
hamr	mer	scissors	laptop	dishwasher	ship

Complex machines	

Write what type of machine these are depending on the energy they use.



- Listen and answer the following questions.
 - a) How many pillars do they need to make the shelf?.....b) How many girders is Dani's father going to use?.....
 - c) Which girder do you think has more possibilities of bending? Why?.....
 - d) What does Dani want to put on the second shelf?....

lever. Then add mo	ore example	s.	each class to the correct example of
Class 1 lever ●	•		
Class 2 lever ●	•	200 00	
Class 3 lever •	•		
1 2 3		>	carry out the different jobs.
4 5 6			
Label the parts of ti	ne lever you	see in the pictu	re. Then explain what they are.

7	Read	d and mark the sentend	ces as true (T) or false (F). Correct th	ne false sentences.		
		Some simple machines allow us to move heavy objects				
		An inclined plane is also called a pulley.				
		In a group of pulleys	there are two or more connected	pulleys		
		A pulley has three w	heels			
		A television is an exa	ample of simple machine			
		A pulley makes it po	ssible to lift weight more easily tha	an doing it manually		
8	Deci pulle	•	w an example of an inclined plane,	, pulley or a group of		
			8			
		S. E.				
		bucket	crane	slide		
9		en and decide whethe n and answer the que	r they should use an inclined planestions.	e or a pulley. Then listen		
	a)					
		What is Marta's birthda	ay present?			
	e) \	e) What does the family need to move?				
	f) \	What happened to Sim	non?			

10	Copy what you hear and then try to guess the name of the inventions.		
38	a)		
	b)		
	c)		
	d)		
	e)		
	f)		
	Commission the feet file on Aughture de l'in		
W	Complete the fact file on Archimedes' in	ventions.	
	Name:		
	Lived:	City:	
	Inventions:		
	Name:	Name:	
	Use:		
	Parts:	Parts:	
12	Now, think of a new invention that needs words.	s to be invented and explain it in your own	

External exams

Look and read. Choose the correct words to complete the sentences.

1. A construction made up of different parts that can support heavy loads
2. A complex machine that uses electrical energy to work.
3. A complex machine made up of simple machines.
4. A simple machine made up of a wheel with raised edges and a rope that goes through
5. A simple machine made up of a rigid bar and a central pivot
6. A simple machine, also called a ramp that has one end higher than the other.
Complete the fact file on Archimedes' inventions
7. A invention by Archimedes used to raise the level of water
······································
8. A crane-like invention with a pulley used to lift ships.
9. Helicopters, cars, trains and spaceships are examples of advances in this field of
inventions
10. An invention in the field of communication that allows people all around the
world to be connected
(structure) inclined plane laptop lever
internet transport Archimedes' screw pump claw of Archimede

bicycle

wheel

pulley

swing

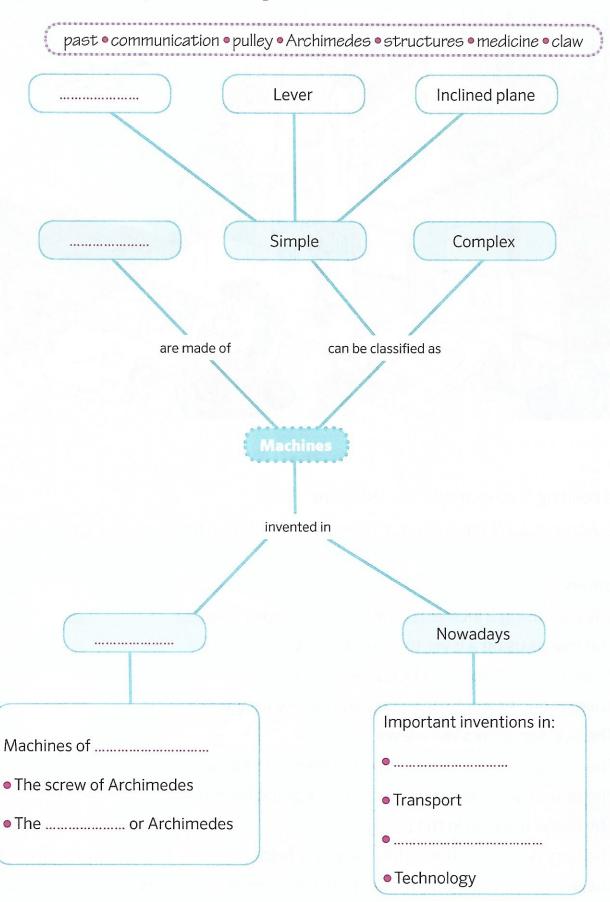
Look and read. Mark Y (yes) or N (no).



Example	Y N
The building is an example of a structure.	1
The workers don't have any machines to help them to move the things.	
Questions	
 They are using a inclined plane to raise a heavy object. 	
2. The man is using a lever to move the bed.	
3. There is an example of a 1-class lever in the park.	
4. There is one example of 3-class lever in the image.	
5. The see-saw works like a lever.	
6. There is an example of a group of pulleys in the image.	
7. The phone is an example of a communication invention.	
8. The bed is the load in the pulley.	
9. The lorry is an invention in the trasnport field.	
10. The aeroplane is a modern invention in the communications field.	

To sum up

(15) Complete the mind map with the words given below.



16	Complete the sentences with the words provided.	
1>		the second of the second
	help us to do a variety of tasks with less	effort complex energy structure machines simple electrical
2	are simple machines used to move objects that weigh a lot. Levers	located transmit fulcrum increase levers
3>	Simple machines also allow us to move objects. The	effort pulley inclined plane slide heavy
4>	invented the screw of Archimedes to raise	communication claw defend aeroplanes water Archimedes

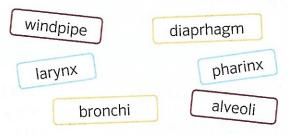
'Qui^Z,

Who is carrying out a healthy habit?



- a. David
- b. Susana
- c. Felipe

- A structure ...
 - a. ... can support weight.
 - b. ... transforms movement.
 - c. ... is a moving part.
- Which system of the human body do these organs belong to?



- a. the circulatory system
- b. the respiratory system
- c. the reproductory system
- Which parts does this flower have?



- a. 6 petals, 1 stamen, 1 pistil
- b. 6 petals, 1 stamen, 6 pistils
- c. 6 petals, 6 stamens, 1 pistil

A material is elastic if ...

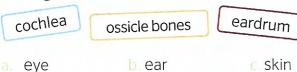


- a. ... it can bend without breaking.
- b. ... it returns to its original shape after experiencing deformation.
- c. ... water cannot pass through it.
- 6 What group of animals have all three of these characteristics?



lungs

- reptiles
- c. fish
- Which sense organ do the following parts belong to?

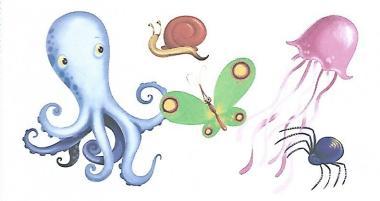


- 8 Which of these things uses renewable energy to work?
 - a. motorbikes
 - b. wind turbines
 - c. cars
- When an inclined plane has a larger gradient, ...
 - a. ... it requires less effort to raise the load.
 - b. ... it requires more effort to raise the load.
 - c. ... it requires the same effort to raise the load as with a smaller gradient.

Which organ has sent a command to hit the ball?



- a. The eye, when it sees the ball coming towards the body.
- b. The brain, after it receives the message from the eye.
- c. The arm, which takes orders from the muscle.
- What are amphibians? Choose the correct answer.
 - a. Amphibians have fins and live only in water.
 - b. Amphibians do not have scales and their skin is permeable. They can live in water and on land.
- Which animals can you see here?
 - a. Molluscs, echinoderms and worms.
 - b. Molluscs, arthropods and jellyfish.
 - Arthropods, sponges and jellyfish.



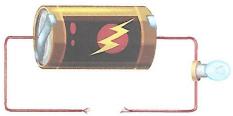
13 The elements of a pulley are ...



- a. ... a rope, groove and bucket.
- b. ... a groove, wheel and rope.
- c. ... a wheel, rope and bucket.
- Which of these objects is a class 2 lever?



- a. the pliers
- b. the tongs
- c. the bottle opener
- Which element would you use to allow an electric current to flow through this circuit?



- a wooden ruler
- b. a metal fork
- a cloth serviette
- 16 When a force acts on a body, ...
 - ... it cannot change its speed.
 - b. ... it can change its speed and cause deformation.
 - ... it cannot cause deformation.