Clinical haematology worksheet

Blood video

1 Blood is actually a _____ of cells suspended in a slightly-yellowish _____ called plasma.

2 Plasma is _____ up mostly of water, but it also contains _____, sugars, hormones and _____.

3 RBC make up _____ of your blood. They're round and look a little like a _____ .

4 Their main job is to _____ oxygen to the other cells of the body and to take away the carbon dioxide as a _____ product.

5 RBC only live for _____, but healthy bone marrow produces _____ RBC every hour.

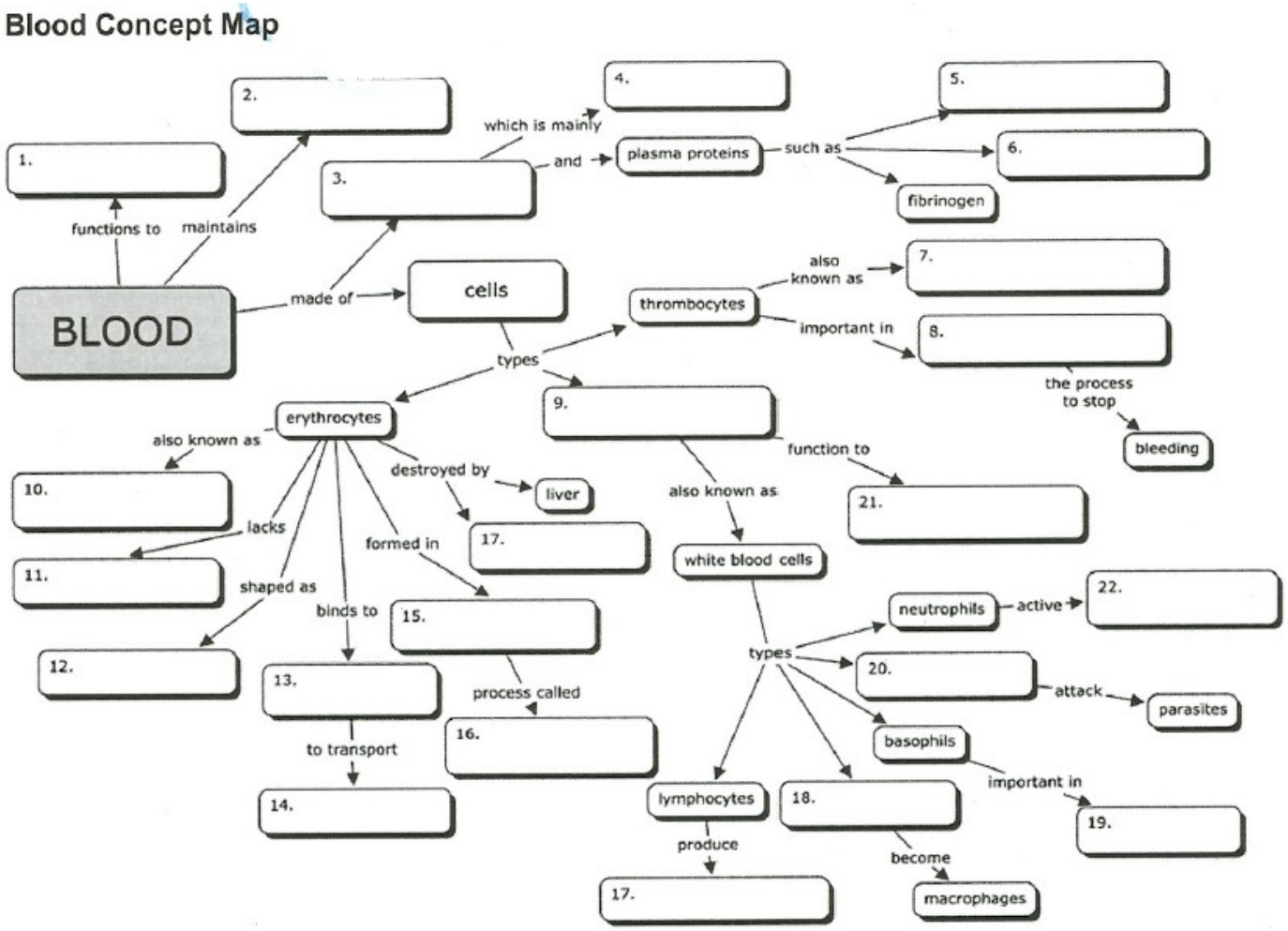
6 WBC fight infection from _____, _____, all those nasty _____ that can cause disease.

7 When at last they find the invader _____, they quickly move in for the kill.

8 Platelets are small pieces of _____ or cytoplasm whose job it is to plug _____ in a vessel's walls.

9 Platelets form a plug that stops the loss of blood within _____ minutes.

10 A platelet plug will last for only _____ hours.



Blood reading

Complete with the words in the box:

concentration	parameters	bloodstream	fluid	number
differential	circulate	sample	volume	characteristics

The complete blood count (CBC) is a test that evaluates the cells that ___ (1) in blood. Blood consists of three types of cells suspended in ___ (2) called plasma: white blood cells (WBCs), red blood cells (RBCs), and platelets (PLTs). They are produced and mature primarily in the bone marrow and, under normal circumstances, are released into the _____ (3) as needed.

A CBC is typically performed using an automated instrument that measures various ____ (4), including counts of the cells that are present in a person's _____ (5) of blood. The results of a CBC can provide information about not only the _____ (6) of cell types but also can give an indication of the physical _____ (7) of some of the cells. A standard CBC includes the following:

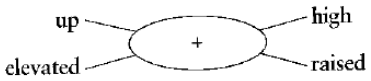
- Evaluation of white blood cells: WBC count; may or may not include a WBC _____ (8)
- Evaluation of red blood cells: RBC count, hemoglobin (Hb), hematocrit (Hct) and RBC indices, which includes mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin _____ (9) (MCHC), and sometimes red cell distribution width (RDW). The RBC evaluation may or may not include reticulocyte count.
- Evaluation of platelets: platelet count; may or may not include mean platelet _____ (10) (MPV) and/or platelet distribution width (PDW)

Blood test results and fill-in

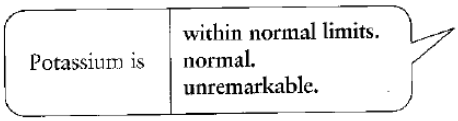
Haematology lab report

Full blood count (FBC)	Value	Range	Unit
Haemoglobin (Hb)	143	115-165	g/L
Haematocrit (HCT)	0.224	0.37-0.47	L/L
Mean cell volume (MCV)	72.5	78.0-98.0	fL
White cell count (WCC)	7.4	4.0-11.0	10^9/L

Terms used to describe lab results



When the results are within the normal range, doctors say:



Unit abbreviation	Full form
g/L	grams per litre
L/L	litres per litre
10^9/L	times ten to the power nine per litre
fL	femtolitres
mmol/L	millimols per litre
umol/L *or* µmol/L	micromols per litre
U/L	units per litre

Complete the sentences describing the results of the report above:

1 Haemoglobin is _____ _____ _____, one hundred and forty-three _____ litre.

2 Haematocrit is _____, 0.224 _____ _____ litre.

3 Mean cell volume is _____, 72.5 _____.

4 White cell count is _____, 7.4 _____