Genetic Mind Reader Card Games

Concept	Answer
1. A chromosome map of a species shows the specific physical locations of its genes and/or markers on each chromosome.	1. Physical map
2. A Chromosome map of a species that shows the position of its known genes and/or markers relative to each other.	2. Genetic map
3. The number of genes in human DNA.	3. About 30,000
4. The techniques used to manipulate genes in an organism.	4. Genetic engineering

5. Short-term educational counseling process for individuals and families who have a genetic disease or who are at risk for such a disease.	5. Genetic counseling
6. A few of the estimated 5,000 hereditary diseases.	6. Huntington disease, cystic fibrosis, and sickle cell disease
7. The size of the human (*Homo sapiens*) genome.	7. About 3 billion bases
8. Number of pairs of chromosomes in a normal human cell.	8. 23

9. Pieces of DNA, most containing information for making a specific protein.	9. Genes
10. One of the thread- like "packages" of genes and other DNA in the nucleus of a cell.	10. Chromosome
11. A large complex molecule made up of one or more chains of amino acids in a specific order.	11. Protein
12. The names of bases making up DNA.	12. Adenine, Guanine, Cytocine, Thymine

13. A disorder caused by a single base pair change in one of the genes that codes for hemoglobin.	13. Sickle cell disease
14. Permanent structural alteration in DNA.	14. Mutation
15. Common diseases arising from the interaction of several genes with environmental factors.	15. Cancer, Alzheimer disease, and heart disease
16. Separate compartment in the cell that contains 6 feet of DNA packed into 23 pairs of chromosomes.	16. Nucleus

17. Cells containing single sets of chromosomes.	17. Egg and sperm cells (gametes)
18. Knowing the DNA sequence of a gene	18. Reveals the amino acid sequence of the protein that the gene encodes
19. An evolving technique used to treat inherited diseases by replacing, manipulating, or supplementing nonfunctional genes with healthy genes.	19. Gene therapy
20. Testing a population group to identify a subset of individuals at high risk for having or transmitting a specific genetic disorder.	20. Genetic screening

21. One-letter variations in the human DNA sequence that contribute to differences among individuals.	21. Single-nucleotide polymorphism or SNP
22. Study of genetic variation underlying differential response to drugs.	22. Pharmacogenomics
23. A way of studying how large numbers of genes interact with each other and how a cell's regulatory networks control batteries of genes simultaneously.	23. Microarray technology
24. Technology that identifies mutations in genes.	24. DNA microchip technology

25. All the DNA contained in an organism or a cell.	25. Genome
26. Size of the mustard weed (*A. thaliana*) genome.	26. 100 million bases
27. Size of the bacterium (*E.coli)* genome.	27. 4.6 million bases
28. Size of the yeast (*S. cerevisiae*) genome.	28. 12 million bases

29. Size of the fruit fly (*D. melanogaster*) genome.	29. 165 million bases
30. Size of the laboratory mouse (*M. musculus*) genome.	30. 3 billion bases
31. Size of the roundworm (*C. elegans*) genome.	31. 100 million bases