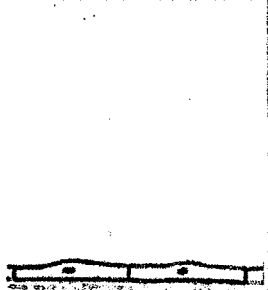
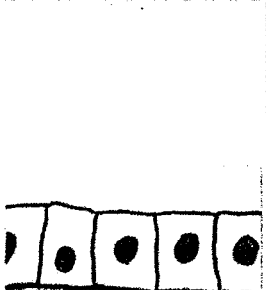
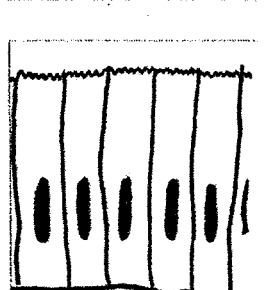
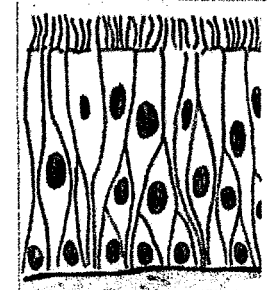
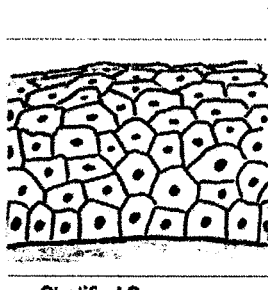
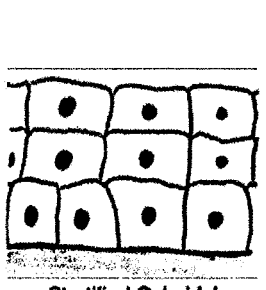
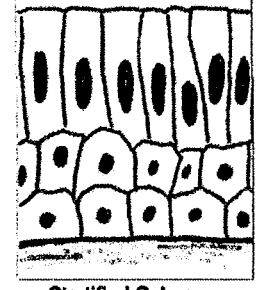
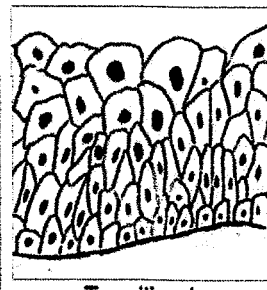


# Epithelial Tissue Histology

## Model 1: Structure of Epithelial Tissue

		SHAPE			
		Squamous	Cuboidal	Columnar	Other
LAYERS	Simple	 <p>Simple Squamous</p>	 <p>Simple Cuboidal</p>	 <p>Simple Columnar</p>	 <p>Pseudostratified Columnar</p>
	Stratified	 <p>Stratified Squamous</p>	 <p>Stratified Cuboidal</p>	 <p>Stratified Columnar</p>	 <p>Transitional</p>

### QUESTIONS:

1. Describe the morphology (shape) of the following epithelial tissue cells.

a) **Cuboidal:**

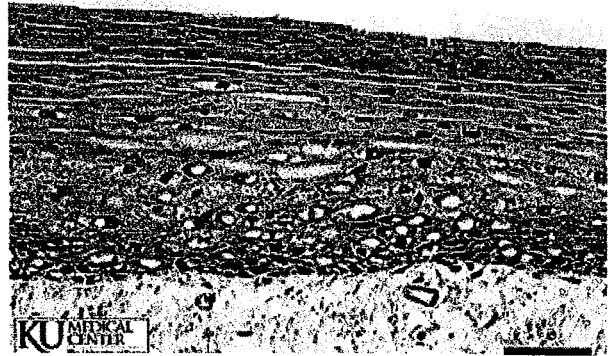
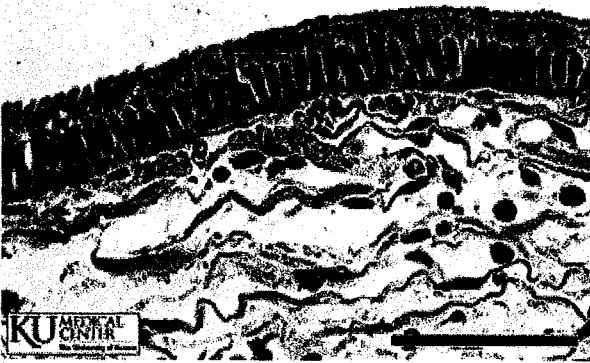
b) **Columnar:**

c) **Squamous:**

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2. Write a grammatically correct sentence to describe the difference between **simple** and **stratified** epithelial tissue:
  
3. Reviewing your answers to questions #1 and #2, what two characteristics do you think are used to classify epithelial tissue?
  
4. Based on your examination of Model 1, which epithelial tissues do not conform to the naming classification rules you described in question #3? (*The manager* should have two different team members state a tissue and describe its structure).
  
5. Compare pseudostratified columnar epithelium and simple columnar epithelium and answer the following questions:
  - a) How are these two tissues the same?
  
  - b) What differentiates pseudostratified columnar epithelium from simple columnar?
  
6. The bottom (**basal**) layer of stratified epithelial tissue may have different cell shapes from the top (**apical**) layer. Which layer determines the shape classification of the tissue? Provide evidence to support your answer.

7. Name the specific type of epithelium described by the following: a tissue that consists of multiple layers of cells, in which the top layer is composed of columnar cells.
  
8. Before answering as a group, each person should individually complete this question by themselves. Once everyone is done, complete Question #9 as a group.
  - a. Label the **apical** surface on each epithelial tissue photomicrograph.
  - b. Label the **basal** surface on each epithelial tissue photomicrograph.
  - c. Draw a bracket to indicate the location of the epithelial tissue.
  - d. Name the specific epithelial type under both tissue photomicrographs.



*Images courtesy of The University of Kansas*

Tissue = \_\_\_\_\_

Tissue = \_\_\_\_\_

9. Discuss and compare your individual answers to the above question with your group. (The manager should ensure that all group members share their answers). Develop a group consensus and write the best answer below:
  
10. The majority of dust is composed of human skin cells. What does this indicate about the rate of mitosis for epithelial tissue?

11. Epithelial cancers are the most common types of cancer. Answer the following questions together as a group:

a) Briefly explain what cancer is.

b) What do you think makes skin so susceptible to uncontrolled cellular growth?