

Unit 2: Tissues

Lesson 1: *Epithelial tissue (Part 1)-Key*

Activity 1 (10'): Assessment

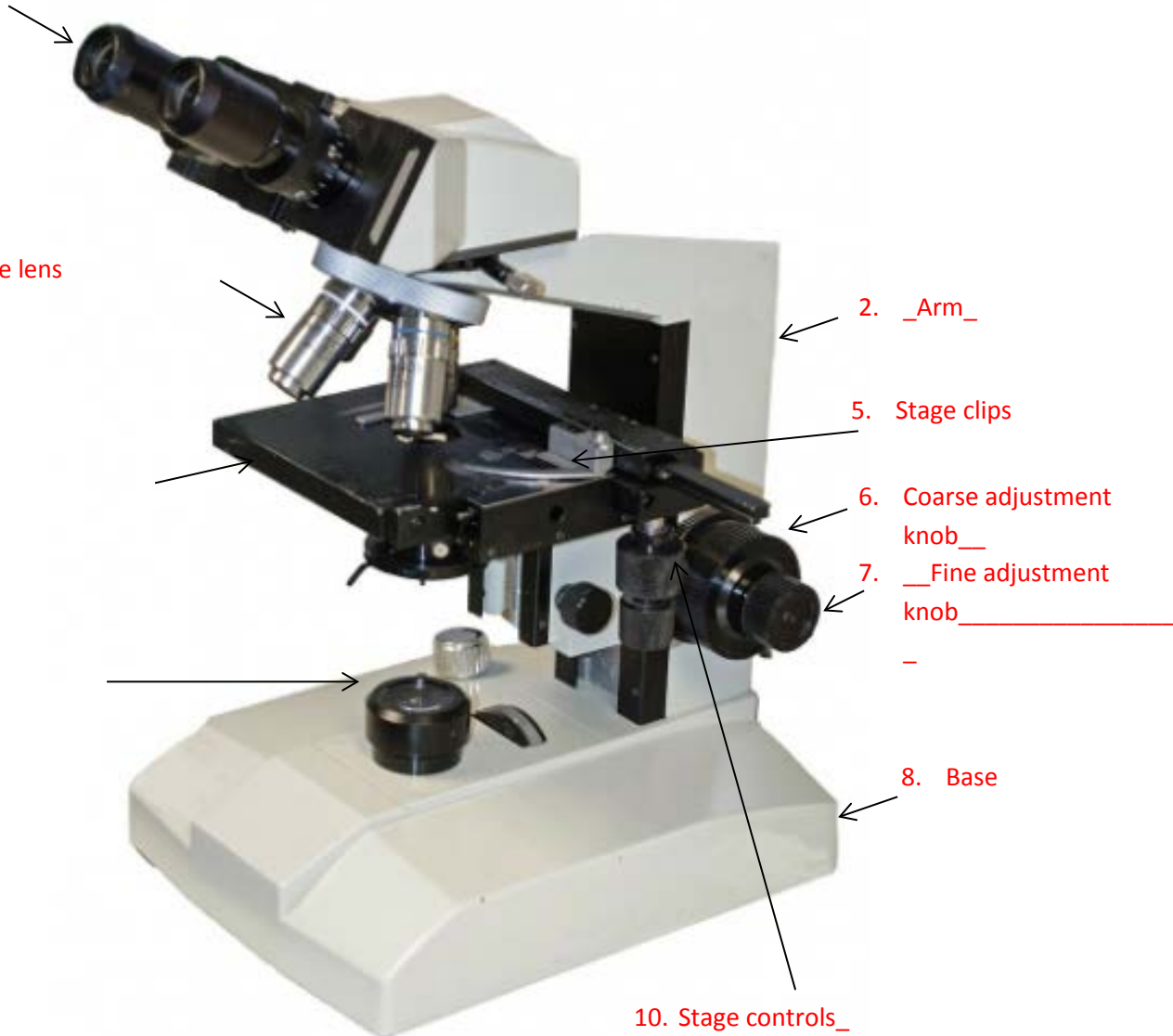
Based on your knowledge, learned in unit 1, fill the image below.

1. Eyepiece

3. Objective lens

4. Stage

9. Light source



Unit 2- Lesson 1: Epithelial Tissue (Part 1)-Key


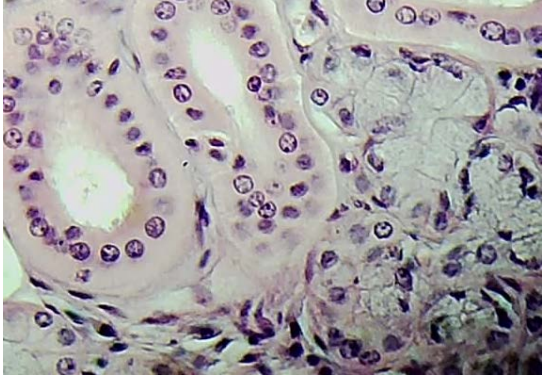

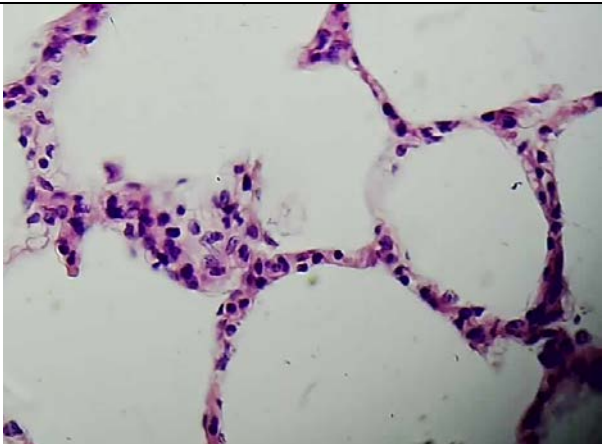
Assessment

Each right answer 1 point (half point spelling and half point correct match).

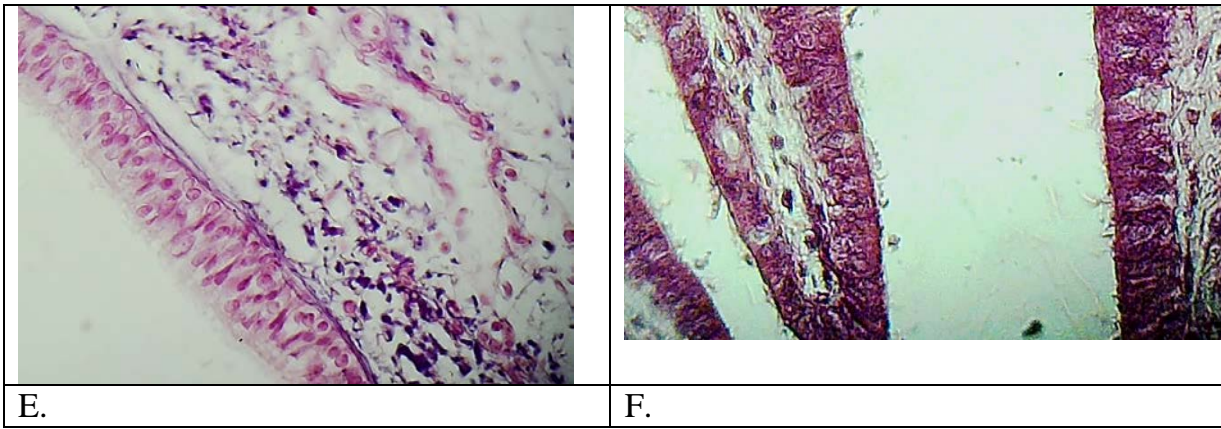
Points	Grade
10	9
9	8.5
8	8
7	7
6	6.5
5	6
4	5.5
3	5
2-1	4

Activity 2 (15'): Observation epithelial tissues

Match the slide on the microscope with the following image. Each image represents one type of epithelial tissue.

	
A.	B.
	
C.	D.

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Activity 3 (25'): Tissue classification

Read the following text, then based on it classify the different types of epithelial tissues.

The epithelial tissue is classified with two names, the first one describes the number of cell layers, the second one describes the shape of the cells.

Based on the number of layers, there are three different types of epithelial tissue: *simple* means only one layer, *stratified* means many layers, while *pseudostratified* is a simple layer, but the nuclei are at different heights, thus giving the impression of a stratified layer.

Simple tissue allows diffusion, in fact this type of tissue occurs where there is absorption, secretion and filtration, for example in glands, capillaries, alveoli, pancreas, intestine. Stratified tissue is located where body linings resist a mechanical and chemical insult, having a protective function.

Based on the shape, the cells can be: *squamous* (flat), *cuboidal* (as tall as wide) or *columnar* (tall).

Squamous cells are found where there is passive diffusion (e.g. capillaries, lung). Cuboidal cells have the function of secretion and absorption (e.g. ducts, and glands). Columnar cells are found in area with a lot of secretion and absorption, such as small intestine. Moreover, sometimes these cells have on top cellular extensions, named cilia.

Stratified squamous epithelia can be keratinized or non-keratinized, depending on the location it is found in. Keratinized epithelium, also called "cornified" is composed of numerous layers of dead squamous cells (Skin)

Letter	Shape	Layer	Tissue Name
A	Flat	Stratified	Cornified epithelium (Skin)
B	Cube-like cells	One	Simple cuboidal epithelium (gland)
C	Flat	Stratified	Non cornified epithelium (tongue)
D	Flat cells	One	Simple squamous epithelium (alveoli)
E	Columnar (with cilia)	One	Pseudostratified (trachea)
F	Columnar	One	Simple columnar (oviducts)