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

© Royal Collections Trust
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

Antony Hall sketchbook c. 2019

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

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

“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
- 2 x grey board for back and front cover (a bit bigger than your sketchbook, thick and good to lean on.)
- Metal Book Binder Rings to fasten (1.5 inch for easy page turning)
- Hole punch
- …Or ribbons (tape the ends of your ribbon to make it easier to thread through the punched holes in your sketchbook pages)

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

Choose an approach to fill your first sketchbook page.

DRAWING FOR ....Wellbeing

➢ 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

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

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

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

ADD YOUR MIND MAP TO YOUR SKETCHBOOK
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.

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

FIND OUT MORE about Leonardo a drawing materials in this 5 minute video from the Royal Collection Trust
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

TRY... chalks and charcoal

Henri Fantin-Latour
Seated male figure, undated
Charcoal

© Manchester City Galleries
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.

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

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

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

Look at Leonardo’s study of muscles and bones:
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 Beggar 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’.

**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.

**WHY NOT MAKE A LABELED DIAGRAM OF THE HAND BONES & MUSCLE FUNCTIONS 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?
Sharing your sketchbooks

- 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?
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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.