

## Biology –A Differentiated Lesson Using Cubing by Readiness, and Jigsaw

**Understand:** Functions of cell organelles relatedness of each organelle's function with others'

**Know:** Key Vocabulary (nucleus, mitochondria, endoplasmic reticulum, ribosome, nucleolus, vacuole, golgi body, lysosome, cell membrane)

**Do:** Analyze and explain a facet of cell function and interrelationship of parts

**First:** Class reading and discussion of cell, parts, and interrelationships –followed by a diagnostic quiz

**Next:** The teacher assigns students to Jigsaw groups of 6 –and a task numbered 1-6 within the Jigsaw groups.

Tasks escalate in difficulty and may also use interest or learning profiles.

**1.Describe:** cell parts (structure) and function

**2.Illustrate:** a cell with organelles and functions

**3.Analyze:** how each cell part is related to others

**4.Compare:** location of the organelle with its functions and relationships

**5.Connect:** how interrelationships among organelle functions are like other interrelationships among organelle functions are like other interrelationships in life

**6.Apply:** what you've learned to predict how organism functions are like cell functions.

Within “specialty” groups (all the 4's, for example) students devise a way of sharing their tasks and understandings with the Jigsaw “home base” groups. Once back in Jigsaw home base groups, each individual is responsible for:

- a) presenting and answering questions about one facet of the cube, and
- b) taking notes, asking questions, achieving understanding about the other facets of the cube

Students have an opportunity to pose questions and ask for clarification from the whole class.

They then select either a quiz or a journal entry on the topic to demonstrate Mastery.