

## PART 1: HOW GENOMES ARE STUDIED

1. Genomes, Transcriptomes and Proteomes
2. Studying DNA
3. Mapping Genomes
4. Sequencing Genomes
5. Genome Annotation
6. Identifying Gene Functions

## PART 2: GENOME ANATOMIES

7. Eukaryotic Nuclear Genomes
8. Genomes of Prokaryotes and Eukaryotic Organelles
9. Virus Genomes and Mobile Genetic Elements

## PART 3: HOW GENOMES ARE EXPRESSED

10. Accessing the Genome
11. The Role of DNA-Protein Interactions in Genome Expression
12. Transcriptomes
13. Proteomes
14. Genome Expression in the Context of Cell and Organism

## PART 4: HOW GENOMES ARE REPLICATED AND EVOLVE

15. Genome Replication
16. Recombination and Transposition
17. Mutations and DNA Repair
18. How Genomes Evolve