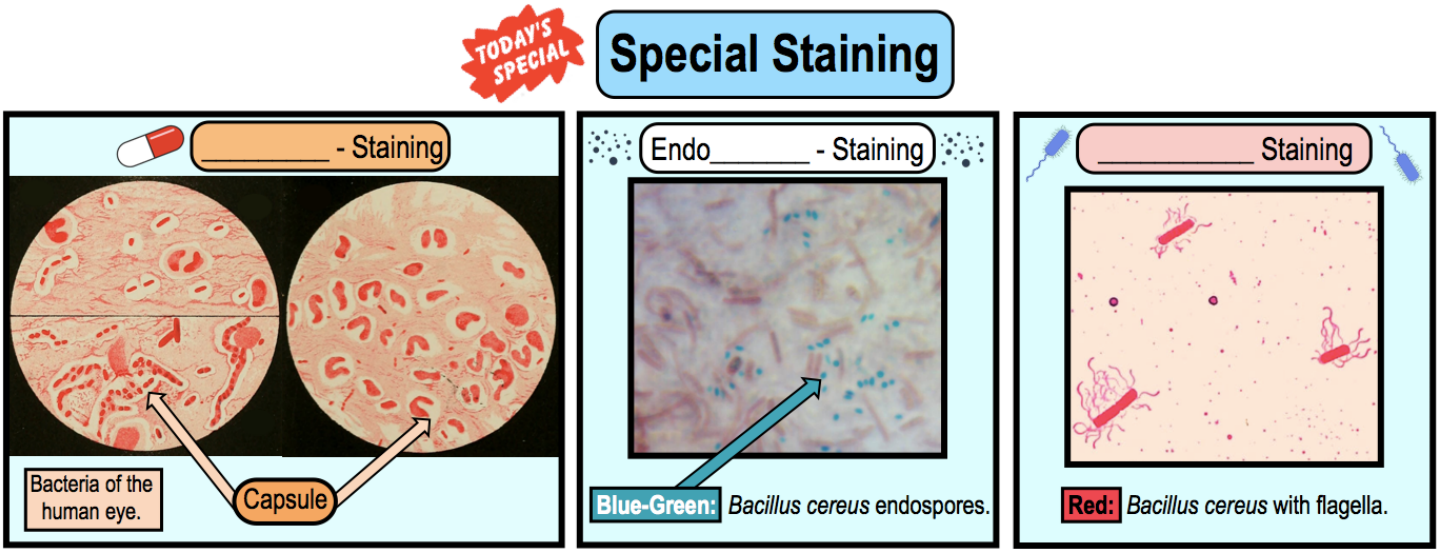
CONCEPT: OTHER TYPES OF STAINING

Special Staining

- _____ **Staining**: special procedures used to stain very specific structures inside or outside cells.
  - □ Examples include *capsule* stain, *endospore* stain & _____ stain.

EXAMPLE: Types of special staining.



PRACTICE: Which of these is considered a special stain that correctly matches its description?

a) Endospore stain: stains the capsules of bacteria found in the human eye.

b) Gram-stain: used to differentiate gram-negative from gram-positive bacteria.

c) Acid-fast stain: identifies acid-fast bacteria that contain mycolic acid in their cell walls.

d) Flagella stain: stains the flagellum of bacteria like *Bacillus cereus.*

PRACTICE: What is the major difference between special staining techniques and differential staining techniques?

a) Special staining stains the background behind the specimen. Differential staining stains the specimen.

b) Special staining stains specific structures of a cell. Differential staining differentiates different type of specimens.

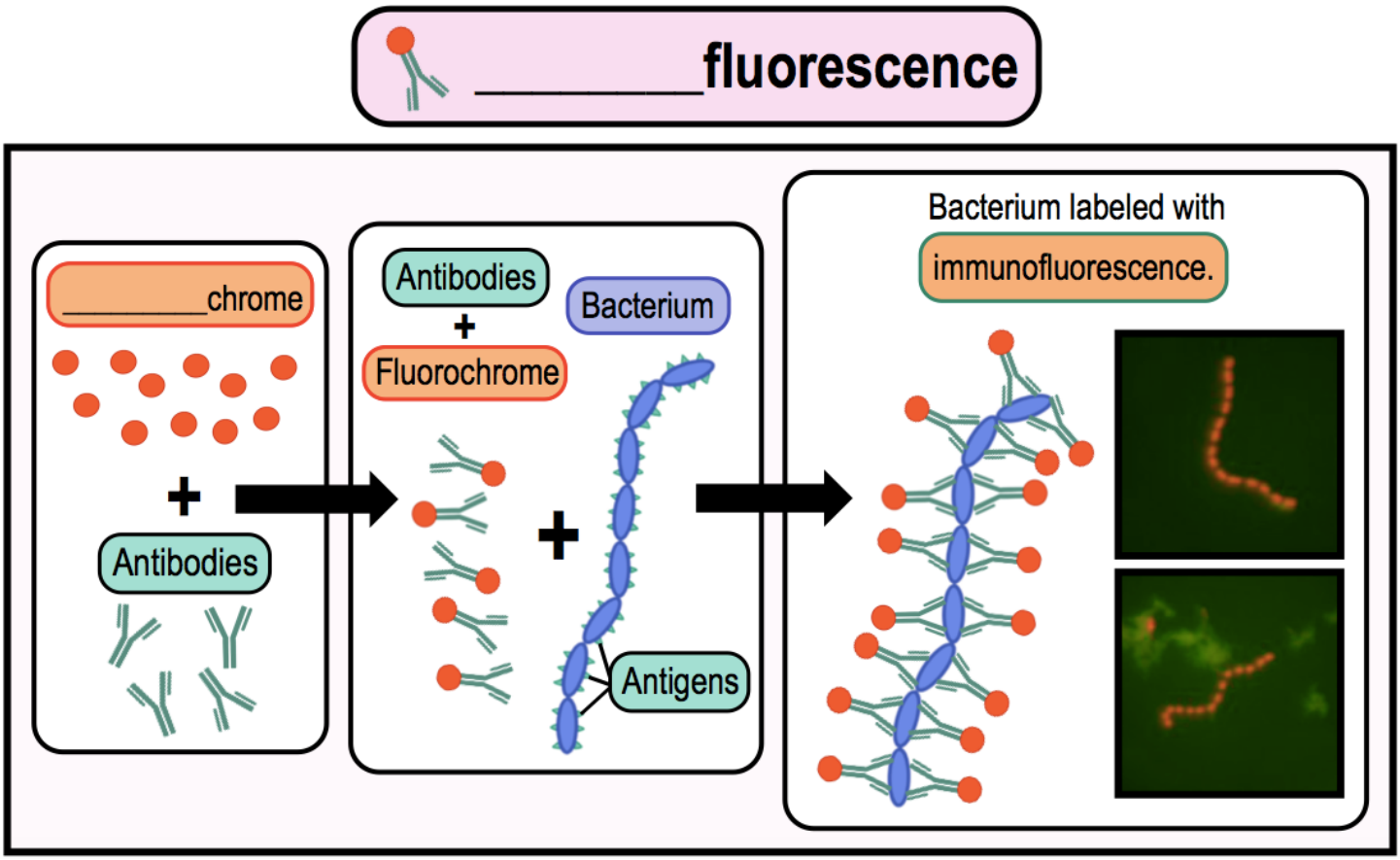
c) Special staining differentiates gram + from gram – cells. Differential staining stains capsules and flagella.

CONCEPT: OTHER TYPES OF STAINING

Fluorescent Dyes

●Recall: _____ dyes & *immunofluorescence* can be used to observe cells &/or cell components.

- □ **Immunofluorescence**: technique combining a *fluorochrome* with an _____ to tag specific objects.
- □ Some fluorescent dyes can be changed by cellular processes to distinguish *living* from *dead* cells.



PRACTICE: _____ is/are used to attach fluorochrome molecules to antigens on the surface of bacterial cells in immunofluorescence.

a) DNA.
b) Ribosomes.
c) Antibodies.
d) Flagella.