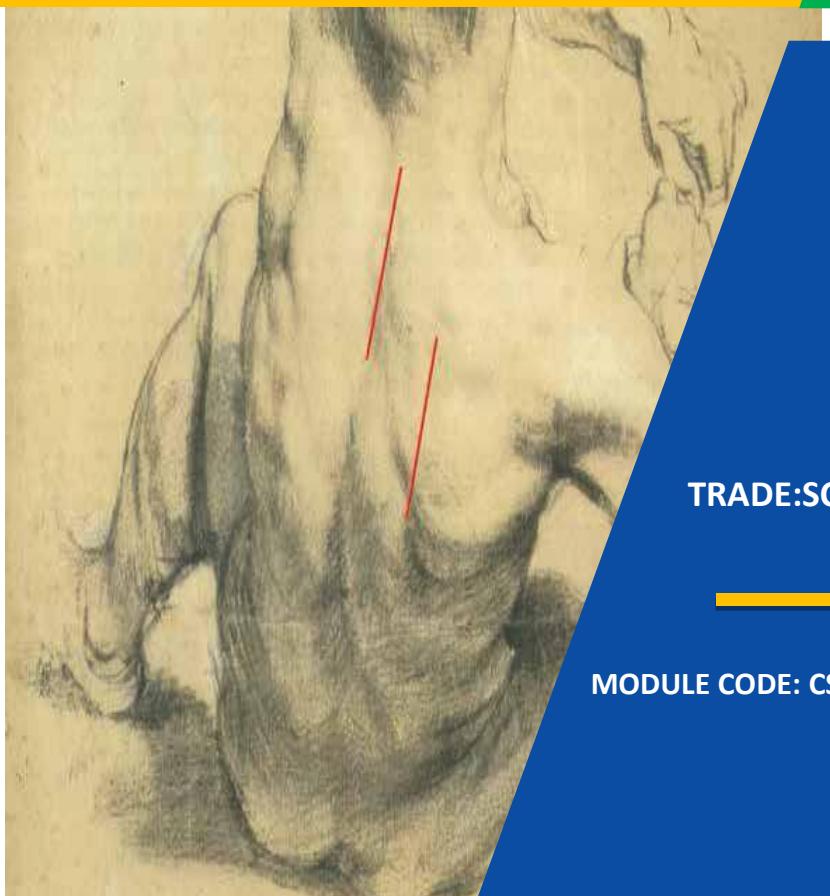




RQF LEVEL : 5



TRADE:SCULPTURE AND CERAMIC

MODULE CODE: CSCAD 501

TEACHER'S GUIDE

Module name : APPLY ANATOMY FOR PLASTICIAN ARTIST



MODULE NAME: APPLY ANATOMY FOR PLASTICIAN ARTIST

Table of content

Acronyms

3D: Three dimension

Prop: proportion

Lu: learning unit

Lo: learning outcome

Ic: indicative content

BCE: Before Christ

Introduction

This module describes the skills, knowledge and attitude required to the trainee to be able to identify Anatomy for Plastician artists, and apply instructions of that, it means that he/she will be able to draw all kinds of human body according to the proportion, anatomy and all techniques used.

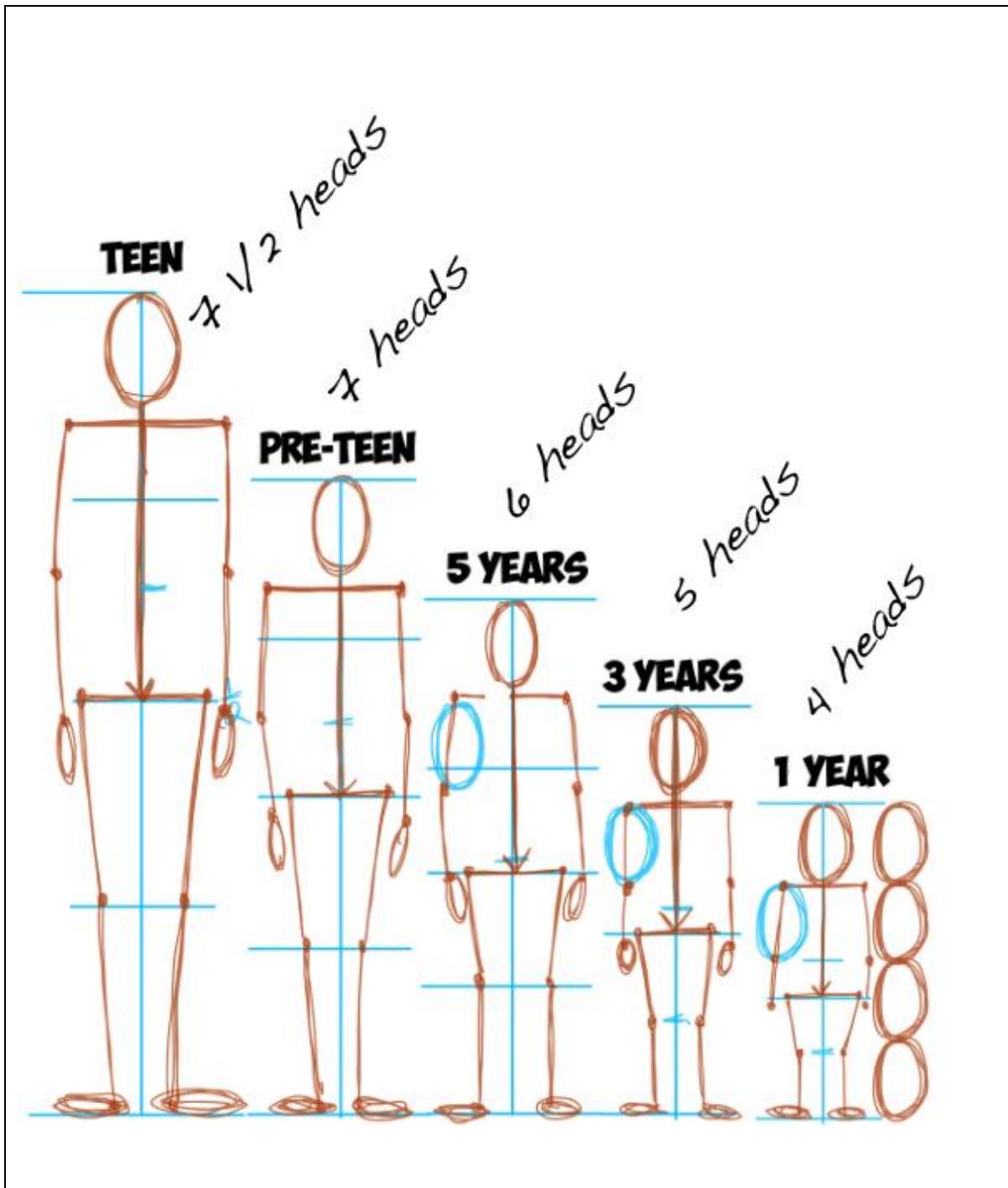
Module Code and Title: Apply sculpture for plastician artist: CSCAD501

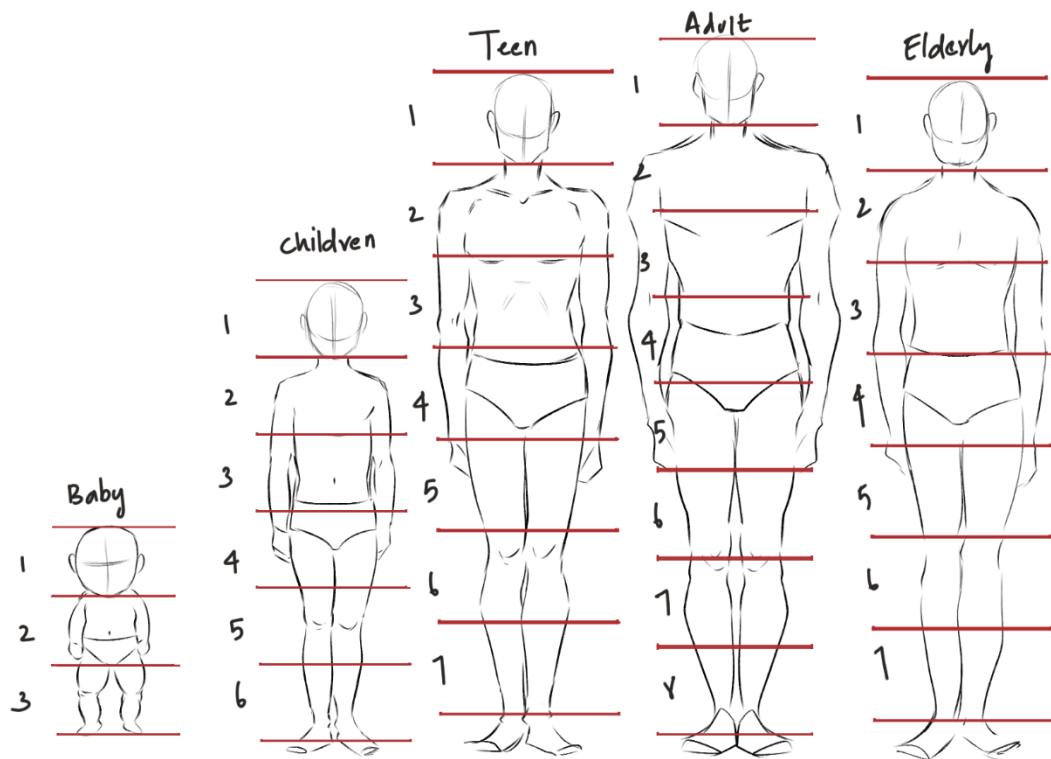
Learning UNIT 1: IDENTIFY PROPORTIONS BY AGE

Learning UNIT 2: APPLY DRAWING A SKELETON IN MOVEMENT

Learning UNIT 3: APPLY DRAWING MUSCLES IN MOVEMENT

Learning UNIT 1: IDENTIFY PROPORTIONS BY AGE





LEARNING OUTCOME

- 1.1: Proper identification of proportions canon according to the child
- 1.2: Proper identification of proportions canon according to the teenager
- 1.3: Proper identification of proportions canon according to adults.

LEARNING OUTCOME: Proper identification of proportions canon according to the child



Duration: 10hrs



Learning UNIT 1 objectives :

By the end of the learning outcome, the trainees will be able to:

1.1: identify of proportions canon according to the child

1.2: identify of proportions canon according to the teenager

1.3: identify of proportions canon according to adults.



Resources

Equipment	Tools	Materials
Libraries	-Papers	Drawing board
Workshop	- Pen	Books
Workbench	- Eraser	Printer,
Laptop	- Pencil	Projector,
Books	- drawing board	Laptops
		tablets

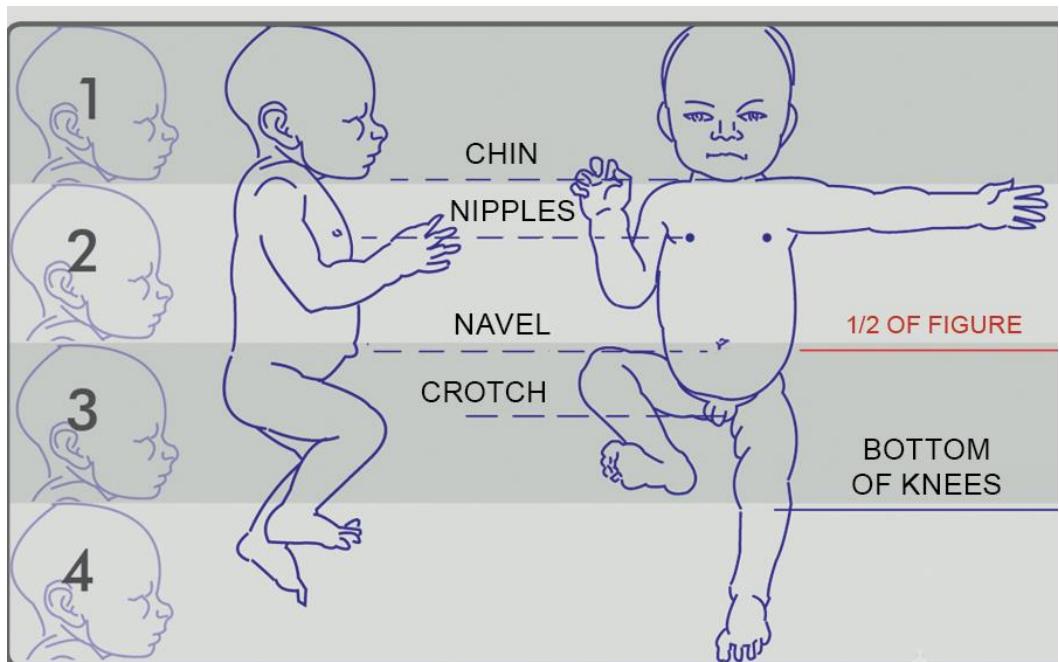


Advance preparation:

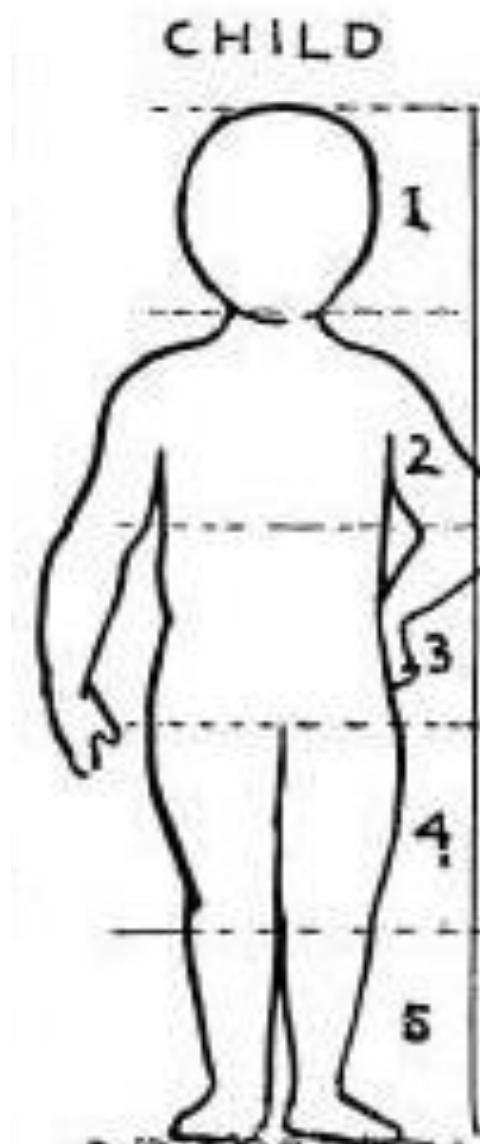
- . internet
- . book reference
- .

Content: Identify proportions canon according to the child

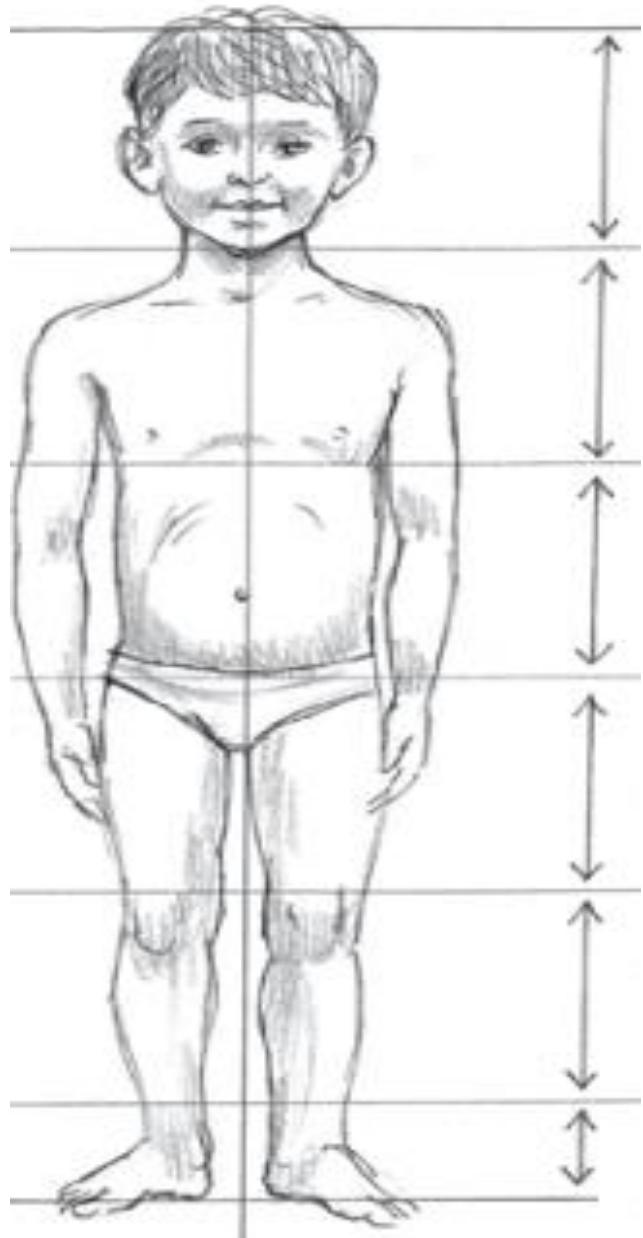
- The proportion of newborn
- ✓ 4 head units



- The proportion of toddler:
 - ✓ 5 head units

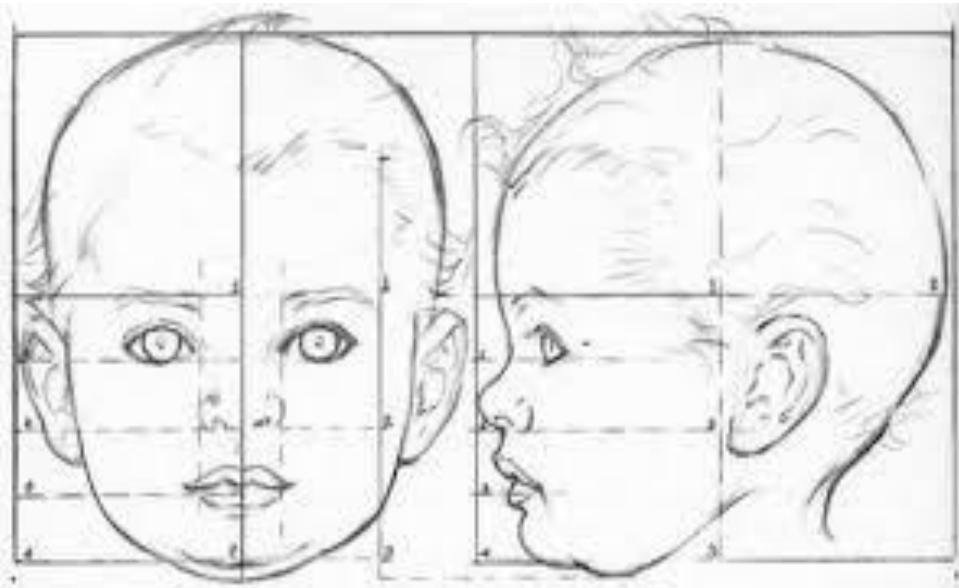
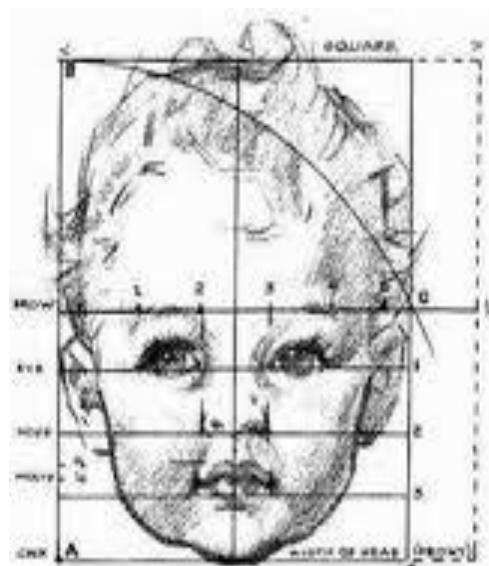
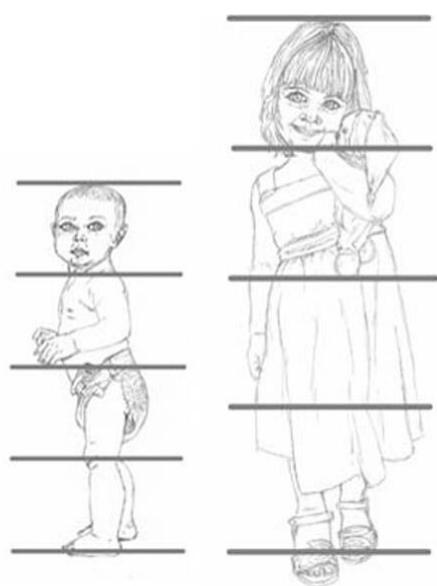
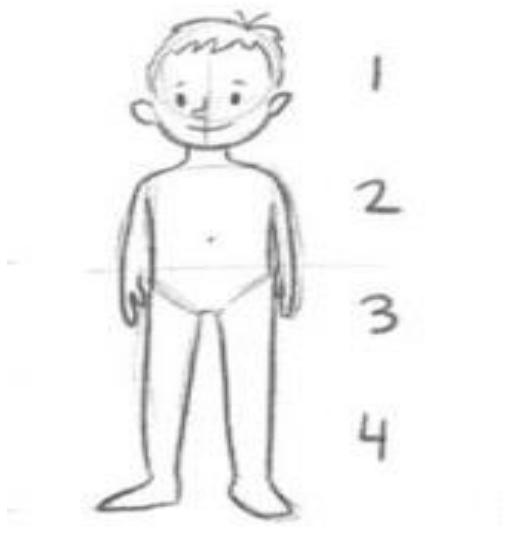


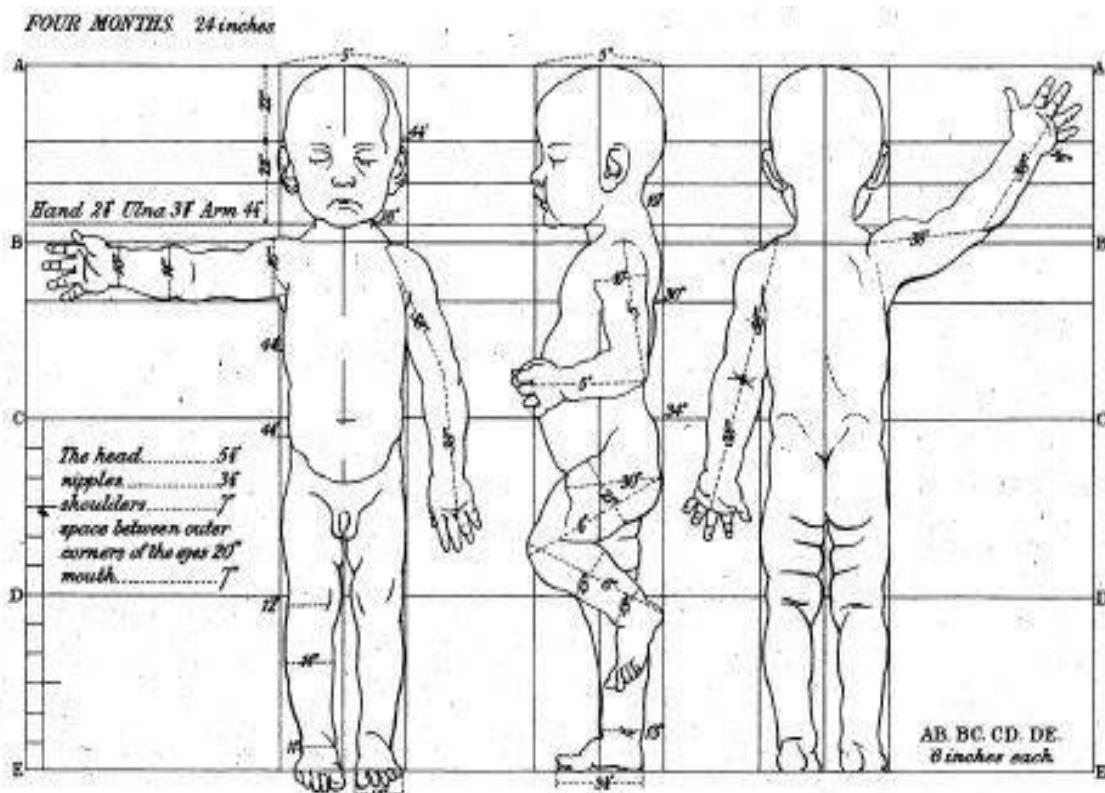
- The proportion of child:
5.5 head units



The proportion of newborn

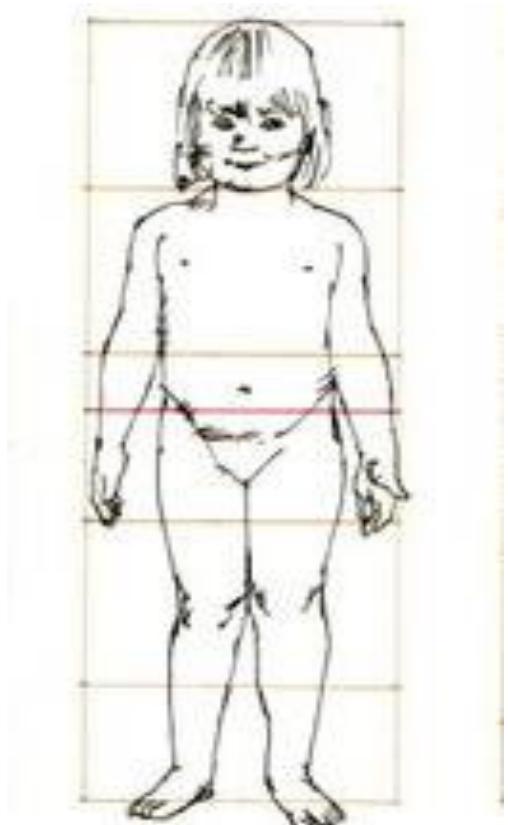
✓ 4 head units. Examples



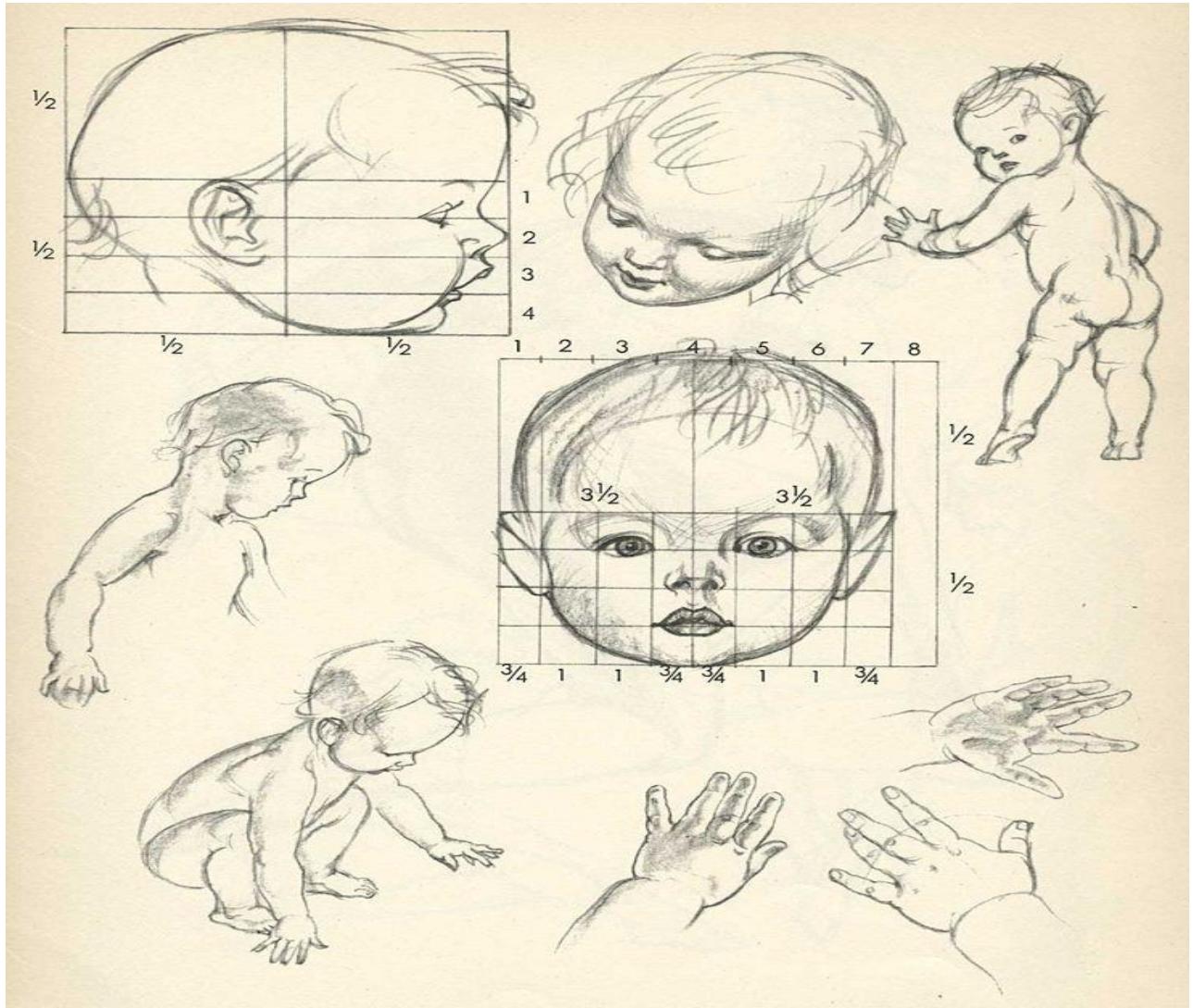


At birth, a baby's head is relatively large, making up one-quarter to one-third of his or her total body length.

- The proportion of toddler:
- ✓ 5 head units



- ✓ A toddler is a child 12 to 36 months old. The toddler years are a time of great cognitive, emotional and social development. The word is derived from "to toddle", which means to walk unsteadily, like a child of this age. Example



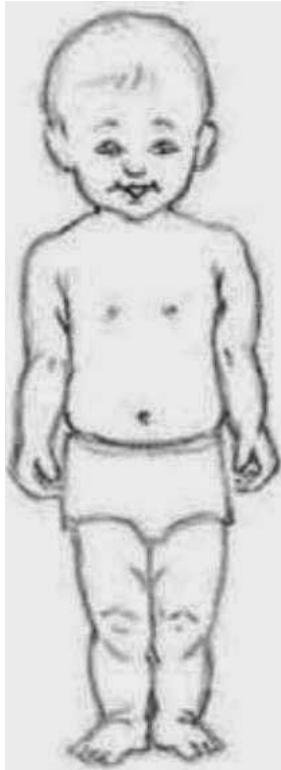
- CHILDREN'S BODY PROPORTIONS

Drawing children can be challenging because you have to get their proportions just right or your drawings will look odd. Children's proportions are much different than adults', and children's proportions change as they age. For example, a baby's head is extremely large in proportion to its body—but as the child grows up, the head becomes smaller in proportion to the body. Additionally, a child's head is wider than it is long, so it's rounder than that of an adult. If your drawings of children look too old, make sure you're not using adult proportions!

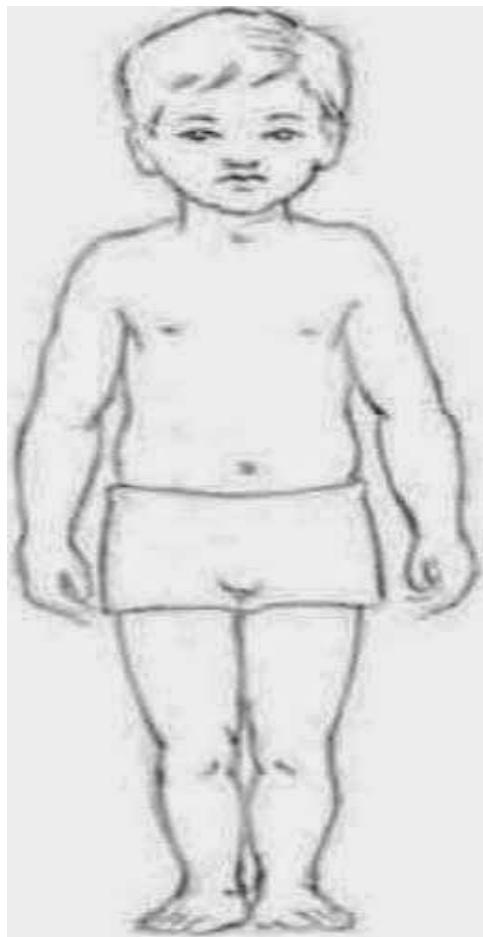
Proportion Scale for Growth Years Infants' bodies are short, making their torsos and limbs appear proportionately thicker. As infants grow into toddlers, their faces and bodies begin to elongate. By age five, children are about half as tall as they will be as adults; and by age eight, growth spurts will add another 1 to 2 heads in height, further elongating the body. By the early teens, the face has elongated to such a degree that the eyes are almost at the center line of the face (where they are located on adults' faces); the change in proportion results in

a less chubby look, thus we say bodies lose their "baby fat." People reach their full adult height between the ages of 18 and 20; musculature is still developing, but adult proportions have been achieved.

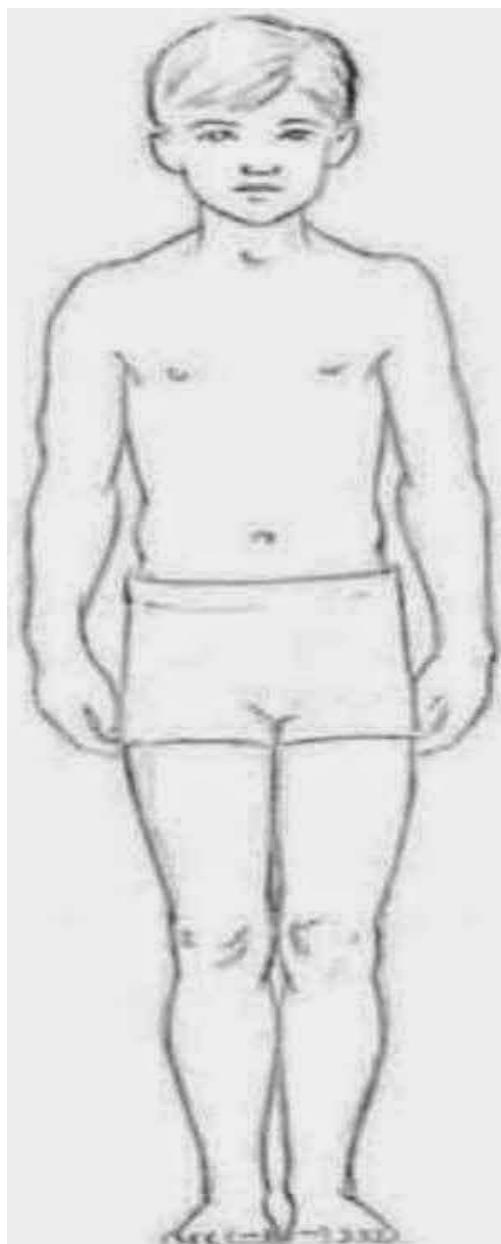
Note: These proportions and observations are based on averages; carefully study your subjects to determine their individual proportions.



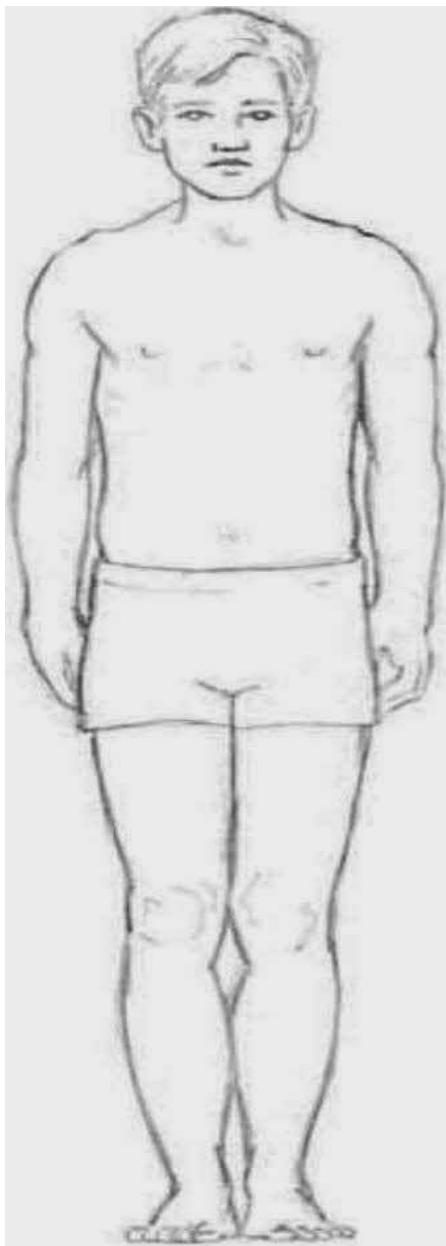
Toddler (3-3/4 heads tall)



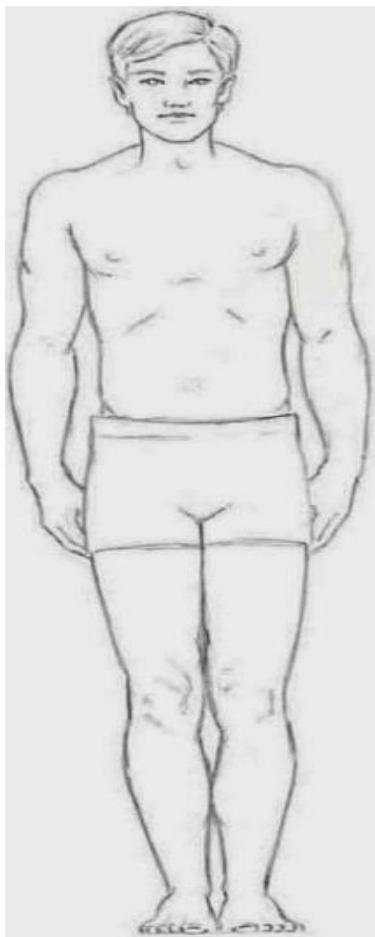
Age five (4- 1/2 heads tall)



Age eight (6 heads tall)



Young teen (6- 1/2 heads tall)



Older teen (7 heads tall)

Children's proportions are much different than adults', and children's proportions change as they age. For example, a baby's head is extremely large in proportion to its body-but as the child grows up, the head becomes smaller in proportion to the body. Additionally, a child's head is wider than it is long, so it's; rounder than that of an adult. If your drawings of children look too old, make sure you're not using adult proportions!

Another examples of child's proportion is that between 4heads of total human body for newborn, 5heads unit for toddler, and 5 heads for child.



Theoretical learning Activity

1. Discuss on child proportion

Answer:

Children's proportions are much different than adults', and children's proportions change as they age



Practical learning Activity

- ✓ Practical exercises of drawing children



Points to Remember

- To know Conon of human proportion of child
- Proportion canon according to the teenager
- Proportion canon according to adults

Learning Outcome 1.2: Identify proportions canon according to the teenager



Duration: 10 hrs



Learning outcome 1.2 objectives :

By the end of the learning outcome, the trainees will be able to:

Identify Child and teenager proportions (Ages 8 - 12) - 6 head units

Identify child and Teenager proportions - 7 head units



Resources

Equipment	Tools	Materials
Internet, Computer lab Printer, Library, Documents about art history	pencils, Pens, notebooks	Printer, Projector, Laptops tablets



Advance preparation:

- internet references
- book references
- drawing board

canon of proportion

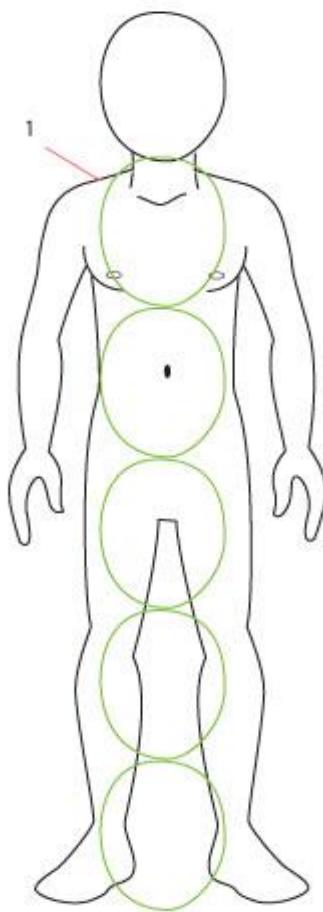
A system of mathematical ratios based on measurements of parts of the human body, designed to create ideal proportions for the human figure in art. Illustration of the canon of proportions of the Greek sculptor Polycleitus (5th century BCE)

Proportions for teenager

Child (5 - 11 years)

In normally-fed children, all baby fat is gone, but the muscles are still infantile, so the body looks skinny. Body proportions change from 5.5 heads in early childhood, to 6 heads between 7 and 9, bearing in mind that the speed of growth is unequal – some children look younger than their age and some grow so fast they look like teenagers. This balances itself out before adulthood, with a growth spurt for the former and a slowing down for the latter. Note also that in children, the face occupies a smaller area of the head than in adults.

Example : 6 heads units



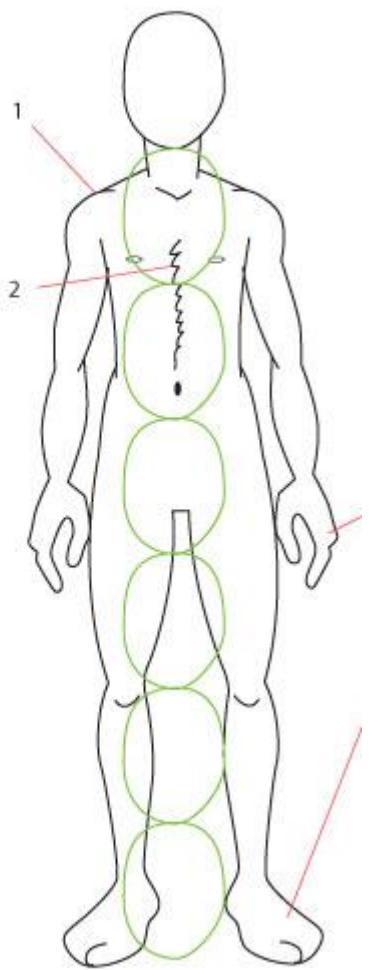
- ✓ The neck grows out of an almost horizontal shoulder line (instead of the trapezius of adults because these muscles are not developed).
- ✓ The eyebrows still appear high.
- ✓ The ears grow before other features so they look large for a while.
- ✓ Thin neck
- ✓ The chin becomes defined, but not yet strong.
- ✓ The nose looks short because it's still upturned.
- ✓ The nose bridge gains dimension.

The face contours start to appear, but are still soft.

Adolescent (12 - 17 years)

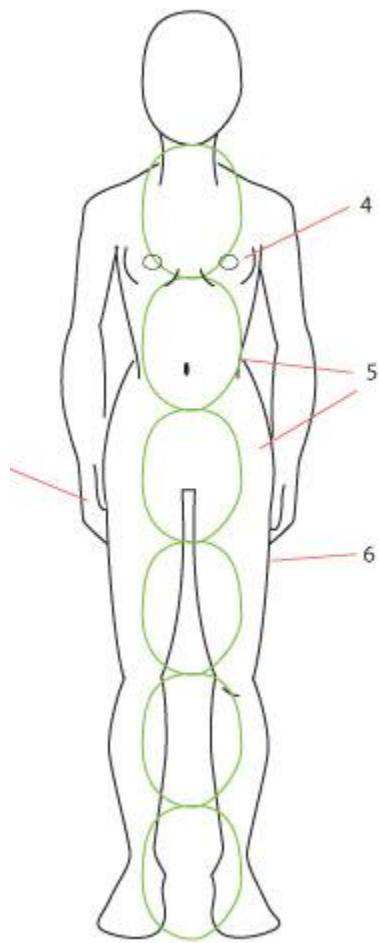
Females actually begin puberty between 8-13 years of age, with males starting between 9.5 and 14 years. *Height= 6.5 to 7 heads* (males are taller).

Male

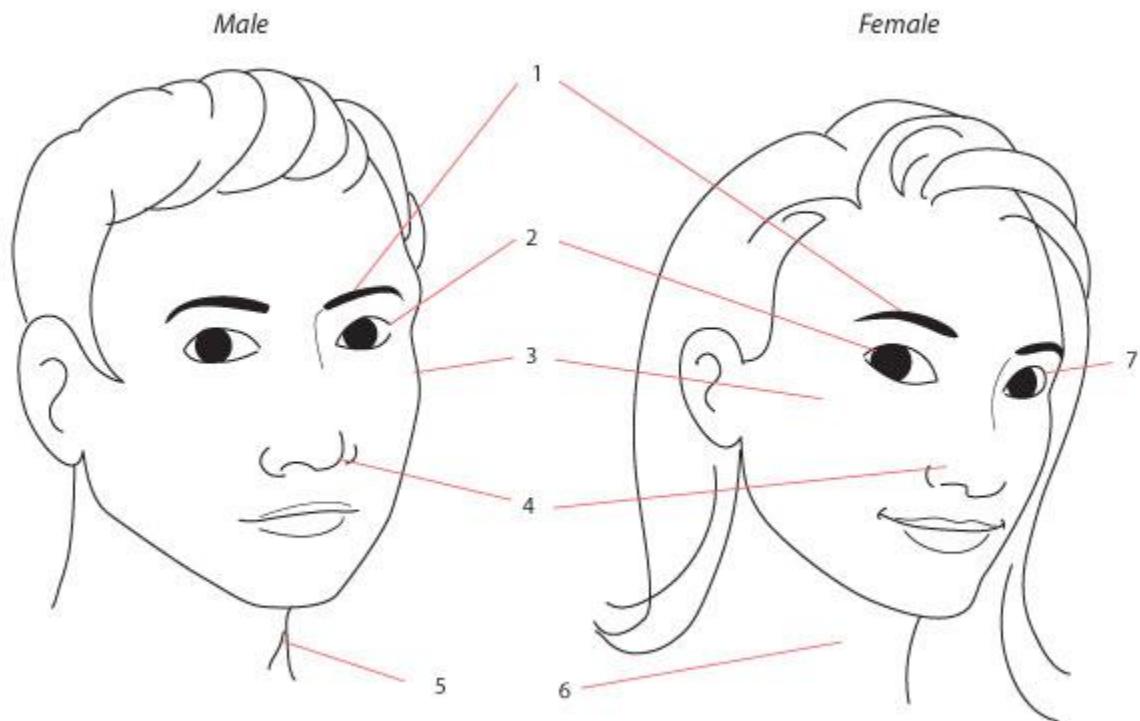


- ✓ In males, shoulders broaden.
- ✓ Hair appears on the body, legs, arms and face.
- ✓ The feet, arms, legs and hands may grow faster than the rest of the body, leading to the gangly look and feeling of clumsiness.

Female



- ✓ In females, the development of the breasts is the first sign of puberty, but they don't reach their full size until adulthood. First the breasts form small mounds, then the areola gets larger. The breast keeps growing from there.
- ✓ The waist gets smaller and the hips get wider.
- ✓ Fat may increase in the buttocks, legs and stomach.



- ✓ The eyebrows are full and lower on the eyes, attenuating the wide-eyed look of childhood.
- ✓ The most noticeable difference with adult faces at this point is the size of the eyes, which are still large.
- ✓ The bone structure is in place but still softened by a full face.
- ✓ As the nose take its adult shape, it looks longer.
- ✓ In males, the neck is thicker, the Adam's apple appears.
- ✓ In females, the neck remains slender, with NO Adam's apple.
- ✓ Eyelashes can be left out to convey adolescence, as their presence in a drawing tends to make a female look older.
- The proportions started between 5-11 years old and their Body proportions change from 5.5 heads in early childhood, to 6 heads between 7 and 9, bearing in mind that the speed of growth is unequal – some children look younger than their age and some grow so fast they look like teenagers. This balances itself out before adulthood, with a growth spurt for the former and a slowing down for the latter. Note also that in children, the face occupies a smaller area of the head than in adults



Theoretical learning Activity

Discuss on the proportion of the teenager



Practical learning Activity

Draw teenager by respecting the canon of human proportion



Points to Remember (Take home)

Learning Outcome : 1.3 Proper identification of proportions canon according to adults.



Duration: 10 hrs



Learning outcome 1.3 objectives :

By the end of the learning outcome, the trainees will be able to:

Identifying proportions of Adult

Identify Realistic adult proportions of 7.5 head units

Idealize adult proportions of 8 head units



Resources

Equipment	Tools	Materials
Internet, Computer lab Printer, Library, Documents about art history	pencils, Pens, notebooks	Printer, Projector, Laptops tablets

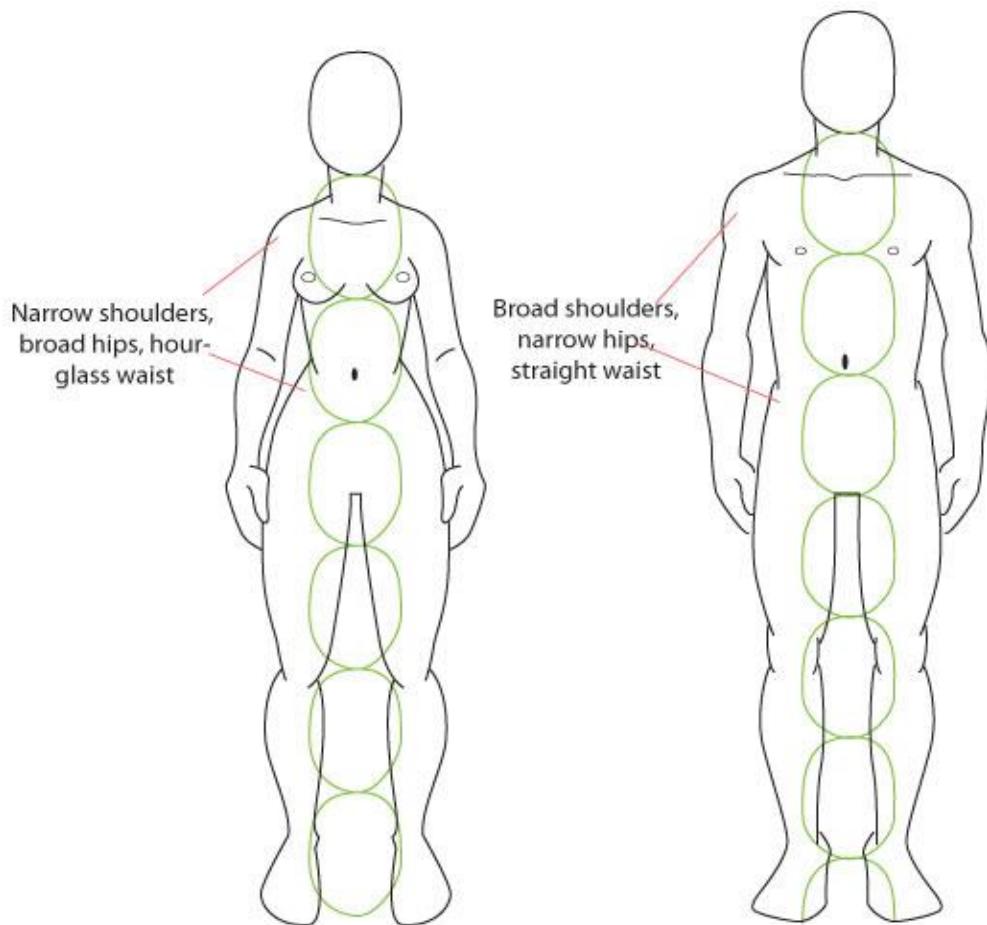


Advance preparation:

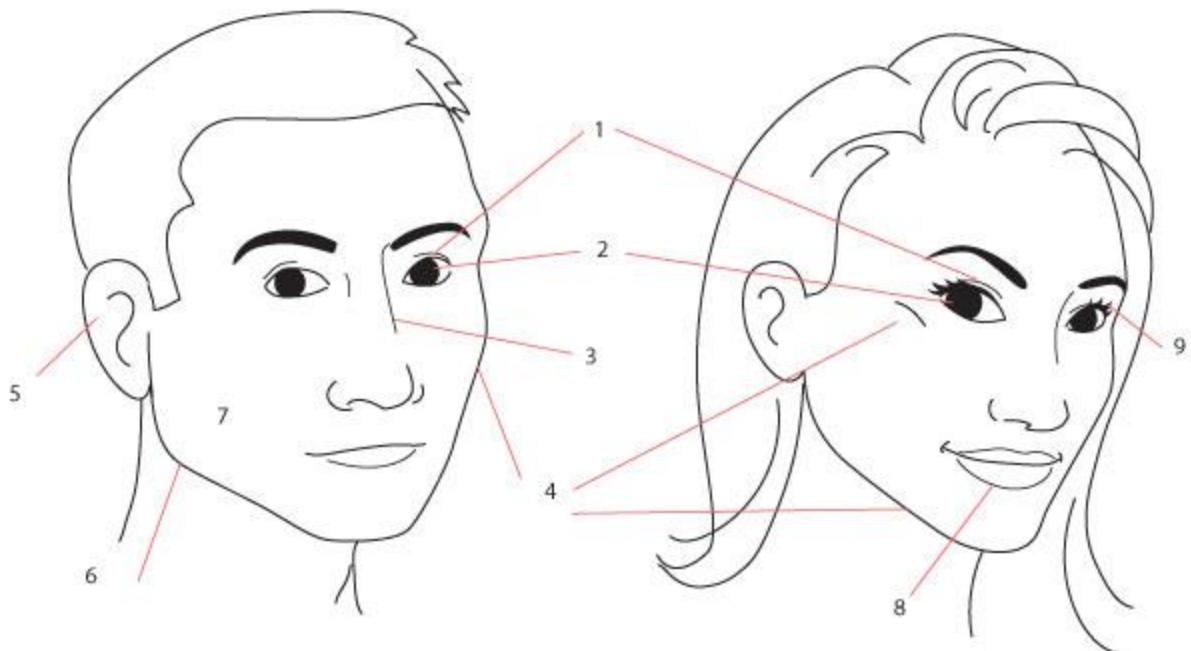
- . internet references
- .book references

Young Adult (18 years - 30's)

Adulthood is when growth stops: this is the tallest one gets in one's life. The body achieves maturity, with fully developed muscles, and in women's case full breasts. Height= 7.5 heads (Note that we use 8 heads when learning to draw people, as explained in basic body proportion Basic. The full details of adult female and male bodies are described in advanced body proportion, but note the most obvious differences between them at this point:



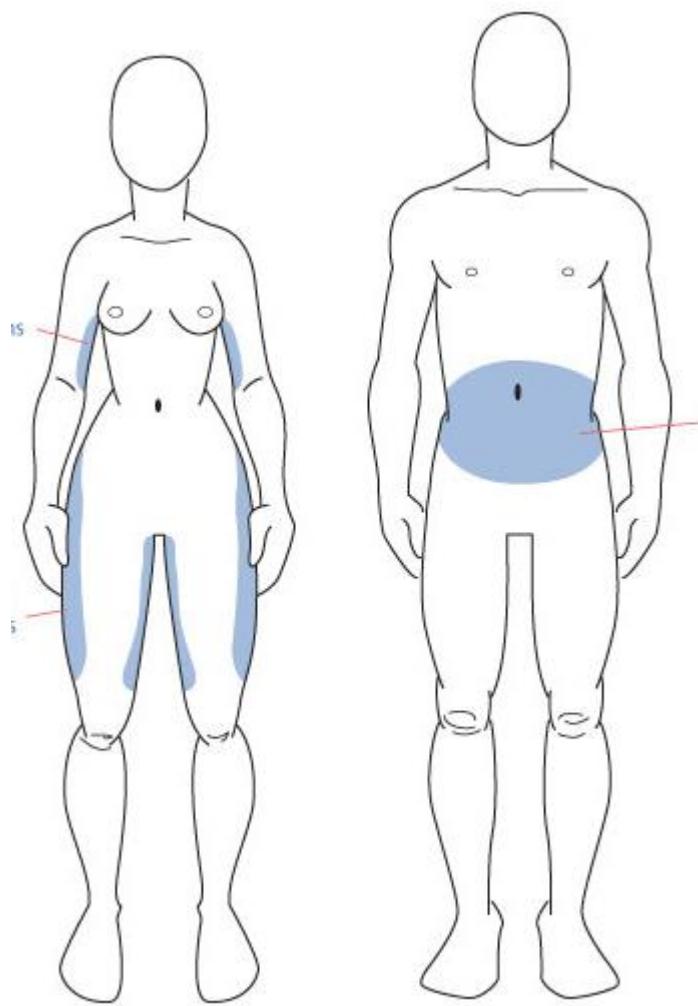
Grey hair can start appearing in one's thirties or even late twenties, though most people (especially women) will remove or dye them. Female eyebrows at this stage are often styled (at least, in parts of the world where that is done) so they look neatly drawn, while male eyebrows retain a natural look than is rarely as crisp.



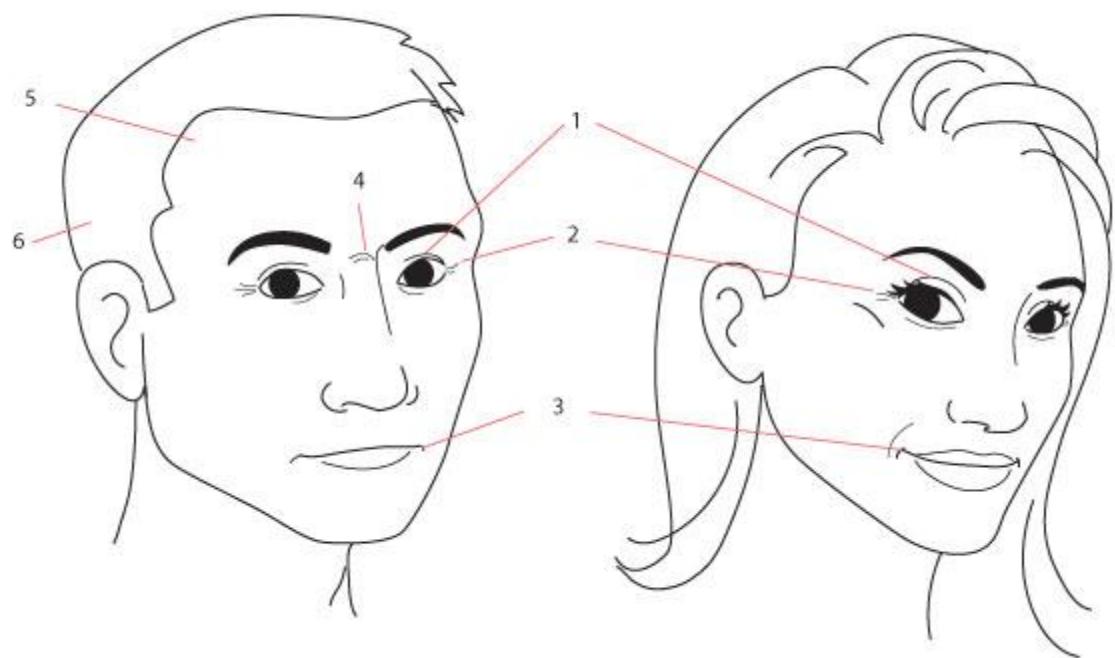
- ✓ The eyelids become more visible, toning down the gaze and conveying maturity.
- ✓ The eyes look slightly smaller.
- ✓ The line of the nose is chiseled.
- ✓ The face contours now show more bone and muscle structure than soft flesh.
- ✓ The ear size stabilizes at the measure that is roughly the distance from the top of the eyes to the tip of the nose.
- ✓ Males have a strong squared jaw.
- ✓ Dark-haired men often have a shadow around the jaw even when they're shaved. At this age, facial hair would be at their strongest if grown.
- ✓ Female lips at their most fleshy (and frequently look much redder or contrasted, due to the use of cosmetics).
- ✓ The eyelashes are now emphasized.

Middle Age (40's and 50's)

The body doesn't change all that much, but muscle density decreases, and female breasts start losing firmness. Elbows and knee caps show wrinkles. The tendency to accumulate fat increases. Men and women store it in different places, indicated in blue:



The changes in the face are mostly in the lines, no lon

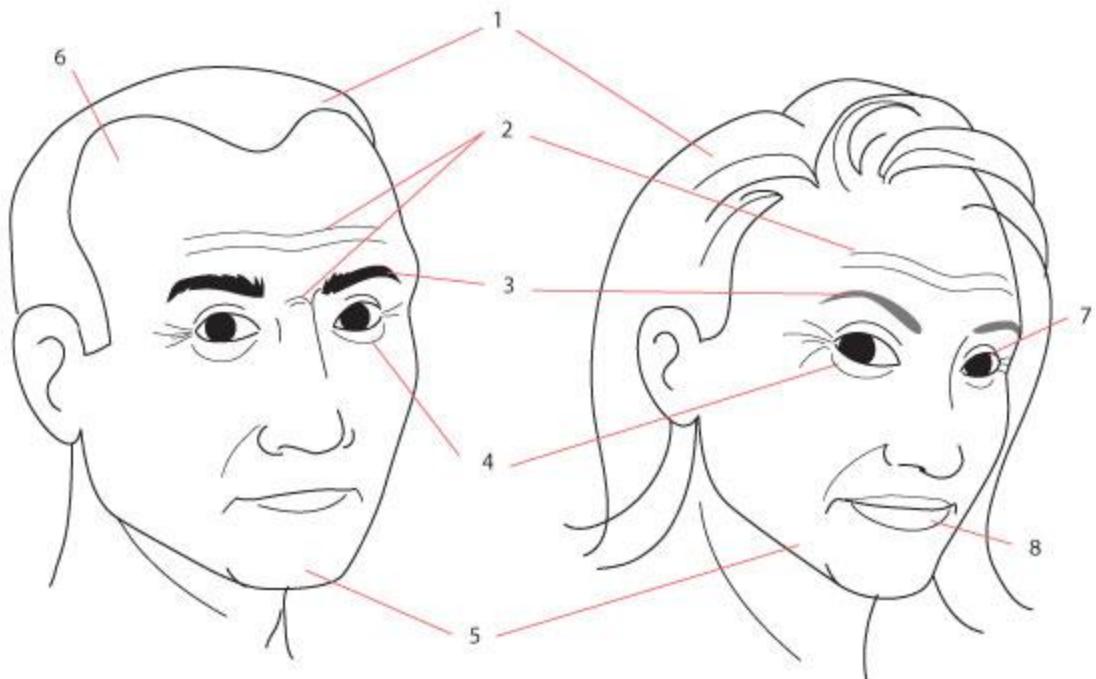


- ✓ The eyelids become heavier.
- ✓ Crow's feet begin to appear.
- ✓ A downward fold shows up at the corners of the mouth, giving a bit of a wry expression. It is now safe to draw more expression lines that would have made the face look too old otherwise.
- ✓ Lines may also appear at the root of the nose.
- ✓ In males, the hairline is likely to start receding.
- ✓ The hair shows more sign of aging, the "salt and pepper" look.

Menopause happens in a woman's fifties. The drop in estrogen levels has many effects on the body, the most visible ones being:

- The bones lose density so the body starts getting shorter.
- The breasts dry up.
- Weight gain is redistributed to the abdominal area, so the waist starts disappearing.

Early Old Age (60's)

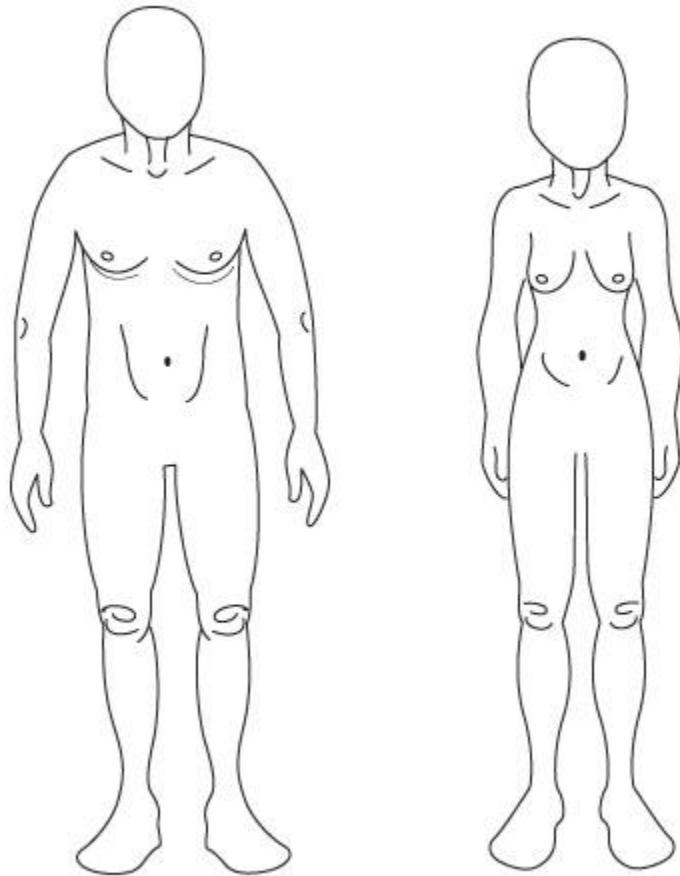


- ✓ The hair turns decidedly grey. It thins, and its growth is now limited, so women wear it shorter.
- ✓ Worry, frown and smile lines become permanent.
- ✓ The eyebrows may stay dark longer than the hair (if they were dark in the first place), but grow sparser.
- ✓ Pockets appear under the eyes.
- ✓ The skin loses elasticity and starts hanging at the jaws, resulting in a less firm jawline.
- ✓ The male hairline recedes to a varying, but noticeable degree.
- ✓ Female eyelashes are no longer prominent.

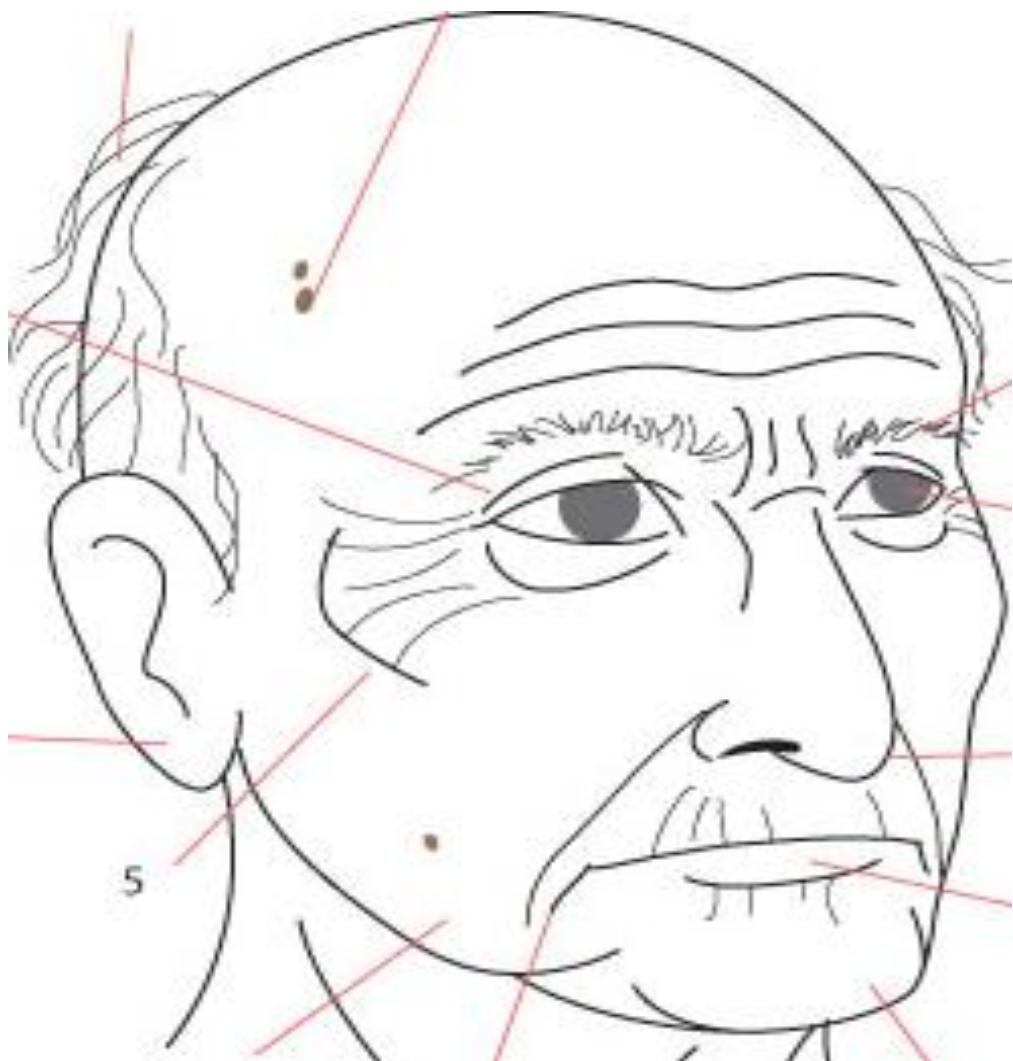
- ✓ The lips get thinner. The face in general starts losing femininity.

Middle Old Age (70's)

People who keep exercising into old age keep a younger body longer, and may not slump or lose much muscle mass. Slumping makes the neck look shorter and the arms fall lower than usual. Male pectorals droop visibly.



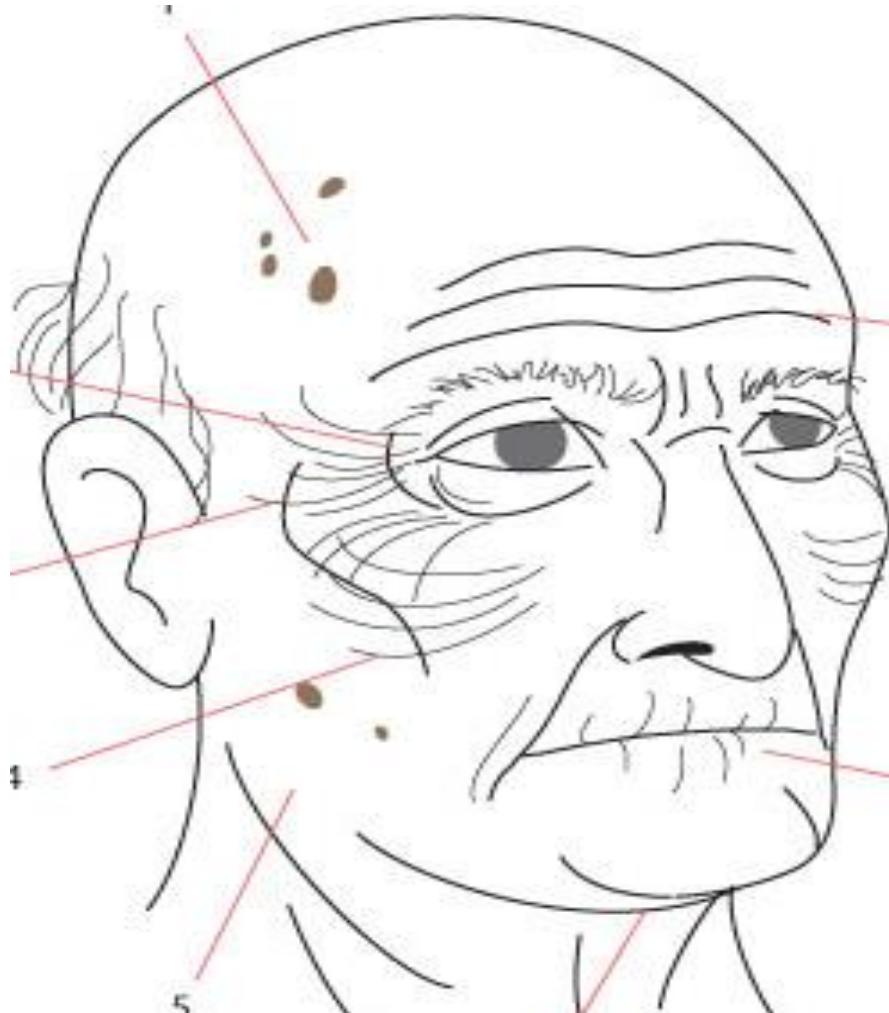
In males, hairline recedes considerably or all hair is lost. Women's hairline recedes little: this is the main difference between male and female faces at this stage.



- ✓ The skin becomes thinner, showing veins, blemishes and age spots.
- ✓ The hair is thin and wispy, almost transparent as all pigment is gone.
- ✓ The upper eyelid may droop to permanently cover the outer corner of the eye, giving it a triangular shape. This happens to populations of Western and Northern Europe and to people heavily exposed to the elements.
- ✓ The earlobe droops (mostly noticeable in people who wore earrings).
- ✓ The skin adheres to the bone, hollowing the cheeks.
- ✓ There is a jowl effect as the skin on the cheeks sags.
- ✓ The corners of the mouth run down.
- ✓ The folds join the chin to the neck pit.
- ✓ If there is any facial hair, it's getting sparser and weaker.
- ✓ The lips lose color, with vertical lines running up and down from them.
- ✓ Loss of cartilage makes the nose tip droop.
- ✓ The eyes become watery and their iris less intense in color.
- ✓ Sparse or scraggy eyebrows.

Very Old Age (80's and up)

The appearance of carrying the burdens of the world that old people usually have is mostly due to the physical changes of their face – the “sad” eyes (shaped this way by the drooping eyelid in Caucasian types), permanent “worry” and frown” lines, corners of the mouth drooping... We read these as expression lines even though at that time of life, they are just always there. When drawing an elderly face, we need to be aware of the expressive power of these lines and balance or attenuate them according to the facial expression we wish to convey.



- ✓ More age spots.
- ✓ The eyes sink back, letting the orbits show through the skin.
- ✓ Crow's feet can become really long and abundant.
- ✓ People who spent their lives exposed to the elements can have abundant lines on the cheeks as well.
- ✓ The jaw line is lost.
- ✓ Double chin.
- ✓ The mouth puckers in if lost teeth are not replaced by dental work (only affordable or available to a portion of the industrialized world)
- ✓ These lines deepen.



Practical learning Activity

1. Observe people on the street, on the bus, etc. On first impression, what age would you give them? Try then to deconstruct the visual clues, picked up unconsciously, that led to that impression.
2. Consciously sketch age groups that you don't normally draw or that you have trouble portraying, both with and without reference.
3. Play around with imagining your favorite comic book character (or your own character) at different stages of their life.
4. Practical exercises of drawing children
5. Explain how you draw a child by stages



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



Practical learning Activity

- ✓ (Example: Trainees in pair perform



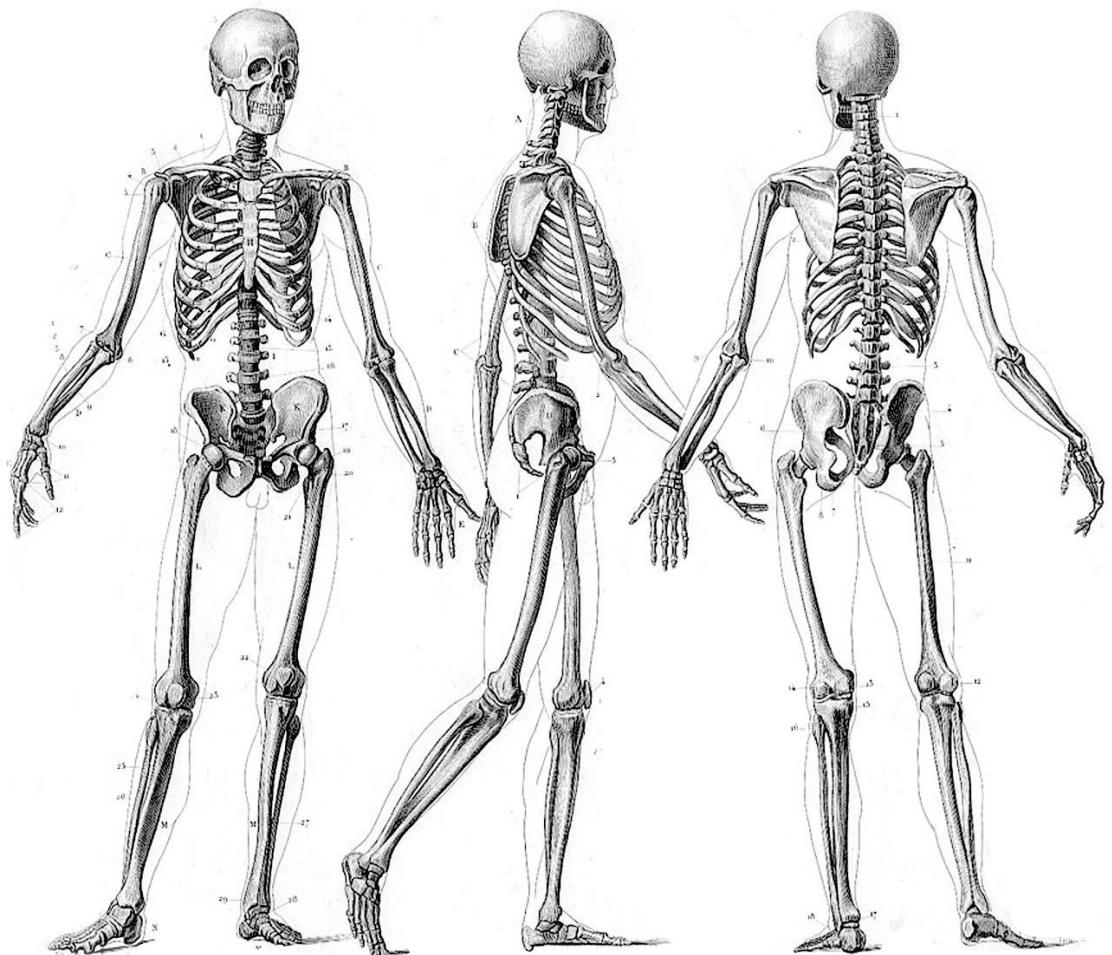
Points to Remember (Take home

-

-

Adulthood is when growth stops: this is the tallest one gets in one's life. The body achieves maturity, with fully developed muscles, and in women's case full breasts. Height= 7.5 heads (Note that we use 8 heads when learning to draw people, as explained in basic body proportions.

LEARNING UNIT 2: APPLY DRAWING A SKELETON IN MOVEMENT



Learning outcomes:

1. Draw bones in movement according to their kind
2. Draw bones joints according to their characters
3. Draw bones according to their age

Learning outcome 2.1: draw bones according to their kind



Duration: 5 hrs



Learning outcome 2.1 objectives :

By the end of the learning outcome, the trainees will be able to:

- Draw skull bones in different positions
- Draw Trunk bones in different positions
- Draw Leg bones in different positions
- Draw Foot bones in different positions
- Draw Arm bones in different positions
- Draw Hand bones in different positions



Resources

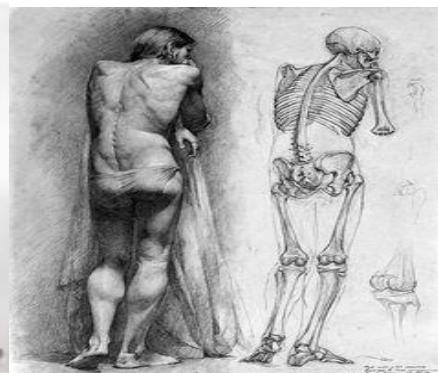
Equipment	Tools	Materials
Internet, Computer lab Printer. Library, Documents about art history	pencils Pens notebooks	Printer Projector Laptops tablets

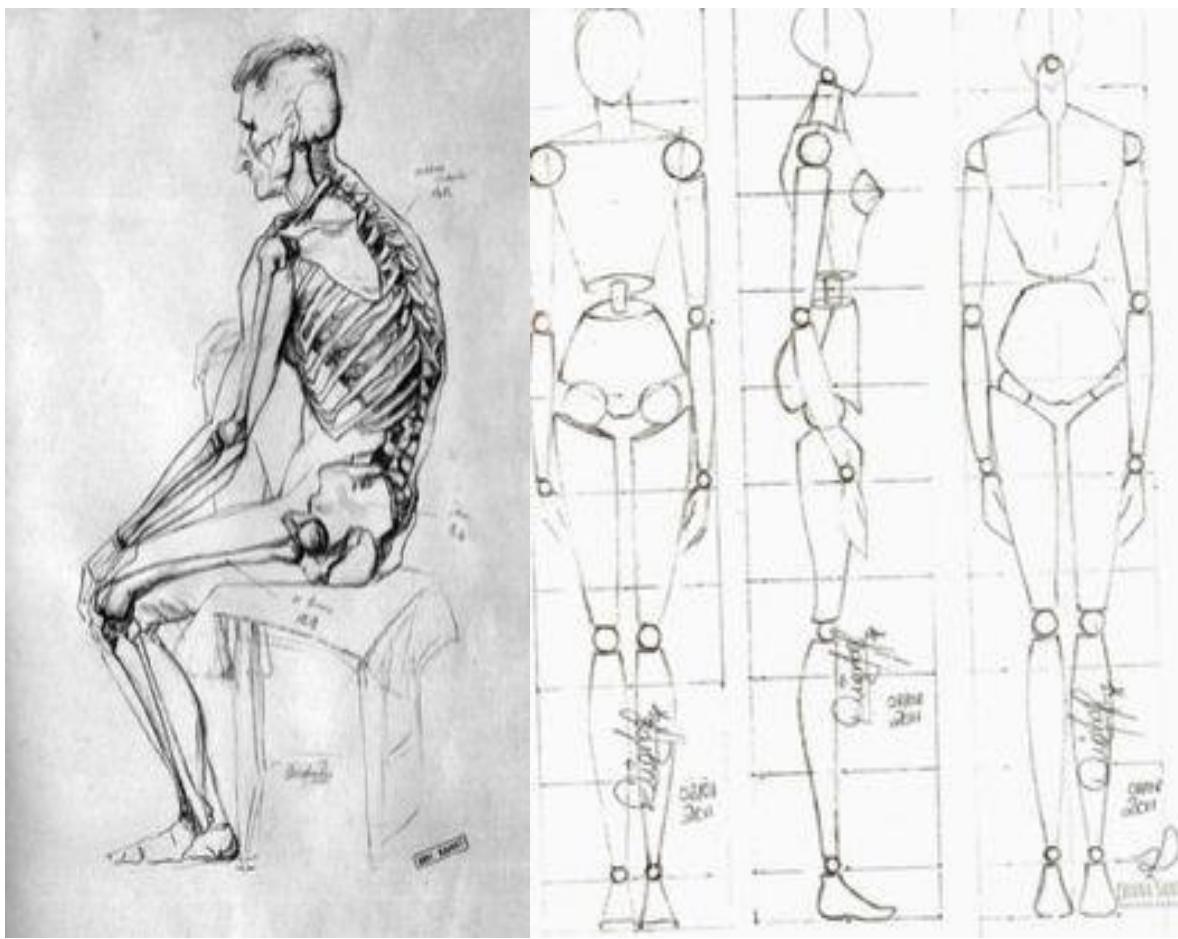


Advance preparation:

- . book references
- . internet connection

 **Content:** Draw skull bones in different positions





When you draw human body you consider the movement of bones and follow them by adding other necessary parties of human body which are required and then you check the

- ✓ Proportions
- ✓ Balances
- ✓ Emphasize
- ✓ Neatness and expressions



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



Practical learning Activity

- ✓ (Example: Trainees in pair perform)



Points to Remember (Take home)

Learning outcome 2.2: Draw bones joints according to their characters



Duration: 5 hrs



Learning outcome 2.2 objectives :

By the end of the learning outcome, the trainees will be able to:

- Draw types of joint bones in different views



Resources

Equipment	Tools	Materials
Internet, Computer lab Printer. Library, Documents about art history	pencils Pens notebooks	Printer Projector Laptops tablets



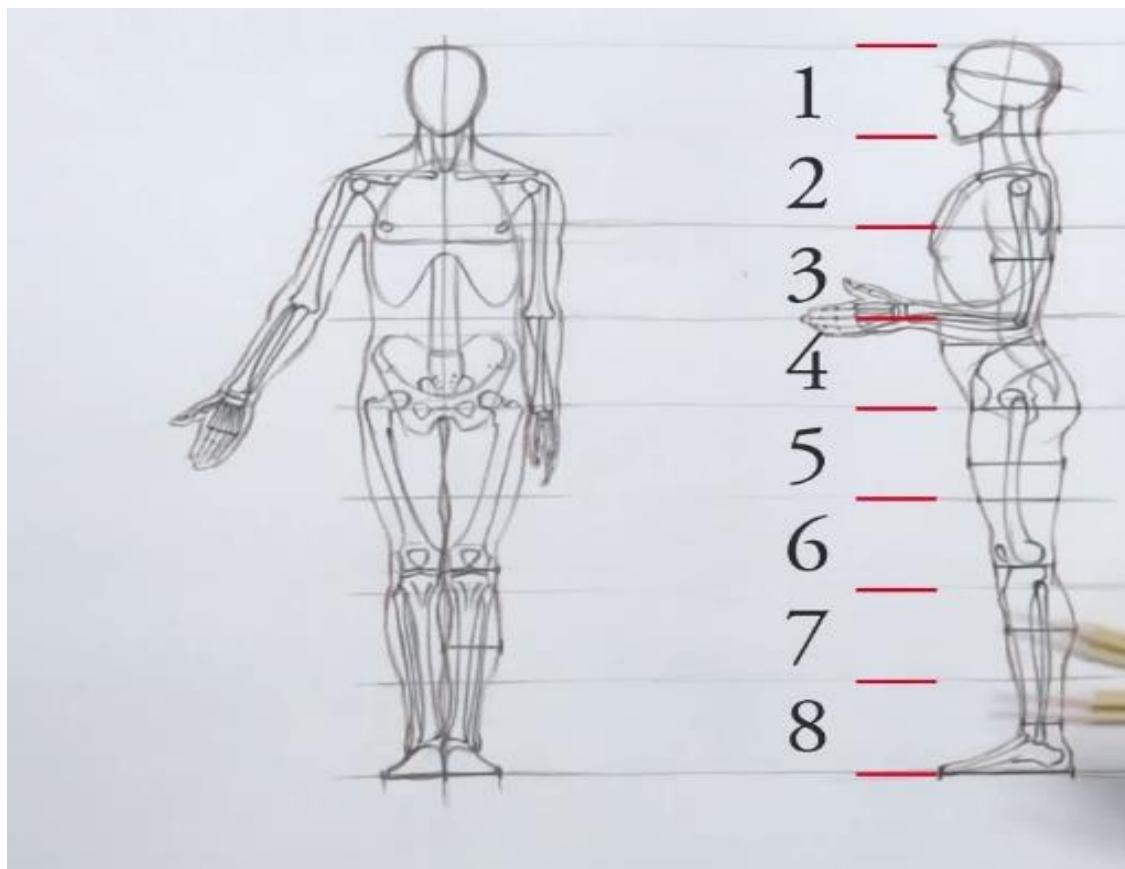
Advance preparation:

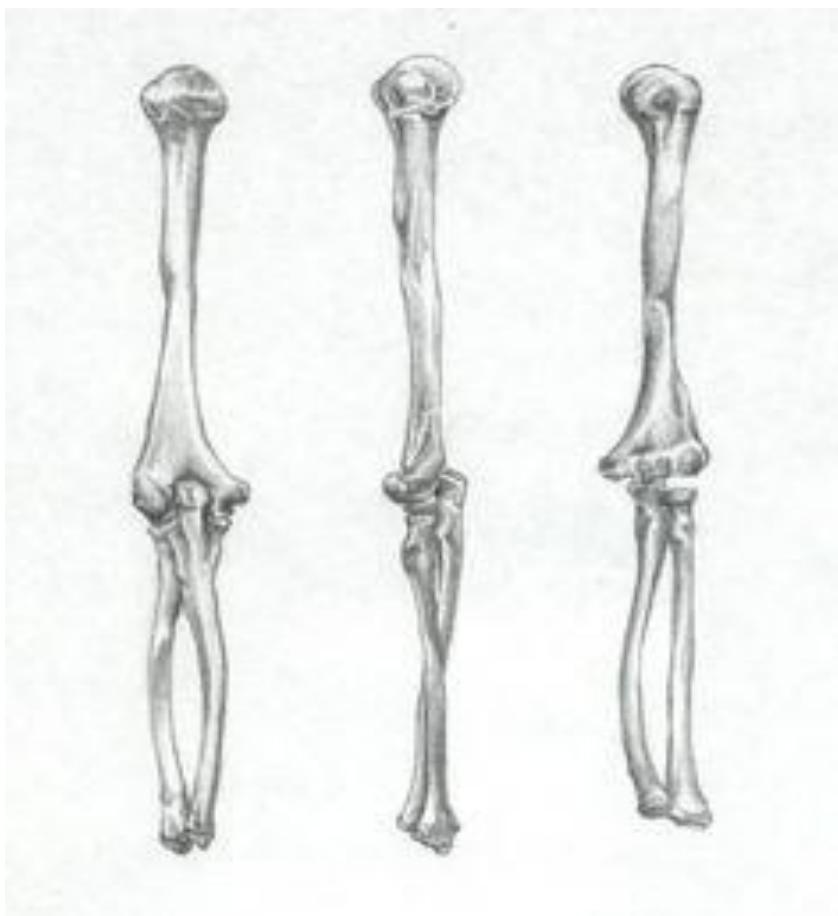
- . book references
- . internet connection

Content: Proper drawing bones joints according to their characters

what is joint bones

A joint or articulation (or articular surface) is the connections made between bones in the body which link the skeletal system into a functional whole. They are constructed to allow for different degrees and types of movement. Joints are classified both structurally and functionally. examples





joints bones; is the connection made between bones in the body which link the skeletal system into a functional whole .and it is necessary to consider the joint bones in orders to get the movement of the body and its proportions.



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



Practical learning Activity

- ✓ (Example: Trainees in pair perform



Points to Remember (Take home

Learning outcome 2.3 : draw bones according to their ages



Duration: 5 hrs



Learning outcome 2.3 objectives :

By the end of the learning outcome, the trainees will be able to:

- Draw three many parties of skeleton bones
 - ✓ Draw child skeleton
 - ✓ Draw adult skeleton
 - ✓ Draw senior skeleton



Resources

Equipment	Tools	Materials
Internet, Computer lab Printer. Library, Documents about art history	pencils Pens notebooks	Printer Projector Laptops tablets

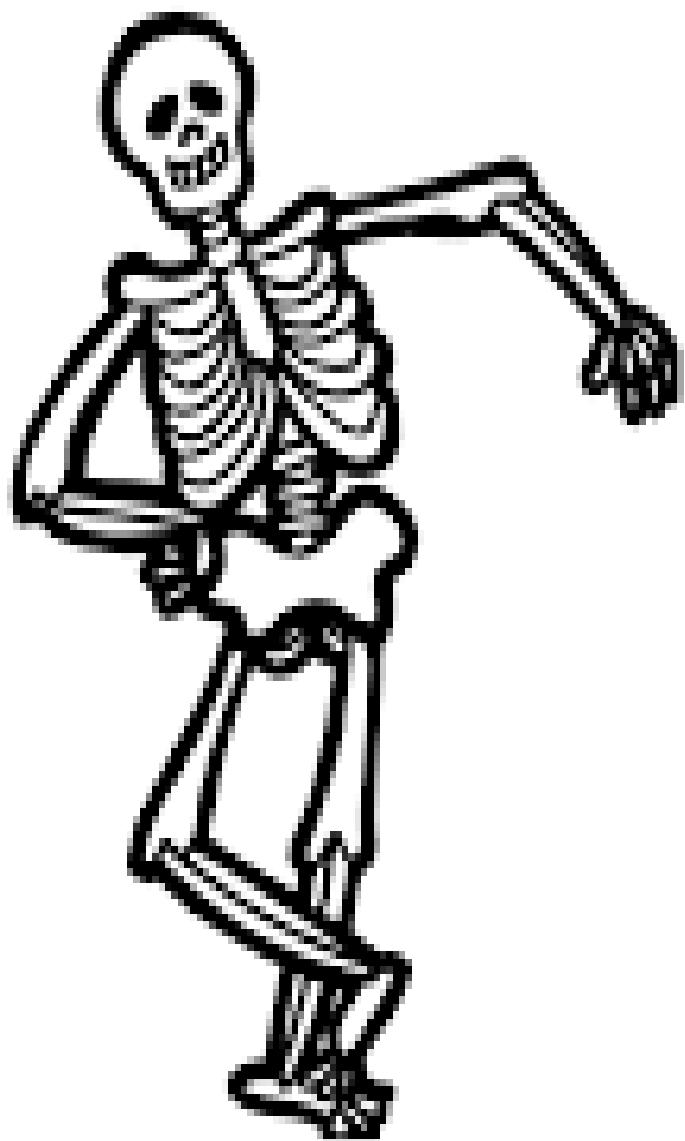
 Advance preparation:

- . book references
- . internet connection

Content: Proper drawing bones according to their ages

How can bones determine age?

The appearance and fusion of these bones helps anthropologists determine the person's age. The fourth rib is also used to estimate age as the cartilage between the end of the rib and the sternum slowly turns to bone over time. Finally, it is also possible to use features of the skull to estimate age. Examples.





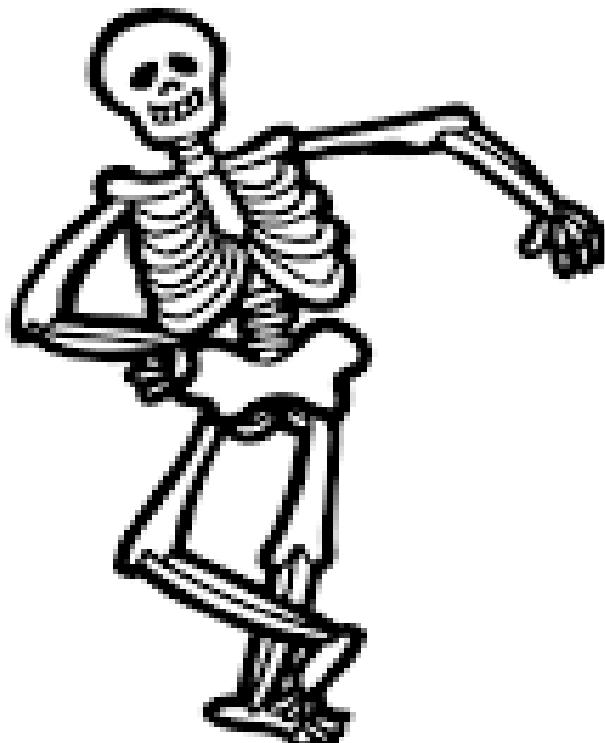
CONTENT : Proper drawing bones according to their ages

The appearance and fusion of these bones helps anthropologists determine the person's age here you consider the bones according to the ages then you think about their proportions



Theoretical learning Activity

- Discussion on types of bones
- Practical exercises for drawing bones.
- What are the functions of bones in drawing as an artist
- Draw bones of hands and imitate them to draw a real hands
- Draw bones of leg in different position
- By using this position, draw a real person from this structure of bone



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



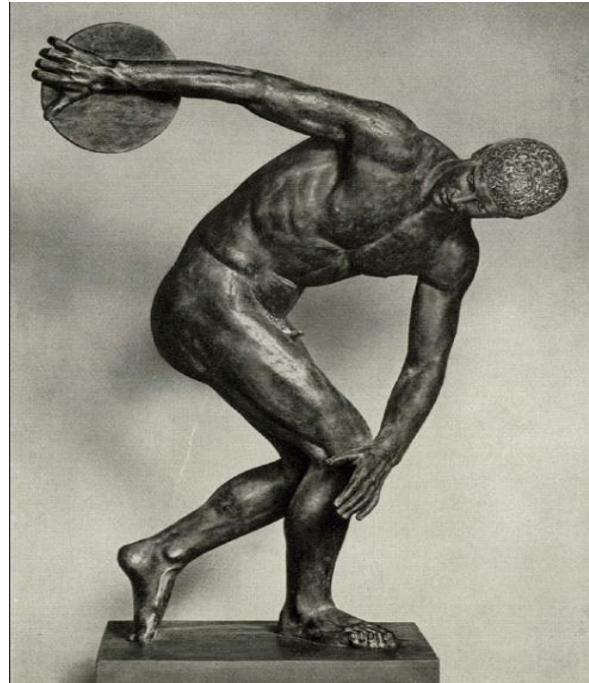
Practical learning Activity

✓ (Example: Trainees in pair perform)



Points to Remember (Take home)

Learning unit:3. Apply drawing muscles in movement



LEARNING OUTCOMES:**3.1: DRAW MUSCLES OF CHILD****3.2: DRAW MUSCLES OF TEENAGER****3.3: DRAW MUSCLES OF ADULTS.****LEARNING OUTCOMES 3.1: DRAW MUSCLES OF CHILD****Duration: 10hrs****Learning objectives : Draw the muscles of child**

By the end of the learning outcome, the trainees will be able to:

3. 1: draw child muscles in different position and movement

- ✓ Head muscles in different views
- ✓ Trunk muscles in different views
- ✓ Arm muscles in different views
- ✓ Leg muscles in different views

**Resources**

Equipment	Tools	Materials
Libraries	-Papers	Drawing board
Workshop	- Pen	Books
Workbench	- Eraser	Printer,
Laptop	- Pencil	Projector,
Books	- drawing board	Laptops
		tablets

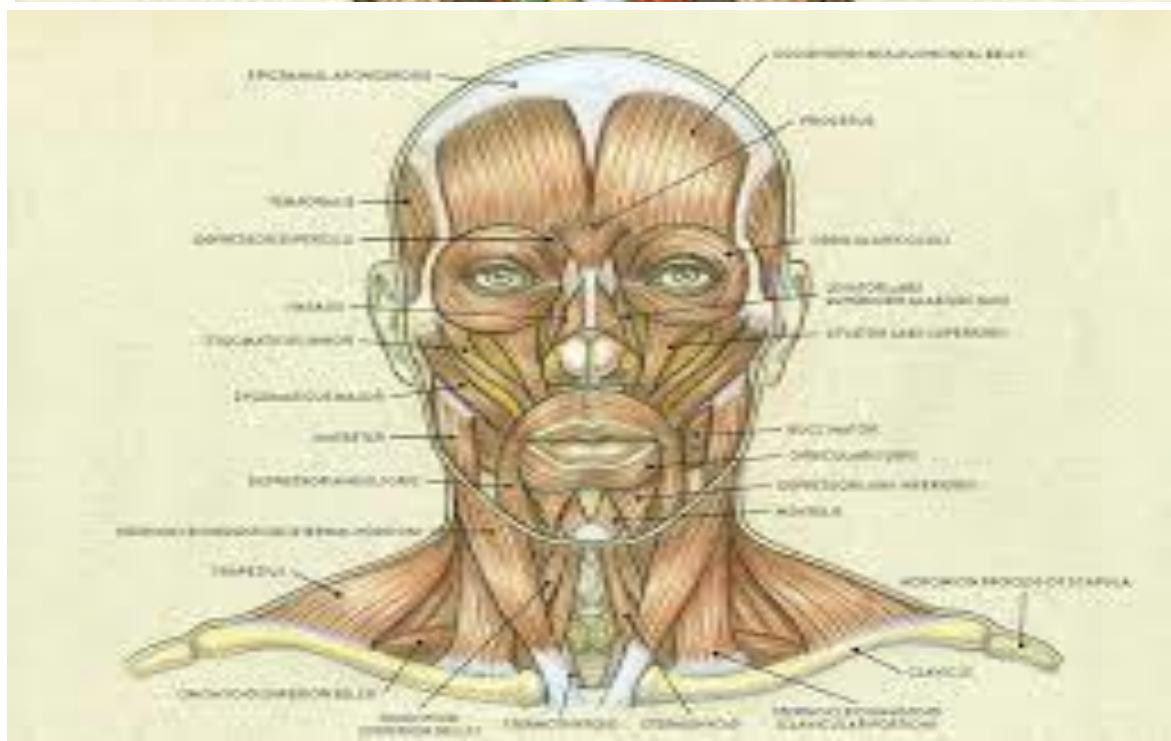
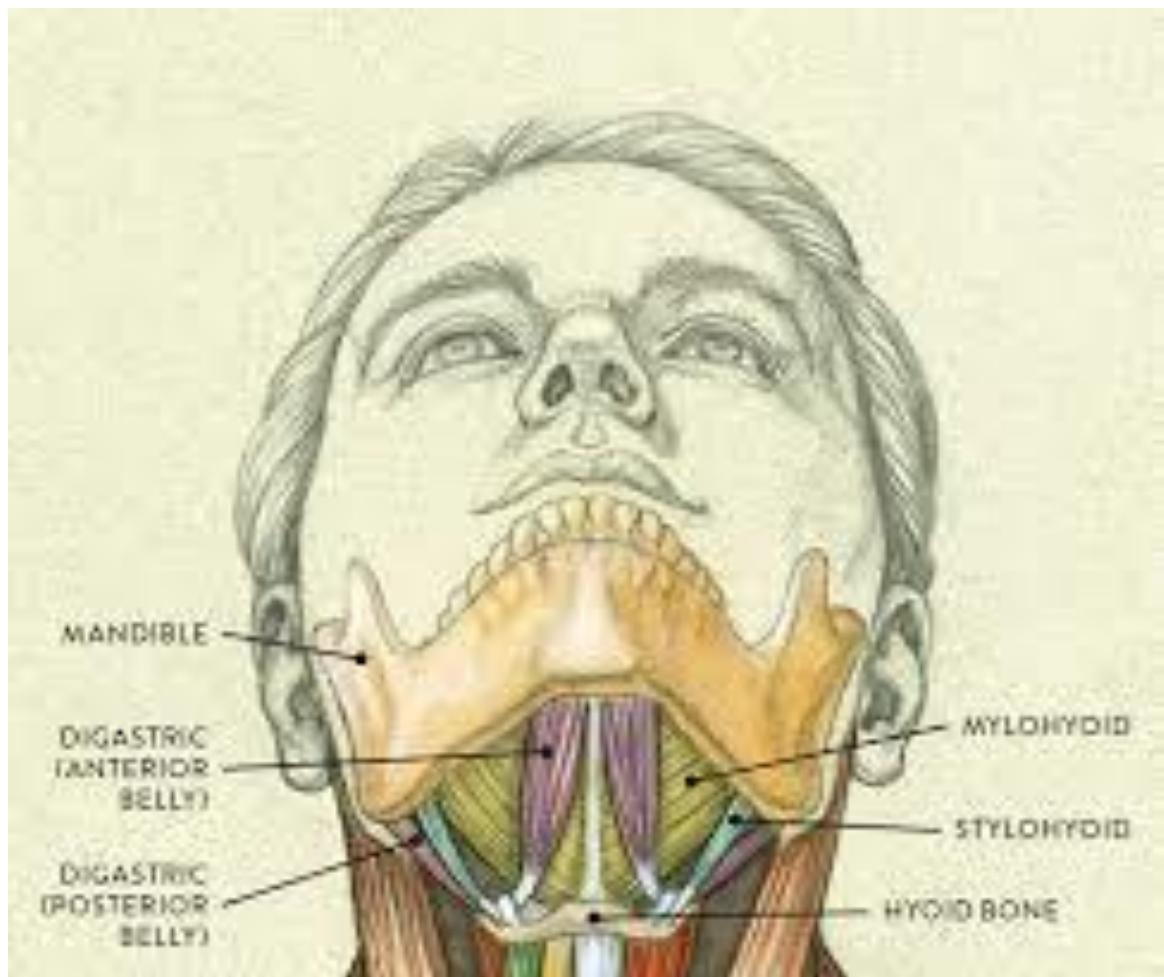
**Advance preparation:**

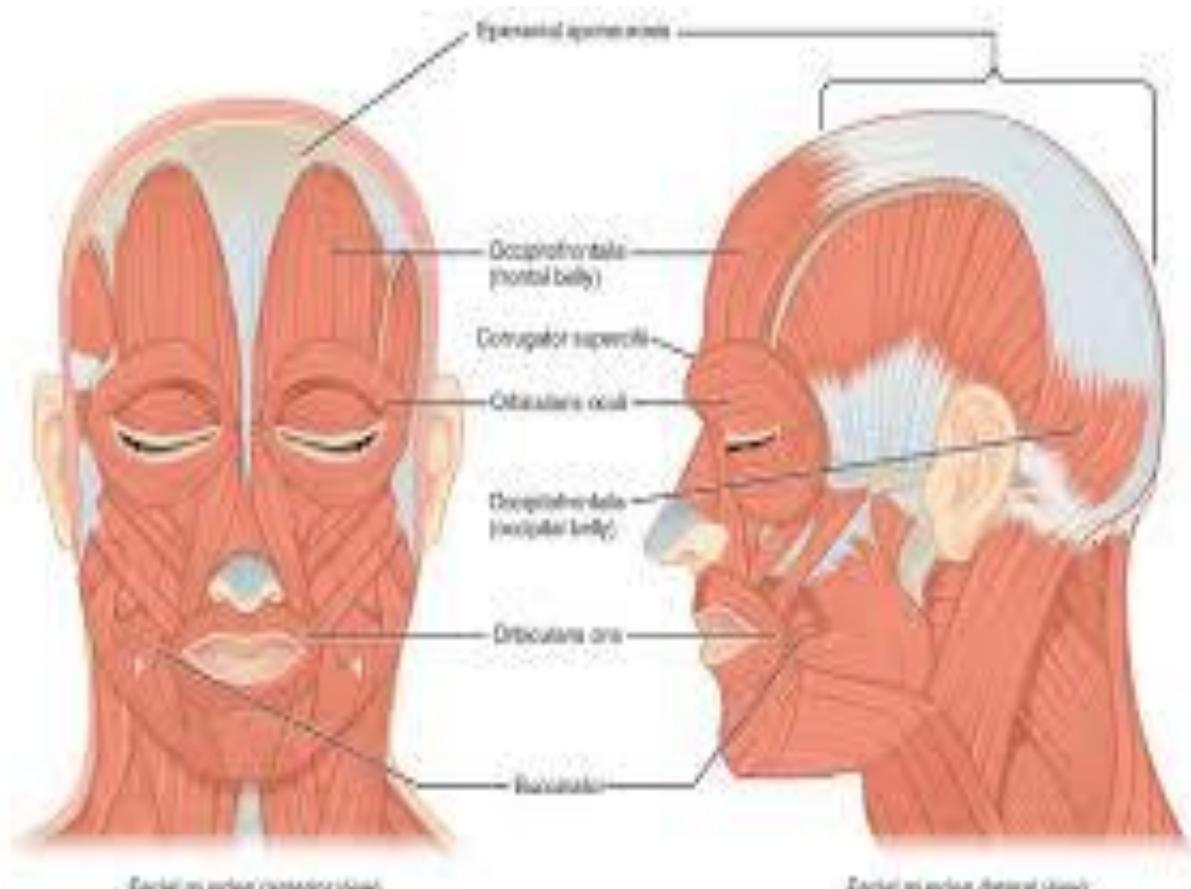
. internet

Book reference

Content : Draw child muscles in different position and movement

- **Head muscles in different views**

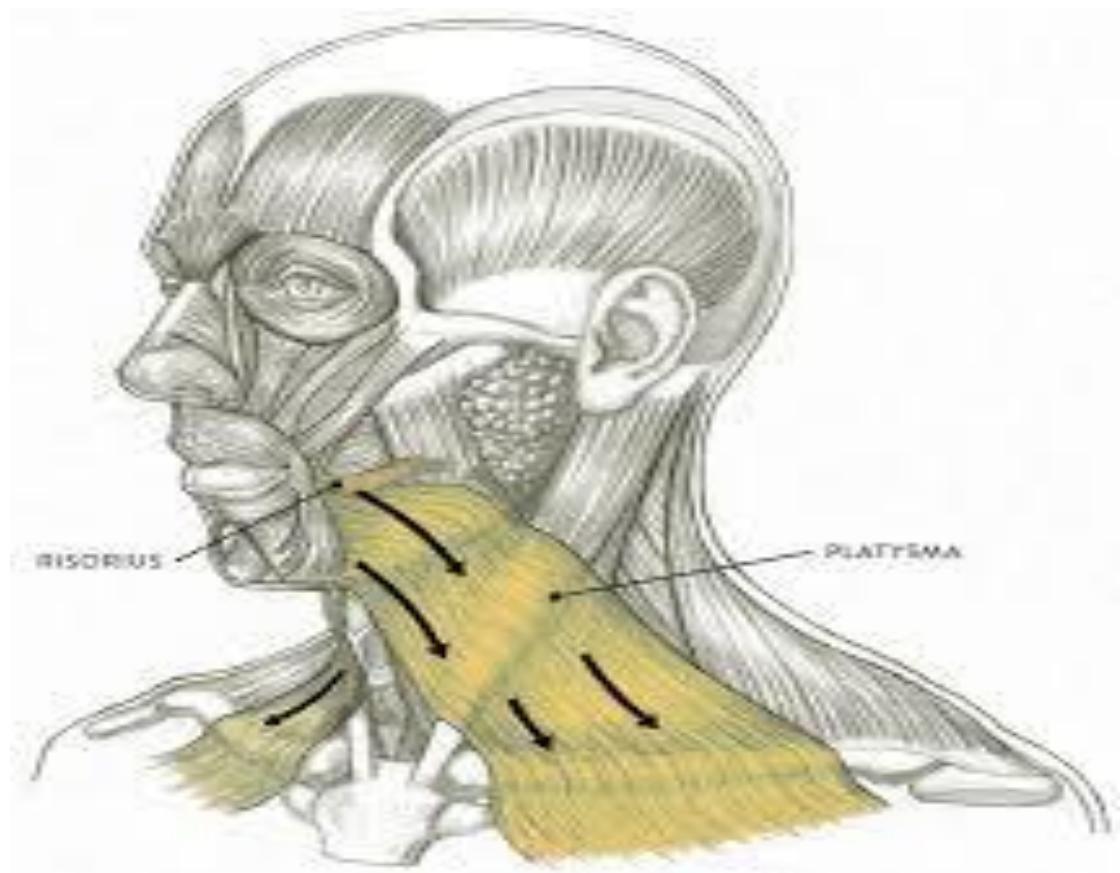




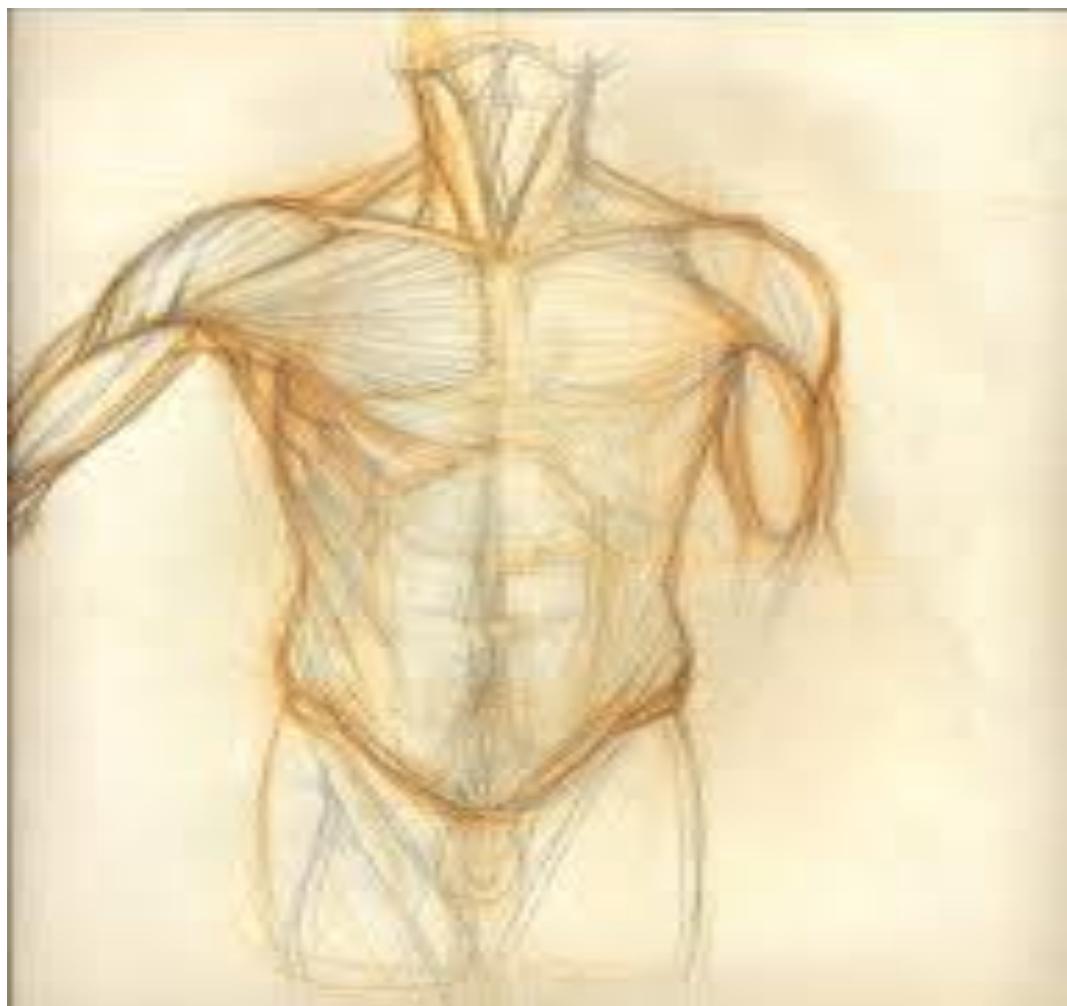
Facial muscles (anterior view)

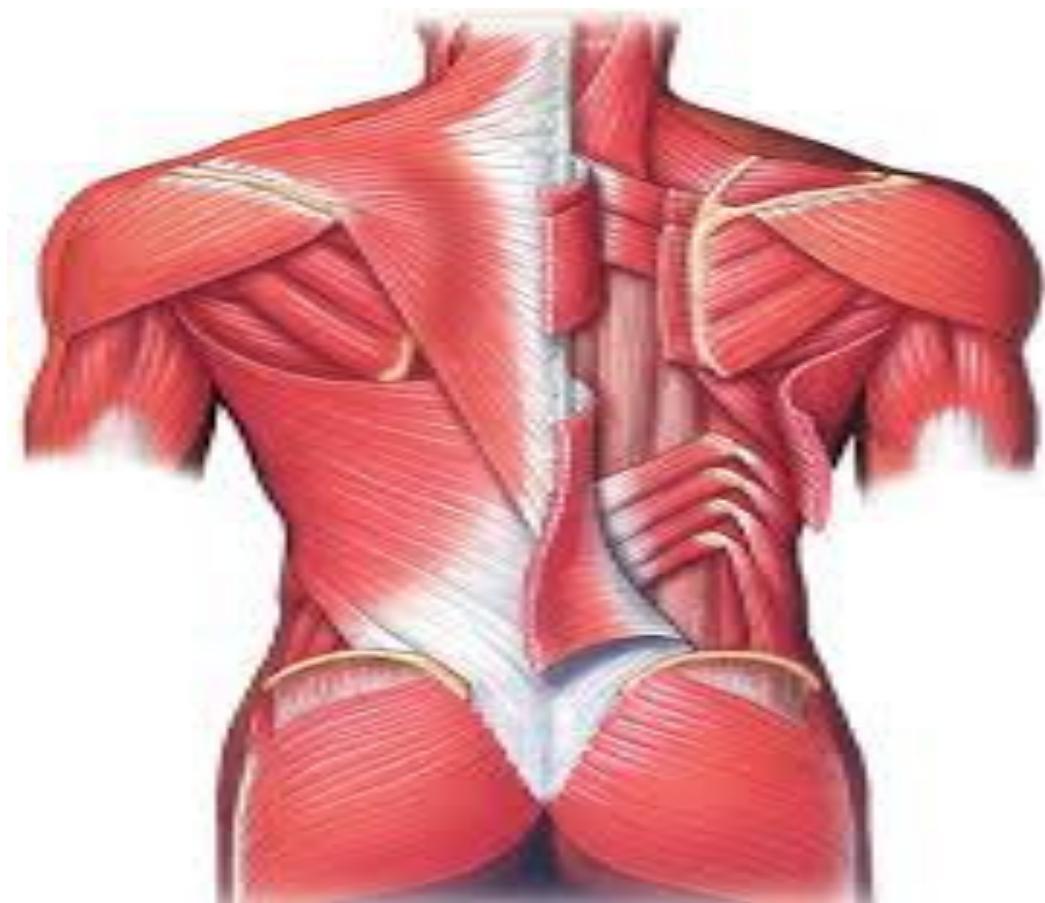
Facial muscles (lateral view)





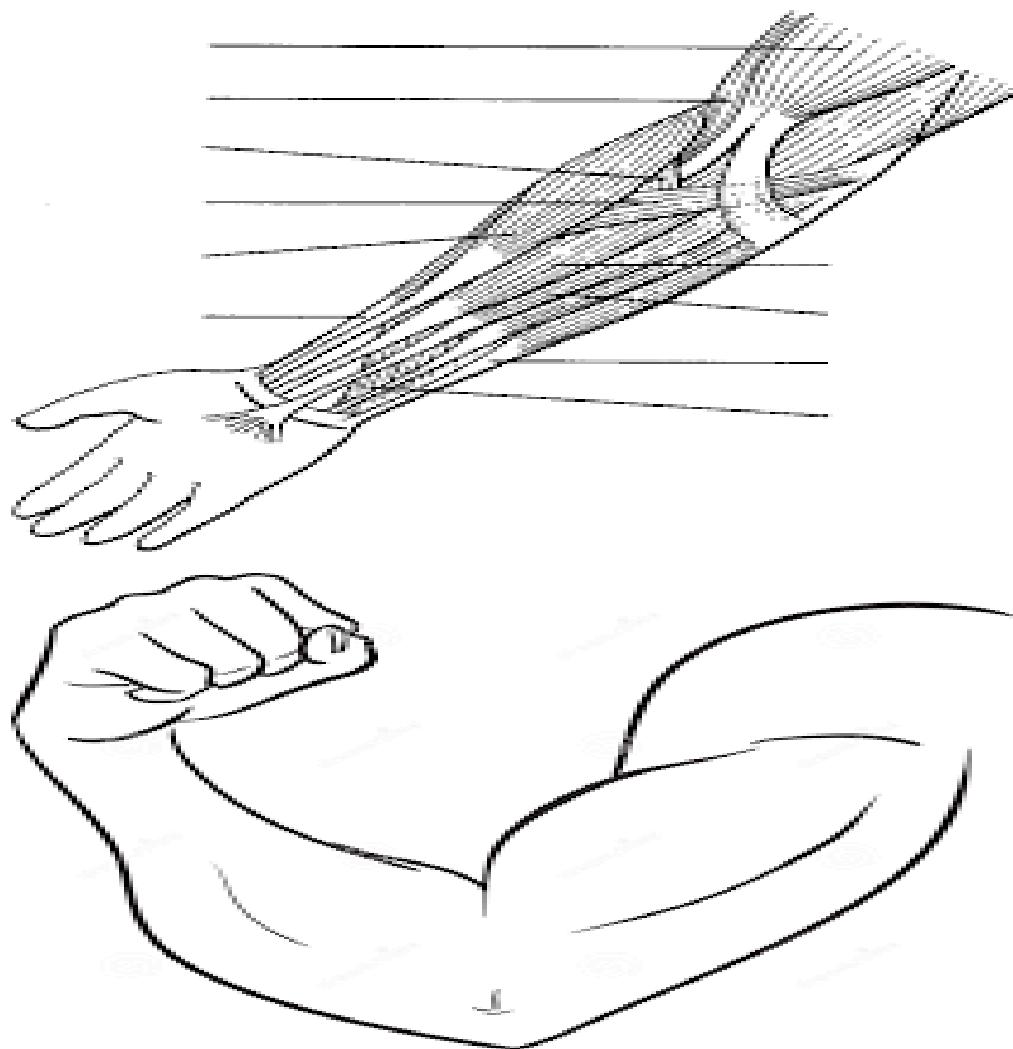
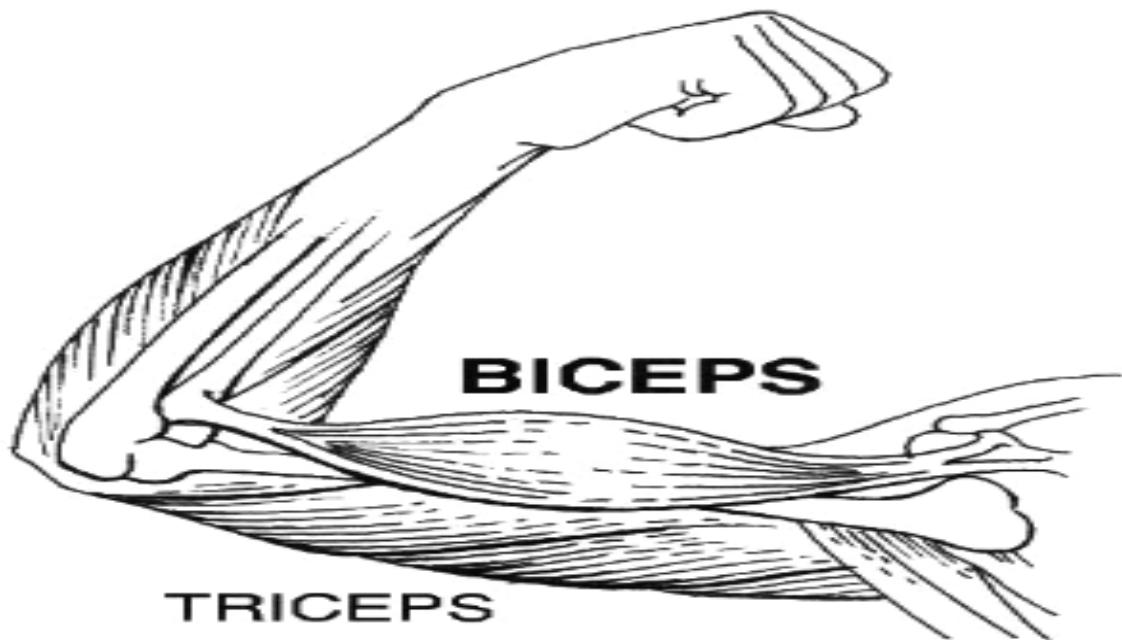
- Trunk muscles in different views





- Arm muscles in different views





- Legs muscles in different views





Drawing muscles of child is necessary because of their muscles is different from the muscles of adult and you check if the drawing has elements and principles of art.



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



Practical learning Activity

- ✓ (Example: Trainees in pair perform)



Points to Remember (Take home

LEARNING OUTCOMES 3.2: Draw muscles of teenager according to their proportions



Duration: 10hrs



Learning objectives : Draw the muscles of teenager

By the end of the learning outcome, the trainees will be able to:

3. 1: draw teenager muscles in different position

- ✓ Head muscles in different position
- ✓ Trunk muscles in different positions
- ✓ Leg muscle in different position



Resources

Equipment	Tools	Materials
Libraries	-Papers	Drawing board
Workshop	- Pen	Books
Workbench	- Eraser	Printer,
Laptop	- Pencil	Projector,
Books	- drawing board	Laptops
		tablets



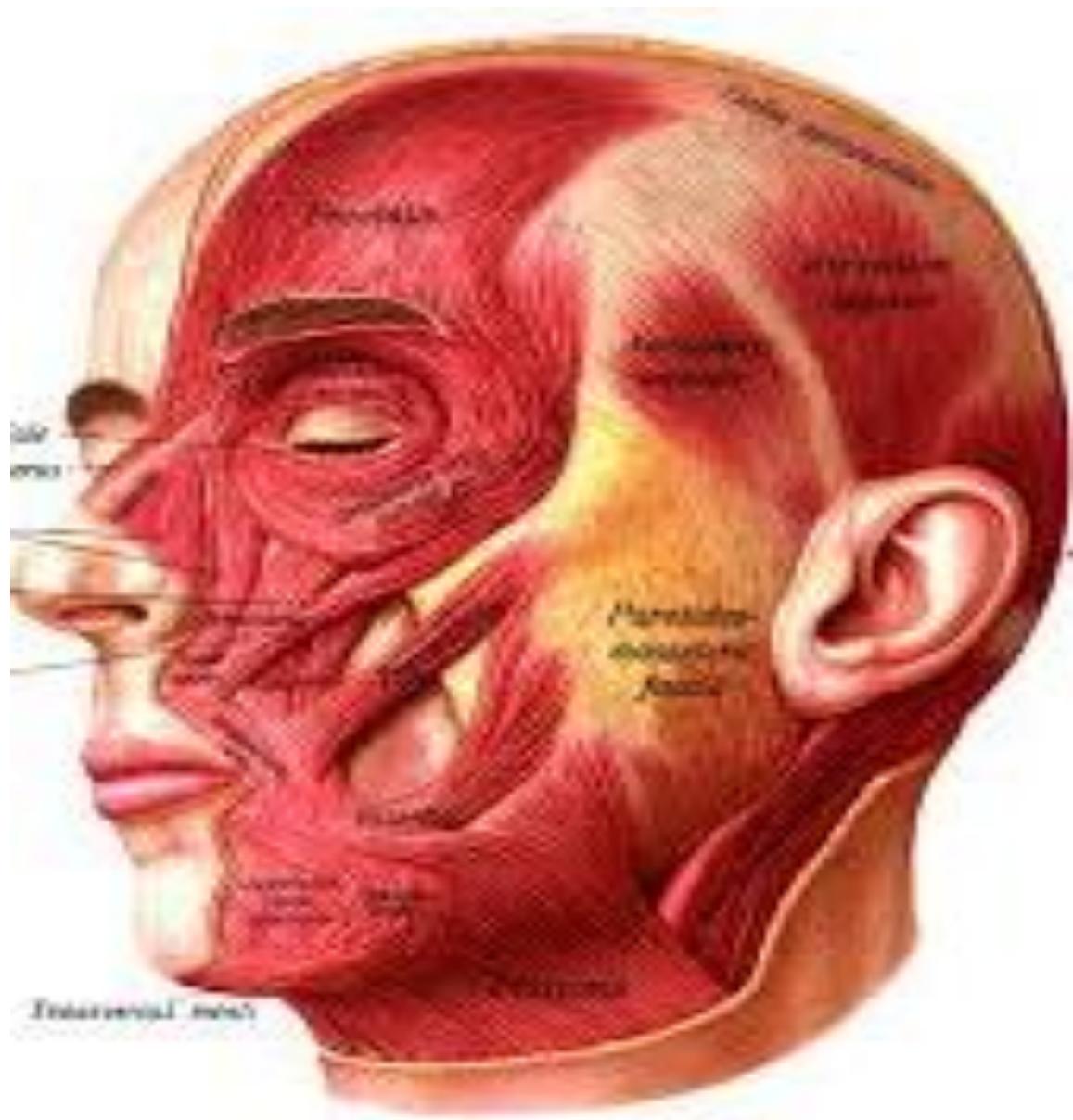
Advance preparation:

. Internet

Book reference

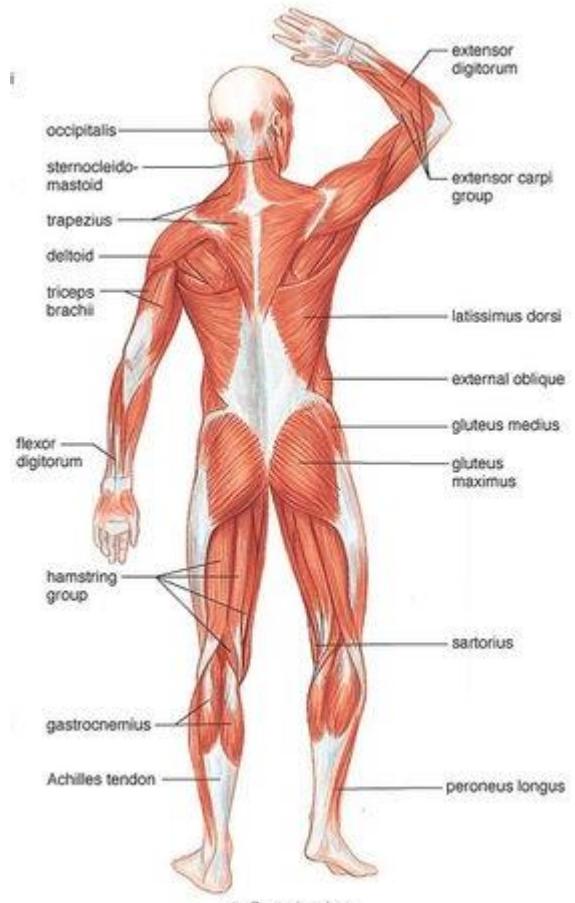
Content: Draw teenager muscles in different position

 **Head muscles in different positions**

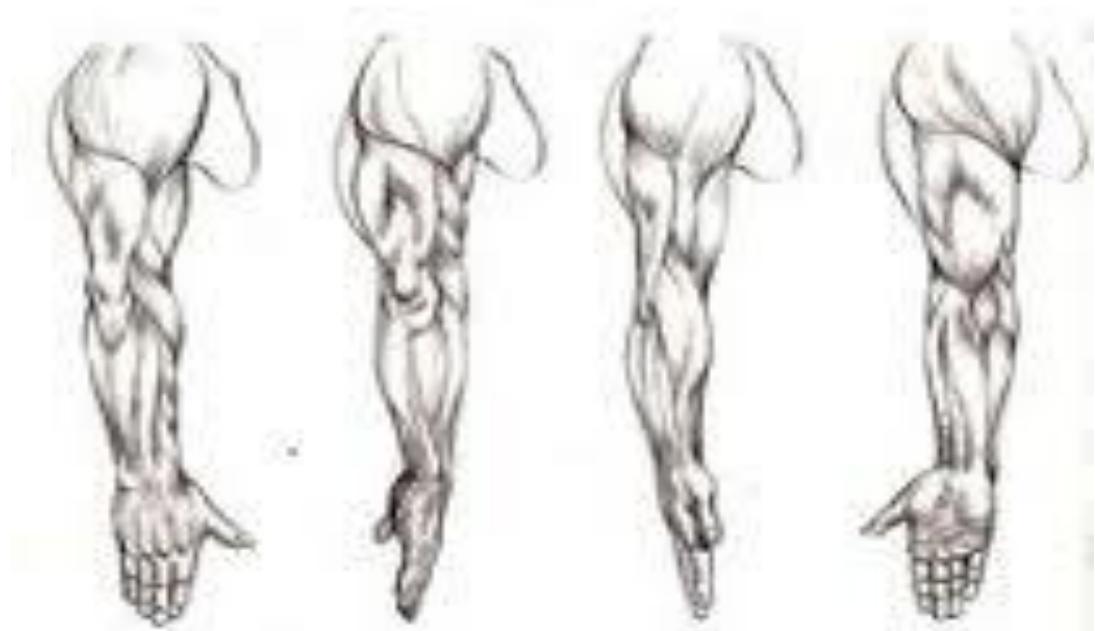


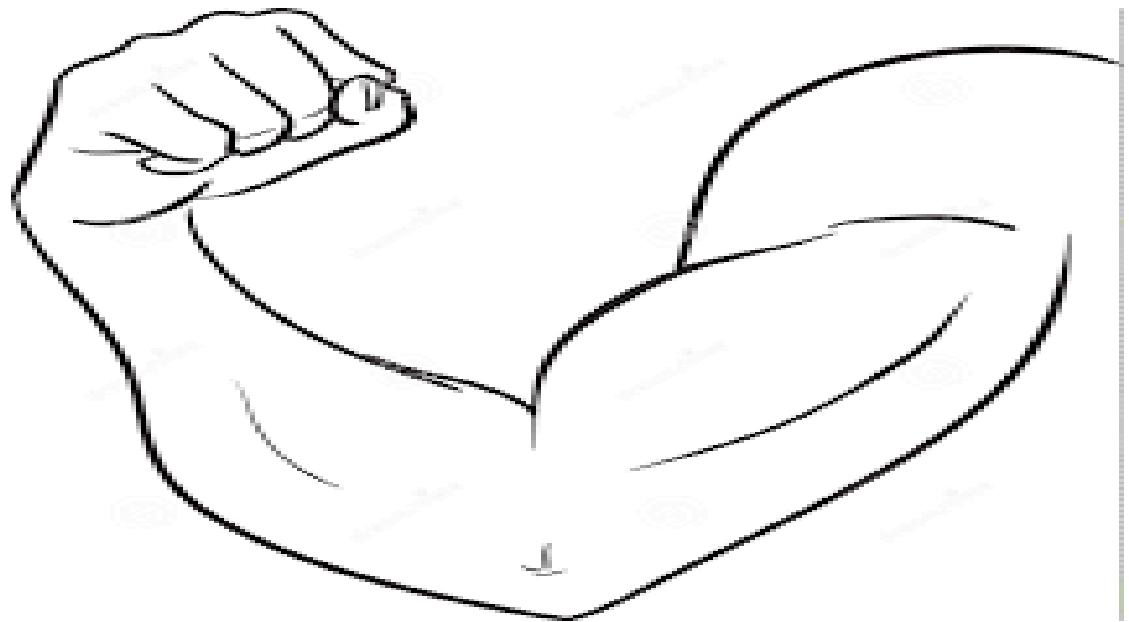


Trunk muscles in different positions



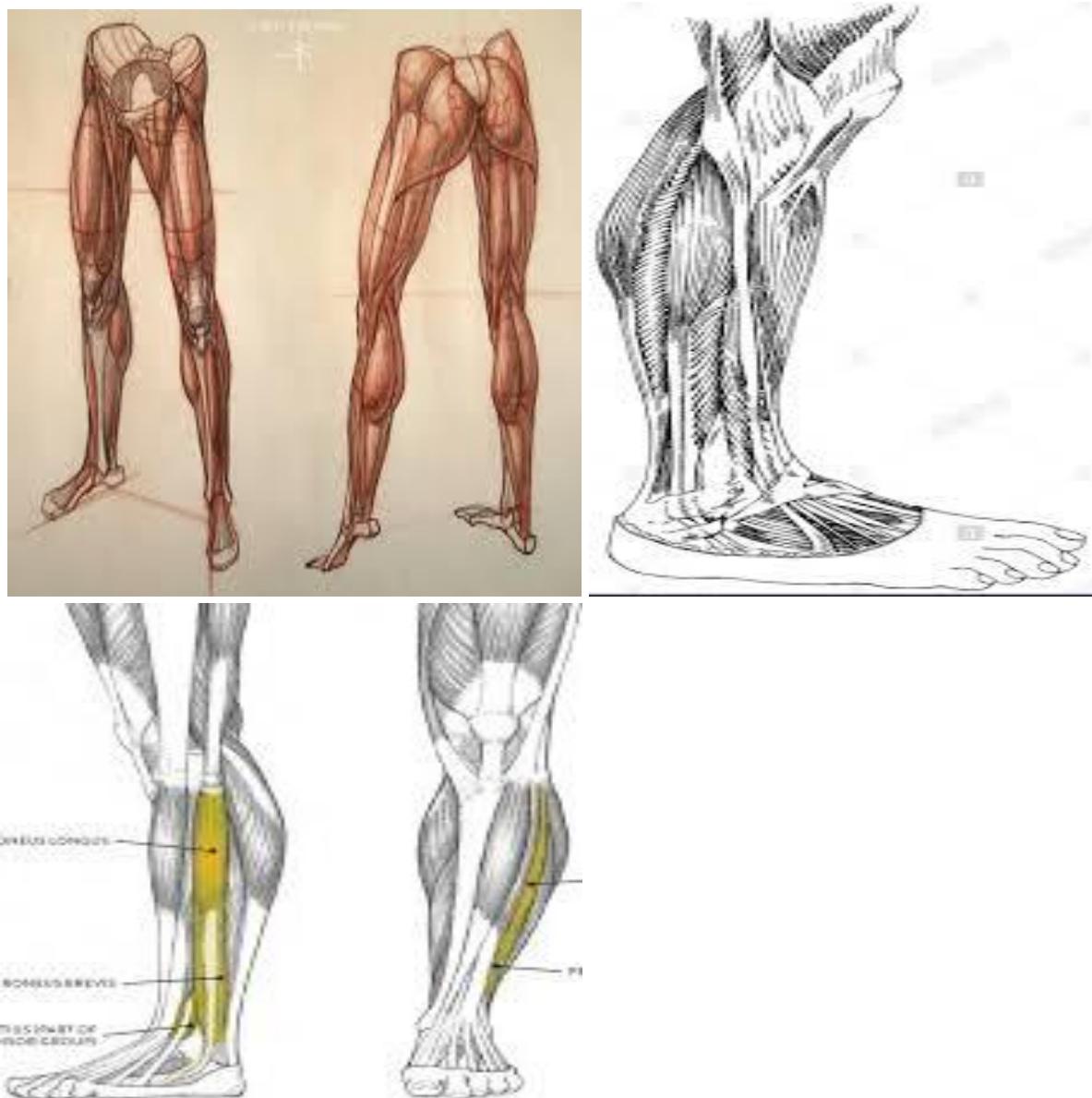
Arm muscles in different views





Notes: Here you consider the movement of arm before you draw the muscles of them

↳ **Legs muscles in different views**



Drawing muscles of teenager is necessary because of their muscles is different from the muscles of adult and you check if the drawing has elements and principles of art



Theoretical learning Activity

- ✓ (example: ask trainees to brainstorm about..... within groups)
- ✓
- ✓



Practical learning Activity

✓ (Example: Trainees in pair perform)

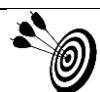


Points to Remember (Take home)

Learning Outcome 3.3: Draw the muscles of adults according to their proportions



Duration: 10hrs



Learning objectives :

By the end of the learning outcome, the trainees will be able to:

- Draw The muscles of adults according to their proportion
 - ✓ Head muscles in different position
 - ✓ Trunk muscles in different positions
 - ✓ Leg muscle in different position



Resources

Equipment	Tools	Materials
Libraries	-Papers - Pen - Eraser - Pencil	Drawing board Books Printer,
Workshop		

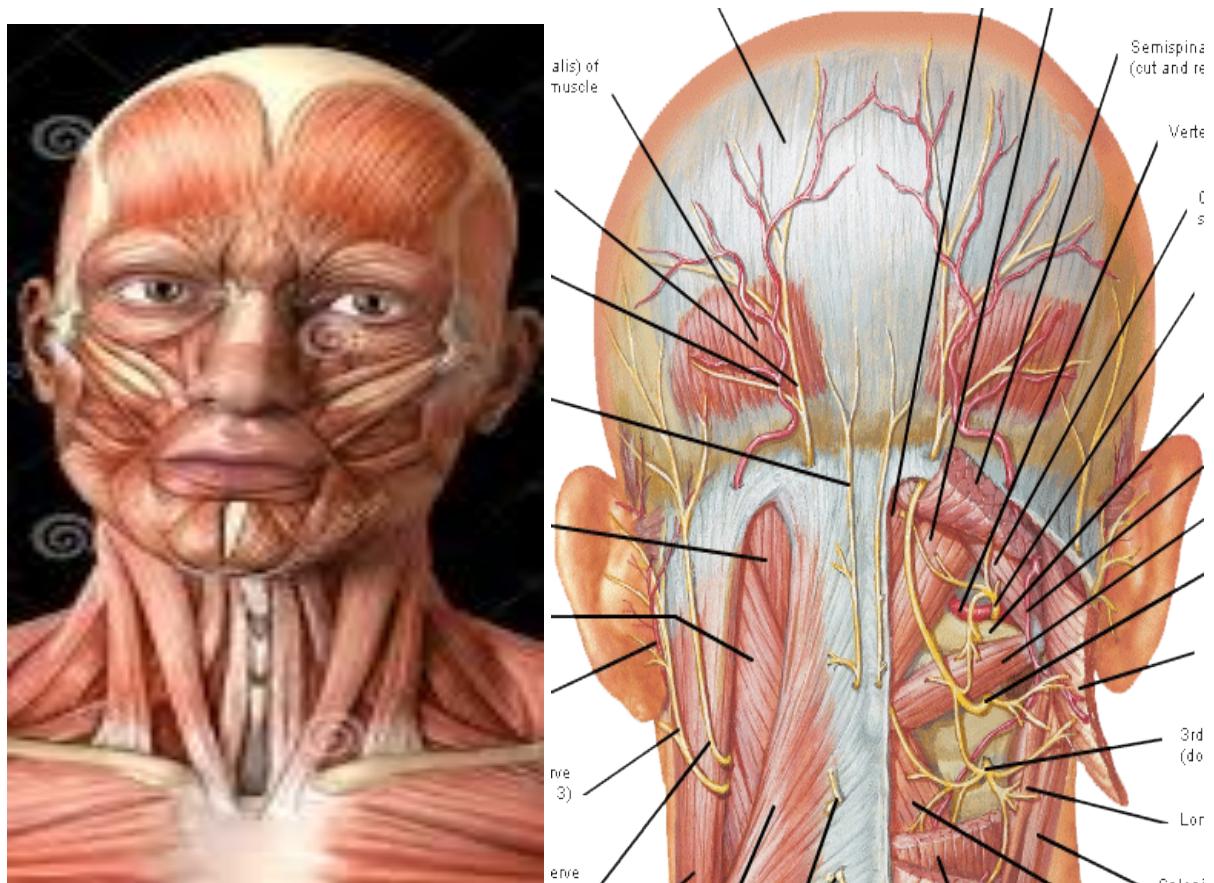
Workbench	- drawing board	Projector, Laptops tablets
Laptop Books		

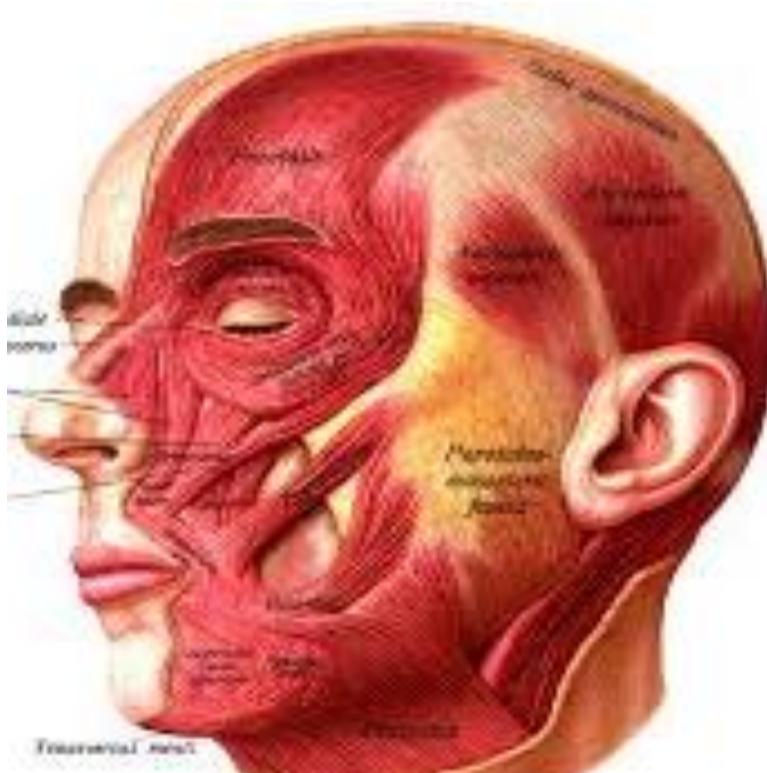


Advance preparation:

- . internet
- . book reference

Head muscles in different positions of adult





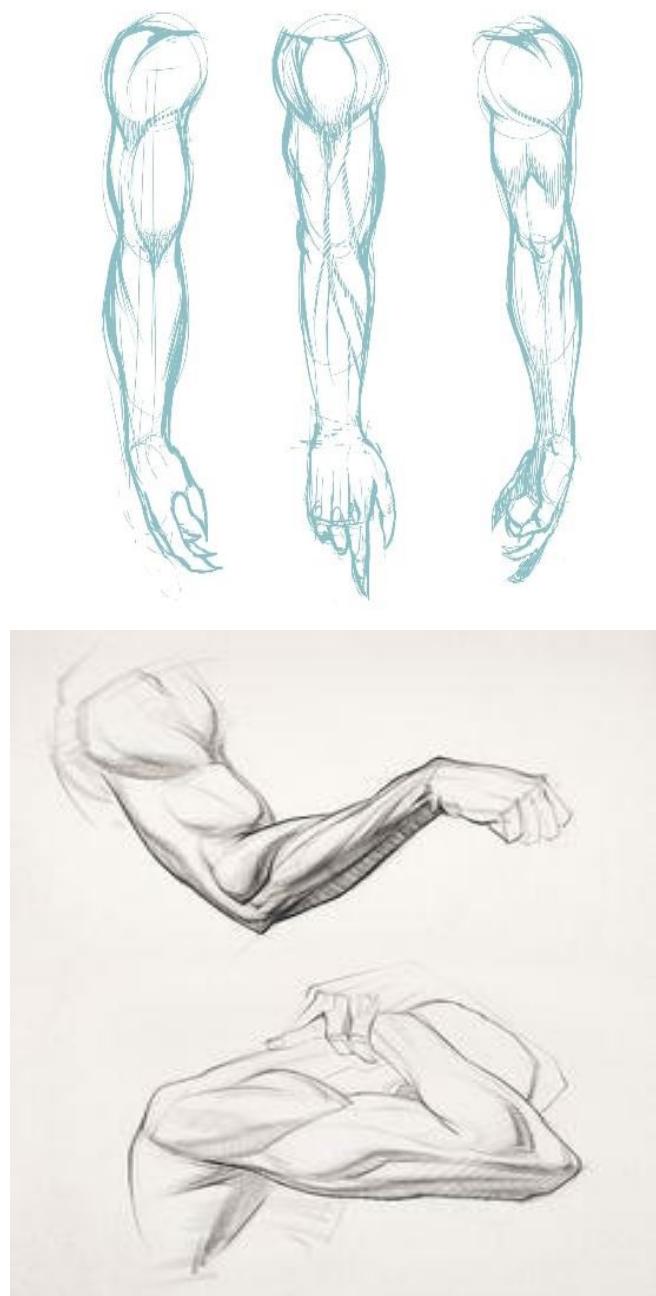
Trunk muscles in different positions

The superficial trunk muscles consist of the rectus abdominis, internal oblique abdominal, external oblique abdominal, lateral quadratus lumborum, erector spinae, and iliopsoas muscles. They do not directly attach to the vertebrae, so they only stabilize pressurized spinal segments.

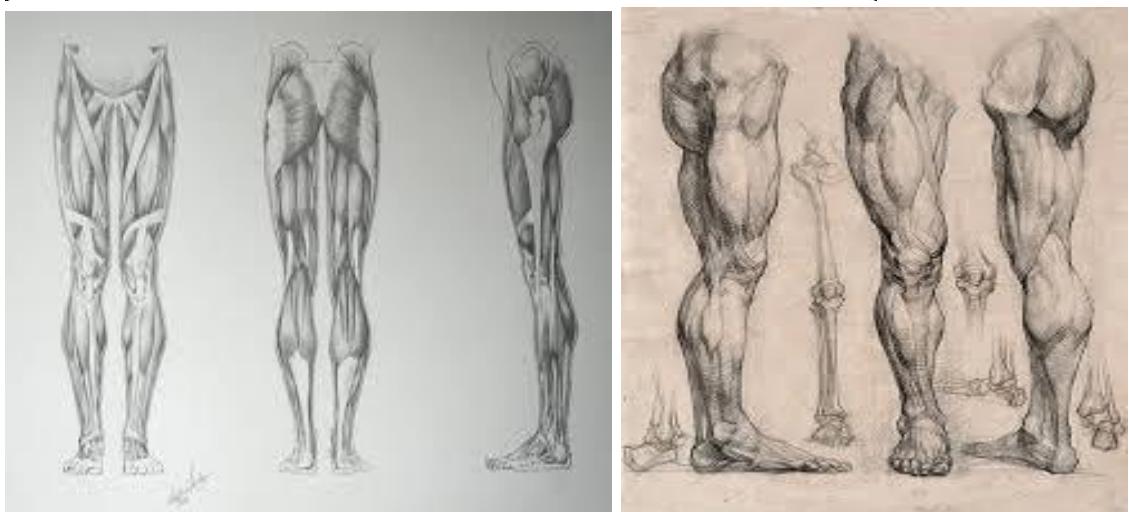
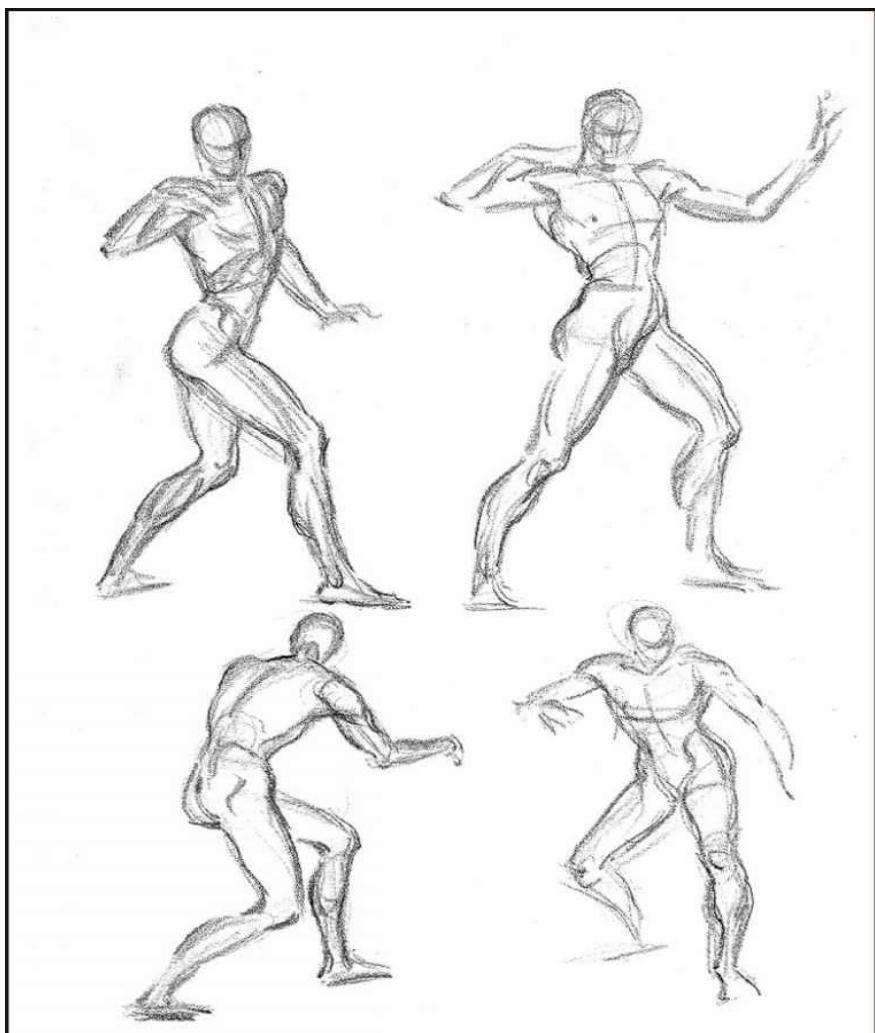


Arm muscles in different positions





Leg muscle in different positions



Drawing muscles of child is necessary because of their muscles is different from the muscles of adult and you check if the drawing has elements and principles of arts



Theoretical learning Activity

- Outline the principles used to draw human body



Practical learning Activity

- Make the practical exercise for drawing child, teenager and adult muscles in different position
- Make the practical exercise for drawing child, teenager and adult muscles in different position
- Do you need to learn anatomy to draw? Explain and give examples by drawing
- Draw muscles of hands, feet and heads.
- By using the different position of drawing, try to draw the real people?



Points to Remember (Take home)

Draw human muscles of child

Draw human muscles of teenager

Draw human muscles of adult

.



5. How do you study art anatomy?

Reference books:

- ✓ Anatomy for the Artist (the dynamics of the Human form) Author: TOM FLINT & PETER STANYER
- ✓ www.humananatomy.com
- ✓ Basic figure drawing techniques, edited by Greg Albert
- ✓ Anatomy for sculptors Author: ULDIS ZARINS with SANDIS KONDRATS

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References: