Classification of Living Things – Lesson using ***Toothless***

By: Mrs. Judson

S7L1. Obtain, evaluate, and communicate information to investigate the diversity of living organisms and how they can be compared scientifically.

a. Develop and defend a model that categorizes organisms based on common characteristics.

b. Evaluate historical models of how organisms were classified based on physical characteristics and how that led to the six kingdom system (currently archaea, bacteria, protists, fungi, plants, and animals).

(Clarification statement: This includes common examples and characteristics such as, but not limited to, prokaryotic, eukaryotic, unicellular, multicellular, asexual reproduction, sexual reproduction, autotroph, heterotroph, and unique cell structures. Modern classification will be addressed in high school.)

While studying classification and the Kingdoms of life, ***Toothless*** our class pet (bearded dragon) is in the spotlight.

Using him as a living example we work through the classification of him – Se start with Domain, them examine each taxon following. The students must explain why he belongs in each taxon. Below is the correct information.

Classification

Common Name: Bearded Dragon

Scientific Name: *Pogona vitticeps*

Complete Classification

Domain: Eukarya- Contains cells with a nuclear organelle

Kingdom: Animalia- Multi-cellular, mitochondrial heterotroph

Phylum: Chordata- Possesses a notochord

Class: Reptilia: Cold-blooded, air-breathing and completely ossified skeleton

Order: Squamata: Skull with two pairs of temporal openings

Family: Agamidae: True lizard, which includes chameleons and geckos

Genus: Pogona: Bearded lizard, omnivorous, lives in semiarid habitat

Species: Pogona Vitticeps

Once students are comfortable with classification, they are then able to choose 2 organisms and proceed with the same process.

1. They classify each organism
2. They then do a side by side comparison poster of their organisms' classifications and then highlight where the divergence occurs.
3. This helps to show how common ancestors are possible for all species on earth.

Without ***Toothless*** in the room, this same activity does not have the same impact on the students. The living specimen makes every taxon become relevant to them. I have done this project in the past without a living specimen to observe and it was NOT as successful.

Taxonomic Project

Item	Points	Comments
Organisms drawn, and scientific name given		
Taxonomic Scheme		
Food Web with arrows pointing in the appropriate direction to show transfer of energy		
Dichotomous Key correctly identifies organisms		

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