

Supplemental Materials and Methods section

Microscopy Terms

- Two things that limit light microscopy:
 - 1) Size of the wavelength
 - 2) Numerical aperture (pupil of the objective, the larger it is, the higher the resolution)
- Resolution (differentiate between two points) versus enlargement (make larger)
- Giemsa Stain
- Phase contrast microscopy
- Bright field microscopy

Giemsa Stain

The Giemsa stain is clearly visible on standard light microscopes. This stain clearly differentiates between different cellular structures.

Collagen, muscle.....	pale pink
Microorganisms, parasites.....	purplish-blue
Starch granules, cellulose.....	sky blue
Pigments.....	green
Nuclei.....	dark blue to violet
Cytoplasm.....	varying light blue shades

Suggested Vocabulary List/Topics to Discuss with Class

(in no way an exhaustive list but rather a suggested starting point)

- Aliquot (verb versus noun, when is it appropriate?)
- Tachyzoite/Bradyzoite/Oocyst
- Symbiosis (phoresis, mutualism, commensualism)
- Parasitism (and things like ecto vs. endoparasite)
- Plastid
- Apical organelles
- Seroconversion (changing from Toxo (exposure to pathogen) – negative to Toxo-positive)
- Immunocompromised
- Biosafety
- Homogenize
- Supernatant
- Pellet
- Non-ionic
- Surfactant
- Detergent, denature, micelle
- Dilutions
- Conversion Factors
- Density
- Molarity
- Osmolarity

Suggested Topic List

AIDS

Infectious Disease

Parasitology (for those wishing an in-depth study on the history of parasitology, we recommend reading the review by Cox 2002 CLINICAL MICROBIOLOGY REVIEWS, Oct. 2002, p. 595–612 Vol. 15, No. 4)

Definition of a cell

Cell Doctrine

Pasteur's Germ Theory

Food Safety

Pregnancy

Pet ownership

Public Health

Food recalls (topical news items)

Morbidity and Mortality Weekly Reports (MMWR) (www.cdc.gov/mmwr/)