FUTURE MEDICS
AFTER SCHOOL CLUB

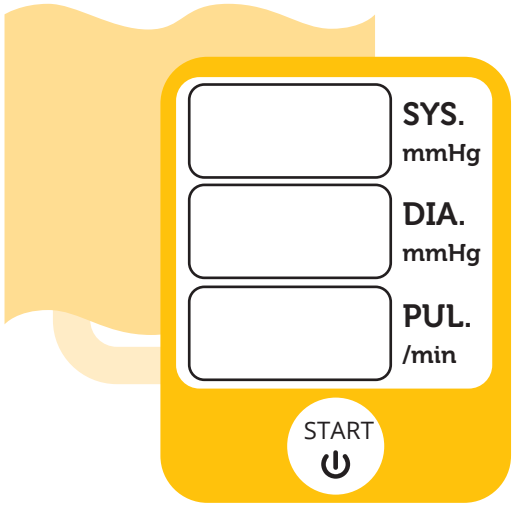
Patient Name

BASIC MEDICAL OBSERVATIONS

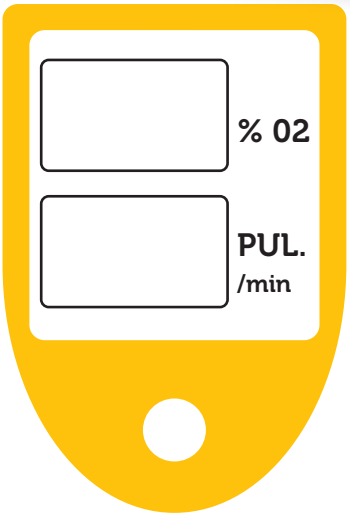
Career Finder
Midwife
Nurse
Paramedic
Doctor

Temperature _____ °C

Blood pressure monitor:



Pulse oximeter:



Recording an ECG

Who uses this kit?
Cardiac Physiologist
Paramedic
Cardiologist

Calculate your heart rate from your ECG

Number of spikes _____ x 12 = _____ bpm

Label the PQRS and T parts of the trace below!

Scan this QR code to watch an interview with a Cardiac Physiologist!

Medical Images: What can you see?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

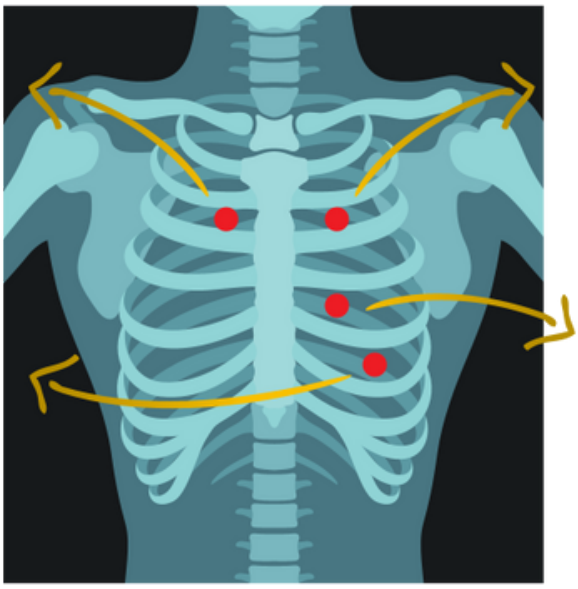
How to use a stethoscope

What did you listen to with the stethoscope? Write it on the line below!

_____

The top 2 listen to the valves in the arteries leaving the heart!

2nd rib space, 1-2 inches from the left side of sternum (breast bone). This listens to your Aortic Valve



2nd rib space, 1-2 inches from the right side of sternum (breast bone). This listens to your Pulmonary Valve

5th rib space, 3-4 inches from the right side of sternum (breast bone). This listens to your Bi-cuspid or Mitral Valve between the left atria and ventricle.

4th rib space, 1-2 inches from the right side of sternum (breast bone). This listens to your Tricuspid Valve between the right atria and ventricle.

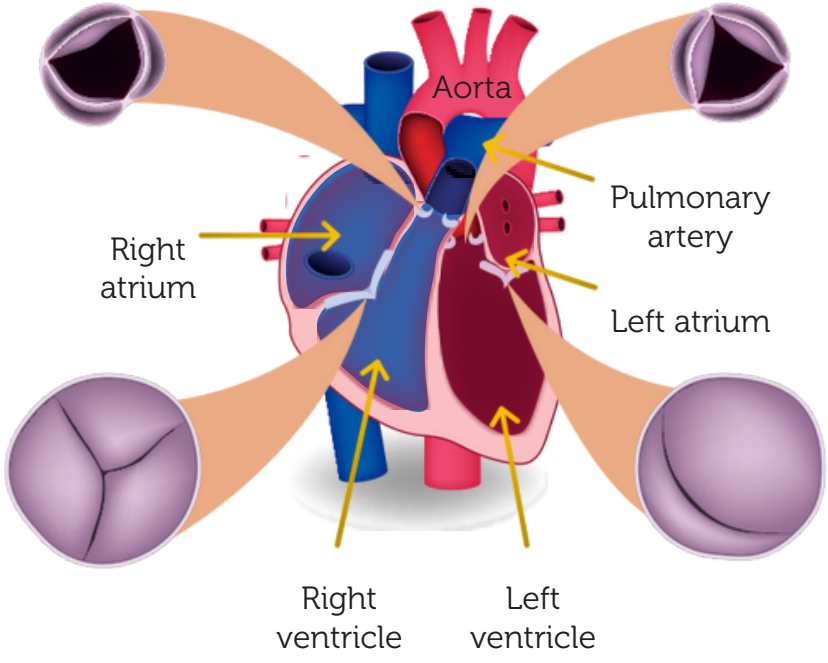
The bottom 2 listen to the valves between the atria and ventricles in the heart!

If there is a problem with a valve the lub-dub sound changes.
Depending on the problem medics can whooshing, rumbling, or hissing type sounds.

Here's where your heart valves are located!

Pulmonary Valve (Open)

Aortic Valve (Open)



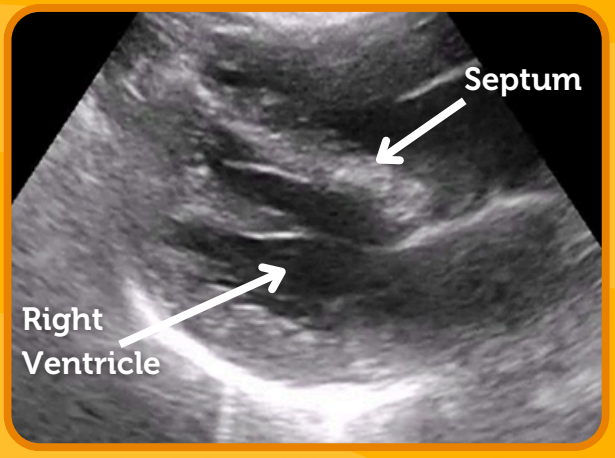
Tricuspid Valve (Closed)

Mitral Valve (Closed)

Ultrasound

An ultrasound uses sound waves to create images of the inside of our body. Most people recognise it from baby scans! However, only 5% of scans in hospitals are on babies! These rest are on other parts of the body, in both men and women!

Today, we're using the curved probe which can 'see' 15-20cm into the body! We are going to look at internal organs such as the heart & liver!



This is Tom's heart! You can see the right ventricle and the septum. The septum is the wall that separates the right and left sides of the heart!

Genetics Bingo

You get half your genes from your mum and half from your dad – so you have two sets of genes. That's why scientists call us "diploid" (di = two!).

Your genes are like instructions that decide things about you, such as your eye colour, height, or hair type. The instructions you carry are called your genotype. What we can actually see – like brown eyes or curly hair – is called your phenotype.

Some genes are stronger (called dominant) and will show up even if you only get one copy of them. Others are weaker (called recessive) and only show up if you get two copies. If you get one strong gene and one weak gene, the strong one shows – but you still carry the weak one and can pass it to your children!

G G

2 Dominant Genes = Dominant Trait

G g

1 Dominant Gene & 1 recessive Gene = Dominant Trait (and a carrier!)

g g

2 Recessive Genes = recessive trait

Take a look at the traits below and on page 4.
Decide if you have the dominant or recessive trait!
Compare your traits to your parents and see if any of them have the opposite trait to you!

Cleft Chin = Dom
No Cleft = Rec

Bent Pinky = Dom
Straight Pinky = Rec

Left Thumb Clasp = Dom
Right Thumb Clasp = Rec

Genetics Bingo

Career Finder
Genomics
Geneticist
Bio-Informatics

Widow's Peak = Dom
Straight Hair Line = Rec

Curly Hair = Dom
Straight Hair = Rec

Straight Thumb = Dom
Bendy Thumb = Rec

Freckles = Dom
No Freckles = Rec

Dimples = Dom
No Dimples = Rec

Brown Eyes = Dom Any other colour = Rec

Tongue Roller = Dom
Can't Roll! = Rec

Detatched Ear Lobe = Dom
Attached Lobe = Rec

Achoo Syndrome = Dom
No Achoo Syndrome = Rec

Coriander = Yum
Coriander = Yuk

Does coriander taste like soap to you?

Whilst this is not a domintant or recessive trait, how you taste coriander can be affectedby your genetics!

If it tastes like soap, chances are you have a genetic mutation of a gene called OR6A2 (catchy, eh!).

This codes for the olfactory receptors in your nose and makes them more sensitive to a group of chemicals called 'aldehydes' which are also found in soap!

Check out more on today's activities here: medicalmavericks.co.uk/for-parents