

Unit 2: Tissues

Lesson 9 : *Connective Tissue-Key*

Activity 1 (15'): *Overview of connective tissue*

Read the following text and in pairs answer the questions.

Adapted from <https://courses.lumenlearning.com/boundless-ap/chapter/connective-tissue/>

Connective tissue (CT) is a one of the four of tissues. It is the most abundant tissue and widely distributed, but the amount of it can vary according to the organ.

It can be found around the body organs and between different tissues. In fact one of its function is to support other types of tissues and organs and fill the empty space between them.

Unlike epithelial tissue, the connective tissue is never in contact with the external environment. Furthermore, this type of tissue gives strength, protection and insulation to other body tissues.

Each type of connective tissue has a particular function, e.g the hematopoietic one produces blood.

It has three main components: ground substance, fibers and specialized cells.

Connective tissue is mainly divided into two types: *connective tissue proper* and *specialized connective tissue*.

The first one is subdivided according to cells, fibers and ground substance into two types: loose connective (e.g. adipose, areolar) and dense connective tissue.

The second group, the specialized one, includes : cartilage, blood and bone.

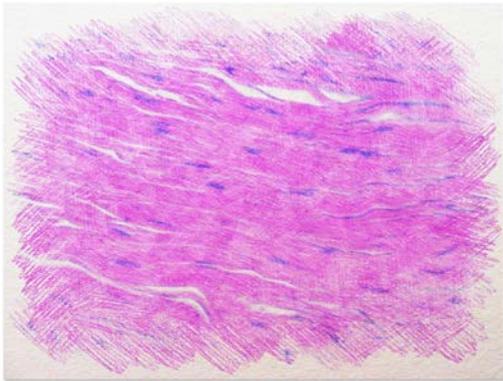


Figure 1: dense connective tissue

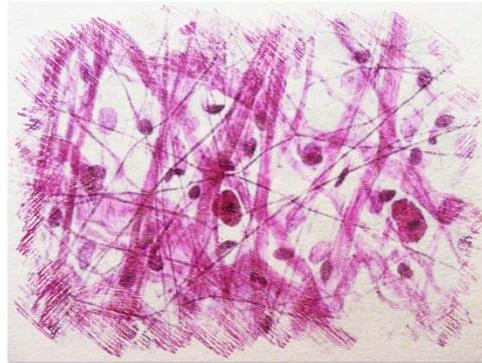


Figure 2: loose connective tissue

1. What are the functions of the connective tissue?

It provides: support, movement, insulation, storage, protection and binds structures

2. In your opinion , why is the connective tissue defined loose or dense?

Each student gives his/her personal answer by observing the images provided.

3. Based on your knowledge what is the specific function of each type of specialized connective tissue?

Free answer

Unit 2- Lesson 9: Connective Tissue-Key

Activity 2 (35'): *Connective tissue proper*

Step1(15'): After watching the following video twice

<https://www.youtube.com/watch?v=4HNbspnFyIE> up to 3.58 min complete the following table

Type	LOOSE	DENSE
Description	Few fibers and cells and loosely arranged in ground substance	A lot of collagen fibers but less matrix
Is it flexible?	Yes	No
Is it strong?	Quite strong	Resists compression
Common location	Deep in the skin	Ligaments and tendons Skin Surrounds bones Vocal cords
Types	Adipose, areolar, reticular	Regular, irregular, elastic
Function	Insulate; store energy; surrounds organs and blood vessels, supportive framework	Handle stress

Step 2 (20'): Watch the whole previous video, then in pairs, by referring to the video and the following concept map, write a text that summarizes the main contents of the connective tissue (max 15 lines).

Each pair writes their own text that will be evaluated using the grid