



LEONARDO
500

OBSERVING THE BODY THROUGH ART & SCIENCE
A resource for KS2 teachers inspired by Leonardo da Vinci

CONTENTS

ARTISTS AND DRAWING

SKETCHBOOKS AND GETTING STARTED

RESEARCHING AN ARTIST

SKETCHING THE BODY WITH DIFFERENT DRAWING TOOLS

OUR BODIES INSIDE

Activities

Discussion,
questions & prompts

RESEARCH LINKS

SKETCHBOOK
IDEAS



Artists and drawing...



DISCUSS: *What is drawing?*

- ▶ **What do drawings look like?**
- ▶ **List some tools people use to draw.**
- ▶ **Over 500 hundred years ago, when Leonardo da Vinci was alive, what do you think people drew? Why?**
- ▶ **Today, where do you see drawings? Why are they there?**
- ▶ **Why does drawing matter in our lives?**

DRAWING CAN... *help us identify places, people and things*

Leonardo da Vinci lived and worked in Italy over 500 years ago. As an artist, scientist and inventor, he used drawing in many ways.



Leonardo drew studies to identify and label flowers. Share a time you made a labeled drawing?

The seed-heads of two rushes (*Scirpus lacustris* and *Cyperus* sp.), with notes c.1510
Pen and ink



DRAWING CAN... *help us identify places, people and things*

Leonardo also made maps to identify and label places. These drawings helped people understand and navigate the world around them.

Can you draw a route from your classroom to the playground from memory?



A map of the Valdichiana c.1503-6
Black chalk, pen and ink, wash, blue bodycolour

DRAWING CAN... *help observation skills*



Leonardo would follow an interesting person all day to capture their likeness.

As an illustrator, Jim Medway observes and draws interesting people and places for his books.

Jim's drawings, like this self portrait, illustrate this resource.

LEFT: A pair of grotesque figures c.1490 Pen and ink
RIGHT: Jim Medway self-portrait, 2019



DRAWING CAN... *help observation skills*

“Drawing helps me spend time really looking. I always carry my sketchbook in case I see something worth capturing. A drawing can become a story later.”

Jim Medway

***What characters
do you notice on
your way to
school?***

Jim Medway sketchbook
c. 2018



DRAWING CAN... *help practise and plan*



Lord Frederic Leighton was an English artist.

Notice how he used sketching to plan final artworks like this one, which you can visit at Manchester Art Gallery.

Chalk drapery Study for 'The Last Watch of Hero' and oil painting by Lord Frederic Leighton 1887



DRAWING CAN... *help us analyse*

Drawing helped Leonardo study and understand the science behind the flow of water. Scientists can use drawing to explain their discoveries.

Antony Hall is an artist who also works with science.

“Drawing is still important in this age of technology. There are things I can show in a drawing that I can’t with a photo.”

Antony Hall



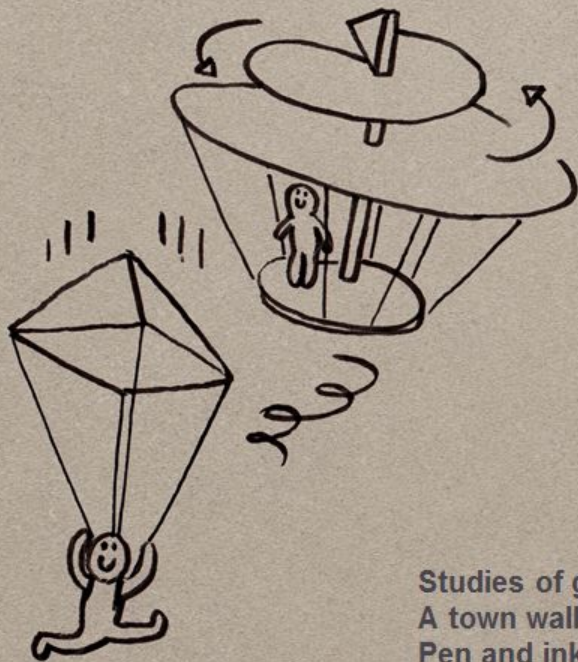
Detail from *Studies of flowing water*
c.1510-13

Antony Hall sketchbook c. 2019



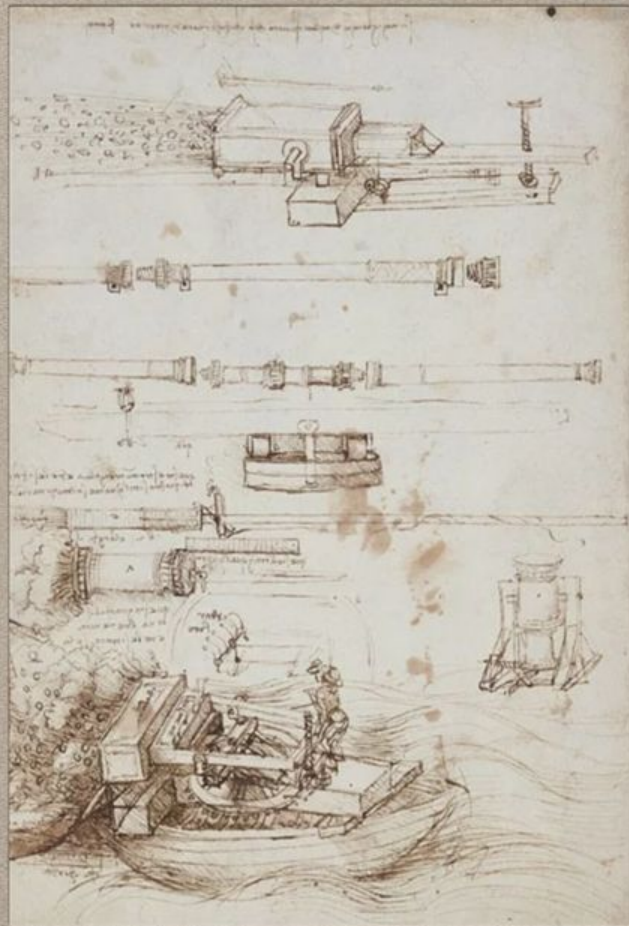
DRAWING CAN... *help us innovate*

When designing inventions, Leonardo used drawings to solve problems and develop his ideas.



*Can you think of a
time when you
have solved a
problem?*

Studies of gun-barrels and mortars.
A town wall being blown up. c.1485-90
Pen and ink over metalpoint



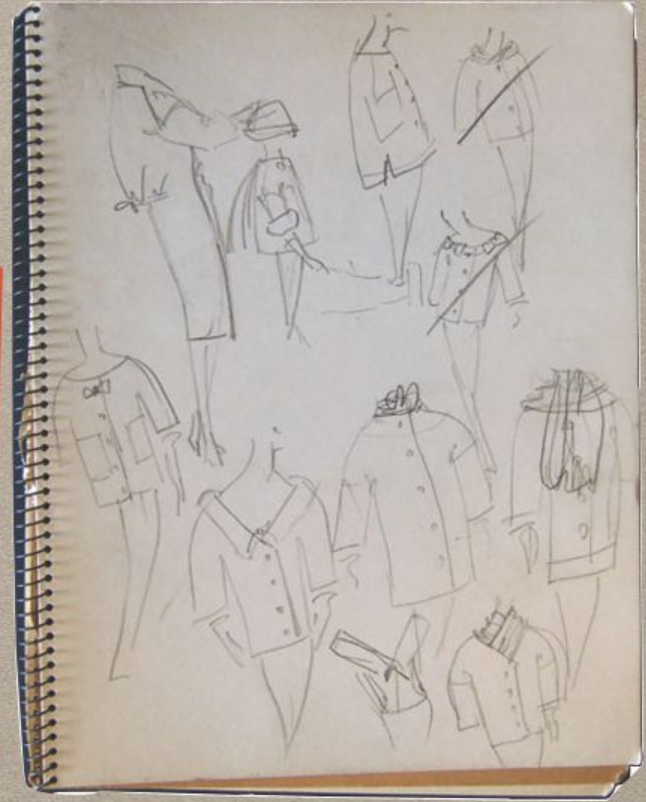
DRAWING CAN... *communicate ideas*

Fashion designer Christian Dior drew 'trend sketches' to explain ideas to his design team. They then turned his sketches into more detailed designs for clothes.



Dress & jacket, Christian Dior, 1958

Can you think of a time when a drawing helped explain something to you?



Christian Dior sketchbooks, 1950-1957

DRAWING CAN... *help our wellbeing*

Naomi Kendrick is an artist who lives and works in Manchester today. She makes marks mindfully, whether drawing in her pocket sketchbook or in a large-scale artwork.



“Sketching helps me slow down and the act of drawing focuses my mind. I find it relaxes me.”

Naomi Kendrick

**What
helps your
wellbeing?**

“Drawing can be very peaceful because you are able to concentrate – and the good thing is you will be calm.”

Omar, aged 8

Sketchbooks and getting started



DISCUSS: How might you use your sketchbook?

- ▶ ideas and notes
- ▶ methods for experiments - and results
- ▶ plans and designs
- ▶ observations
- ▶ personal reflections

“It’s in my sketchbook where I decide what’s important in telling a story - what to keep and what to leave out.”

Illustrator Jim Medway

MAKE YOUR OWN ECO SKETCHBOOK

YOU WILL NEED:

- ▶ Lots of recycled **paper** (make sure you've got some A4) envelopes, labels, scraps

- ▶ Metal Book Binder Rings to fasten (1.5 inch for easy page turning)...



WHY NOT TRY...
getting started with a colour sample or mark making page inspired by Leonardo's artworks or sketches?

- ▶ Hole punch

- ▶ ...Or ribbons (tape the ends of your ribbon to make it easier to thread through the punched holes in your sketchbook pages)



- ▶ 2 x grey board for back and front **cover** (a bit bigger than your sketchbook, thick and good to lean on.)



SKETCHBOOK STARTER...

Choose an approach to fill your first sketchbook page.

DRAWING FORWellbeing

- Draw around your hand
- Fill the space inside with mindful marks.



The blank page doesn't have to be daunting!
You don't need a plan.

This is your drawing
There are no mistakes.



DRAWING FOR... Analysis

- Draw around your hand
- Look at your hand for 1 minute. Ask yourself what you see and how your hand feels.
- Draw or write your observations on your hand drawing.

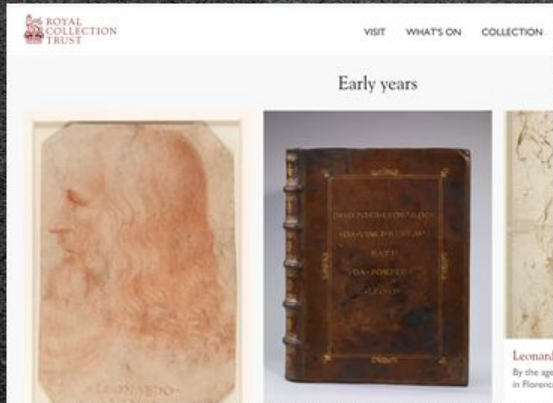
Researching an artist

RESEARCH...*Leonardo's life*

BORN... any important life events and work along the way?...DIED

After you've found out some facts (*you can use the links below*), follow the prompts on the next page to make a '*Leonardo research mind map**'.

**Making mind maps can help us analyse, understand, recall and generate ideas from our research.*



[ARTWORKS – Leonardo da Vinci: A Life in Drawings](#)

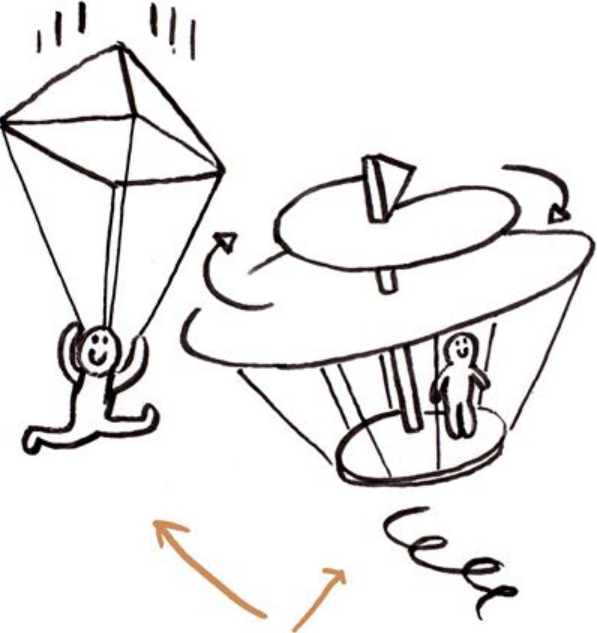
[Leonardo Da Vinci TIME LINE](#)

[INSIDE THE AMAZING MIND OF LEONARDO DA VINCI](#)

MAKE a Leonardo research mind map

1452
~1519

A Leonardo artwork that inspires me...
A famous classic or one of his sketches?



ADD YOUR
MIND MAP
TO YOUR
SKETCHBOOK

An invention that intrigues me...
Flying? Military?
Robotic? Architecture?
Engineering?

A scientific observation that WOWs me...
Optics? Anatomy?
Botany? Geometry?

Sketching the body with different drawing tools

Warming up and taking notice

To be either a skilful artist or scientist, you have to be good at noticing things. So let's practise really looking...

- ▶ Get in a circle with someone in the middle (standing legs slightly apart, one hand on hip is a good pose)
- ▶ Before you draw, take time to take notice the shapes and lines in front of you.



**Don't peek at
your page -
weird can be
wonderful!**

**Don't worry
About making a
perfect drawing and
more about learning
to really look.**



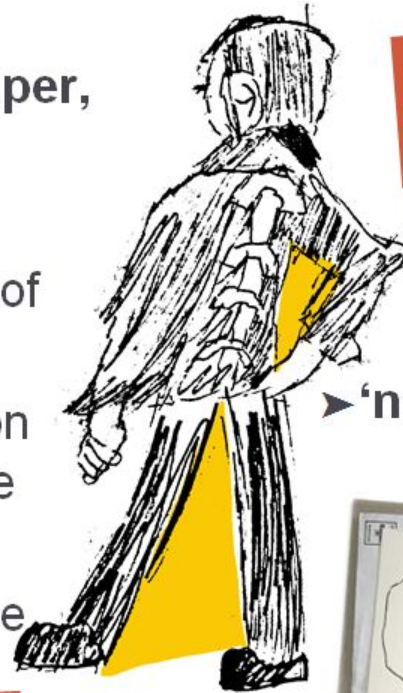
Warming up and taking notice

Look only at the person and not your paper, to create a line drawing of them.

Take notice:

- ▶ Is it a round or oval head sitting on top of the neck?
- ▶ What **'negative'** shapes do the hand on hips/legs apart make? How far does the length the arm reach down the leg?
- ▶ Where are you positioned? Can you see a full face, back of head or profile (side view of face)?

Ignore what you *think* a person should look like: what do you see right now?



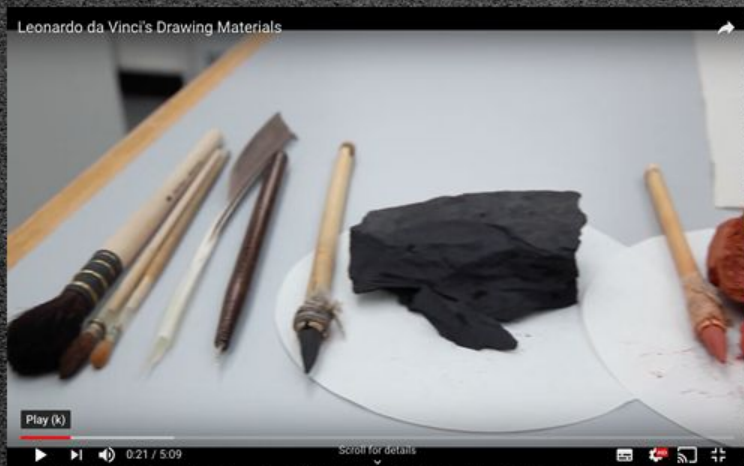
ADD YOUR DRAWINGS TO YOUR SKETCHBOOK

▶ **'negative' shapes**



RESEARCH *Drawing materials*

Just as there is more than one way to draw, there is more than one tool for the job. Leonardo used different drawing instruments.



[FIND OUT MORE about Leonardo's drawing materials in this 5 minute video from the Royal Collection Trust](#)



A pair of grotesque figures c.1490
Using a quill made from goose's wing feather



A design for an equestrian monument c.1485-8
Using metalpoint on blue prepared paper



The head of a youth in profile c.1510-15
Using red and black chalk on red prepared paper

Drawing the body

Make drawing stations with different activities at each (you can repeat the stations i.e. have 4 charcoal stations)

- ▶ Position the class in a circle around a person in the centre (a good pose is legs slightly apart, one hand on hip)
- ▶ Move clockwise around the stations to try different viewpoints and drawing materials

WHY NOT?...Take it in turns to sketch on top of one drawing to create a collaborative artwork

ADD YOUR DRAWING TO YOUR SKETCHBOOK



Drawing stations



TRY... quill and ink

Make your own quill just like Leonardo – use ink with a feather or straw.

WHY NOT TRY... making your own ink from blackberries? [QUILL](#) [INK](#)



TRY... make a drawing tool with a chopstick



TRY... drawing with both hands

ADD YOUR DRAWINGS TO YOUR SKETCHBOOK

Henri Fantin-Latour
Seated male figure, undated
Charcoal



TRY... chalks and charcoal

Drawing the body

Leonardo da Vinci drew living people to understand how our bodies move and work.



Have you ever wondered how Humans stand up and move without falling?

LEFT: Studies of an infant c.1506-8
Black chalk, pen and ink

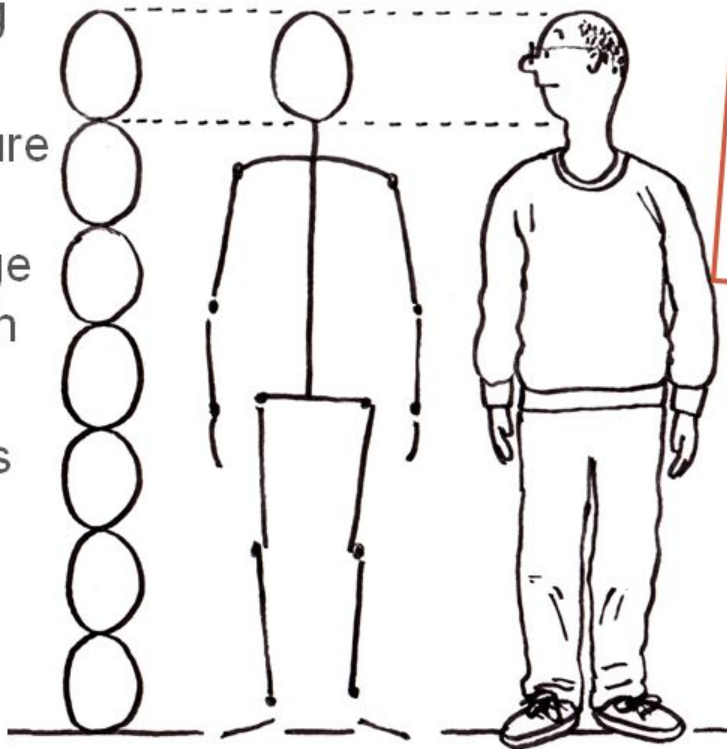
RIGHT: Figures in action c.1508
Black chalk, pen and ink



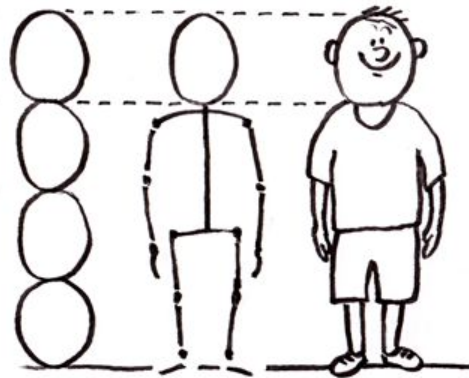
Body proportions

Drawing methods can help artists and scientists draw accurately.

- Draw a person, starting with the head first.
- Use the head to measure the rest of the body on your page. The average is: adult - 7 'heads' high
child - 4 'heads' high
- Can a classmate guess the person's age from your proportions?



HAVE YOU NOTICED
Cartoonists give
young characters
disproportionately big
heads?

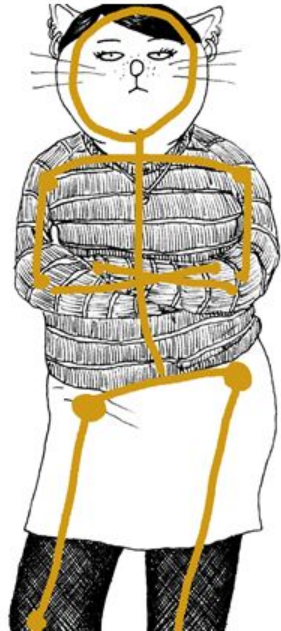


**ADD YOUR DRAWINGS
TO YOUR SKETCHBOOK**

Body joints

Have you ever drawn a stick figure? Why not try this more detailed version.

- ▶ Find some action photos in newspapers. Draw the main bone structure and joints on top of the picture.
- ▶ Now you've practised, try drawing your friends posed in action shots.



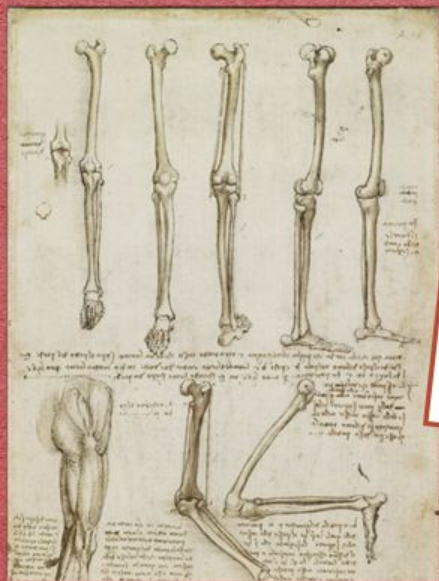
ADD YOUR DRAWINGS
TO YOUR SKETCHBOOK



Our bodies inside

RESEARCH: *Inside the body*

Leonardo made detailed sketches of the skeleton to help him understand the human body and make better drawings.



The bones and muscles of the leg c.1510-11
Pen and ink with wash over black chalk

Have you ever wondered what we would look like without a skeleton? What do you think would happen?



The muscles of the shoulder, arm and neck c.1510-11
Pen and ink

Look at Leonardo's study of muscles and bones:

LEONARDO DA VINCI THE DANCING SKELETON

Armography Graceful Ballet Arms

(“Arm-o-grafi”) – dancing with your arms
Leonardo drew these arms to show the muscles that are under the skin.

When you move your thumb you can see the tendons move under your skin. Try it...

The position of the hand in Leonardo's drawing is similar to this ballet dancer's in the pose called the second position.

1510/11

RESEARCH: *hands*

Leonardo's detailed sketches, labels and notes about bones and muscles helped him understand how the body works inside.



TRY... looking online for artistic and scientific images of hands to see what's under your skin.

WHY NOT... make drawings from models?



The bones, muscles and tendons of the hand c.1510-11
Black chalk, pen and ink, wash



Study of Hand for King Cophetua and the Begger Maid, about 1833
Edward Burne-Jones,
Graphite on paper

Make a model hand

Leonardo made drawings of mechanical bodies. Have a go at making your own articulated hand.

STEP 1 Draw around your hand on corrugated cardboard and cut out.

TOP TIP make sure the corrugated cardboard's ridges run in the same direction as the bends of the joints



STEP 2 Measure the sections of your hand, then cut straws to the lengths you've noted down.



STEP 3 Sellotape the straws to the hand, then thread in some string through, taping the ends to your 'fingertips'.

WHY NOT MAKE A LABELED DIAGRAM OF THE HAND BONES & MUSCLE FUNCTIONS IN YOUR SKETCHBOOK?



STEP 4 On the other sellotape elastic bands, these will work a bit like your tendons. Research how the tendons work and make notes in your sketchbook.

RESEARCH...Leonardo's body studies

Leonardo explored the insides of real bodies to find out about the human circulatory and digestive system.



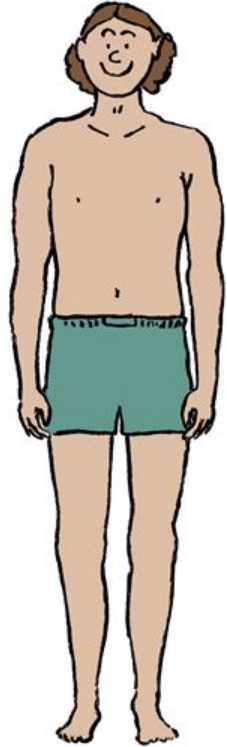
LEFT: The Major
Organs and vessels
c.1485-90
Black chalk, pen and
ink, green wash

RIGHT: The
gastrointestinal tract,
and the bladder
c.1508
Pen and ink over
traces of black chalk

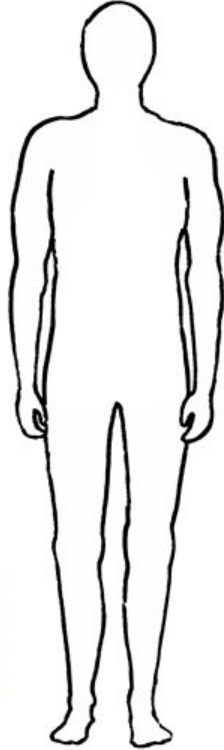


Label the body

- Draw/cut out and stick in the bodies below.
- Label skeleton and describe the functions of the digestive system.



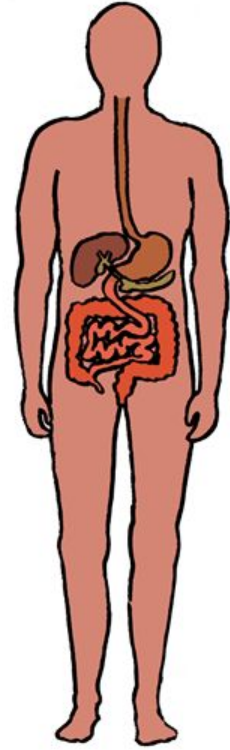
WHY NOT...
Draw the skeleton or digestive system in the body outline?



BODY

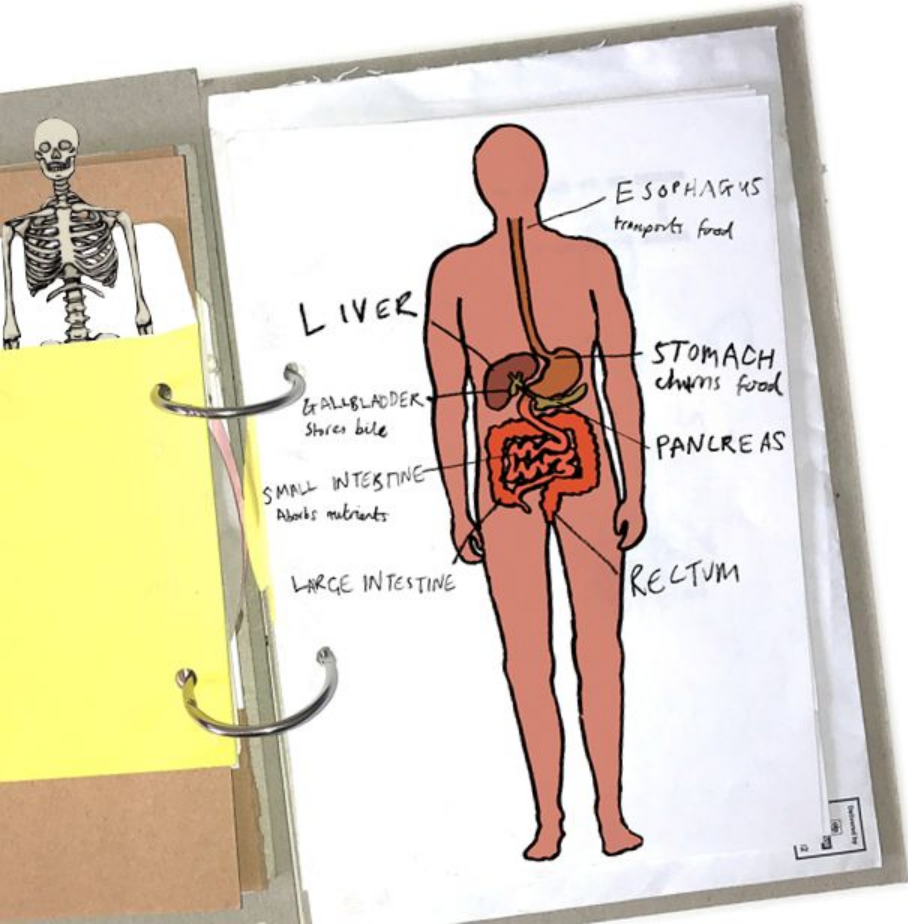


SKELETON



DIGESTIVE SYSTEM

Sharing your sketchbooks



FRIENDLY FEEDBACK

- ▶ Swap sketchbooks with your neighbour
- ▶ Share what your favourite pages are and why
- ▶ Which drawings did you enjoy making most?
- ▶ Did any types of drawing help you learn more?
- ▶ Anything you'd do differently next time?



LEONARDO
500

The development of this resource was funded by the Esmée Fairbairn Foundation and supported by Royal Collection Trust / © Her Majesty Queen Elizabeth II 2019

interference Art, Manchester Art Gallery and One Education teamed up with Button Lane Primary, Chorlton CofE Primary and Cravenwood Academy to create a teaching resource in response to Leonardo: A Life in Drawing exhibition. The ideas and learning have informed this resource developed for aimed at 7-9 year olds