INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Projekt:	MO-ME-N-T MOderní MEtody s Novými Technologiemi
Reg.č.:	CZ.1.07/1.5.00/34.0903
Operační program:	Vzdělávání pro konkurenceschopnost
Škola:	Hotelová škola, Vyšší odborná škola hotelnictví a turismu a Jazyková škola s právem státní jazykové zkoušky Poděbrady
Tematický okruh:	Parts of body II.
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Datum:	26. 10. 2013
Ročník: (Cíl. skupina):	2. – 4.
Anotace:	Základní informace o lidském těle. Popis jednotlivých částí těla a jejich funkce.

Lower limbs

- ***Hip*** - it refers to the area or the joint (the main function is to support the weight of the body while standing or walking. It helps to keep balance.
- ***Waist*** - on proportionate people, the waist is the narrowest part of the body
- ***Groins*** - groin muscles adduct the thigh (bring the femur and knee closer to the midline).
- ***Bottom (buttocks=butt)*** - it enables to take off the weight from the feet while sitting
- ***Thighs*** - one of the strongest muscle and the bone is very thick and strong. Thigh bone plays the key role in lymphatic system and to support immune system
- ***Knees*** - largest joints in the human body

- ***Calf (calves)***
- ***Ankle*** - it's the most injured joint of the body (sprains)
- ***Foot (feet)*** - the arches of the foot are very important because they serve as a shock absorb
- ***Heel*** - 2 cm thick tissue layer for protection
- ***Sole*** - the bottom of the foot;
  - the thickest layers of skin on the human body
- ***Toes*** - big toe, long toe, middle toe, ring toe, little toe; especially while walking they provide balance and bear weight (namely big toe)
- ***Nails*** - the fastest growing nail is on the middle finger
  - fingernails grow nearly four times faster than toenails

Upper limbs

- ***Arm*** - is adapted for precise positioning of the hand and thus assist in the hand's manipulative function
- ***Elbow*** - the task of the elbow is to properly place the hand by shortening and lengthening the upper limb
- ***Forearm*** - the ulnar nerve runs through
  - the forearm (from inside of elbow to inside of wrist) is the same length as your foot
- ***Wrist*** – this area might be affected by using computer mouse
- ***Hand*** – it enables us to grasp things
- ***Palm***
- ***Finger*** – an organ of manipulation and sensation; the highest concentration of touch receptors

  - thumb, index finger, middle finger, ring finger, little finger

Organs

- We could remove a large part of your internal organs and still survive. It's possible to survive even without the stomach, the spleen, 75 percent of the liver, 80 percent of the intestines, one kidney, one lung, and actually every organ from the pelvic and groin area.
- ***Lungs*** - organ of respiration
  - together they contain cca 2,400 km of airways.
  - total surface is about the size of a tennis court
  - if all of the capillaries that surround the alveoli were laid on a surface, they would have about 992 kilometres
  - the left lung is smaller than the right lung to make room for the heart
- ***Kindeys*** - excretion of wastes
  - hormone secretion (e.g. erythropoietin - production of red blood cells),
  - blood pressure regulation

- ***Livers*** - scientists have counted over 500 different liver functions
  - detoxification
- ***Bladder*** - collects urine excreted by the kidneys
- ***Stomach*** - the acid in the stomach is strong enough to dissolve razorblades
- ***Heart*** – organ of blood circulation
  - the human heart creates enough pressure to pump blood up to 9 meters
  - the heart beats about 100,000 times a day
- ***Intestines*** - small intestine is 4x as long as an average adult is tall
- ***Veins*** - a human body has cca 96,500 km of blood vessels (the distance around the earth is 40,075 km)
- Capillaries, are so small that it takes ten of them to equal the thickness of a human hair
- ***Blood*** - our blood is on a 19,000 km journey per day
  - our body creates 100 billion red cells every day
  - our body has about 5.6 liters of blood. This 5.6 liters of blood circulates through the body three times every minute
- ***Cells*** - it takes about 20 seconds for a red blood cell to circle the whole body
  - half of the body's red blood cells are replaced every seven days
  - 25 million of total new cells are being produced each second
- ***Nerves*** – nerve impulses can travel up to 400 km/h

Bones, muscles

- ***Bones*** - the feet have one quarter of all the human body's bones. Of about two hundred bones in the body, the feet contain 52 of them
- ***Skull*** - the skull is one of the least deformable structures found in nature
- ***Spine*** - consists of 24 vertebrae + 9 creating sacrum
- ***Vertebra*** - serve as shock absorber
- ***Ribs (ribcage)*** - part of the respiratory system
- ***Muscles*** – slow twitch fibers contract for long periods of time but with little force – „red"
  - fast twitch fibers contract quickly and powerfully but fatigue very rapidly – „white"
  - their function is to produce force and motion
  - it takes 17 muscles to smile and 43 to frown
  - the strongest muscle in the human body is the tongue
  - it needs 200 muscles to take one step
  - it takes twice as long to lose new muscle if you stop working out