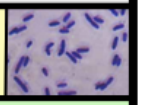
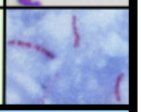
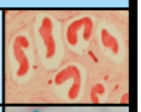
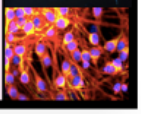
CONCEPT: REVIEWING THE TYPES OF STAINING

●Now let's review the types of staining:

Type of Stain	Description	
Simple Stains ⊕ ⊖	A simple dye which stains cells or the _____ behind cells.	
Differential Stains	A procedure that stains different microorganisms different colors.	
_____ Stains	A procedure that stains Gram + and Gram - bacteria cells different colors.	
Acid-Fast Stains	A dye used to stain microorganisms that are not easily stained.	
Special Stains	A procedure that stains specific cell structures.	
_____ Stain	A procedure that stains the background so the capsules of cells visually stand out.	
Endospore Stain	A special dye used to stain endospores which normally do not stain.	
Flagella Stain	A special dye that coats the outside of the _____ making it more visible.	
Fluorescent Dyes & Tags	**Fluorescent Dyes:** Dyes which can be made to stain all cells or only specific cell structures. **Fluorescent Tags:** Antibodies with an attached fluorescent _____ which stain specific molecules.	 

PRACTICE: Which of the following stains is NOT correctly matched with its function or purpose?

a) Gram-stain: A staining technique that stains gram-positive and gram-negative bacterial cells different colors.

b) Simple stain: A staining technique that can stain all types of bacteria cells, including bacterial endospores.

c) Acid-fast stain: A technique used to stain bacteria that possess mycolic acid in their cell walls.

d) Capsule stain: A staining technique that stains the background behind bacteria to allow their capsules to visually stand out.

PRACTICE: Which of these is considered a differential stain and why?

a) Flagella stain: differentiates the flagella from the rest of the structures of the cell.

b) Capsule stain: differentiates the capsule from the background behind the bacterium.

c) Gram-stain: differentiates two types of bacteria, gram-positive and gram-negative.