

IMSc Science-Workshop for Class-X : Biology References
(Group-A)
Tanmay Mitra, SRF, IMSc

Basic conceptual help :

1. Pearson Bio-Coach :

http://www.phschool.com/science/biology_place/biocoach/

2. Scitable by Nature Education :

<http://www.nature.com/scitable>

Please explore : <http://www.nature.com/scitable/topics>

Please explore the following and other related topic rooms :

<http://www.nature.com/scitable/topicpage/translation-dna-to-mrna-to-protein-393>

3. Wikipedia : Studying from "Wikipedia" can be a good help if you consult other links and books also, as sometimes it can contain some wrong concepts or information (though the frequency of these wrong things is less enough).

4. Biology Education : <http://biology.about.com/>

5. Science student center (Mcgraw-hill) :

http://highered.mcgraw-hill.com/sites/9834092339/student_view0/chapter1/

(Please explore all chapters)

Advanced Books :

1. **Molecular Biology of the Cell**, 4th edition

By : Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, and Peter Walter.

New York: Garland Science; 2002.

ISBN-10: 0-8153-3218-1, ISBN-10: 0-8153-4072-9

2. **PRINCIPLES OF GENETICS**, 5TH Edition

By : Simmons, Snustad.

December 22, 2008 | ISBN-10: 0470388250 | ISBN-13: 978-0470388259 | Edition: 5

3. **Lehninger PRINCIPLES OF BIOCHEMISTRY** Fourth Edition

By : David L. Nelson and Michael M. Cox

Book chapters/Academic chapters from web :

1. The structures of DNA and RNA :

http://biology.kenyon.edu/courses/biol63/watson_06.pdf

2. DNA Structure and Replication :

<https://highered.mcgraw-hill.com/sites/dl/free/0072916907/574014/Chapter07.pdf>

3. DNA replication mechanism :

<http://www.ncbi.nlm.nih.gov/books/NBK26850/>

4. The process of transcription :

http://www.garlandscience.com/res/pdf/9780815365136_ch04.pdf

5. Transcription in Eukaryotes :

http://www.blackwellpublishing.com/allison/docs/sample_ch11.pdf

6. Molecular basis of eukaryotic transcription (Chemistry Nobel prize lecture-2006) :

http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2006/advanced-chemistryprize2006.pdf

7. Protein synthesis :

http://www.jblearning.com/samples/0763740632/40632_ch08_rev151_188.pdf

8. Genetic code :

<http://hyperphysics.phy-astr.gsu.edu/hbase/organic/gencode.html>

9. The genetic code (Medicine Nobel Prize lecture) :

http://www.nobelprize.org/nobel_prizes/medicine/laureates/1968/nirenberg-lecture.pdf

10. Cell cycle :

http://www.ncert.nic.in/html/learning_basket/biology/cc&cd.pdf

11. Checkpoints in the Cell Cycle :

<http://pt7mdv.ceingebi.unam.mx/computo/pdfs/cursosviejos/bcelularII02/bcelular/Novak%20B.pdf>

12. Meiosis :

[http://web.udl.es/usuaris/e4650869/docencia/segoncicle/genclin98/recursos_classe_\(pdf\)/revisionsPDF/meiosis.pdf](http://web.udl.es/usuaris/e4650869/docencia/segoncicle/genclin98/recursos_classe_(pdf)/revisionsPDF/meiosis.pdf)

13. Chromosome structure :

<http://smcg.ccg.unam.mx/enp-unam/03-EstructuraDelGenoma/cromosomeStructure.pdf>

14. Eukaryotic Chromosomes:

[http://web.udl.es/usuaris/e4650869/docencia/GenClin/content/recursos_classe_\(pdf\)/revisionsPDF/euchromosomes.pdf](http://web.udl.es/usuaris/e4650869/docencia/GenClin/content/recursos_classe_(pdf)/revisionsPDF/euchromosomes.pdf)

Articles/Research Papers :

1. Biology's Big Bang : <http://www.economist.com/node/9339752>

2. Central dogma of Molecular Biology :

<http://www.nature.com/nature/focus/crick/pdf/crick227.pdf>

3. What is a gene, post-ENCODE? History and updated definition :

<http://genome.cshlp.org/content/17/6/669.full.pdf+html>

4. DNA replication at high resolution :

http://berger.berkeley.edu/PDFs/Keck_RepRev.CB00.pdf

5. THE REPLICATION OF DNA IN ESCHERICHIA COLI(The original paper of discovery):

<http://www.pnas.org/content/44/7/671.full.pdf>

6. Starting the protein synthesis machine: eukaryotic translation initiation :

<http://faculty.washington.edu/dmorris/conjoint/Lecture1/Papers/Priess%26Hentze.pdf>

7. Translational control of localized mRNAs: restricting protein synthesis in space and time :

http://140.226.65.22/MOLB7800/RNA_Metabolism/Translational%20control%20of%20localized%20mRNAs-%20restricting%20protein%20synthesis%20in%20space%20and%20time%20'08.pdf

8. The origin of genetic code :

http://profiles.nlm.nih.gov/ps/access/SCBCCB.pdf?origin=publication_detail

9. A semi-synthetic organism with an expanded genetic alphabet :

<http://www.nature.com/nature/journal/vaop/ncurrent/full/nature13314.html#figures>

10. The cell cycle: a review of regulation, deregulation and therapeutic targets in cancer :

<http://www.d.umn.edu/~pschoff/documents/cyclinCDKrev.pdf>

Biology books-popular science level :

- 1. On the origin of species by means of natural selection-by Charles Darwin**
- 2. The Selfish Gene-by Richard Dawkins**
- 3. The Double Helix-by James D. Watson**
- 4. Incognito: The Secret Lives of the Brain-by David Eagleman**
- 5. Adaptation and Natural Selection-by George C. Williams**
- 6. The eighth day of creation-by Horace Freeland Judson**
- 7. The Expression of the Emotions in Man and Animals-by Charles Darwin**
- 8. The Voyage of the Beagle-by Charles Darwin**
- 9. The Third Chimpanzee-by Jared Diamond**
- 10. On evolution-by Charles Darwin**
- 11. The Lives of a Cell: Notes of a Biology Watcher-by Lewis Thomas**
- 12. The Extended Phenotype-by Richard Dawkins**
- 13. The Blind Watchmaker-by Richard Dawkins**
- 14. A Child Is Born: The drama of life before birth in unprecedented photographs-by Lennart Nilsson**

Explore the link for more popular science books :

<https://www.goodreads.com/shelf/show/science-biology?page=1>