Angie Poe

EDMT 612-001

**Direct Instruction Lesson Plan**

**Class**: Freshman Biology

**Time**: 50 minutes

**Materials:**

Class-Textbook, PowerPoint, and Internet.

Lab-Scissors, construction paper, glue and/or tape

**Technology**: Smart board, Internet

**Kentucky core Content Standards Met**:

**SC-HS-3.4.1**

-Students will explain the role of DNA in protein synthesis. Cells store and use information to guide their functions. The genetic information stored in DNA directs the synthesis of the thousands of proteins that each cell requires. Errors that may occur during this process may result in mutations that may be harmful to the organism.

**Adaptations for Special Needs Learners:**

**(**Autistic child 1st bell cannot use scissors due to sensory overload)

-Teacher has precut lab supplies so student can participate to the best of their ability or with the help of a lab partner.

**Objective:** As part of the cellular unit students will be able to explain the structure of DNA. They will be able to describe base pairing, nucleotides, and the double helix. Students will know how DNA packages itself to fit into the cell.

**Anticipatory Set** (9:00-9:10) Students will watch a 5-10 minute Internet presentation defining what DNA is. This will prime their brains with basic DNA facts.

**Introduction of new Material (9:10-9:30):** Teacher will go over power point further explaining the new material. Class will begin the lab for the new material. Time may overlap to the next day. Proposed outline of Power Point: See attached notes.

**Providing Models Or Examples:** Looking at transparencies of book pictures as the power point is discussed.

**Checking for Understanding (9:30-9:40):** Students and teacher will go over the quiz about the presentation together as a class. The handout will ask

* What does DNA stand for?
* What are the 3 parts of a nucleotide?
* What are the purines and prymidines?
* What is the shape of DNA
* Who discovered the shape of DNA
* One strand of the double helix is \_\_\_\_\_\_ to the other
* What chemical bond holds together the base pairs?

**Guided Practice (9:40-9:55 or next day) = Lab:** Double Helix activity retrieved from <http://www.lessonplansinc.com/science.php/biology/lessonplans/C79/> . Includes making a double helix out of construction paper to demonstrate the structural properties of DNA.

**Closure:**

n/a inform students we will finish lab tomorrow and begin discussion on chromosomes and DNA replication.

**Independent Practice:**

-Students should write in lab book the main points of the lab.

**References:**

Double Helix Activity. (12/06/07). Retrieved September 26, 2009 retrieved from <http://www.lessonplansinc.com/science.php/biology/lessonplans/C79/>.

*The mysteries of Life with Tim and Moby.* (n.d.) Retrieved September 26, 2009 from https://www.brainpop.com/science/cellularlifeandgenetics/dna/.