

The Life of a Fish

Tree of Life

Montessori Classroom

- Students in a Montessori classroom are grouped in 3 age/grade levels.
 - 0-3 years, 3-6 years, 6-9 years, and 9-12 years of age
 - Early Childhood, Pre-K and Kindergarten, 1st-3rd grades, and 4th-6th grades
- Within the Montessori classroom students learn a variety of content from the cultural areas.
- Culture is the basis for all learning.
- Students learn from a young age how curriculum areas are intertwined.
 - Example
 - Math was created out of the human need to document materials, or crops.
 - Language and writing was created out of the need to document stories and history.
 - Geography/History is similar to science with experiments expressing movement and creation of landforms, etc.

Fish in the Classroom

- Lesson Planning
 - Vocabulary and Tree of Life
 - Timeline of Life (2-4 Weeks)
 - Introduction of Montessori Great Lessons and scientific perspective of the animal kingdom throughout time.
 - Activities include students choosing their favorite animal(s) to research from particular era.
 - 3 part cards (5 Weeks)
 - Matching activity to build vocabulary
 - Introduce students to parts of a fish.
 - Beginning with the fish builds an understanding of adaptation of animals within the animal kingdom (fish, amphibian, reptile, bird, mammal)
 - Tree of Life (6-8 Weeks)
 - Adaptation of animals from a scientific perspective throughout time.
 - Check for mastery following study of fish, amphibian, reptile, bird, and mammal studies.

Montessori Timeline of Life

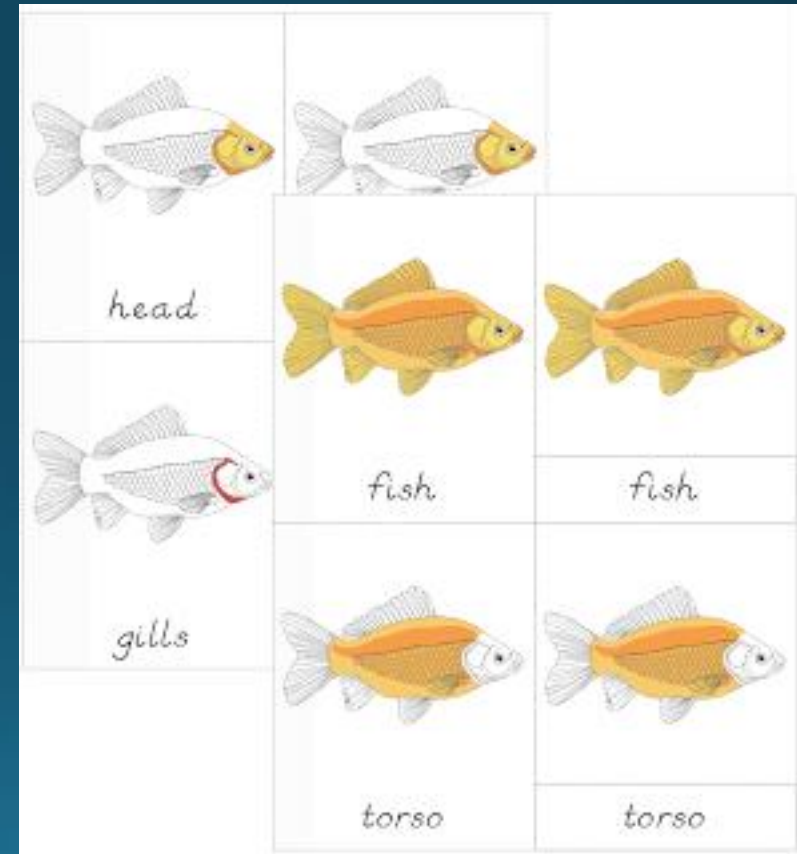
- Timeline of Life
 - Intro story following the Big Bang
 - Scientific Perspective introducing students to life and it's adaptations over time.
 - Student selected research project from Timeline of Life
 - Era-Animal-Plants
 - Math integration
 - Charts and timelines
 - Mathematical processes to compute distance and time between eras.



3 Part Cards

Fish-Amphibian-Reptiles-Birds-Mammals

- 3 Part Cards
 - Vocabulary introduction & Matching
 - Parts of a Fish
 - Fish
 - Torso
 - Head
 - Gills
 - Dorsal Fin
 - Caudal Fin
 - Anal Fin
 - Pelvic Fin
 - Pectoral Fin
 - Lateral Line
 - Eye
 - Mouth
 - Nostril
 - Scales



Montessori Tree of Life

- Tree of Life
 - The tree of life is a final mastery check of student understanding of the scientific perspective of animal adaptation throughout time.
 - Students may take a longer period of time with this particular learning content depending on grade level.
 - Integration of animal classification throughout vertebrate and invertebrates.



Project Based Learning & Assessments

Time Line of Life

Projects may include the following:

Diorama's

Student created timelines

Posters

PowerPoint Presentations

Discovery Education Boards

Narrative Stories

Montessori Experiments

3 Part Cards

Projects may include the following:

Student Booklets

Vocabulary Stories

Posters w/descriptions

2-d and 3-d models

Classification/Naming Class Pets

Needs of Animal

Tree of Life

Projects may include the following:

Legacy Work addition to classroom work

Student created Tree of Life

Group Presentations

Lesson Objectives

- Students will be able to classify animals of the animal kingdom according to scientific practices.
- Students will research to develop a deeper and more meaningful understanding of the adaptations of animals over time.
 - Understand research and writing processes.
 - ELA- Compare/Contrast, Cause/Effect, Point of View/Perspective, Inferencing, etc.
- Students will understand the use of timelines and math processes to compute distances between periods of time, as well as proportional differences in animal sizes compared to humans and changes over time.