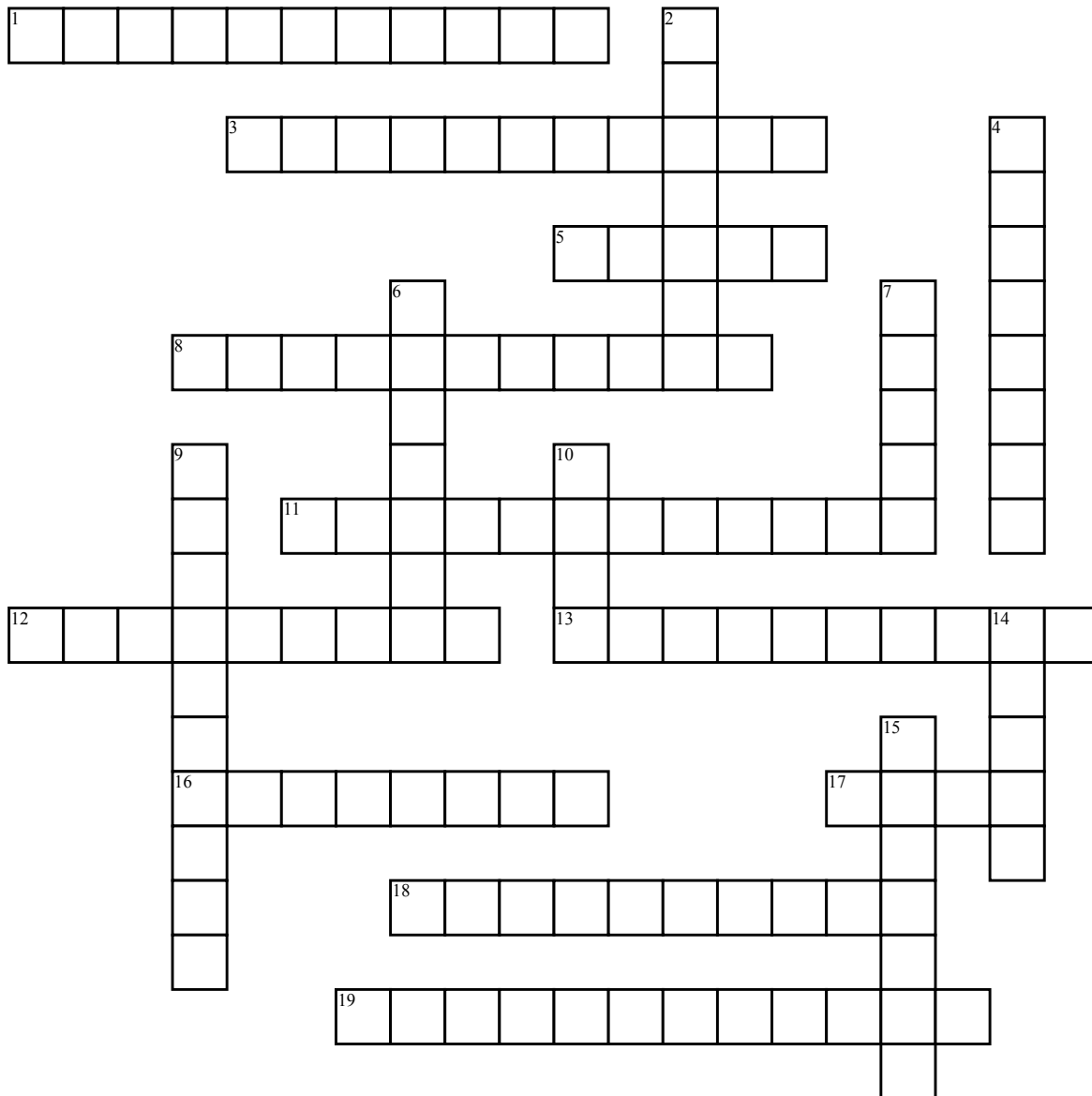


Name: _____ Date: _____ Period: _____

3.4 & 3.4.1-Genetic Information,variation and relationships between organisms & DNA,genes and chromosomes



Across

1. Variation within a species can be measured using _____ in the base sequence of DNA or in the amino acid sequence of proteins.
3. In these cells, DNA molecules are short, circular and not associated with proteins.
5. There are, for example, non-coding multiple repeats of base sequences between genes. Even within a gene only some sequences, called _____, code for amino acid sequences.
8. The _____ of eukaryotic cells also contain DNA which, like the DNA of prokaryotes, is short, circular and not associated with protein.
11. In eukaryotes, much of the nuclear DNA does not code for _____.
12. Genetic _____ within a species can be caused by gene mutation, chromosome mutation or random factors associated with meiosis and fertilisation. This genetic diversity is acted upon by natural selection, resulting in species becoming better adapted to their environment.

13. In the nucleus of these cells, DNA molecules are very long, linear and associated with proteins, called histones.

16. Biodiversity within a community can be measured using species _____ and an index of diversity.

17. base sequence of DNA that codes for: the amino acid sequence of a polypeptide a functional RNA (including ribosomal RNA and tRNAs).

18. Together a DNA molecule and its associated proteins form a _____.

19. The _____ of eukaryotic cells also contain DNA which, like the DNA of prokaryotes, is short, circular and not associated with protein.

Down

2. Within the gene, these exons are separated by one or more non-coding sequences, called _____.

4. The base sequence of each gene carries the coded genetic information that determines the _____ of amino acids during protein synthesis.

6. A sequence of three DNA bases, called a _____, codes for a specific amino acid.

7. A gene occupies a fixed position, called a _____, on a particular DNA molecule.

9. The genetic code is universal, non-overlapping and _____.

10. A _____ is a section of DNA located at a particular site on a DNA molecule, called its locus.

14. Biodiversity within a community can be measured using species richness and an _____ of diversity.

15. The _____ code used is the same in all organisms, providing indirect evidence for evolution.