Source: [KBBiologyMasterIndex]

1 | Mutation and Inheritance

1.1 | Cell Division, Cell Cycle & It's Regulation

Each cell lives and reproduced on a cycle; unsurprisingly, this is called the [KBhBIO101CellLifecycle]!

- These cell cycles create [KBhBIO101GeneticVariation], even in [KBhBIO101Mitosis], because yes!, in mitosis, there could be [KBhBIO101Mutations] which introduce variation
- However [KBhBIO101Mutations] could cause cancer if left unchecked, so we have [KBhBIO101CellCycleRegulation] to keep this cycle check.

At the end of the cell cycle, a little bit of a thing happens where the cell replicates (or makes offsprings, so not necessarily exact copies of) itself. This bit of a thing's called [KBhBIO101CellReproduction].

- This reproduction process uses one of either [KBhBIO101Mitosis] (exact copy, for somatic cells (not sperm/egg) only) or
- [KBhBIO101Meiosis] (half, randomly-mixed genetic info, for gametes (sperm/egg) only).

1.2 | Genetics and Inheritance

[KBhBIO101GeneticVariation] is like, really good. However, its woefully complicated and there are at least 3 ways I think of that it happens.

DNA's sequence could vary by itself, and that will cause a [KBhBIO101Mutations], which is actually very rarely bad news bears and instead simply introduces genetic variation if not doing nothing at all.

Organisms have different traits, and through [KBhBIO101Meiosis] these traits are mi

- Connecting protein function to expressed traits in organisms
  - Given an individual with two particular alleles of a gene, what trait would you expect to see.
- Connecting protein function and traits to inheritance patterns:
  - Given parents with particular alleles of genes, what would you expect in their offspring and why.