

Beyond Inspiration

CmapTools and Possibilities
for the
Lexington Learning Community

Brought to you by Jane Heinze-Fry, Ph.D.

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Elliot Gimble, Biology Teacher, Lexington High School

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Novak's Concept Mapping

Novak's Concept Mapping

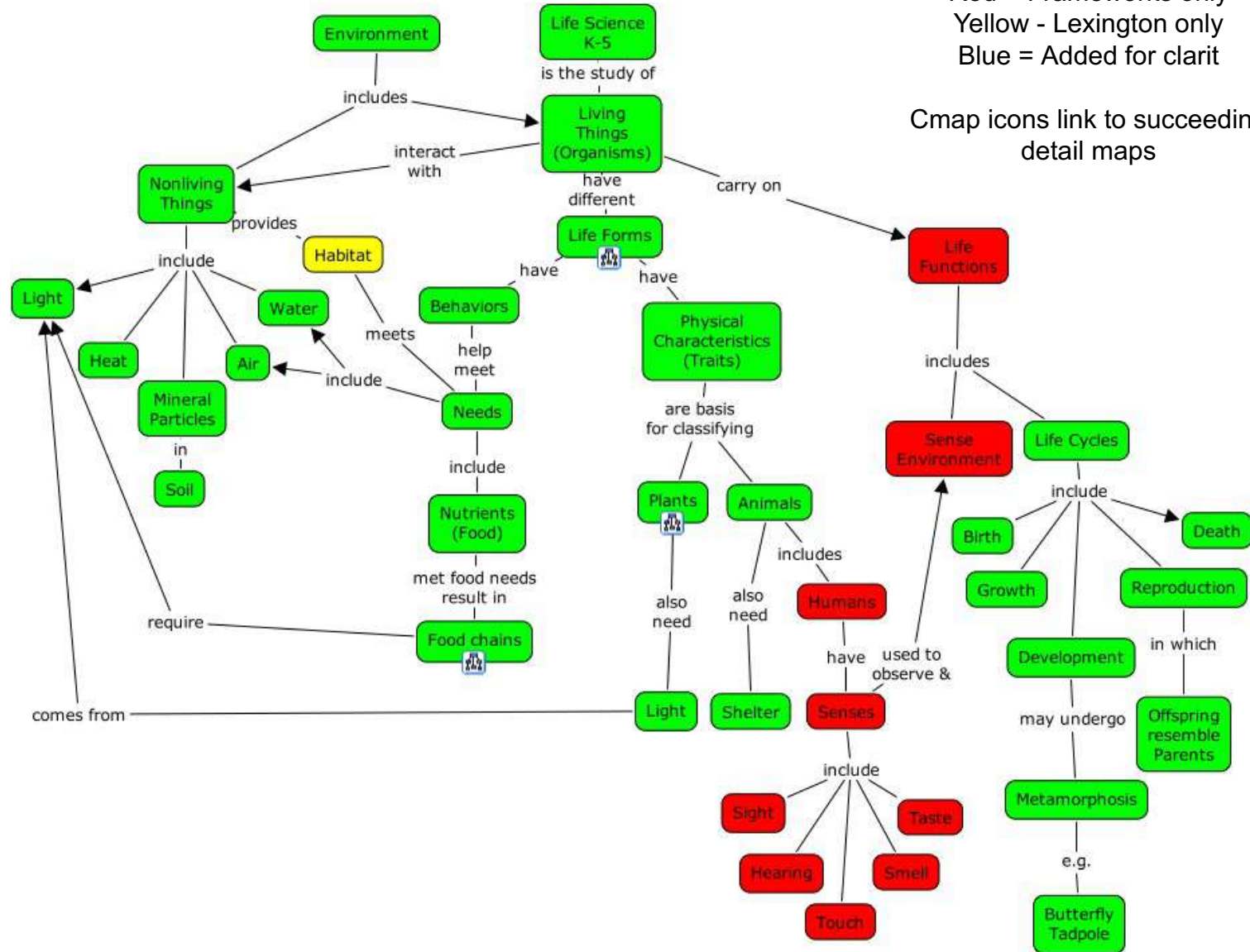
- A concept is a perceived regularity in an object or event and is circled on the map.
- Concepts are connected by linking lines. Linking words define the relationship between concepts.
- Concepts are arranged hierarchically with the most general concept at the top and progressively more specific concepts toward the bottom of the map.
- Cross links connect and integrate concepts from different locations within the map.

Elementary School Life Science

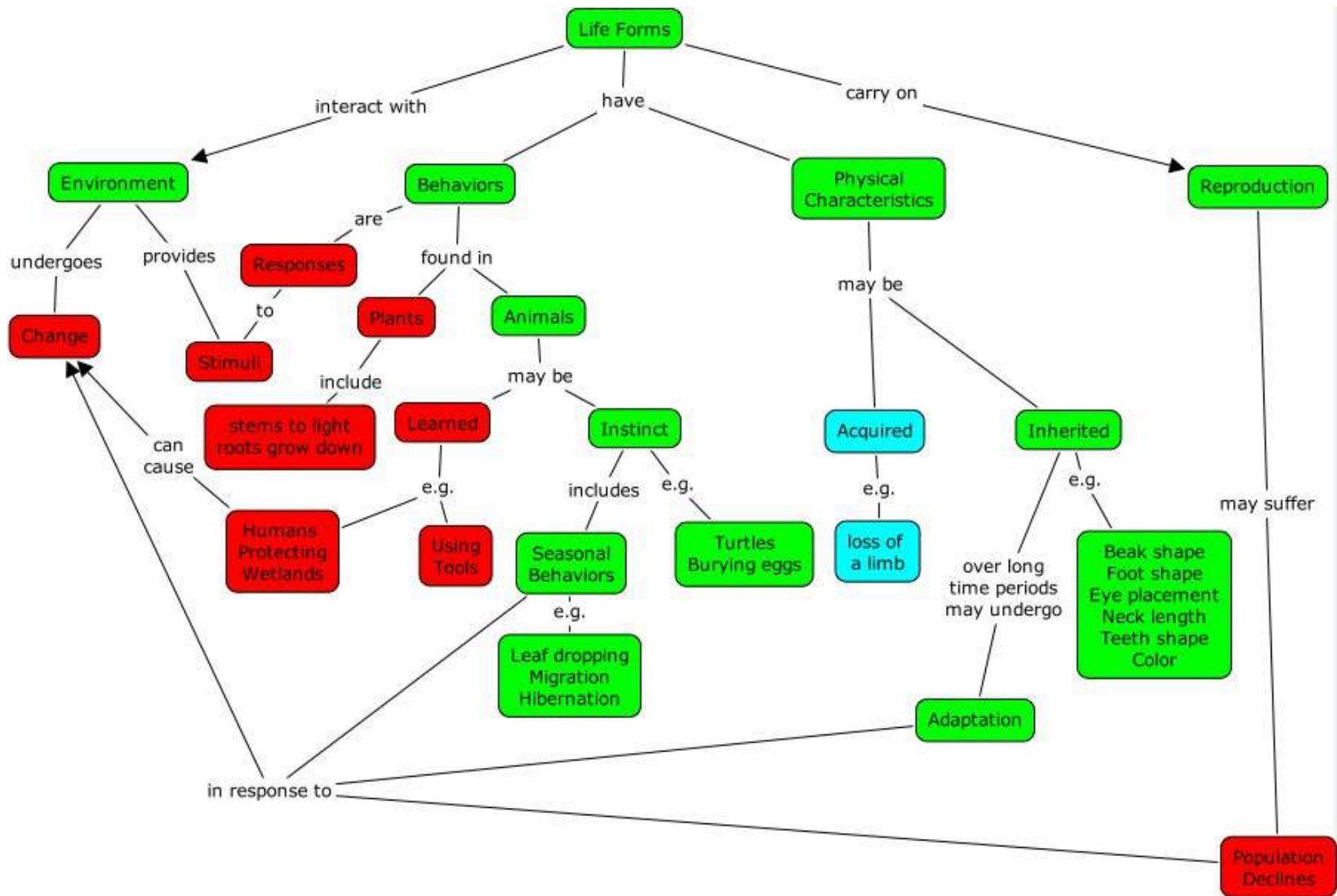
Comparison of Lexington's Goals
with the Massachusetts
Frameworks

Green = Frameworks & Lexington
 Red = Frameworks only
 Yellow - Lexington only
 Blue = Added for clarit

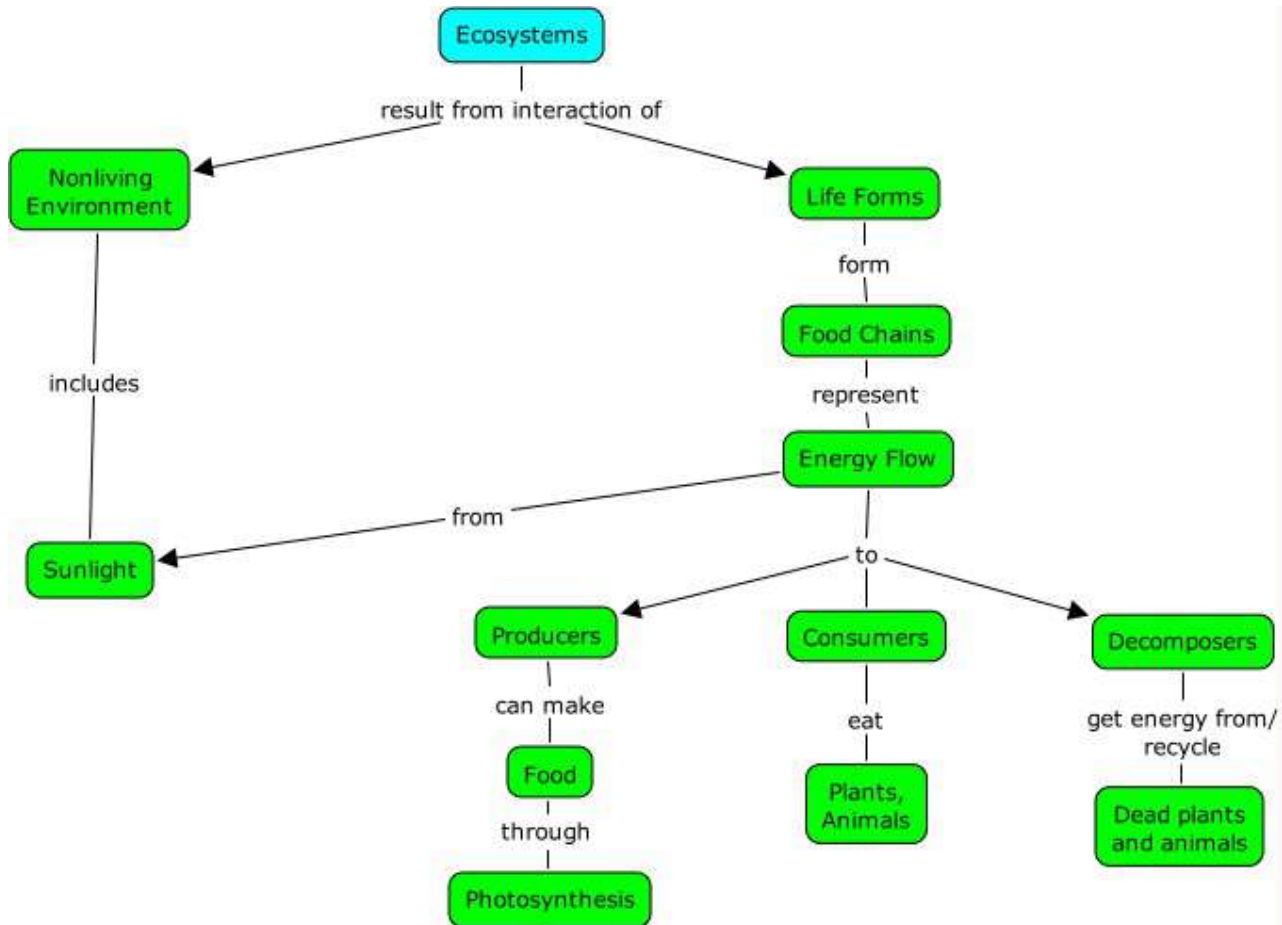
Cmap icons link to succeeding detail maps



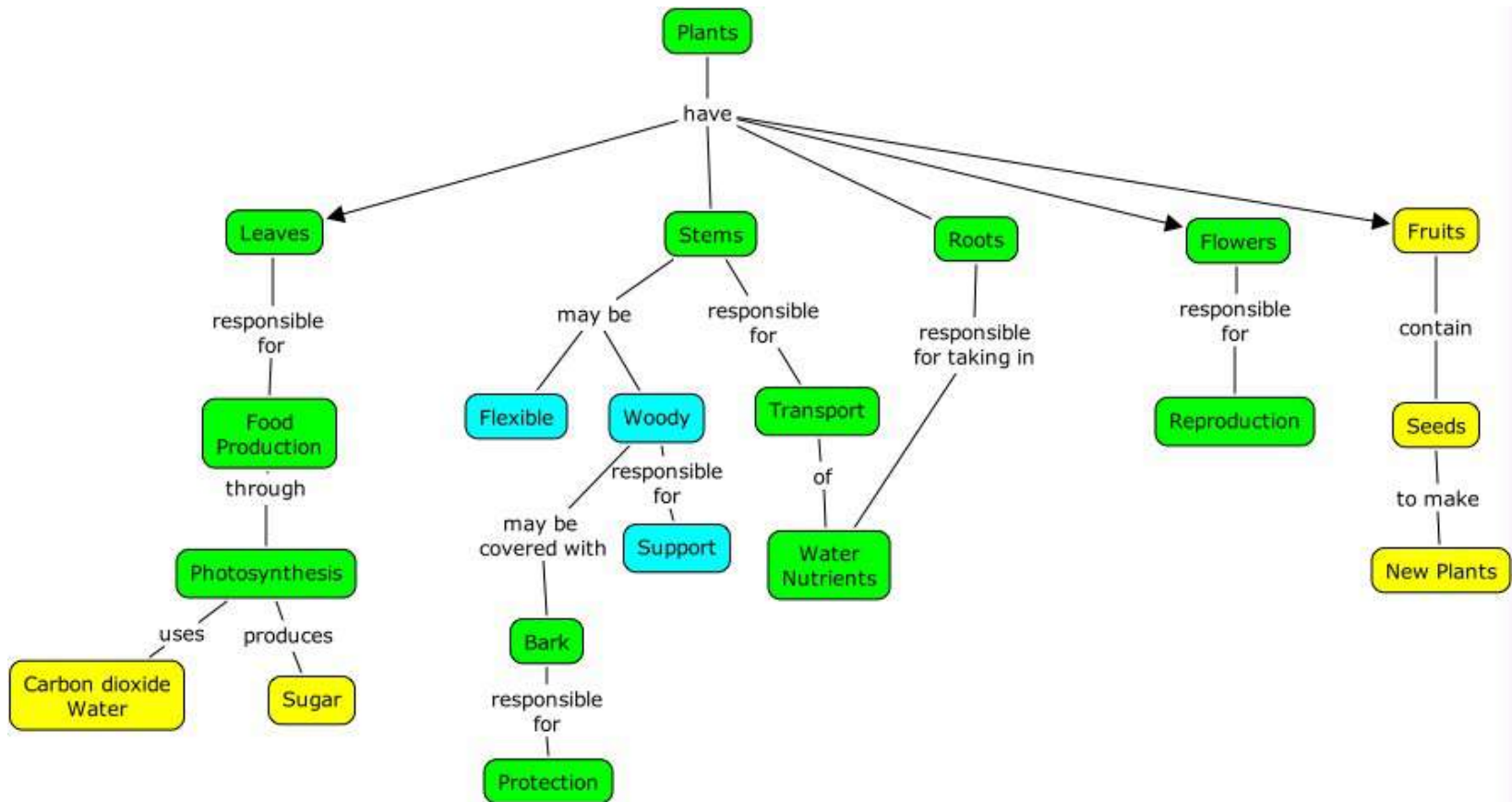
Overview Cmap: Elementary Life Science



Detail Cmap: Life Forms



Detail Cmap: Ecosystems/ Food Chains

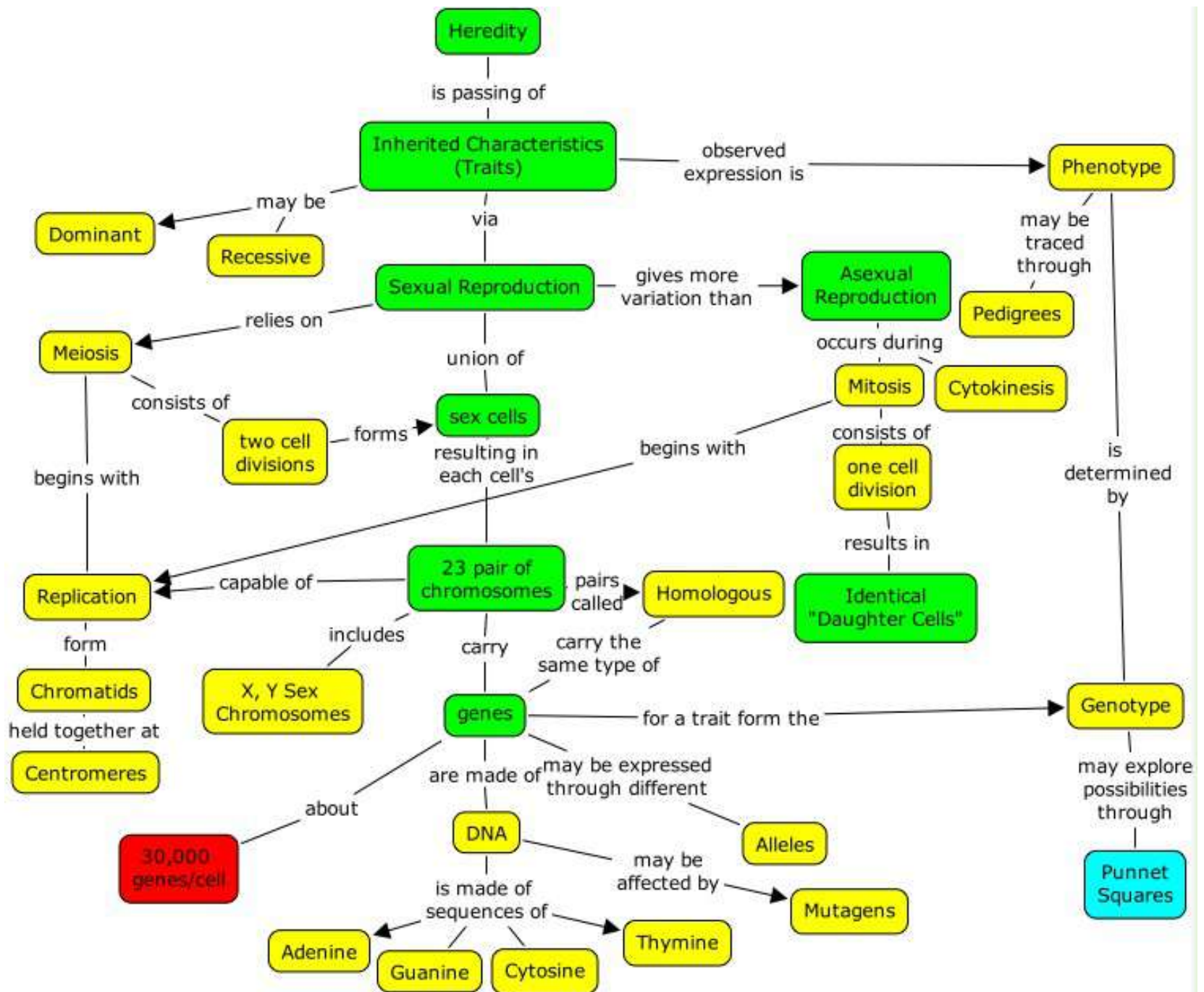


Detail Cmap: Plants

Middle School Life Science

Heredity:

Comparison of Textbook
To Massachusetts Frameworks

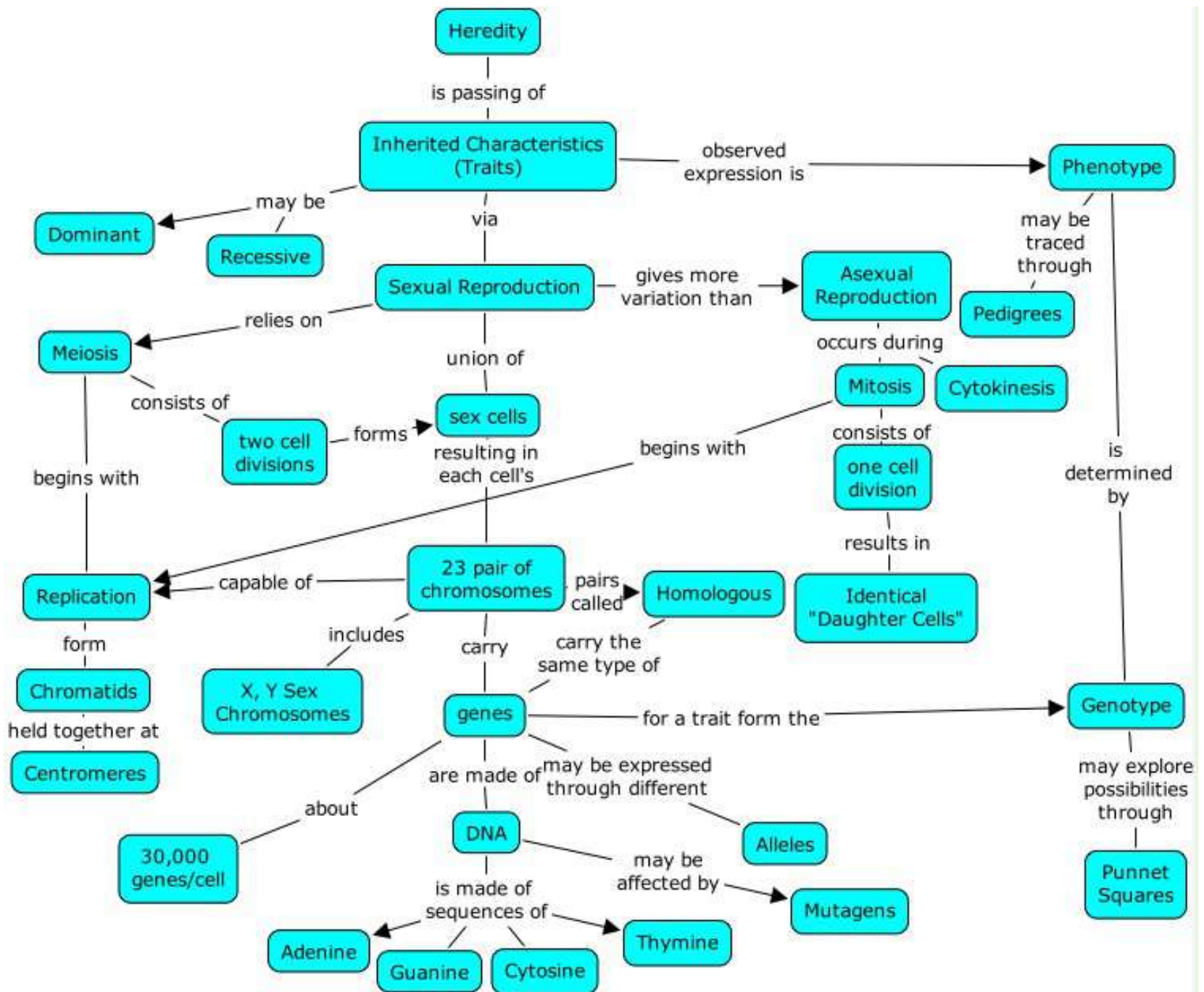


Middle School Life Science

Heredity:

The Precursor Concepts to High
School Molecular Genetics

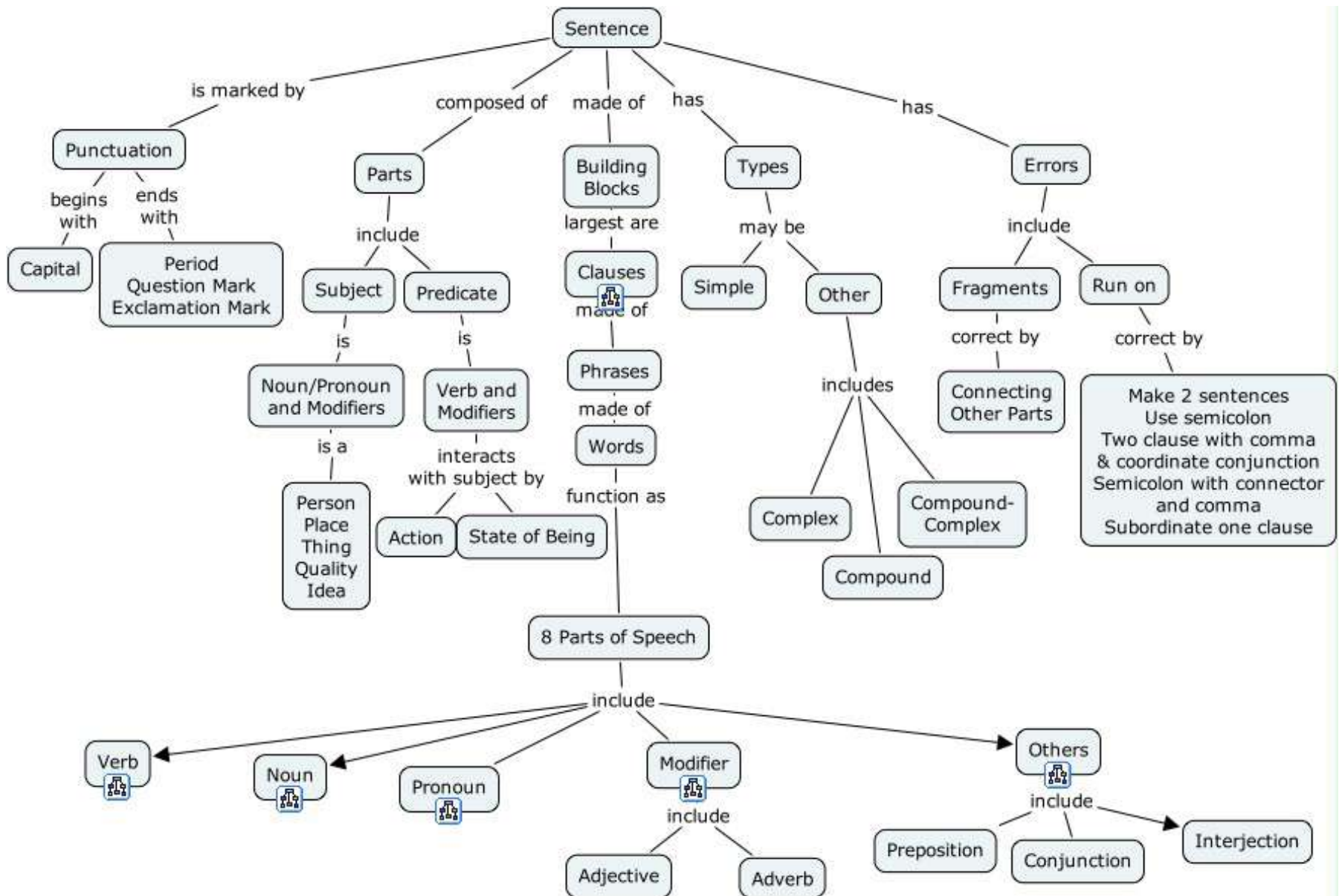
Cmap created from textbook chapter



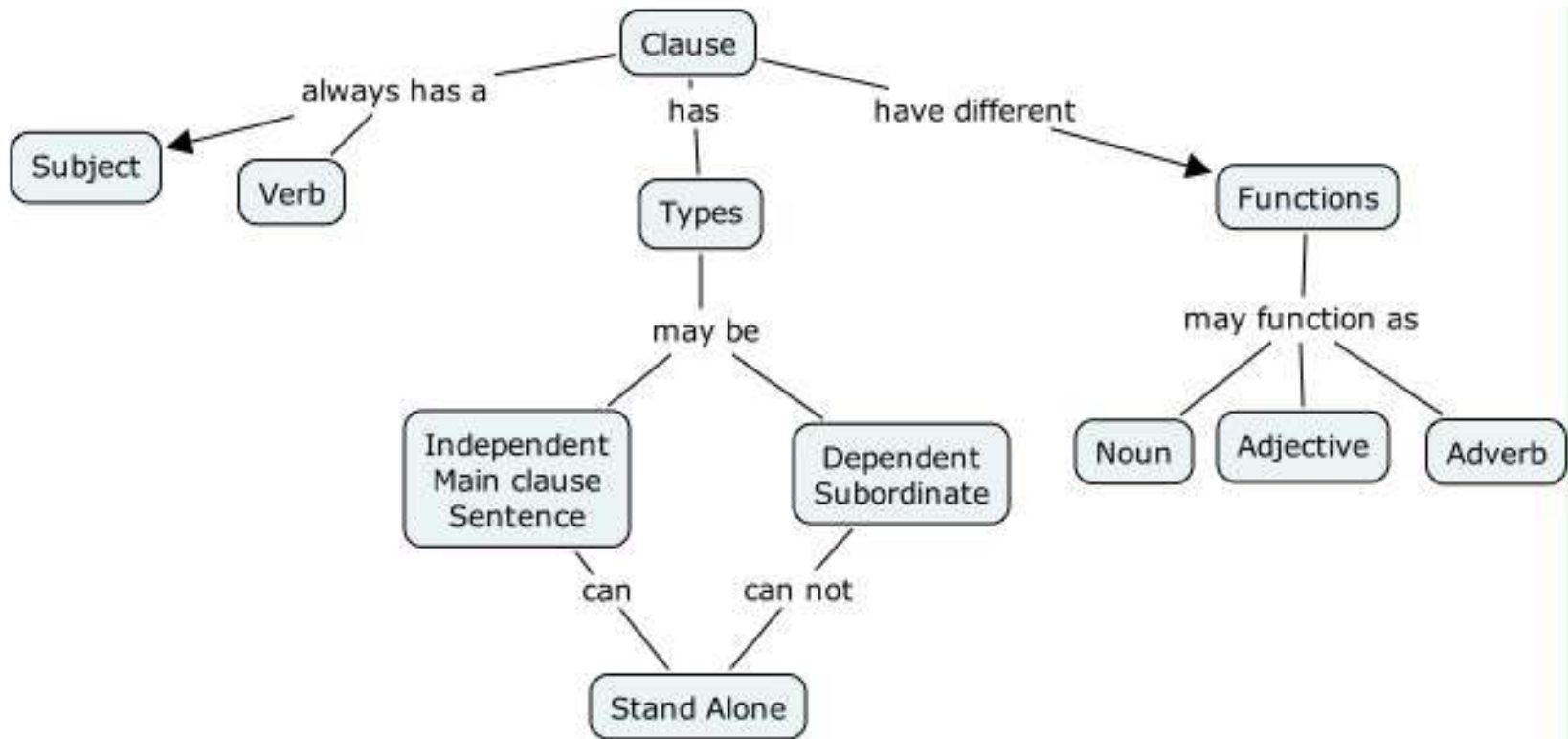
Middle School English

Grammar

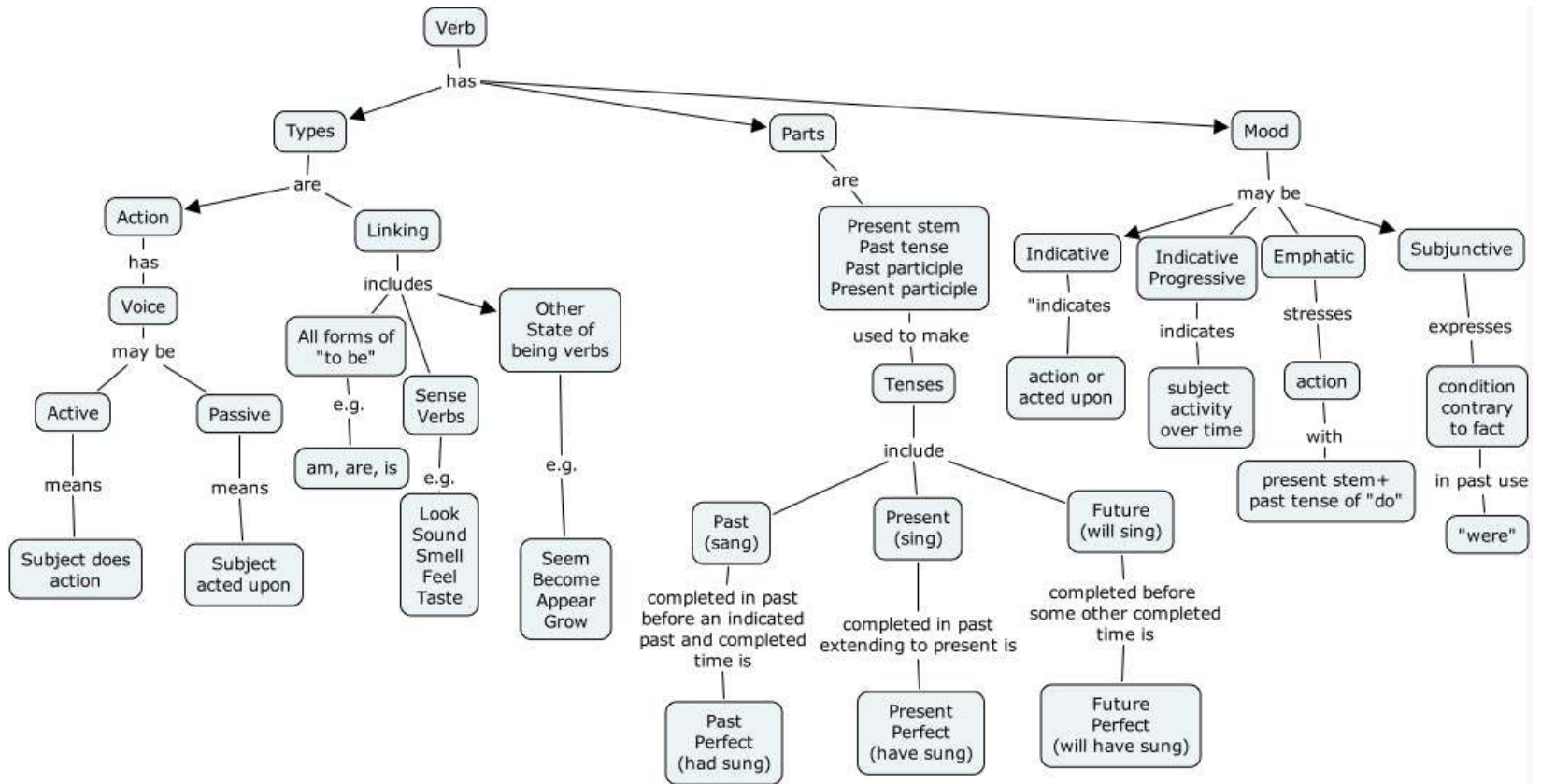
Cmap created from Teacher's Handout



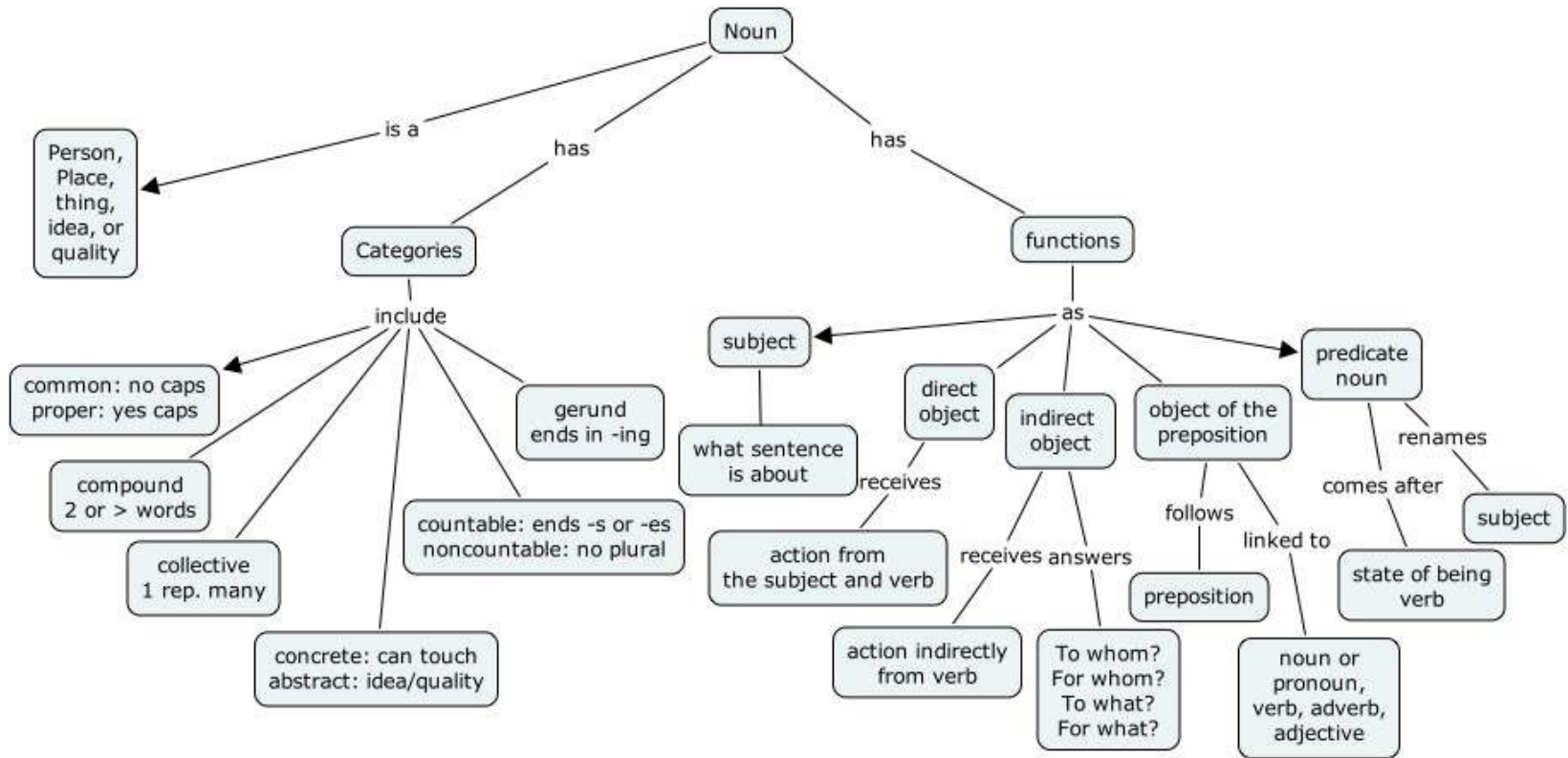
Overview Map: English Grammar



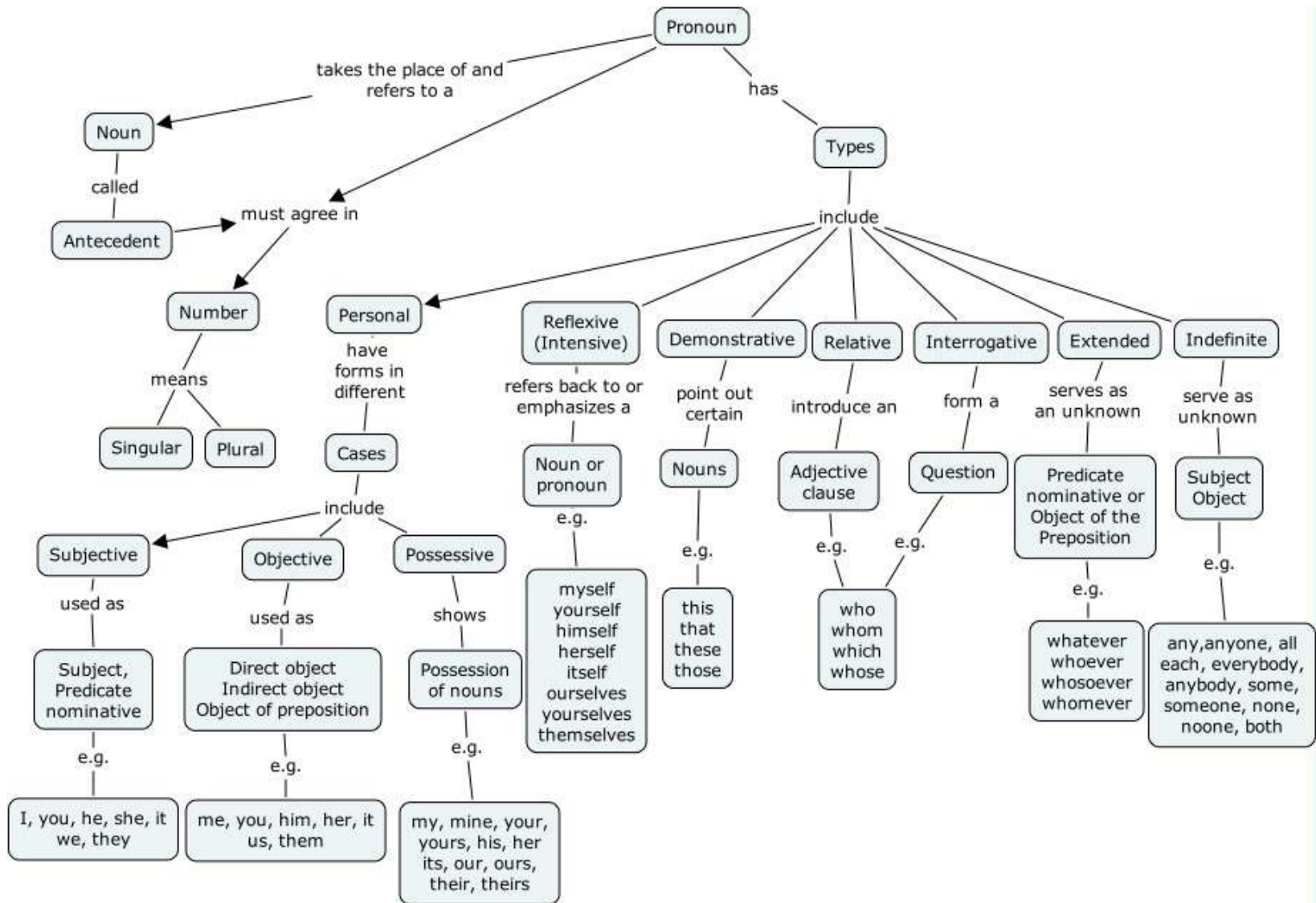
Detail Cmap: Clause



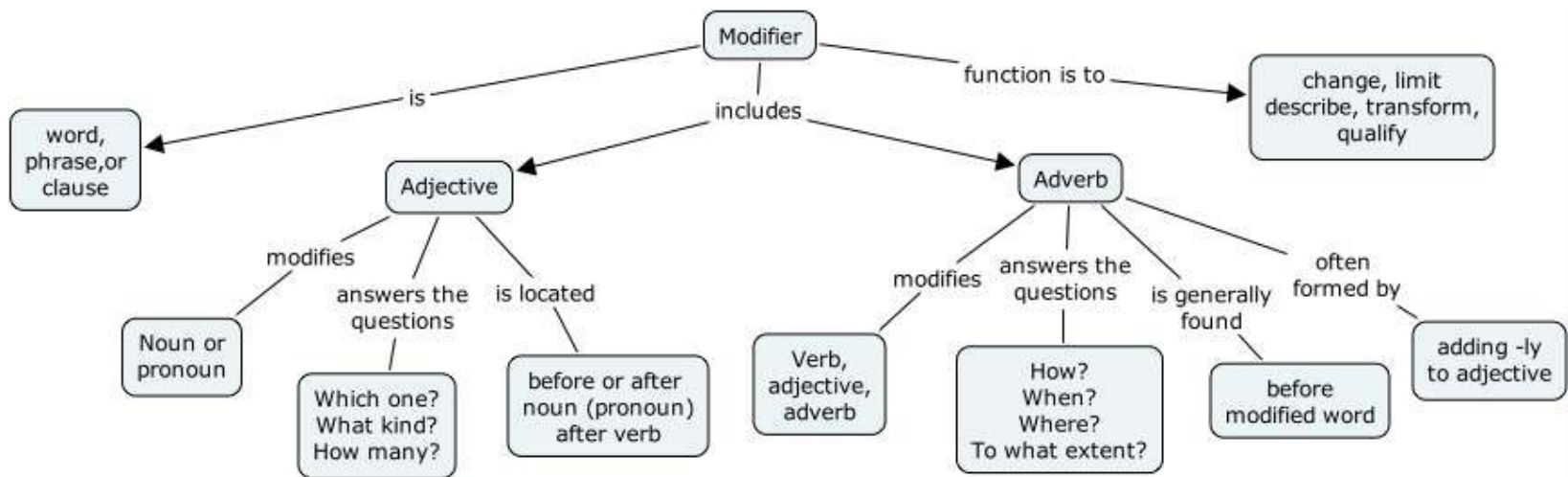
Detail Cmap: Verb



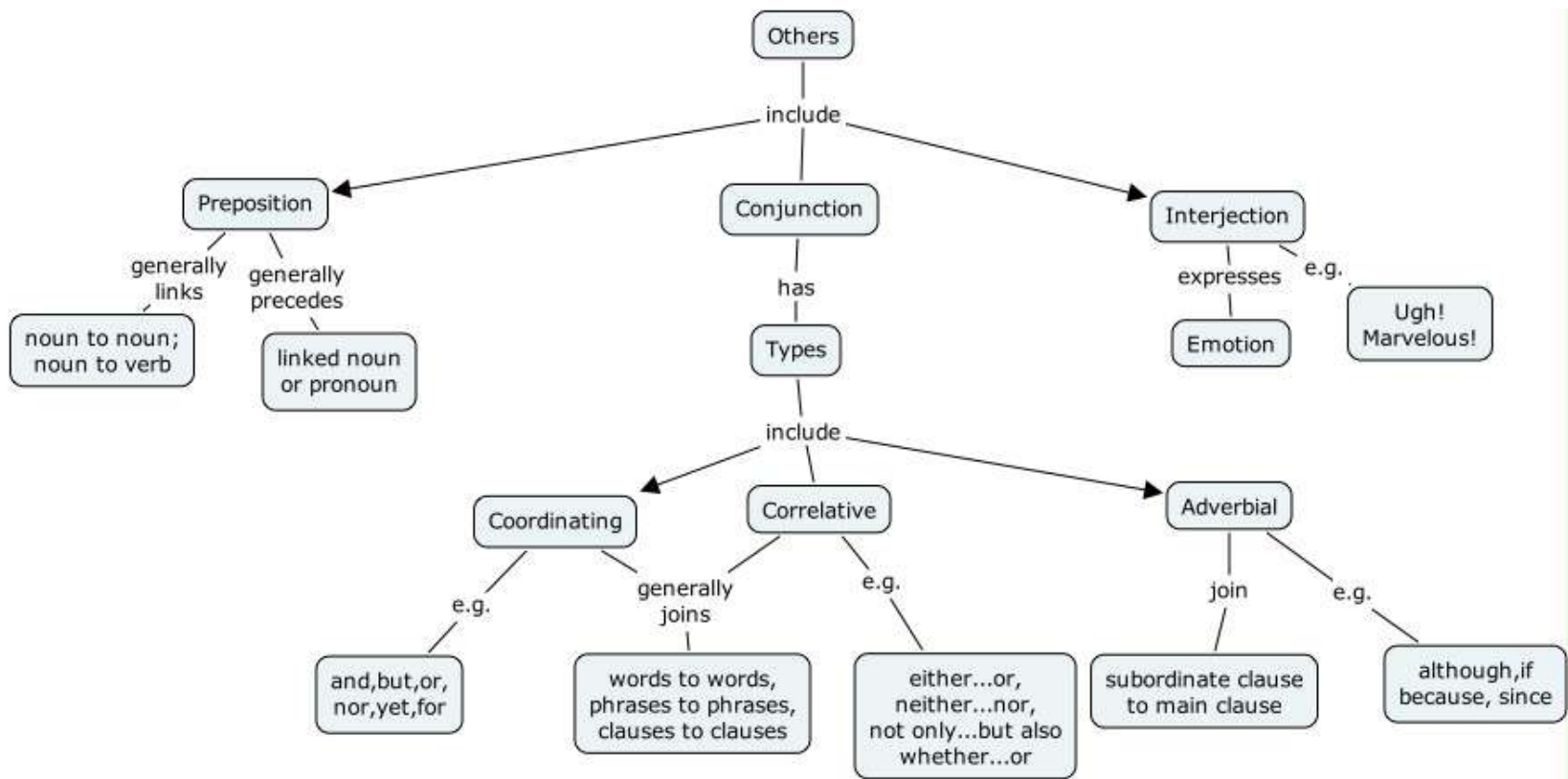
Detail Cmap: Noun



Detail Cmap: Pronoun



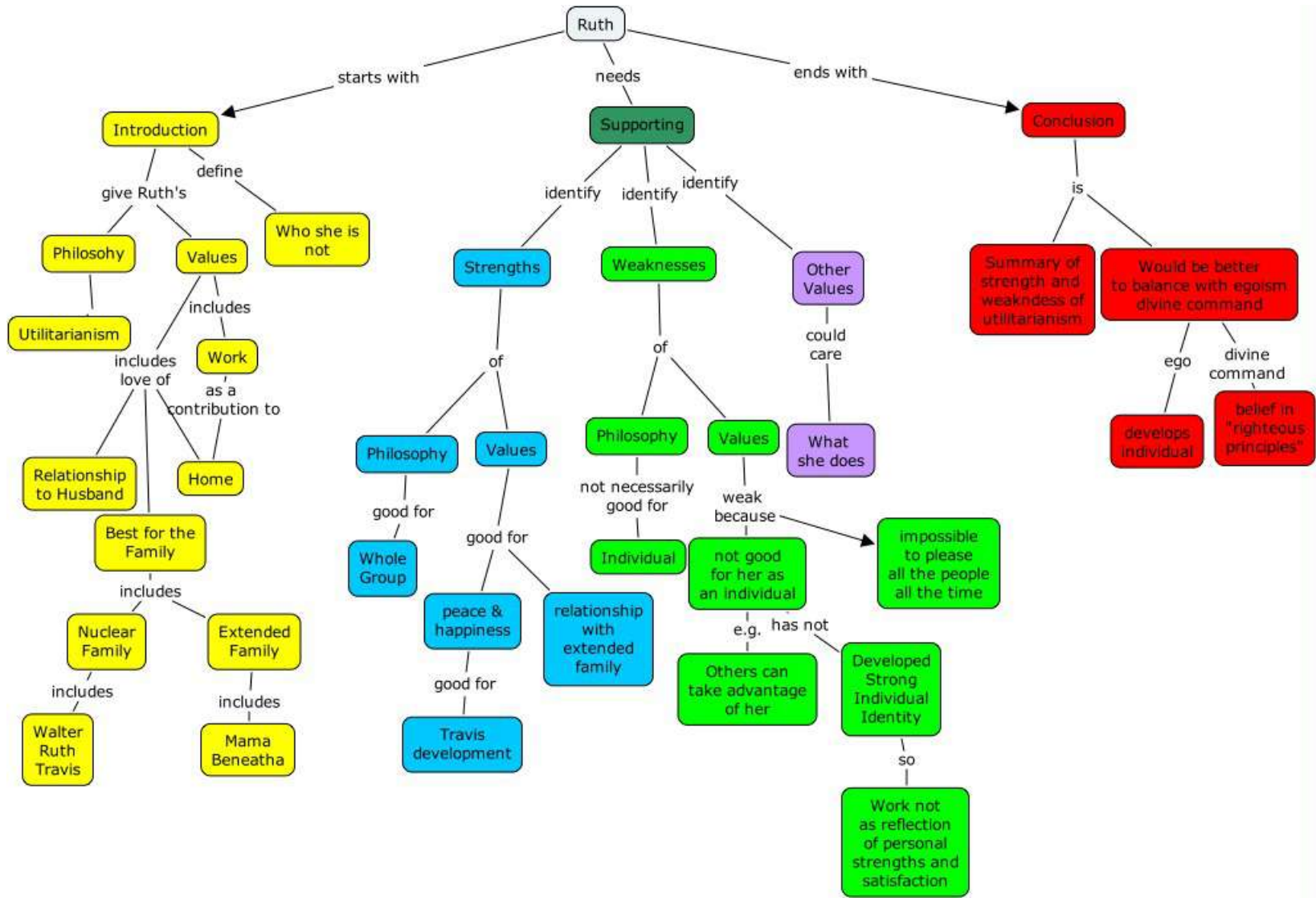
Detail Cmap: Modifer



Detail Cmap: Other Parts of Speech

Middle School English

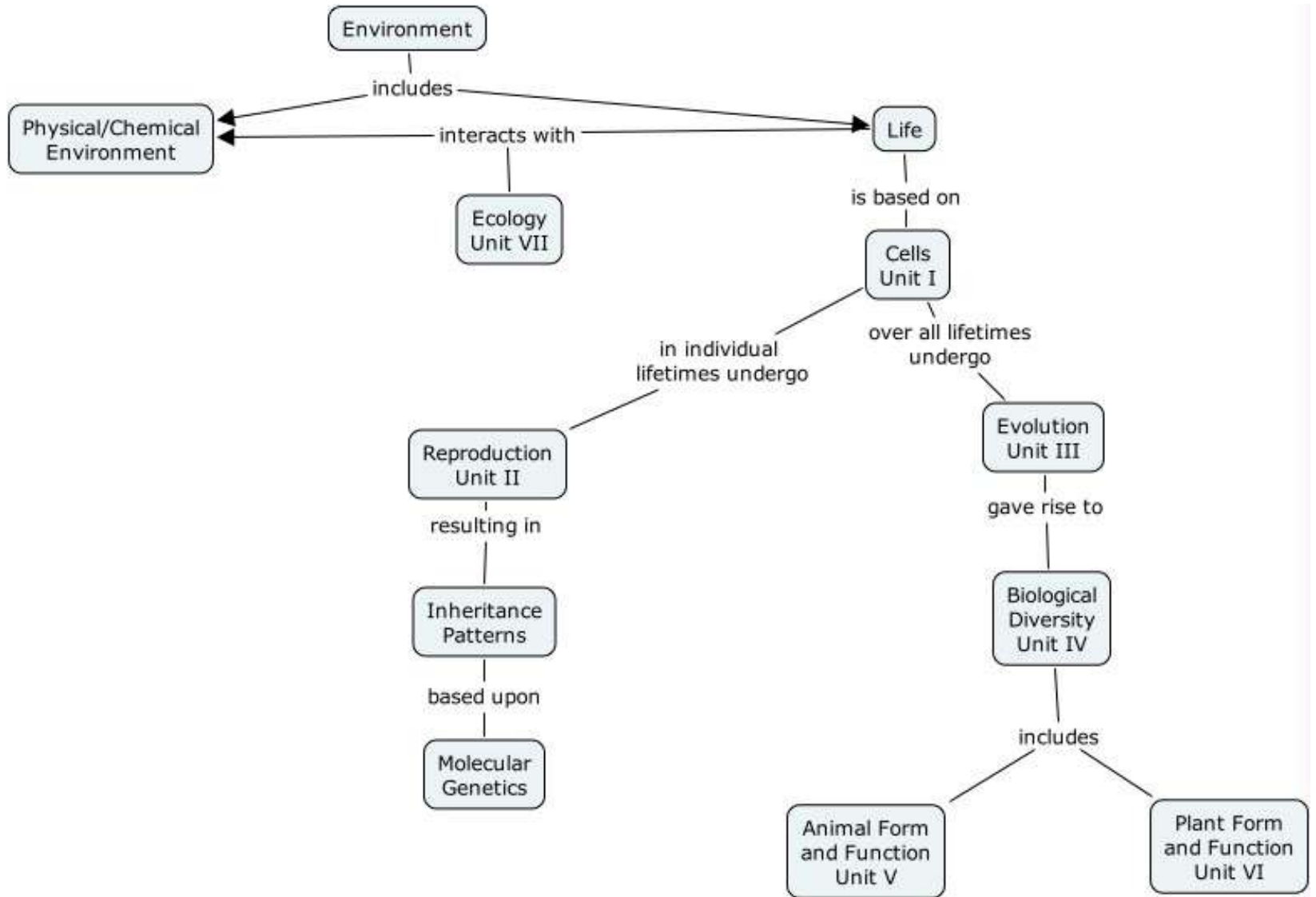
Construction of a Framework:
5-Paragraph Essay



Ayla Heinze Fry's Map to organize her thinking for an English Assignment:
Describe and evaluate the philosophy of life of one of the characters in *Raisin in the Sun*.

High School Biology

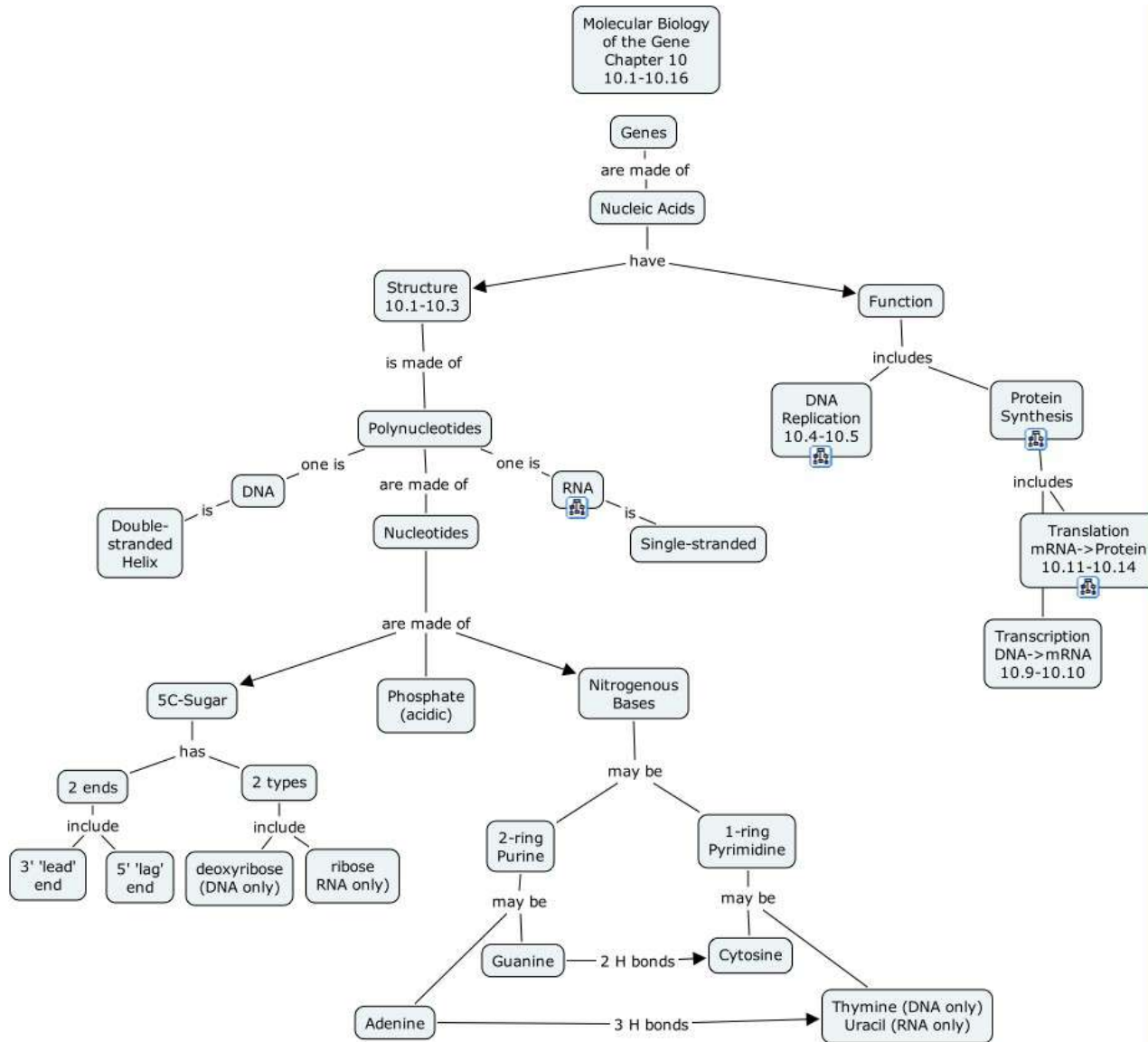
Overview of Level One
Biology Textbook



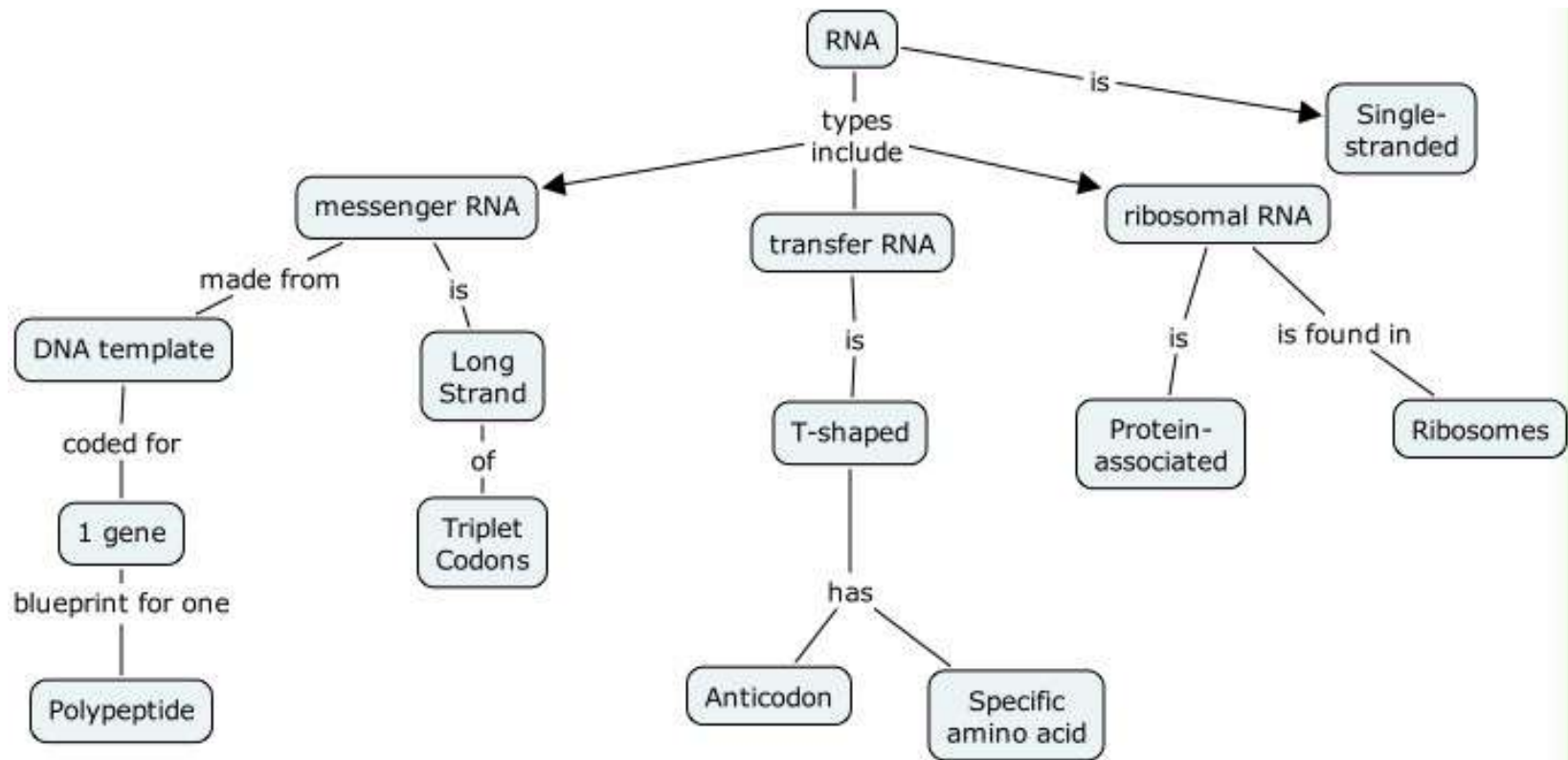
High School Biology

Molecular Genetics: Overview and Connected Detail Concept Maps

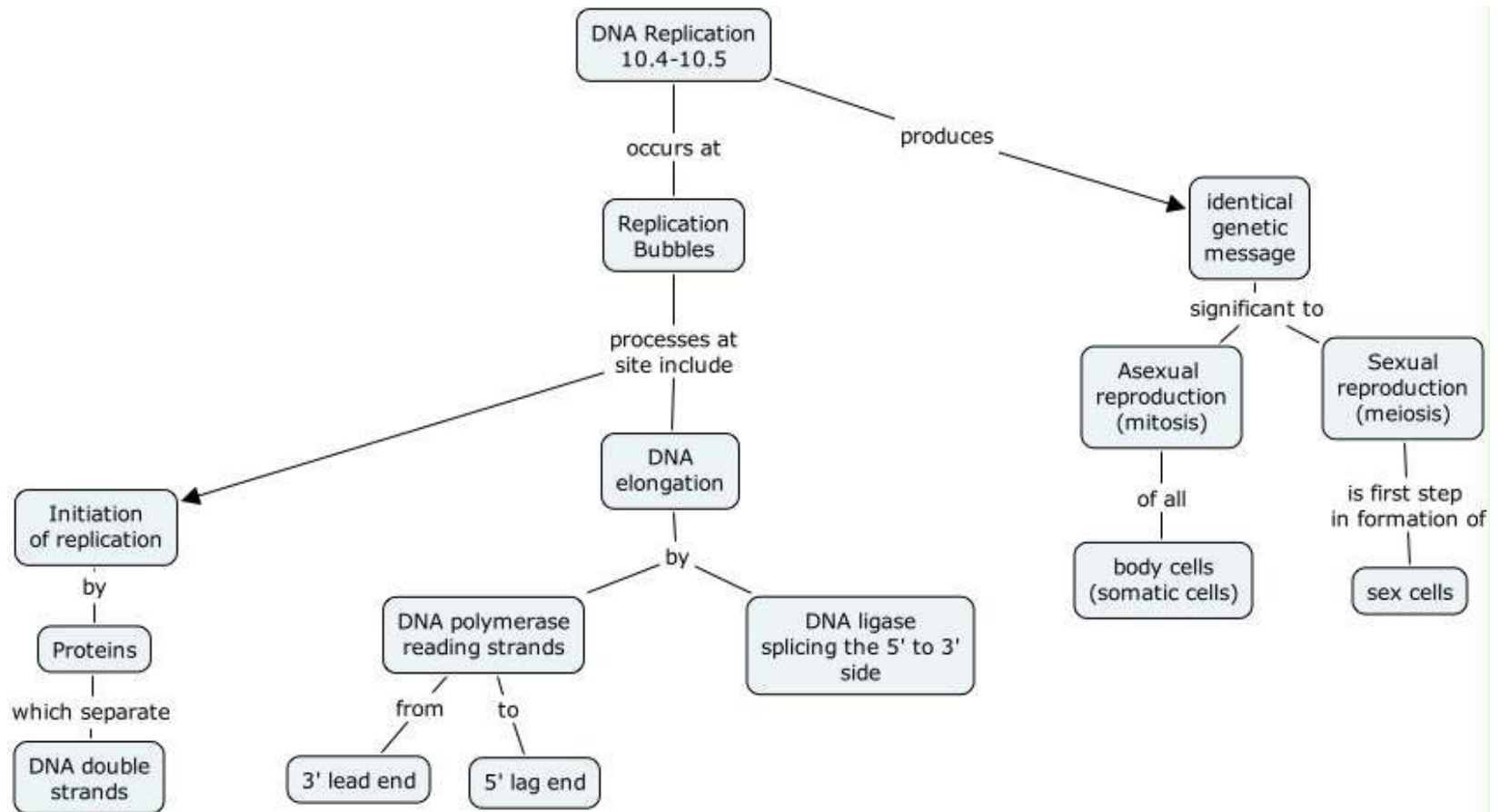
Generated from selected textbook concepts



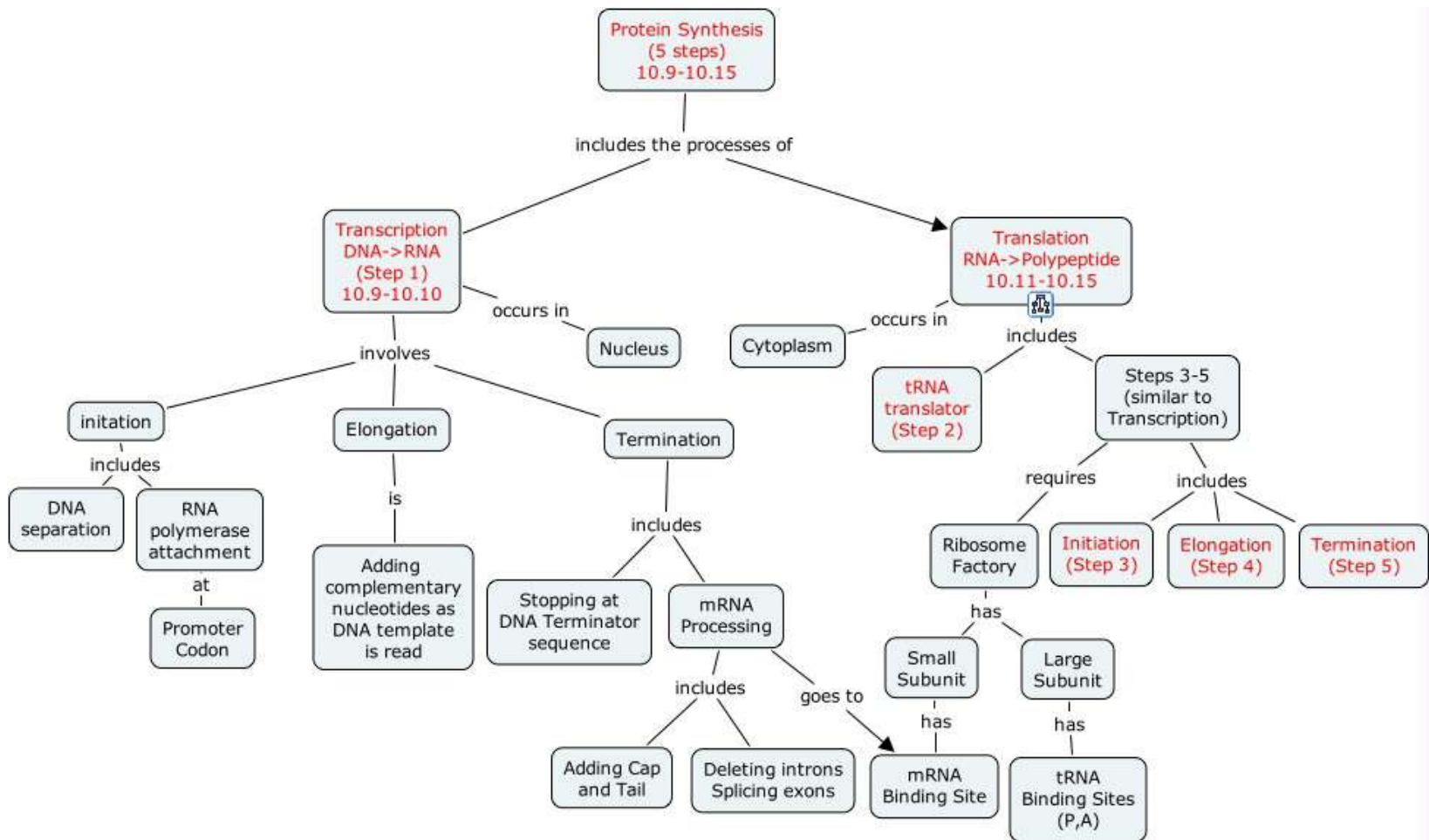
Overview Cmap: Molecular Genetics



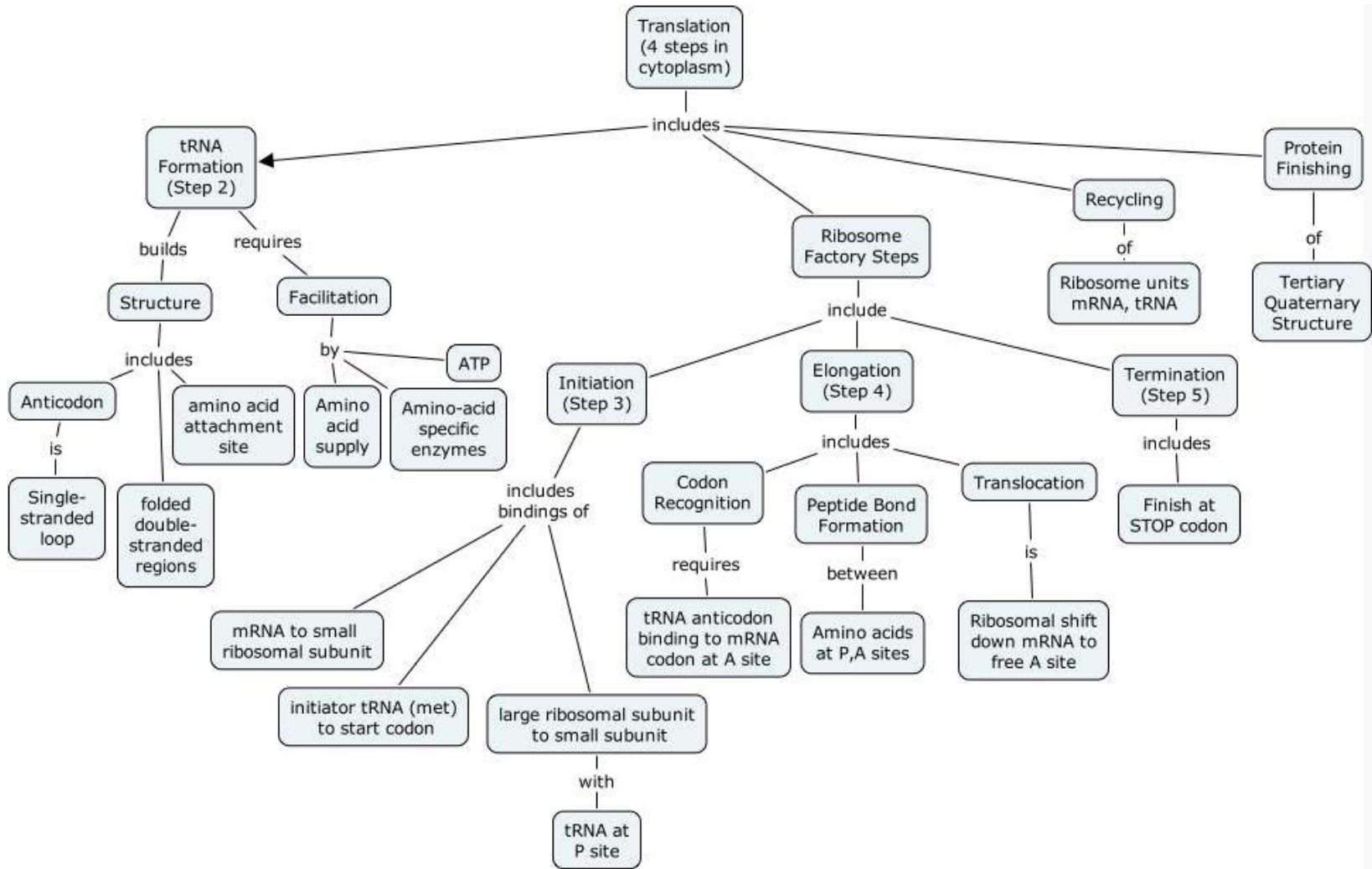
Detail Cmap: RNA



Detail Cmap: DNA Replication



Detail Cmap: Protein Synthesis



Detail Cmap: Translation

KEY Points and Possibilities

CmapTools is web-based and can build collaborative relationships.

CmapTools is free to educators and nonprofit organizations.

Digitally-based materials can be linked to concept maps.

Concept maps can be used:

- to show connections to MA Frameworks.

- to show K-12 development of concepts.

- to clarify concepts in any structured discipline.

Just Imagine

A child who begins to build a map about
'What is Life?'

In grade 1 and then adds in grades 2 and 3 and
continues throughout high school.

Imagine the end product!

-Joseph D. Novak