CONCEPT: INTRODUCTION TO THE CYTOSKELETON

●**Cytoskeleton**: a network of elongated proteins in the _____ with multiple functions.

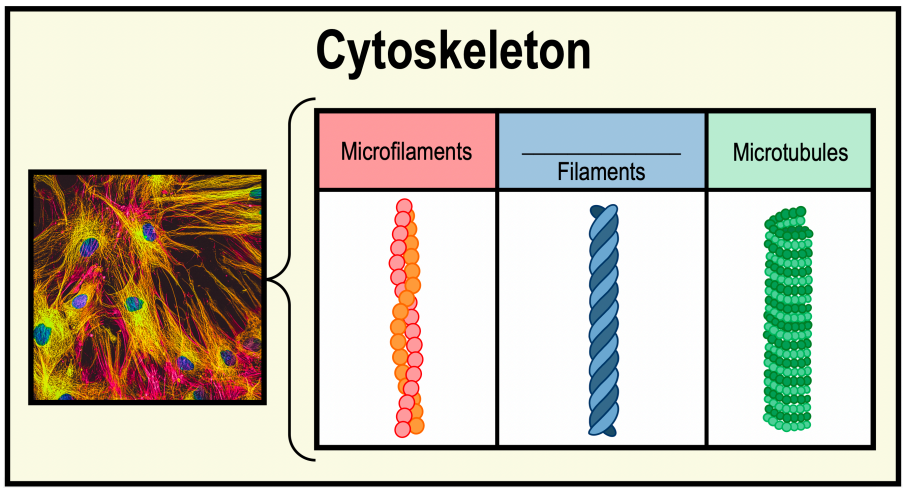
□ *Functions* include providing *cell-*_____, *structure,* _____, *transportation, & biosignaling*.

●_____ major components of the *cytoskeleton*:

1) **Microfilaments**: _____ in size & usually made of thin rods of repeating _____ proteins.

2) **Intermediate Filaments**: _____ in size & made of *variable* proteins.

3) **Microtubules**: _____ in size & forming *tubes* made of repeating _____ proteins.



PRACTICE: What component of the cytoskeletons do motor proteins use to transport vesicles?

a) Actin. b) Microfilaments. c) Microtubules. d) Intermediate filaments.

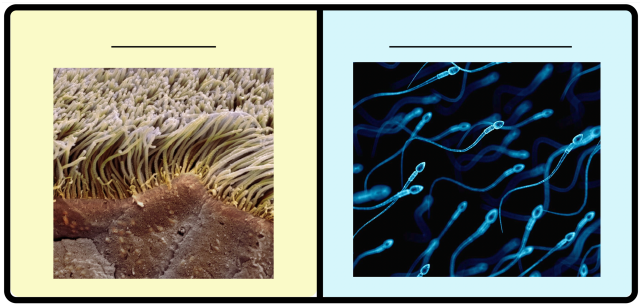
Cilia & Flagella

●*Microtubules* are a major structural component of _____ & _____, which provide cell *movement*.

1) **Cilia**: multiple _____ "hair-like" structures that move like "oars" to move objects or provide cell movement.

2) **Flagella**: _____ "tail-like" structures that move like a "whip" to provide cell movement.

EXAMPLE: Cilia & Flagella.



PRACTICE: In human cells, _____ are used to move a cell within its environment while _____ are used to move objects in the environment relative to the cell.

a) Cilia, pseudopodia. b) Flagella; cilia. c) Cilia; flagella. d) Microfilaments; microtubules.