

VII. Anatomic Position: body standing erect with arms to the side and palms facing forward, head and feet forward

VIII. Directional Terms

- A. Anterior/Ventral: in front
- B. Posterior/Dorsal: in back
- C. Medial: toward the midline
- D. Lateral: toward the side
- E. Internal: within body
- F. External: outside the body
- G. Proximal: closest to the point of origin
- H. Distal: farther from the point of origin
- I. Superior: upper or above
- J. Inferior: lower

- K. Cranial: towards the head
- L. Caudal: towards the tailbone
- M. Flexion: decreasing the angle between two bones
- N. Extension: increasing the angle between two bones
- O. Afferent: carrying toward a center
- P. Efferent: carrying away or away from a center
- Q. Adduction: moving toward the midline
- R. Abduction: moving away from the midline
- S. Eversion: turning a body part outward
- T. Inversion: turning a body part inward
- U. Pronation: turning a body part downward
- V. Supination: turning a body part upward (as in shrug shoulders, palms up, “what’s up?”)
- W. Deep: away from the body surface, more internal
- X. Superficial: toward or at the body surface
- Y. Plantar: toward the sole of the foot
- Z. Palmar: toward the palm of the hand

IX. Planes

- A. Sagittal: divides the body or organ vertically into right and left unequal parts
- B. Medial/Mid-sagittal: divides the body or organ vertically into equal right and left parts
- C. Coronal/Frontal: divides the body or organ vertically into anterior and posterior parts
- D. Transverse: divides the body or organ horizontally or into cranial/caudal parts

X. Body Cavities

A. Ventral (Anterior)

- 1. Thoracic: chest, superior to the diaphragm
 - a. Right pleural: right lung
 - b. Left pleural: left lung
 - c. Mediastinum: heart (in pericardial cavity), trachea, right/left bronchus, esophagus, thymus gland, aorta/aortic arch, vena cava
- 2. Abdominopelvic: inferior to diaphragm
 - a. Abdominal: liver, gallbladder, stomach, pancreas, intestines, spleen, kidneys, ureters
 - b. Pelvic: bladder, female reproductive organs (uterus, fallopian tubes, ovaries), male reproductive organs (prostate, seminal vesicles, part of vas deferens), part of large intestine (colon, rectum)

B. Dorsal (Posterior)

- 1. Cranial: houses the brain
- 2. Spinal: houses the spinal cord

XI. Body Regions

A. Head

1. Parietal: top of head towards the back and sides
2. Frontal: forehead
3. Occipital: base of skull
4. Temporal: sides of head
5. Auricular: ear
6. Buccal: cheek
7. Orbital: eye socket
8. Mastoid: behind the ear
9. Nasal: bridge of nose
10. Mental: chin
11. Submental: beneath the chin
12. Maxillary: upper jaw
13. Mandibular: lower jaw
14. Zygomatic: cheek bone

B. Neck

1. Larynx: front of neck
2. Trachea: front of neck
3. Cervical: back of neck

C. Thorax

1. Axillary: armpit
2. Clavicular: collar bone
3. Sternal: midchest
4. Mammary: breast
5. Costal: rib
6. Scapular: shoulder blade
7. Pectoral: chest
8. Deltoid: shoulder area

D. Abdominal

1. Hypochondriac: under the cartilage of the ribs, right and left
2. Epigastric: over/above the stomach
3. Umbilical: surrounding the navel, belly button
4. Hypogastric: under/below the stomach
5. Inguinal/iliac: groin, right and left

E. Abdominal Quadrants

1. RUQ: liver, gallbladder, large intestine
2. LUQ: stomach, spleen, pancreas, large intestine
3. RLQ: appendix, large intestine, ovary, fallopian tube
4. LLQ: large intestine, ovary, fallopian tube

F. Posterior Trunk

1. Nuchal: back of neck
2. Cervical: neck
3. Thoracic: back of trunk
4. Lumbar: at small of back, lower back, waist area, lateral mid-abdomen, right and left
5. Sacral: pelvis, tailbone area

6. Coccyx: tailbone

7. Gluteal: buttocks

G. Extremities

1. Brachial: upper arm

2. Antecubital: front of elbow

3. Olecranon: back of elbow

4. Carpal: wrist

5. Phalanges: fingers, toes

6. Manual: hand

7. Pollex: thumb

8. Femoral: thigh

9. Patellar: front of knee

10. Popliteal: behind the knee

11. Tarsal: ankle

12. Pedal: foot

13. Calcaneal: heel of foot

MATERIALS NEEDED

Body Orientation Vocabulary

Assorted colors of playdoh

Carrots

Potatoes

Colored toothpicks

Paper plates

Marshmallows

Bananas

Permanent markers

ACCOMMODATIONS

For reinforcement, the students will make flashcards of all of the terms.

For enrichment, the students will develop questions and design a jeopardy game utilizing the information in this unit.

ACTIVITIES

I. In pairs, create a stick-like figure, with a head, trunk, arms, and legs using play dough. As the terms are discussed, the student will use a toothpick to designate the area. After all the terms are discussed, cut the figure into the planes. In pairs, identify the following areas on partner: Area distal to the knee. Area proximal to the elbow. Lateral to the big toe. Anterior side of the body. Posterior side of the body. Area that is medial to the shoulder. Area that is superior to the lungs. Area that is inferior to the heart.

II. Complete **Five Station Lab**

III. Develop a Short Story describing best date or worst nightmare using **anatomical terms**.

Medical Prefixes, Suffixes, Body Planes, and Directional Terms

Objective:

Students will have an overall understanding of the terminology presented and how to utilize it in the medical profession

Materials:

Crayons
Potatoes
Knives
Face Masks
Marker
Gloves
Colored toothpicks
Surgical Caps
Bananas
Carrots
Marshmallows
Paper Plates
Straws
Blank Sheets of Paper
Picture of Torso
Body Parts Worksheet

Stations: (See attached specific directions.)

Station #1 The students make up a story using the medical terminology.

Station #2 The students color the handout of the torso according to regions

Station #3 Students perform the requested surgeries on the patient (potato with a picture of a person drawn on it).

Station #4 Planes and directions are practiced using fruit, vegetables, toothpicks, and marshmallows.

Station #5 A fun activity matching body parts to other meanings for the words.

Station #6 Write the story.

Station #7 Make the play-doh person

Station One

Using the word list provided, write a story showing that you know the correct usage of the terms. Each student must write at least two sentences using the terms. BONUS: USE ALL OF THE FOLLOWING BONUS WORDS!

Arterio-, athero-, arthro-

Ileum, ilium

Infection, inflammation

Laceration, lesion

Mucous, mucus

Myc-, myel- myo-

Palpation, palpitation

Prostate, prostrate

Pyel-, pyo-

Supination, suppration

Viral, virile

The group may help each other. The entire group story must follow the same story line. The first sentence is started for you.....

You have the Grim Reaper on the autopsy table. As you begin the first incision.....

Station #2

Using a diagram of the torso, color code each section as follows (label specific left and right where applicable):

Umbilical Region - Green

Lumbar Region - Blue

Epigastric Region - Red

Iliac Region - Orange

Hypochondriac Region - Yellow

Hypogastric Region - Brown

Station #3

Prepare for surgery: you will need face mask and gloves.

You do not want to be sued for malpractice. The surgical team requires collaboration and planning. Know what you are going to do before you cut. These surgical incisions are permanent. Scarring is probable. Remember the anesthesiologist has given you only 15 minutes.

Your patient requires multiple procedures. Please perform the following:

1. Abdominocentesis
2. Tracheostomy
3. Left legectomy (what is the proper term?)
4. Rhinoplasty

Station #4 Body Planes and Directions

Be careful with the surgical instruments. Read and follow the instructions very carefully.

Carrot:

Cut the carrot with a midsagittal plane. Stick a blue toothpick in the superior end of one of the pieces. Place a marshmallow on the end of the toothpick.

Banana:

Cut the banana with a transverse plane. Stick a matching (same color) toothpick and marshmallow in the most distal point of the inferior piece. Place matching (same color) bilateral toothpicks on the superior piece.

Station #5 Fun Body Parts

Match the body parts with their non-body parts' meanings. Good Luck!!!!

What Part of the Human Body?

1. Is part of a wagon? _____
2. Is a fraction of a yard? _____
3. Is a measure of the height of horses? _____
4. Is a band instrument? _____
5. Is a church musical instrument? _____
6. Is a sailor's reply? _____
7. Is used to fasten boards? _____
8. Is used by artists? _____
9. Is a church? _____
10. Is a tropical tree? _____
11. Is a baby animal? _____
12. Is a strong box? _____
13. Is a male deer? _____
14. Is a flower? _____
15. Is a slang expression for nerve? _____
16. Is a small, fast animal? _____
17. Is one who goes to school? _____
18. Is part of a tree? _____
19. Is the outside cover part of a car? _____
20. Is part of a comb? _____

Short Story

Incorporate the Following terms into a story describing your describing best date or worst nightmare. Underline the term(s) in the story.

Superior

Visceral Organs

Inferior

Anterior

Abdominal Cavity

Dorsal

Pelvic Cavity

Medial

Oral Cavity

Lateral

Orbital Cavity

Proximal

RUQ

Distal

LLQ

Superficial

LUQ

Deep

RLQ

Cholecystitis

Hepatitis

Craniotomy

Integument

Arteriosclerosis

Blepharorrhaphy

Pneumonomelanososis

Gastrectomy

Carcinoma

Skeletal System

Cardiovascular System