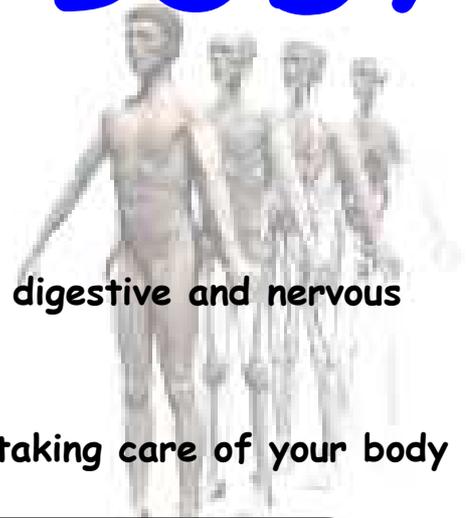


STUDENTS' WORKSHEETS

HUMAN BODY

- ✓ Joints, bones and muscles
- ✓ Systems of the body: respiratory, digestive and nervous
- ✓ A healthy body: food types, sport, taking care of your body



NAME: _____

AGE-GROUP: _____

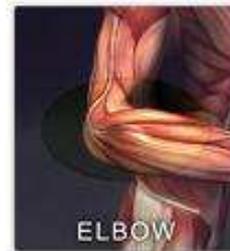
DATE: _____

Lesson 1 : Joints and movement

Joints are the places where two bones join together

There are three types of joints :

fixed (skull) – **gliding** (vertebrae) – **movable** (knee,elbow,wrist...)



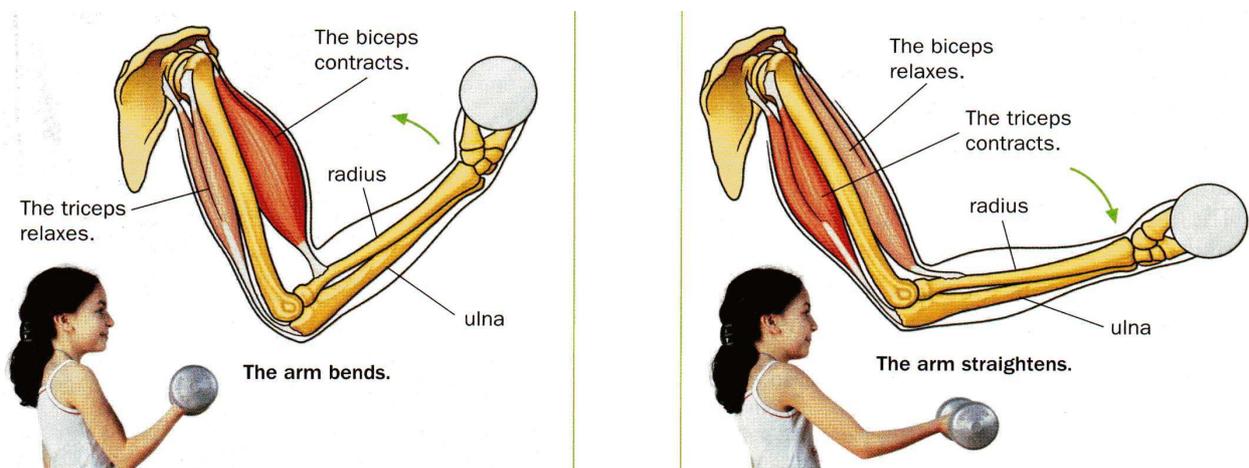
Joints allow movement

Ligaments connect bones in a joint



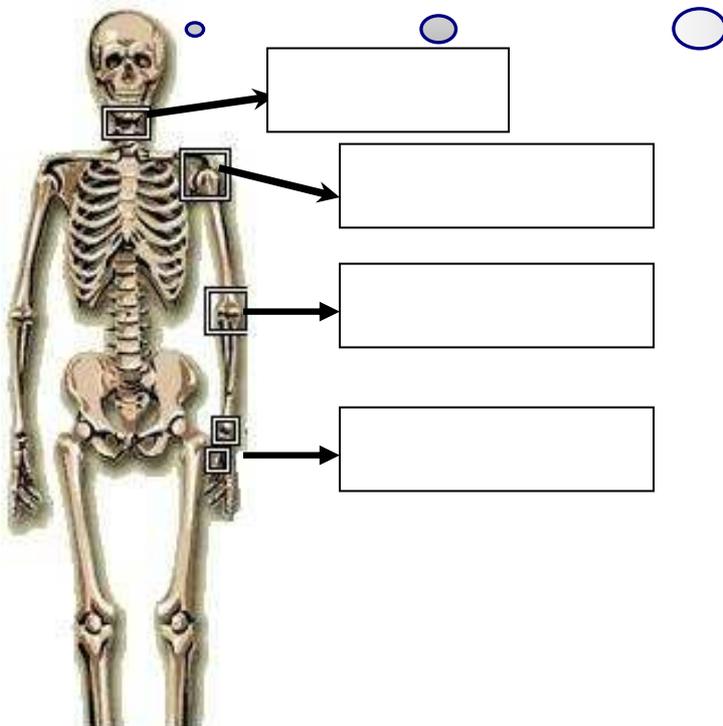
MOVEMENT

In the picture we can see a pair of **antagonist muscles**, when one is contracted, the other one is relaxed. That is possible thanks to the elbow, a movable joint.



ACTIVITY 1:

Complete the graph with the names of joints



ACTIVITY 2:

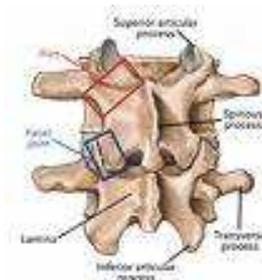
Write 5 correct sentences using the table below

<p>The knee The skull The elbow The neck The shoulder The vertebrae The wrists</p>	<p>Is Are</p>	 <p><i>Fixed</i> <i>Movable</i> <i>Gliding</i></p>	<p>BECAUSE</p>	<p>They have a limited range of movement It/they can move freely It can't move</p>
--	---------------------------------	---	-----------------------	---

ACTIVITY 3:

Ask and answer questions with your partner about joints

- Where is / are the
- What type of joint is this?
- Can you move it?
- What muscles are involved?
- Think of 3 other joints in your mother tongue and look them up in a dictionary, share these with your partner



✓ If you need them, use these **structures**:

- Here is the... I'm touching my... This joint is...
- It is fixed because... I can move it so... I'm not sure/ I don't know
- Yes / No / only a bit

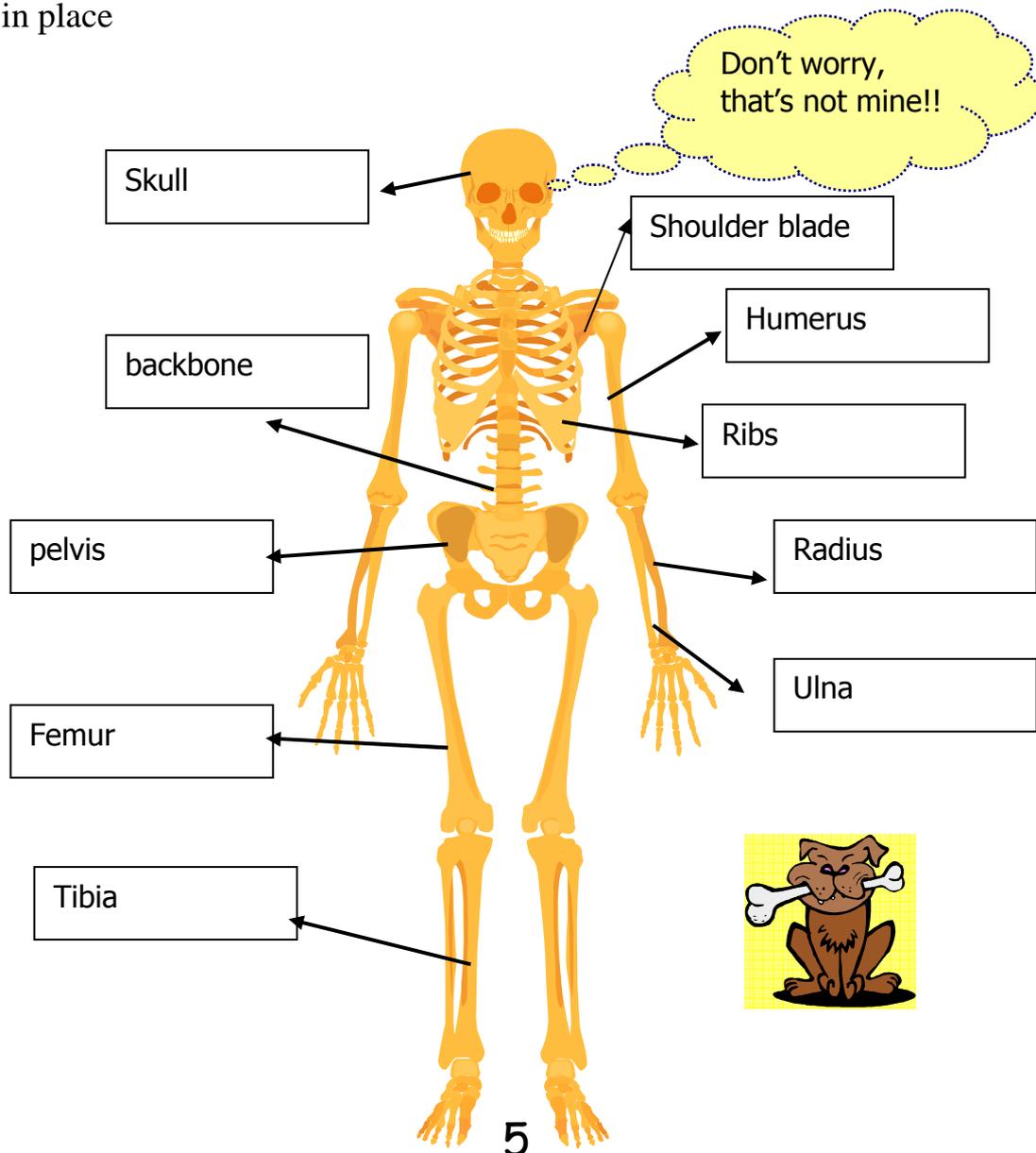


Lesson 2: The Skeleton

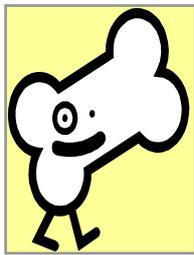
We all have skeletons inside our body: that makes us vertebrates.

The **skeleton** has 3 main functions:

- **It protects** important parts of the body: the skull protects your brain
- **It lets you move**
- **It Supports** you body and keeps it upright by holding the different body parts in place



More about bones:



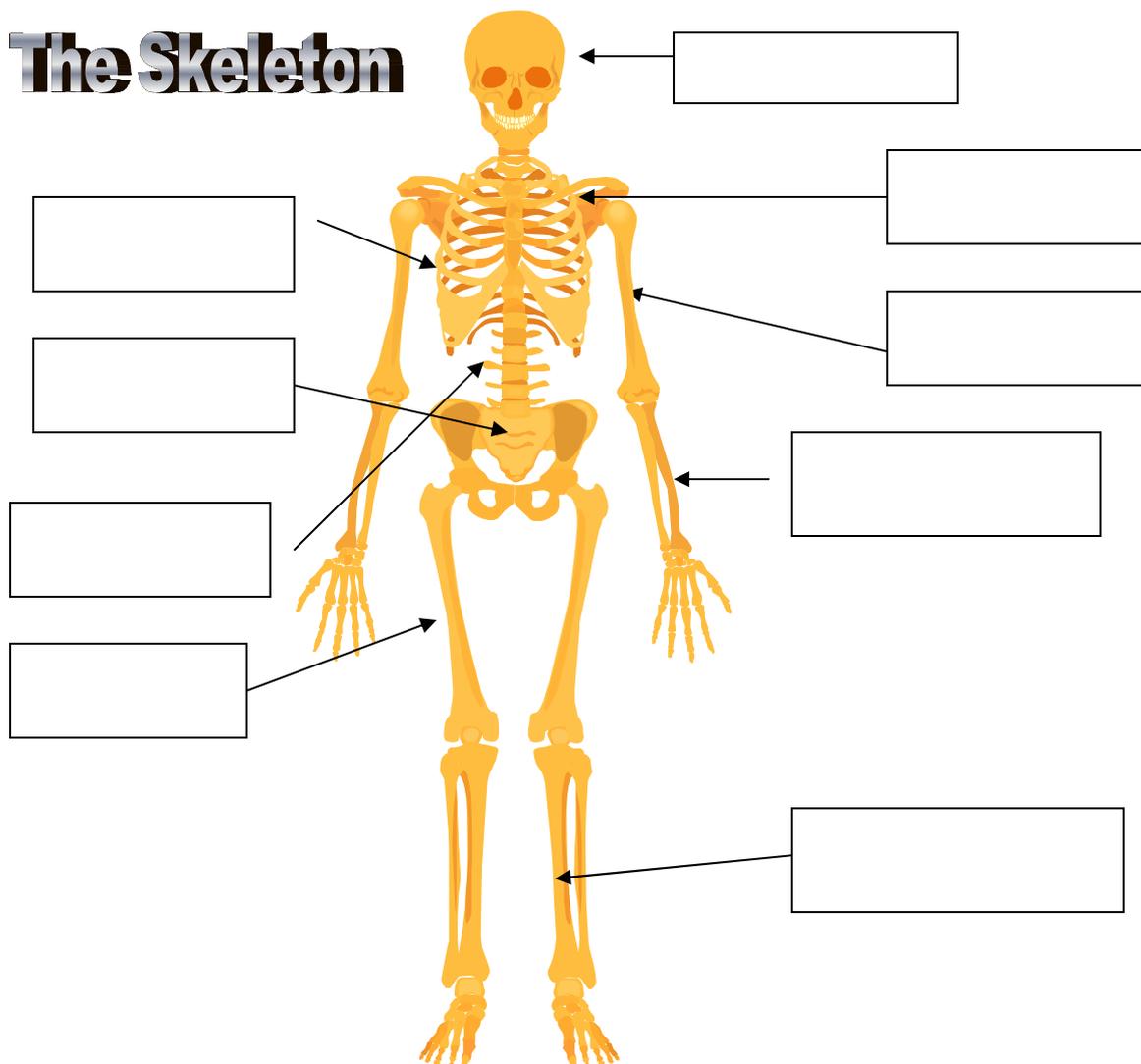
- The body has a total of **206 bones**, 29 of them in the head
- The smallest bone is in your ear and the longest...yes! the femur
- Some people have 11 or 13 pairs of **ribs** instead of 12
- Bone or joints can be substituted with artificial ones: **protheses**
- **Bones change with age**, when you're a baby they bend rather than snap, later they become stiff so they crack rather than bend.

ACTIVITY 1:

Complete the chart of the skeleton with the following bones:

Skull, shoulder blade, ribs, humerus, radius, pelvis, femur, tibia and backbone

The Skeleton



ACTIVITY 2:

Fill in the gaps.

Version A

The skeleton has 3 _____. The _____ protects the brain and it also helps you stand _____. The _____ bone in the body is the femur and we have 206 _____ in our _____.

Upright - functions - bodies - skull - longest - bones

Version B

We have 12 pairs of _____. They protect the _____ and lungs.

The _____ bone is in our ear.

Baby's _____ are _____ (2 words) than adult's.

The _____ is longer than the _____.

ACTIVITY 3:

Review and locate with a partner the names of bones studied

Make comparisons between them

Ask and answer questions



Use these structures:

The skull protects

Which bone is it? (pointing...) , point to your...

Where's the

The *radius* is shorter than..... The *femur* is longer than.....

Some students will answer questions about bones in front of the group ...
so keep reviewing!!



Lesson 3: Muscles

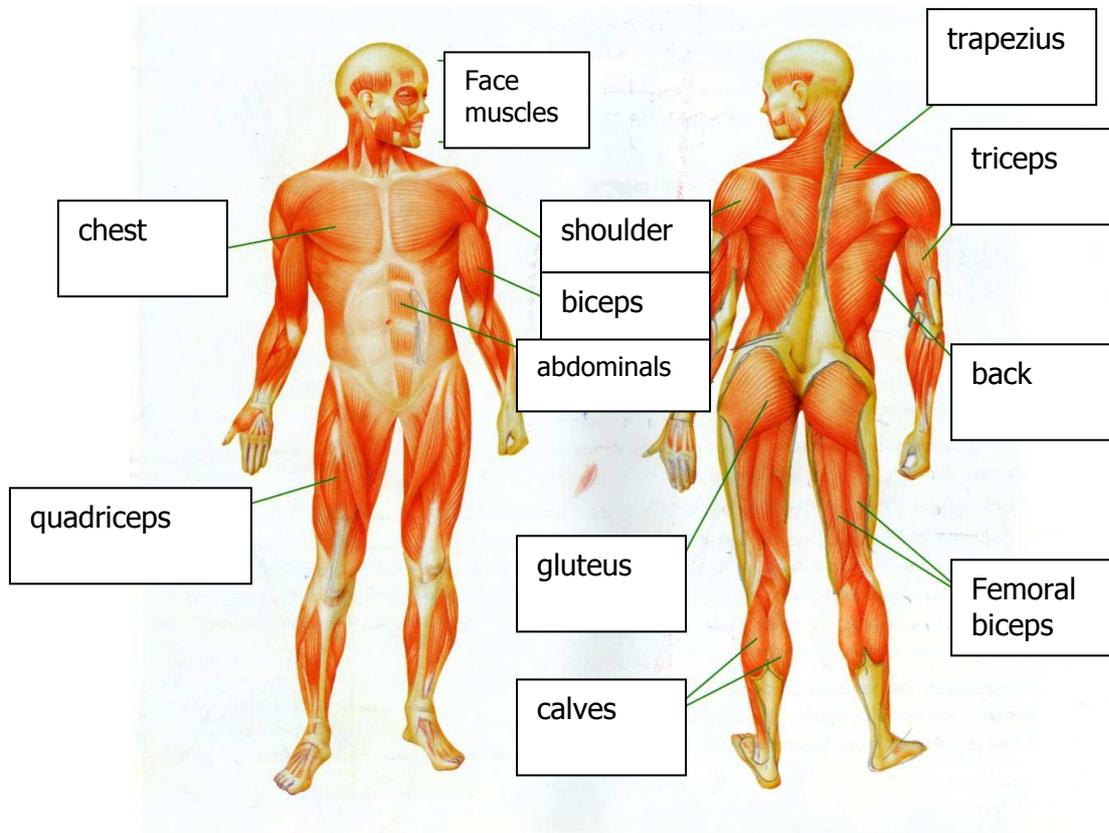
Every **action** you do is carried out by a muscle.

We have about 640 **muscles** in the body

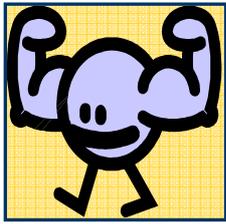
As we have seen with joints they change in length, **when contracted they get shorter and thicker, and when relaxed they get longer .**

The muscular system:

- It enables us to **move** (as the skeleton)
- **It gives the body shape**
- **It protects** some important organs such as the liver



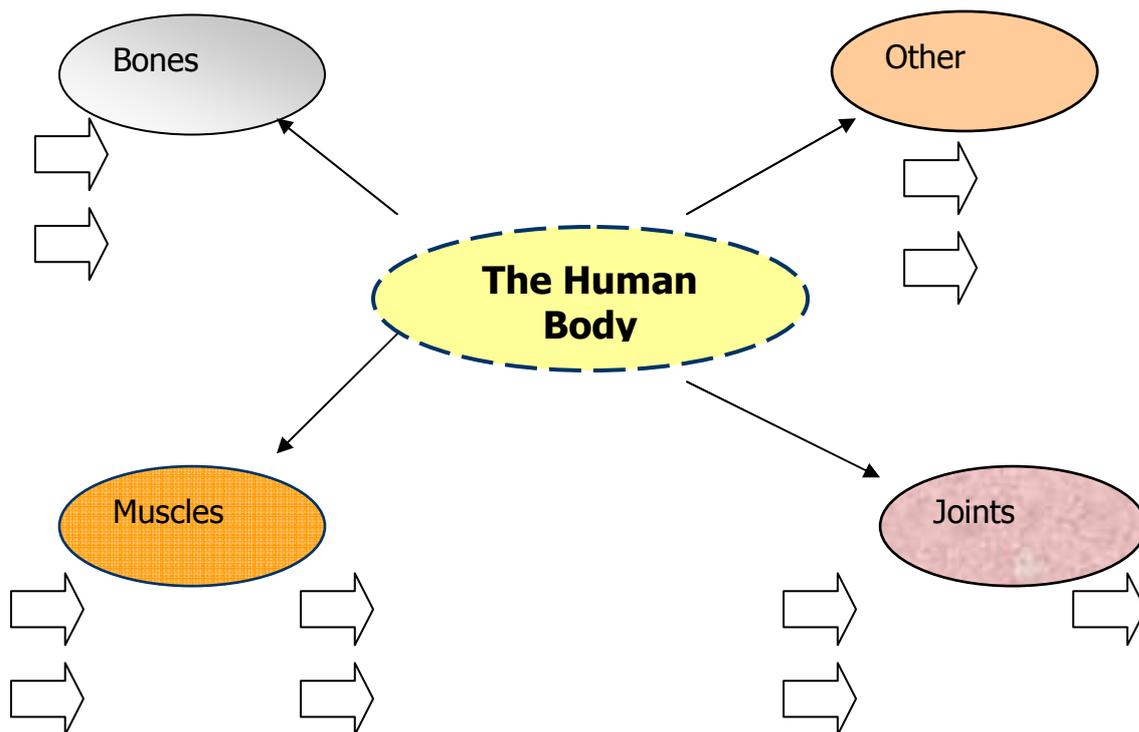
More about muscles:



- The **biggest muscle is not the biceps is the gluteus maximus**, and you know where to find it...yes, there!!
- Muscles don't push, they can only pull or contract
- Muscles make up about **two-fifths of the body's total weight**
- Larger and stronger muscles are a result of regular exercise and physical activities.

ACTIVITY 1:

Complete this mind map about muscles, bones, joints or other .



Humerus - Liver - Triceps - calves - elbow - pelvis - brain- chest
knee - abdominals - wrist

ACTIVITY 2:

Locate the following muscles and say if they are on the:



ARM



LEG



UPPER BODY

Calves : _____

Shoulders: _____

Chest : _____

Quadriceps: _____

Triceps: _____

Abdominals: _____

ACTIVITY 3:

Follow activity 2 orally with your partner

✓ Use these structures

The *biceps* is in the ...

Can you touch your...?

Flex your

Point to your....

Here, I have my....

When I play *tennis*, I use



ACTIVITY 4: Revision Lessons 1-2-3

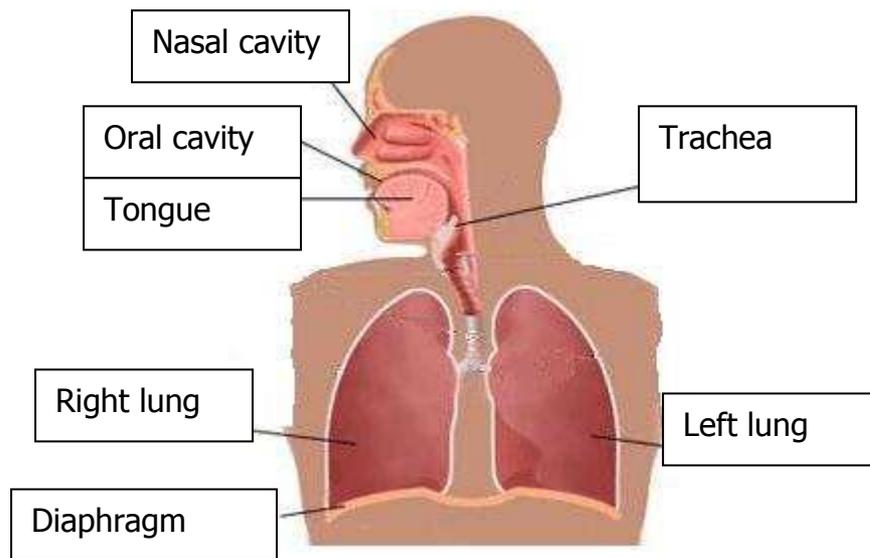
Read the sentences carefully and write true (T) or false (F)

- We have 206 muscles in our bodies
- We can find the calves on the upper body
- The brain is an organ, not a muscle
- The elbow is a gliding joint
- The skeleton supports your body
- Our muscles make-up 10% of our body weight

Lesson 4: Respiratory system

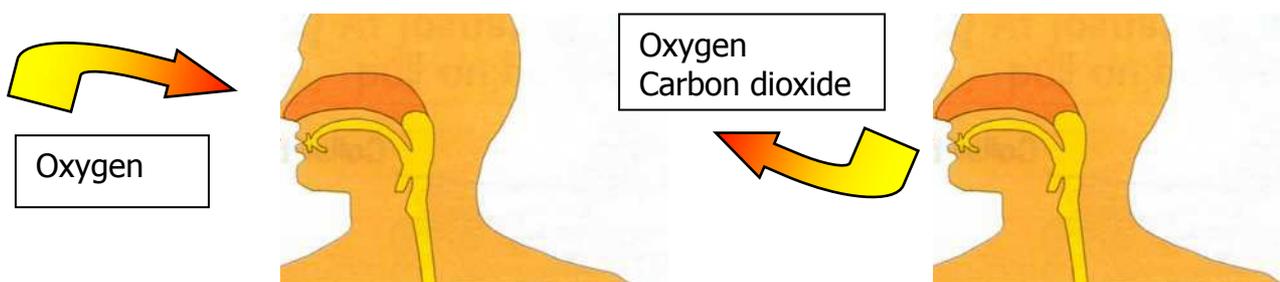
The **RESPIRATORY SYSTEM** is made up of these main parts:

Nasal cavity – oral cavity – trachea – lungs and diaphragm



Breathing is with the heartbeat, the **body's most essential activity**

We breathe with our lungs. When we **breathe in**, we **take oxygen** from the air and we **breathe out** oxygen and **carbon dioxide**.





Facts about breathing:

- Even **when you sleep, you breathe every 4 seconds**
- After much exercise, you breathe as fast as once each second
- **Yawning** happens when the body has been still for a while, so more oxygen is needed
- There's always around **half litre of air in your lungs**

ACTIVITY 1:

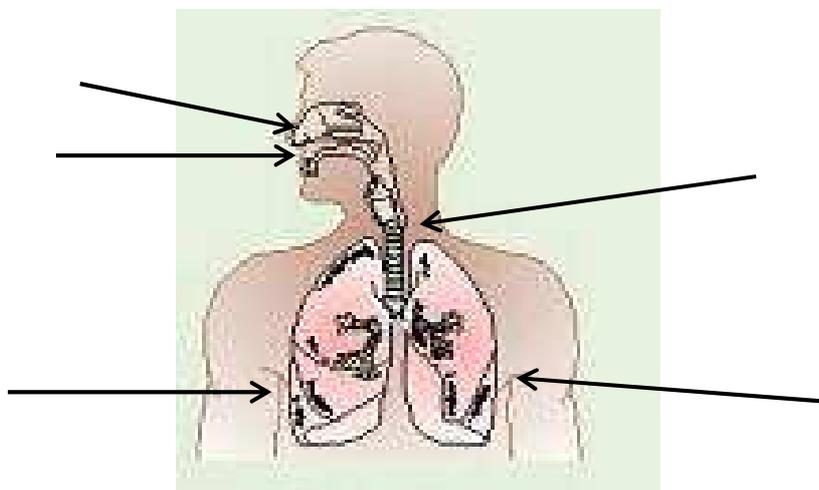
Complete the text with the words given:

When breathing _____, we take oxygen from the _____. This oxygen goes to our _____ and distributed around the body. Then we breathe _____ and we expirate _____.

Out – lungs – carbon dioxide – air – in

ACTIVITY 2 :

Label the picture with the different parts of the respiratoty system



ACTIVITY 3:

Divide into 3 groups of 3-5 students

The teacher is going to assign an **area of discussion**, try to **speak** with your partners for 2-3 minutes.

Areas for discussion:

- **Smoking and the respiratory system**



Not another boring
science
lesson!!!

- **Exercise and breathing**



- **Asking and answering questions to your partners**



- ✓ Use these structures:

When you smoke, you breath in ...

Smoking is for your lungs

When you exercise, you breathing goes

Your lungs breath faster when

Why is breathing essencial?

How many times do you breath in a minute? And in an hour? In a full day?

When do you yawn? When I'm

Is breathing involuntary?



Lesson 5 : Digestive system

The body needs **food**

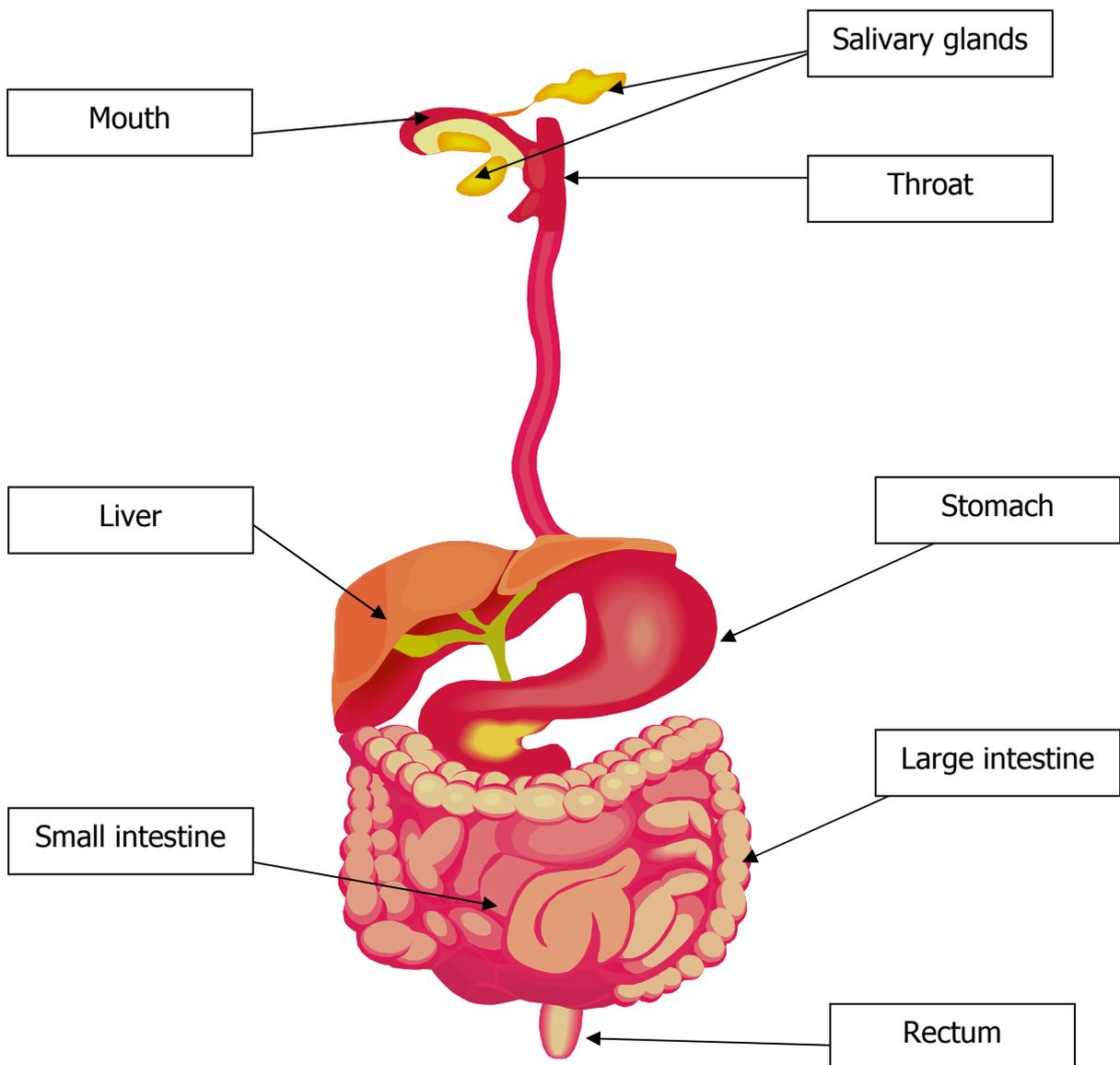


and **drink**



Food contains many substances that help the body grow and repair
Drink is needed to replenish the supply of water in the blood.

Parts of the digestive system:



Timeline of digestion:



0 hours: food is chewed and swallowed



1 hour: food is mixed with acids in the stomach



4 hours: food has left the stomach and passed to the small intestine



10 hours: leftovers begin to collect in the last part of the system



16-20 hours: faeces pass through the anus and out of the body

ACTIVITY 1:

Fill in the gaps:

Version A

My teeth break the _____ into small pieces. The food is mixed with _____ in my _____. Food goes down the _____ and mixes with _____ in the stomach. Nutrients in the food pass from the _____ into my blood. Finally, food that can't be digested comes out of my body when I go to the _____

Intestines – saliva – toilet – juices – food – mouth – throat .

Version B

The body needs to breathe fresh _____ every few seconds, but it cannot live of it alone. The body _____ food which contain _____ used to help the body _____. Drink is needed to fill up the supply of _____ in the _____

ACTIVITY 2:

Match Column A with Column B, if possible add more examples

A

 The longest part of the body is

 The liver makes

 Most food has passed to the small intestine

 We need to eat



B

to provide energy for life processes

within 4 hours

the small intestine

bile to help digest fats



ACTIVITY 3:

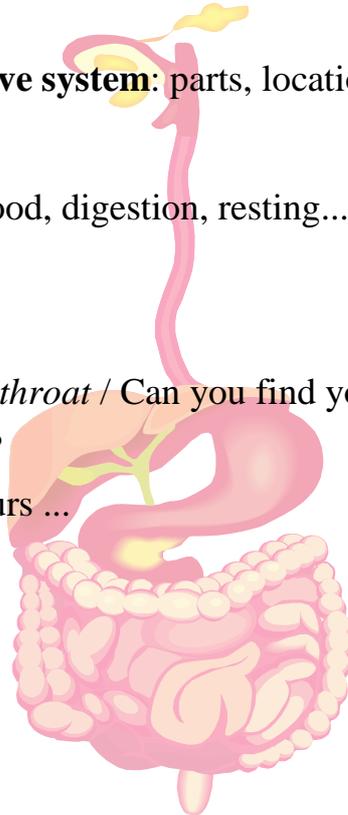
Work with a partner:

Ask and answer questions about the digestive system: parts, location, timeline, facts...

Discuss the **importance** of a good intake of food, digestion, resting...

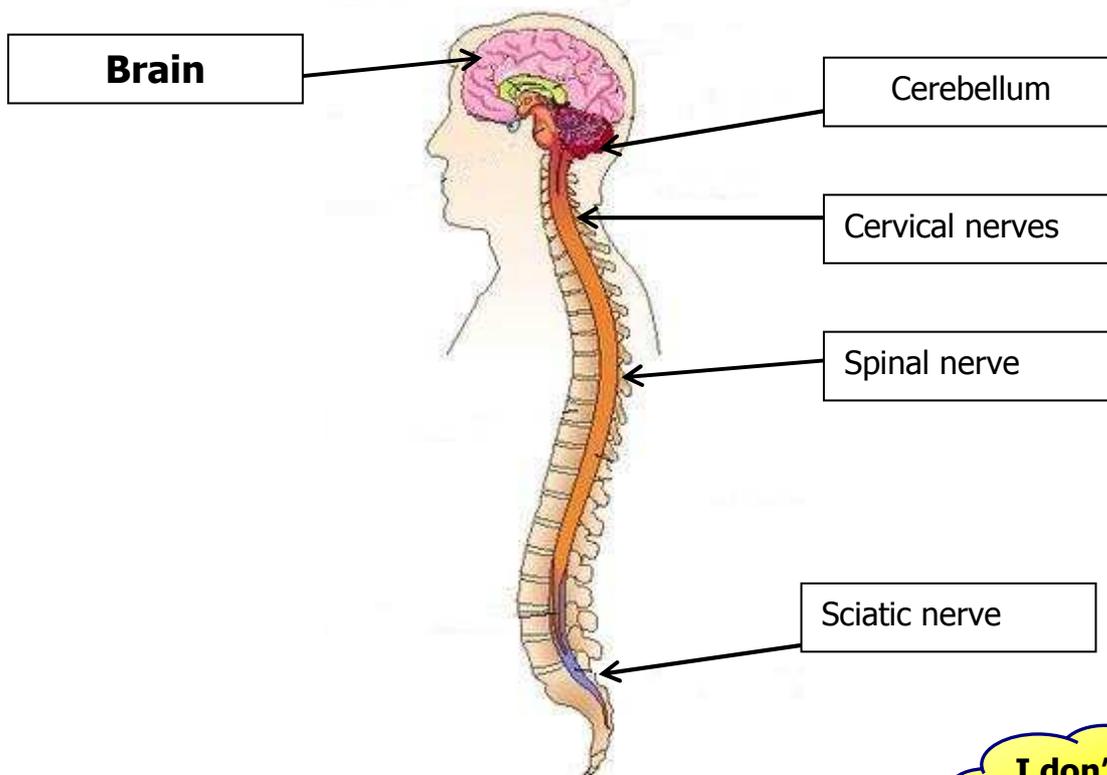
Use these structures:

- ✓ Where's your *stomach*? / Point to your *throat* / Can you find your...?
- ✓ Is the *heart* part of the digestive system?
- ✓ **Within 1 hour**, food is ... within 20 hours ...
- ✓ **Food and water are important for...**
- ✓ We need to eat and drink because ...
- ✓ The *stomach* does...
- ✓ When we are digesting food, blood is ...



Lesson 6 : The nervous system

- **The nervous system sends millions of signals along the nerves.**
- Nerves can go as fast as 100 m/sec
- Information is passed by the neurotransmitters, they communicate nerve cells
- There is a **part** that controls the others: **the brain**



More Brain facts:



The **left part** of the brain is good at **language and maths** and the **right** at **art and music**



Your brain keeps working when you are sleeping, so the heart keeps beating and the lungs breathing



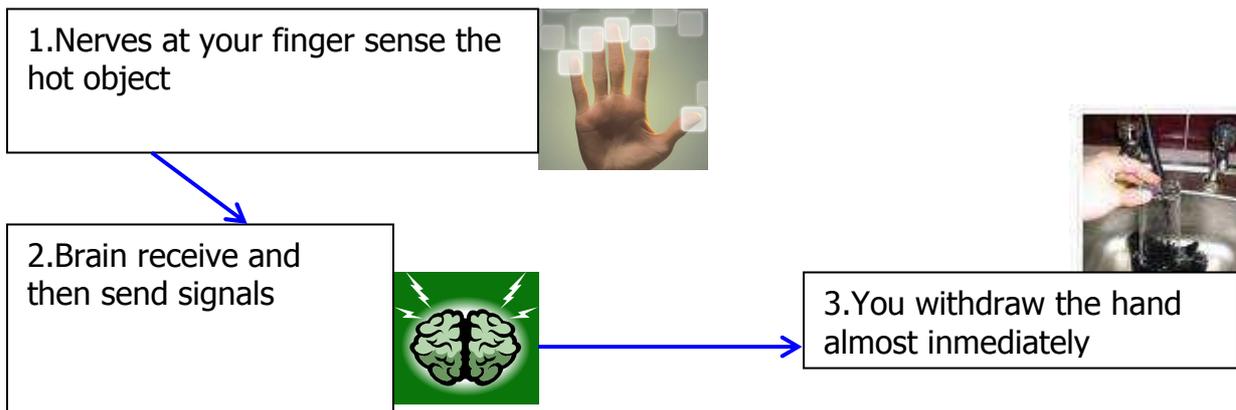
An average brain **weighs about 1.4 kgs** and men have larger brains than women but that doesn't mean they are more intelligent...are they?? =

I don't think so!!

ACTIVITY 1:

Complete the chart as in the example:

- *You touch a very **hot** object*



- *A **ball** is coming to your face*

1.

2.

3.



Your brain sends signals back: close your eyes and raise your hands



Your sight (visual nerves) see the ball and sends signals to the brain



You close your eyes but also try to avoid the impact by raising your hands

ACTIVITY 2:

Match these concepts with its definition

Spinal nerve

Cervical nerve

Brain

Stomach

Is the organ that controls the rest
It's the main nerve linking the body and the brain
Organ that breaks down food
Nerves close to the brain located in the neck and arms

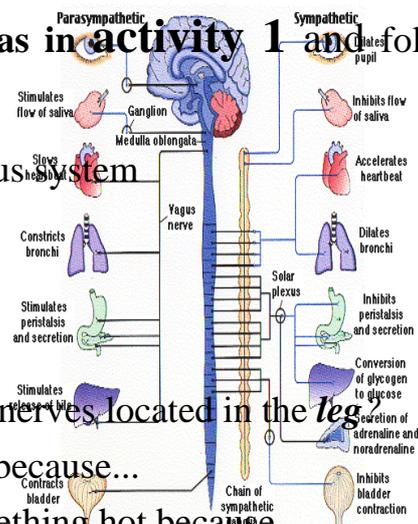
ACTIVITY 3:

A) With your **partner** find more examples as in **activity 1** and follow the steps that the nervous system does.

B) Ask and answer questions about the nervous system

Use these structures:

- ✓ How fast do nerves work?
- ✓ How does the **brain communicate** with nerves located in the *leg*?
- ✓ The **brain is the most important** organ because...
- ✓ We remove the hand when touching something hot because...

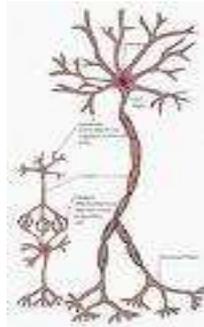


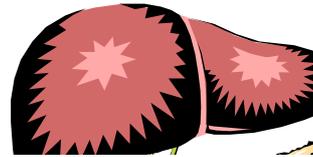
ACTIVITY 4 : Revision lessons 4-5-6

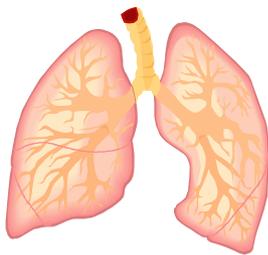
Relate the image to the its correct system:

Digestive -- Respiratory -- Nervous

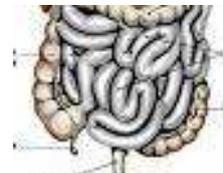














All this **science** makes me sooooo **hungry!!**

Lesson 7 : Food types

There are **7** food types:

<i>Water</i>	
Fibre	
Vitamins	
Minerals	
Proteins	
Fats	
CARBOHYDRATES	

Water : Is absolutely vital for us. **65% of our body is water!!**

Fibre : found in vegetables, bread and rice it **helps our digestion**

 **Vitamins** : Substances found in food, necessary for growing and staying healthy.

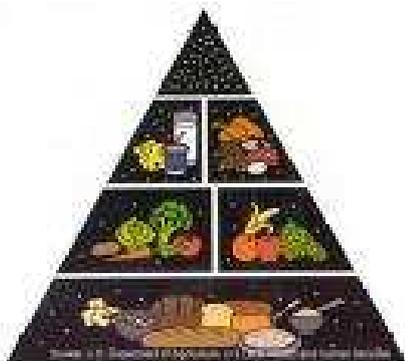
 **Minerals** : Same as vitamins, they help your body develop

Proteins : The **building blocks** of our body

Fats : Also known as lipids, vital for various **metabolic functions**

CARBOHYDRATES : Your **body's favourite 'fuel'**.

Another way of organizing food is with the *food pyramid:*



On **top of the pyramid** we find fats and sugars, to be eaten **once a week**

Then we find food that should be eaten **every 2-3 days**.

At the **base** of the pyramid we found the food that should be eaten **daily**



Vitamins and minerals can be found in **food** and are **important**

for a huge **amount of processes** and functions. Look at the table:

VITAMIN MINERAL	FOOD where you can find it	IMPORTANT for
Vitamin A	Milk, carrots and broccoli	Eyes, skin and immune system
Vitamin D	Milk, <i>and sun... yes!!</i>	Teeth and bones
Vitamin E	Oil and brown rice	antioxidation
Vitamin K	Liver and green vegetables	Blood clotting
Vitamin C	Citrus fruits, strawberries	Reducing the effects of a cold, antioxidant
Vitamins B (B1,2,3,5,6,12)	Meat, tuna, chicken, mushrooms, spinach, peanuts, legumes, whole grain cereals	Protein and carbohydrate metabolism, nerve and brain function
Calcium	Milk, yoghurt and cheese	Strong bones and teeth
Iron	Meats and liver	Making hemoglobin
Magnesium	Spinach, broccoli, tofu and popcorn!	Releasing energy
Potassium	Peanuts, bananas and green beans	Fluid balance
Zinc	Turkey and peanuts	Growing, digestion and metabolism

Facts about food and diet:



- The contents of the food are measured by **Kcal (calories)**; a child aged 6-10 needs 1800 calories per day, a **women 2000** and a **man 2500** .
- Taking into account the previous figures, we should eat **55 grams of protein, 230 of carbohydrates, 70 of fat and 24 of fibre every day.**
- Eating **less than 1200 calories** a day is negative for our development, but **eating more than 3000** is also potentially dangerous.

Example of daily meals:

MONTSERRATINA RESTAURANT

8:00

BREAKFAST:

Glass of milk with 4 biscuits
Banana- apple or pear

400 cal.

10:30

MID-MORNING

Small juice
Small sandwich with salami – ham – cheese (playground break)

250 cal.

13:30

LUNCH:

Pasta – Rice – Pulses – Salad - Vegetables
Meat - Fish
Yoghurt, fruit, 2 slices of bread

800 cal.

17:30

AFTERNOON SNACK:

Bread and chocolate – nuts – cereal bar

150 cal.

20:30

DINNER:

Vegetables - salad
Fish and Yoghurt and fruit

400 cal.

ACTIVITY 1:

Discuss the following diet with your group and decide **if it's balanced**:

Use the following criteria:

- ✓ This meal is **balanced** because it has the right amount of
- ✓ This meal has too much **protein**
- ✓ In this meal there is a lack of **vitamins** / It is incomplete because
- ✓ The diet has **too many calories** / **the right amount** / **too few**

The average science teacher diet

BREAKFAST

2 toasts with ham – salami – turkey
A glass of juice
1 yoghurt
4 biscuits (**ok!**, chocolate ones sometimes!)

AFTERNOON SNACK

Glass of milk
Small sandwich

MID-MORNING

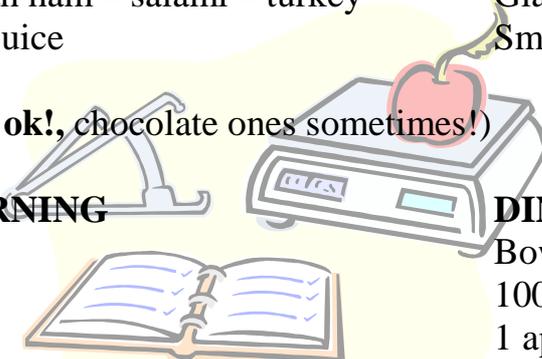
Cereal bar

DINNER

Bowl of salad
100 grs of fish
1 apple - pear

LUNCH

100 grs of pasta –pulses – vegetables – rice
125 grs of red meat – chicken – turkey
1 yoghurt and 2 slices of bread
1 apple – pear - banana



Now, complete or discuss these sentences:

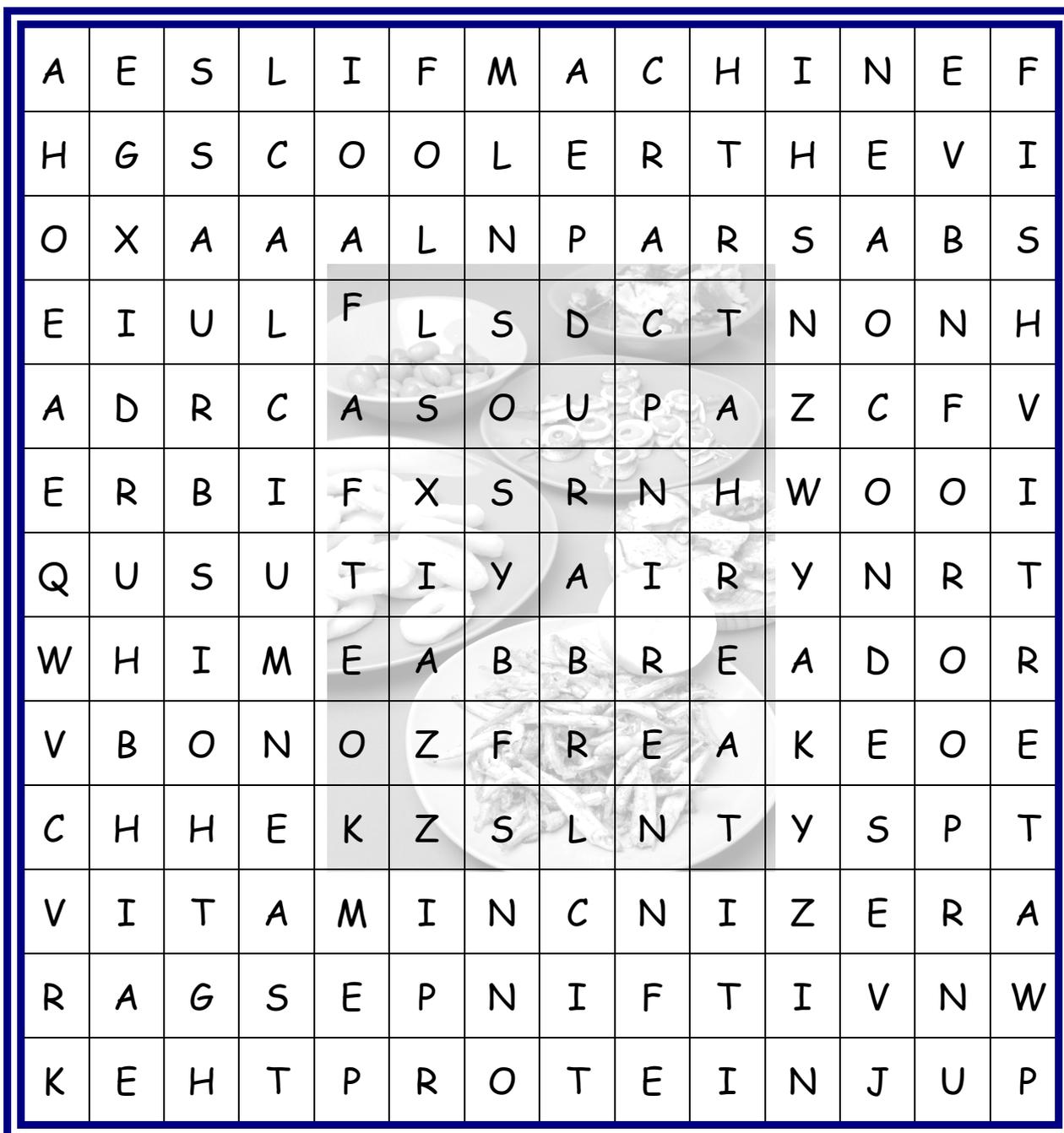
- ✓ Having a glass of milk or a yoghurt in the morning contains the **mineral**.....
- ✓ Where can you find **vitamins** in lunch? And in the dinner?
- ✓ Is it important to **eat some fats**? Do you find them in the diet?
- ✓ **How many calories** should a woman eat daily? And a man?

ACTIVITY 2:

Look for the following words in this wordsearch:

PROTEIN - VITAMIN C - FISH - CALORIE - PEAR

FIBRE - CALCIUM - MEAT - BREAD - ZINC



Look for more 'secret' words related to food... or not!!



ACTIVITY 3:

Put the following **items of food** into the correct category

<p>CHICKEN - BREAD - PASTA - OIL - BUTTER -APPLE</p> <p>EGGS - WATER - RICE - COLA - FISH - SALAD</p>			
<p><small>Lean Proteins</small></p>  <p>PROTEIN</p>	 <p>CARBOHYDRATES</p>	<p><small>Saturated fats</small></p> <p><small>Saturated fats are found in animal products such as butter, cheese, whole milk, ice cream, cream, and fatty meats, and in plants as coconut, palm, and palm kernel oil.</small></p>  <p>FATS</p>	 <p>DRINKS</p>

Lesson 8 : Sport - taking care of my body

So, finally, the last lesson, and yes... it's sports!!

Let's remember some of them:



5 people play on each team, don't run without bouncing the ball, it's.....



In this sport we use a **ball and a net** which is higher than tennis nets, it's.....

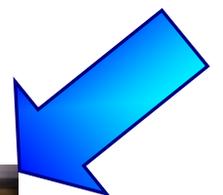


Eagle, Birdie, hole in one... **green grass**, clubs.... yes, it's....



This sport was **invented in England**, and perfected by players such as Pelé, Di Stefano, Cruyff, Maradona and more recently Ronaldo, Ronaldinho, Leo Messi or Kaká, of course you know, it's

So far, so good... but do **you** know the name of **these** sports??



But not everything is sports, there are many other **leisure activities** you can practise in order to stay active:



Playing outdoors with friends or family is a great way to stay active



A park is like a playground, you can get all the exercise you need. Swing, climb, run about... have fun!



You can practise **a martial art**: judo, karate, tae-kwon-do and mugendo are the most popular



After so much activity it is **always** advisable to sit down, rest, and

DO YOUR HOMEWORK!!!!

Appart from doing your homework, there are other healthy habits:



Sleep 9-10 hours per day



Brush your teeth 3 times a day, and a mouthwash once a day



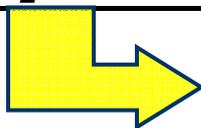
Have a **shower each** and every **day**



If you feel tired, ill , or have an injury... **rest!**



Be sensible, eat a balanced diet and feel happy about who you are.



Ha, ha, sooooo funny!!!!



There are other other things to avoid, and these are called health risks

-  **Smoking** is very bad for your health, so please don't smoke

-  **Watching TV long hours every day**, it's fun to watch some programmes but it's not good to sit in front of it many hours a day.

-  **Alcohol** affects your brain and in the long term you can damage your liver, please be sensible with alcohol

-  **Avoid drugs**, they can be very dangerous to your health in many different ways

-  **Take proper care of your body**, wash your hands often, dress your small wounds, rest when injured playing any sport, don't force the body too much and stay safe in everyday situations.



ACTIVITY 1:

Read and answer the questions. Look for your score because here comes the...

Healthy life quiz

1. How often do you eat vegetables?

- A. never B. sometimes C. often D. always



2. Do you sleep 8-10 hours a day?

- A. never B. sometimes C. often D. always



3. How often do you play sports?

- A. never B. sometimes C. often D. always



4. Do you brush your teeth after a meal?

- A. never B. sometimes C. often D. always



5. Do you wash your hands before a meal?

- A. never B. sometimes C. often D. always



6. How often do you have a bath or a shower?

- A. never B. sometimes C. often D. always



7. How often do you walk to school?

- A. never B. sometimes C. often D. always



8. How often do you listen to your science lessons?

- A. never B. sometimes C. often D. always



Ask your teacher for the scores.

ACTIVITY 2:

Set up in groups of 3-4.

Your teacher will give you 2 topics to choose from:

Healthy habits



Avoiding health risks



Think of a list of any of them and start planning a display using real pictures, drawings, felt tip pens, markers...

You can start your work in the class **but the display should be finished as ... yes, your favourite healthy habit, HOMEWORK!!**



I hope
you
learned a
lot of
things
about your
bodies, so
for now,
bye,
bye!!

