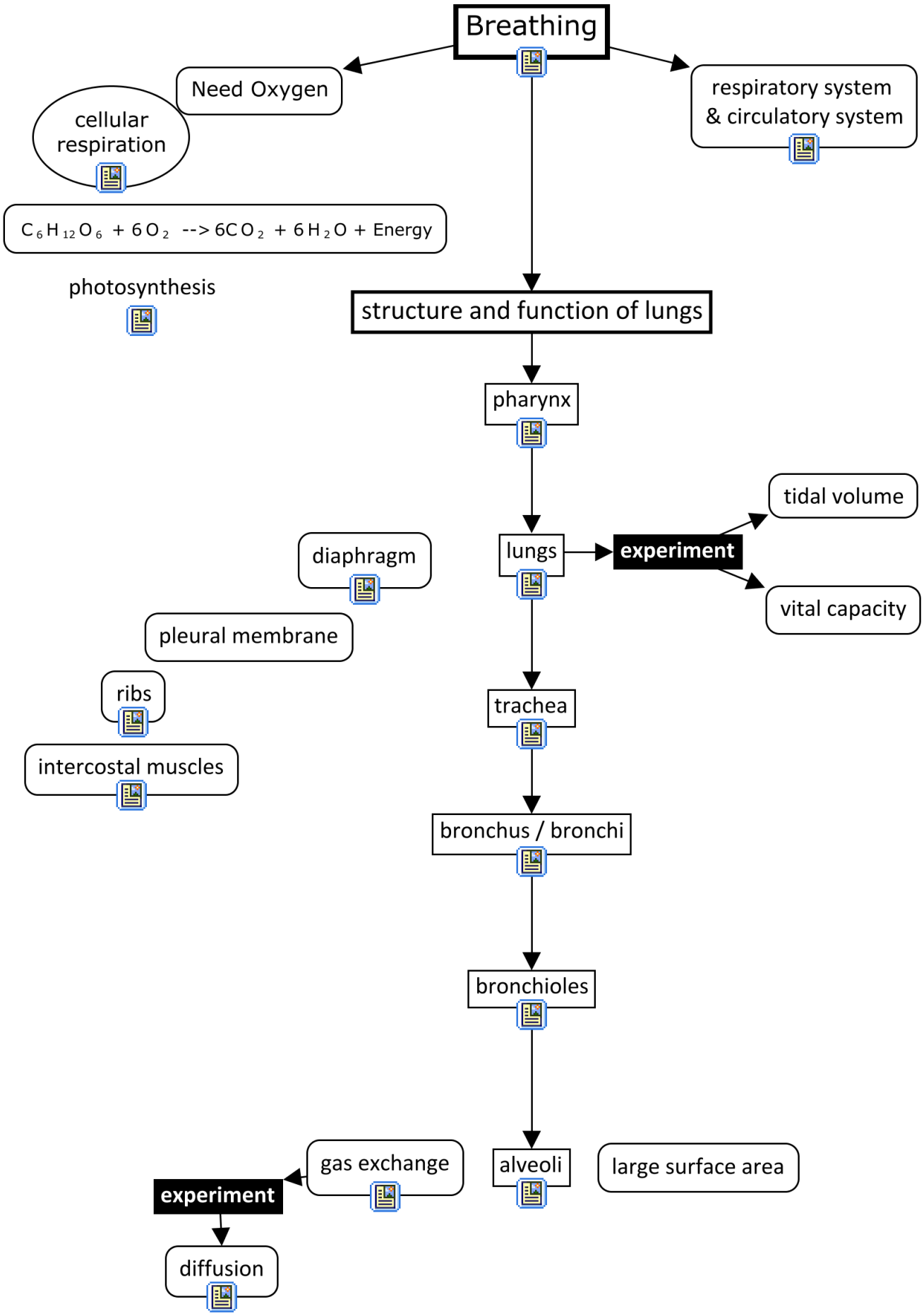
Breathing
Need Oxygen
cellular respiration
$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + Energy$
respiratory system & circulatory system
photosynthesis
structure and function of lungs
pharynx
lungs
experiment
tidal volume
vital capacity
diaphragm
pleural membrane
ribs
intercostal muscles
trachea
bronchus / bronchi
bronchioles
alveoli
large surface area
gas exchange
experiment
diffusion

abdominal cavity	the part of the body that lies between the chest and the pelvis and encloses the stomach, intestines, liver, spleen, and pancreas - *aka* belly
alveoli	tiny air sacs in the lungs at the end of the bronchioles, through which oxygen is taken into the blood
breathing	the process of inhaling to take in oxygen and exhaling to remove carbon dioxide
bronchi	either of the two main branches of the trachea, which contain cartilage within their walls
bronchioles	any of the smallest bronchial tubes, usually ending in alveoli
capillary	very small blood vessels between the ends of the arteries and the beginnings of the veins
carbon dioxide	a colourless odourless incombustible gas present in the atmosphere and formed during respiration, the decomposition and combustion of organic compounds, and in the reaction of acids with carbonates: used in carbonated drinks, fire extinguishers, and as dry ice for refrigeration. Formula: CO_2
carbon monoxide	A colourless, odourless gas formed when a compound containing carbon burns incompletely because there is not enough oxygen. It is present in the exhaust gases of automobile engines and is very poisonous. Chemical formula: CO.
cellular respiration	$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + Energy$ $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + Energy$ (as ATP) glucose oxygen carbon dioxide water **a**denosine **t**ri**p**hosphate The process of breaking sugar into a form that the cell can use as energy. This happens in all forms of life. Cellular respiration takes in food and uses it to create ATP, a chemical which the cell uses for energy.
diaphragm	dome-shaped muscular partition that separates the abdominal and thoracic cavities
diffusion	The movement of atoms or molecules from an area of higher concentration to an area of lower concentration. Atoms and small molecules can move across a cell membrane by diffusion.
intercostal muscles	several groups of muscles that run between the ribs, and help form and move the chest wall
lung	either one of a pair of spongy saclike respiratory organs within the thorax of higher vertebrates, which oxygenate the blood and remove its carbon dioxide
pharynx	The pharynx is an organ in the back of the throat. As such, it is part of the gastrointestinal system. It comes after the mouth and before the oesophagus. Food and air go through the pharynx. The pharynx keeps food and liquids out of the lungs.
photosynthesis	$6H_2O + 6CO_2 + Energy \rightarrow 6O_2 + C_6H_{12}O_6$ water carbon dioxide sunlight oxygen glucose the complex process by which carbon dioxide, water, and certain inorganic salts are converted into carbohydrates by green plants, algae, and certain bacteria, using energy from the sun and chlorophyll.
pleural membrane	The pleural membrane is thin, moist, slippery and has two layers. The outer layer lines the inside of the rib cage and the diaphragm while the inner layer covers the lungs. Between the two layers is the pleural cavity, which normally contains fluid secreted by the membranes. This allows the two layers to slide easily over one another as the lungs inflate and deflate during respiration.
ribs	any of a series of long, curved bones extending from the spine and enclosing the chest cavity
thoracic cavity	the part of the human body enclosed by the ribs – *aka* chest
tidal volume	The amount of air that you move in and out of your lungs while breathing normally
trachea	the tube connecting the mouth to the bronchi. It carries air to the lungs; *aka* the windpipe
vital capacity	the maximum amount of air moved in and out of the lungs

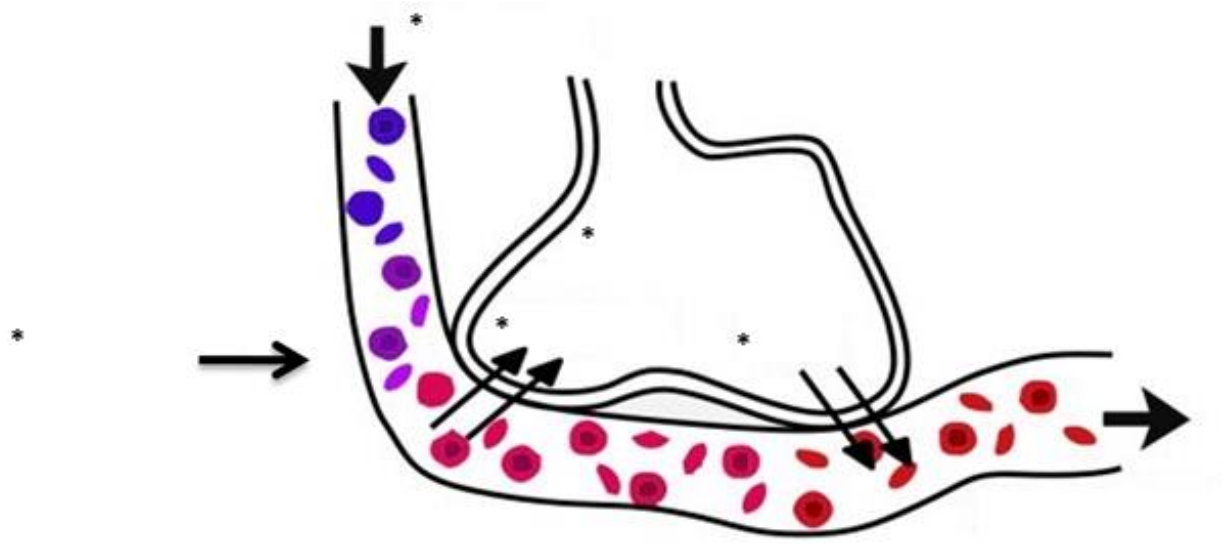

*Figure 1 Label the diagram at **

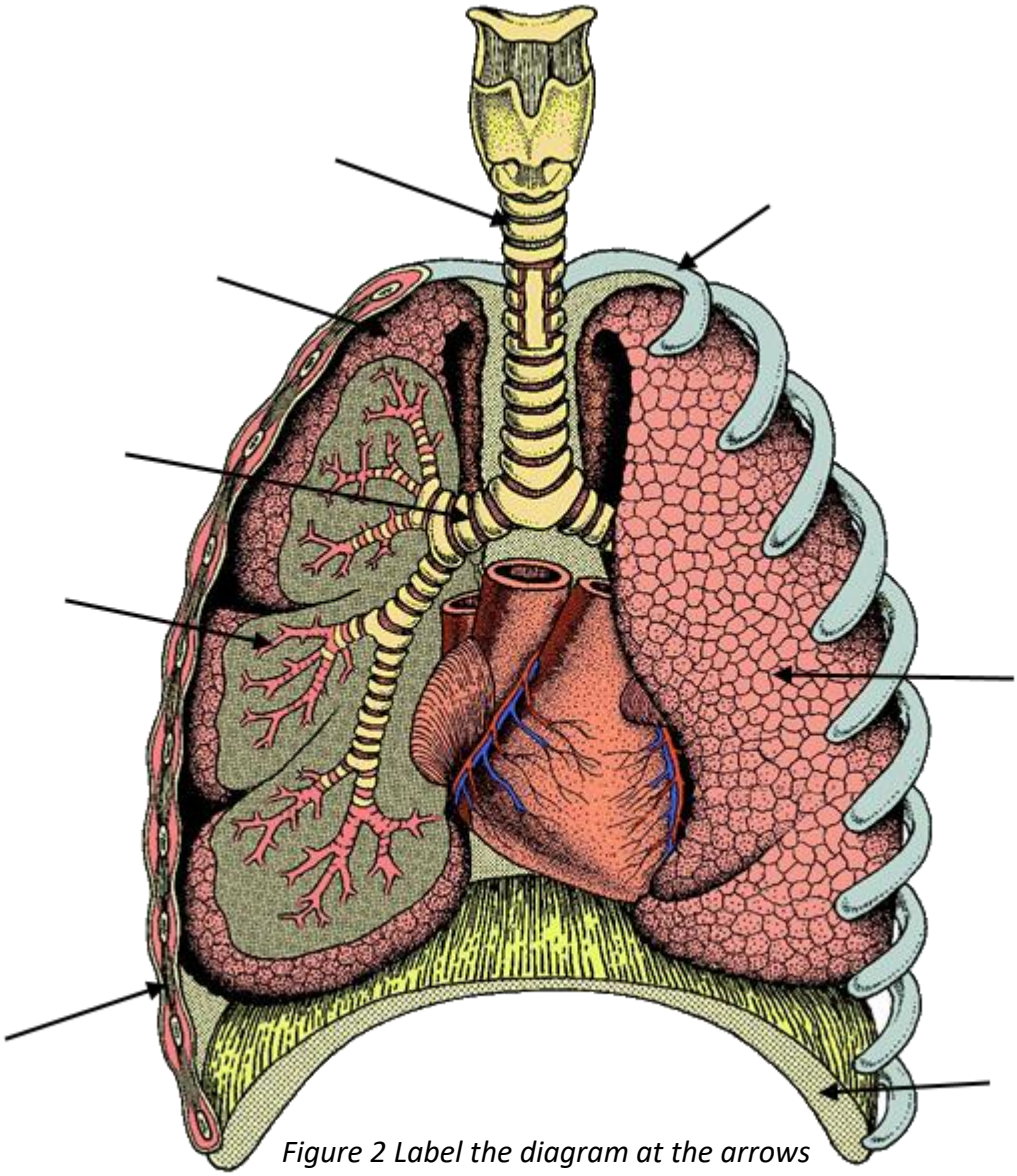

Figure 2 Label the diagram at the arrows