USABO Study Resources

Catherine Wang (updated August 2021)

General Biology*

Biology by Campbell and Reece, 9th ed. and above

Cell and Molecular Biology*

Lehninger Principles of Biochemistry by Nelson and Cox (Chapters 2-10 on macromolecules) *Alberts Molecular Biology of the Cell* by Alberts et. al. (Chapters 8, 9 on methods)

Plant Biology*

Raven's Biology of Plants by Evert and Eichhorn (Chapters 22-30 on angiosperms)

Human Anatomy and Physiology

Vander's Human Physiology by Widmaier et. al. (Chapters on immune, endocrine, and cardiovascular systems)

Genetics

Concepts of Genetics by Klug et. al. (Chapters on linkage analysis, polygenic inheritance)

Other resources

Youtube: Crash Course Biology, Crash Course Human Anatomy and Physiology, Khan Academy MCAT series, Nikolai's Genetics Lessons

Online lecture notes published by universities on topics such as evolution, population genetics, etc. MCAT resources for biochemistry and physiology (MCAT biochemistry is at a similar, if not slightly lower level to USABO)

<u>Tips:</u>

• It's more productive and interesting to read multiple sources on the same topic rather than reading a single source over and over again

• I've found that I absorb information more efficiently through hard copies of textbooks, which can be purchased economically if you go for a used copy of the next-to-latest edition on Amazon

• That said, digital copies of textbooks can be found online through resources such as Library Genesis (if you have trouble finding them, just ask the nearest grad student for help)

• Make good use of the available practice exams. If you run out, there are past IBO exams available as well. The 2013 and 2014 exams are particularly useful because their answer keys come with explanations

• Prioritize active learning: mark up the texts, take notes, draw out structures and pathways, teach to others, make flashcards

• This list is a bit overkill—people have made National Finals with far less reading under their belt! At the same time, the more exposure you get, the better your intuition for challenging problems. So start as early as you can, as it often takes 2-3 years to gain the understanding necessary to succeed at USABO