**CONTENT TEACHING ACADEMY**

**Lesson Plan 1 and Lesson Plan 2**

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**Subject*:*** *Earth Science*

**Unit Title:** *The Atmosphere*

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| **HOMEWORK** | **DO NOW** | **AIM/OBJECTIVE – Plan One**  TSW explain what the atmosphere is in his own words orally and in written form. |
| TSW watch the weather on the news and write at least 3 – 5 new or unfamiliar “weather words” to share with the class along with an original definition based on context  **MATERIALS:**  Various Texts – perhaps different levels  Art materials – colored pencils, markers, construction paper, student scissors, envelopes…  Paper  Pencils  Chalkboard, whiteboard, SMARTboard,  Pictures of the sky, clouds, etc, weather bulletins,  TV (weather reports…  Tape | 1. Identify three facts you know about the atmosphere. 2. Write another word for atmosphere that most people use. | **SOL(s):**  ES. 12 - TSW investigate and understand the origin and evolution of the atmosphere and the interrelationship of geologic processes, biologic processes, and human activities on its composition and dynamics. *(The lesson will not specifically tackle the identified KEY CONCEPTS of the SOL at this time for students who have difficulty with language and/or retention of vocabulary OR for a SpEd resource class.)*  **Lesson Steps:** **Part One**   * Review Do Now - discuss the student responses, push for dialogue; notice prior knowledge (*USE AN “INQIURY CHART”* to bolster students to talk and feel validated.) Segue into how Earth is unique in the makeup of its atmosphere and be sure the students have mentioned the synonym “air.” * Introduce lesson having students predict what would happen to living things if there was no atmosphere. Discuss or have them *predict* what would happen if you place a lighted candle under a jar. Allow students to share their predictions. Ask, “So, what is atmosphere or air?” Look at the news or weather reports; discuss how atmosphere is mentioned… * Give each student an index card on which they write their personal definition. Exchange or display the results discuss each. As a class, come up with one definition that all agree upon; compare it with the “textbook” definition to see how closely the class came to it. * Create an “Atmosphere” definition poster or chart designed by the students to put on the wall. Perhaps each student being responsible for certain words so that the definition looks like a puzzle or ransom note. * Review and discuss homework. Create a word wall with the student’s words. Have students write a quote that depicts, defines or describes the word to pair with the word.   **ASSESSMENT: 1.** Individuals will get with teacher on an assigned or day of their choice within a given time frame to recite and write the definition.  **2.** Make individual envelops with the created definition (words on separate cards) later on during the unit OR allow students to create their own envelopes.) Remove the wall definition after class before assessment. Have students put the words in order on their own piece of construction paper to be turned in for review. When all are done, allow the class to reformulate the wall definition together. Choose teams or have students choose one or more words… line up in order of the definition holding the appropriate word(s). Credit is given if the definition contains the basic components… stress that it does not have to be word for word.  Notes: Allow students to try to illustrate the atmosphere though the “air” is invisible. This will allow them to go beyond the REMEMBERING category. The DO NOW and HOMEWORK will help with UNDERSTANDING. Using their own word to CREATE their own definition and illustrations will aid with EVALUATING and ANALYZING/APPLYING.  These are the first Science plans I’ve ever written… be kind. |
| **HOMEWORK** | DO NOW | AIM/OBJECTIVE – Plan Two TSW identify the main gases in the atmosphere.  TSW describe the composition of the earth’s atmosphere.  TSW identify the four layers of the atmosphere. |
| Find a picture in a magazine or other medium that displays the atmosphere or the effects atmosphere might have on humanity or the earth. Be prepared to explain your choice.  **MATERIALS:**  Paper. Pencils  Art materials for projects  Texts  Index cards  PYRAMID game template  Sticky notepads  Candle, jar, matches or other approved fire maker  Chalkboard. SMARTboard, whiteboard | 1. Draw a picture of two or three types of clouds you’ve noticed in the sky. 2. List what you think exists in the clouds or atmosphere 3. Name 2 ways the atmosphere affects the earth. | **SOL(s):**  ES.12 - TSW investigate and understand the origin and evolution of the atmosphere and the interrelationship of geologic processes, biologic processes, and human activities on its composition and dynamics. *(The lesson will not specifically tackle the identified KEY CONCEPTS of the SOL at this time for students who have difficulty with language and/or retention of vocabulary OR for a SpEd resource class.)*  **Lesson Steps: (Part Two)**   * Review Do Now and discuss answers to lead into the importance of water, gases, and the fact that the atmosphere changes and affects the planet… * Review Homework also indicating the impact of our atmosphere on the earth. Ask what do we need from the atmosphere to live? * After discussion distribute texts and divide students into 4 pairs or groups (use a creative way such as those born in the same season work together). Choose a team leader (who’s the youngest?) and have them choose one of 4 cards labeled with the **layers of the atmosphere**. The team then researches the layer and prepares a presentation to the class. Decide if it will be of their choice or choose a format they should use like power point, graphic organizers, etc. Also decide when the project is due (same day?) based on the time the students may need. Give guided assistance if necessary. When completed students “teach” their layer information to the class. * Refer to the candle experiment and review what the students’ predictions were. If possible conduct the experiment with the class. Have students time the results. Lead the conversation to draw a hypothesis as to why the candle goes out. Introduce the formula (glucose + oxygen yields carbon dioxide + water + energy). Briefly discuss respiration and why the air is needed to survive; this will segue into the other gases found in the air. * Read and discuss the text lesson on the layers, gasses and composition of the atmosphere. Have students design a 3D graphic organizer with ATMOSPHERE as the theme that displays the composition, layers, and gases. * Students also design a separate graph that shows the percentages of the gases (nitrogen, oxygen, carbon dioxide, argon, etc.) * Students play “the PYRAMID game” to create test questions and answers to learn and discuss the layers of the atmosphere. Divide the group into teams to decide the winners. The whole class and participants get “air” popcorn and the winners get “cloud” cotton candy! * The class designs a large wall plague of the earth and the atmosphere out of any medium they choose (clay, paper mache, paints…) to display in the class room, hallway or bulletin board. * Create a vocabulary board with removable key words from the lesson/unit. The teacher and/or students can quiz each other by reading a definition and the student takes the appropriate card off the board. If internet is available decorate the board or a portion of it with a WORDLE about the ATMOSPHERE.   **ASSESSMENT:** Teacher and students create a rubric to include pertinent criteria for the lesson and its components.  Note: These plans are written in the format used by the Department of Correctional Education similar to Lorraine Monroe’s Black Board Configuration. |