A blue and grey logo with claws

Description automatically generated**2024-2025 Weekly Lesson Planning Document**

Template for the following:

Science, Social Studies, CTE, World Languages,

HPELW, Fine Arts, JROTC

Week of Monday, \_\_\_\_\_02/10\_\_\_through Friday, \_\_02/14/2025

**EDUCATOR’S NAME:** \_\_\_\_\_\_\_Dr. Amar K. Pani\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **SUBJECT:** \_\_\_\_\_\_\_\_\_\_Human Anatomy & Physiology (Honors) Honors\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | **MONDAY** | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| **Chapter 15:** Respiratory System  **Page Number(s): 346-379** It’s suggested to use your curriculum map. | **Intro to Respiratory System** | **Respiratory System Structure** | **Respiratory System Function** | **Respiratory System Experiment** | **Respiratory System Review** |
| **TN Standard(s):**  Grade level standard (including standard notation and language).  Which State Standard is your lesson addressing? This should also be on your Whiteboard Protocol. | Standard(s)  HAP.LS1.18 Explain the anatomy of the  respiratory system functions to provide oxygen and  carbon dioxide transport mechanisms between the  lungs and the circulatory system, considering  capillary structures, red blood cell structures,  diffusion, and affinity. | | | | |
| **Objective (s):**  What specifically should students be able to do at the end of the lesson? The objective is standards-based.  Write the objective in student friendly terms. For example, I can multiply binomials.  This should also be on your Whiteboard Protocol.  What do you want students to know, understand and be able to do as a result of this lesson?  The objective should be written using the stem…  **I CAN….** | **I CAN analyze the respiratory system components IOT evaluate the mechanisms of gas exchanges among the environment, lungs and the cardiovascular system** | **I CAN analyze the respiratory system components IOT evaluate the mechanisms of gas exchanges among the environment, lungs and the cardiovascular system** | **I CAN analyze the respiratory system components IOT evaluate the mechanisms of gas exchanges among the environment, lungs and the cardiovascular system** | **I CAN analyze the respiratory system components IOT evaluate the mechanisms of gas exchanges among the environment, lungs and the cardiovascular system** | **I CAN analyze the respiratory system components IOT evaluate the mechanisms of gas exchanges among the environment, lungs and the cardiovascular system** |

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| **Possible Misconception (s):**  What misconception(s) are you anticipating during this lesson? | Misconception(s)  Misconceptions about the lungs and the mechanics  of breathing are common. For example, students  commonly think the lungs are muscles that actively  suck air into the body during inhalations and expel  all the air during exhalations. To overcome these  and similar misconceptions, use a simple model to  demonstrate how the lungs really work  (http://www.sciencenetlinks.com/lessons.php?DocI  D=245 ). | Misconception(s)  Misconceptions about the lungs and the mechanics  of breathing are common. For example, students  commonly think the lungs are muscles that actively  suck air into the body during inhalations and expel  all the air during exhalations. To overcome these  and similar misconceptions, use a simple model to  demonstrate how the lungs really work  (http://www.sciencenetlinks.com/lessons.php?DocI  D=245 ). Misconception(s) | Misconception(s)  Misconceptions about the lungs and the mechanics  of breathing are common. For example, students  commonly think the lungs are muscles that actively  suck air into the body during inhalations and expel  all the air during exhalations. To overcome these  and similar misconceptions, use a simple model to  demonstrate how the lungs really work  (http://www.sciencenetlinks.com/lessons.php?DocI  D=245 ). | Misconception(s)  Misconceptions about the lungs and the mechanics  of breathing are common. For example, students  commonly think the lungs are muscles that actively  suck air into the body during inhalations and expel  all the air during exhalations. To overcome these  and similar misconceptions, use a simple model to  demonstrate how the lungs really work  (http://www.sciencenetlinks.com/lessons.php?DocI  D=245 ). | Misconception(s)  Misconceptions about the lungs and the mechanics  of breathing are common. For example, students  commonly think the lungs are muscles that actively  suck air into the body during inhalations and expel  all the air during exhalations. To overcome these  and similar misconceptions, use a simple model to  demonstrate how the lungs really work  (http://www.sciencenetlinks.com/lessons.php?DocI  D=245 ). |
| **Literacy-Based DO NOW:**  This literacy-based activity should be ready for students to begin working on upon entering class. Students should have an opportunity to read, write, and/or speak. | **The Respiratory System: how the density of air decreases with**  **increasing altitude, so that a given volume of air**  **contains fewer oxygen molecules at high altitude**  **than the same volume of air at sea level. Ask**  **students to hypothesize how this might affect**  **breathing at high altitude. Encourage them to**  **speculate about adaptations that might evolve in**  **human populations that live at high altitudes for**  **many generations. Direct students to the URLs**  **below to see if their ideas are correct.**  **http://www.altitude.org/why\_less\_oxygen.php• Understand ABO and Rh blood grouping.**  **Suggested Phenomenon**  **Blood Donation Describe the INTEGUMENTARY system in your own words.** | Misconceptions about the lungs and the mechanics | Draw, color, label, Define and describe the respiratory system | Misconceptions about the lungs and the mechanics | Draw, color, label, Define and describe the respiratory system |
| **Agenda for the Day**  Simple outline of lesson segments or activities that is time stamped.  Teacher/class should take 2 minutes or less to review. | * Do Now *(8 minutes)* * Review Learning Objective *( minutes)* * Item 3 *( minutes)* * Item 4 *( minutes)* * Item 5 *( minutes)*   Item 6 *( minutes)*  lower respiratory system, upper respiratory system,  breathing, lung, ventilation, nose, nostril, paranasal  sinuses, adenoids, laryngopharynx, nasopharynx,  pharynx, tonsils, epiglottis, glottis, Heimlich  maneuver, larynx, vocal cords, primary bronchi,  trachea, bronchial tree, bronchoconstriction,  bronchiole, bronchodilation, bronchospasm,  alveolus (lung), lobe, pleura, serous, surfactant  (respiratory), diaphragm, exhalation, expiration,  inhalation, inspiration, respiration, millimeters of  mercury (mmHg), bronchitis, emphysema, acute  respiratory distress syndrome (ARDS), chronic  obstructive pulmonary disease (COPD), lung cancer,  lung cancer, pneumothorax, sleep apnea | * Do Now *(8 minutes)* * Review Learning Objective *( minutes)* * Item 3 *( minutes)* * Item 4 *( minutes)* * Item 5 *( minutes)*   Item 6 *( minutes)*  lower respiratory system, upper respiratory system,  breathing, lung, ventilation, nose, nostril, paranasal  sinuses, adenoids, laryngopharynx, nasopharynx,  pharynx, tonsils, epiglottis, glottis, Heimlich  maneuver, larynx, vocal cords, primary bronchi,  trachea, bronchial tree, bronchoconstriction,  bronchiole, bronchodilation, bronchospasm,  alveolus (lung), lobe, pleura, serous, surfactant  (respiratory), diaphragm, exhalation, expiration,  inhalation, inspiration, respiration, millimeters of  mercury (mmHg), bronchitis, emphysema, acute  respiratory distress syndrome (ARDS), chronic  obstructive pulmonary disease (COPD), lung cancer,  lung cancer, pneumothorax, sleep apnea | * Do Now *(8 minutes)* * Review Learning Objective *( minutes)* * Item 3 *( minutes)* * Item 4 *( minutes)* * Item 5 *( minutes)*   Item 6 *( minutes)*  lower respiratory system, upper respiratory system,  breathing, lung, ventilation, nose, nostril, paranasal  sinuses, adenoids, laryngopharynx, nasopharynx,  pharynx, tonsils, epiglottis, glottis, Heimlich  maneuver, larynx, vocal cords, primary bronchi,  trachea, bronchial tree, bronchoconstriction,  bronchiole, bronchodilation, bronchospasm,  alveolus (lung), lobe, pleura, serous, surfactant  (respiratory), diaphragm, exhalation, expiration,  inhalation, inspiration, respiration, millimeters of  mercury (mmHg), bronchitis, emphysema, acute  respiratory distress syndrome (ARDS), chronic  obstructive pulmonary disease (COPD), lung cancer,  lung cancer, pneumothorax, sleep apnea | * Do Now *(8 minutes)* * Review Learning Objective *( minutes)* * Item 3 *( minutes)* * Item 4 *( minutes)* * Item 5 *( minutes)*   Item 6 *( minutes)*  lower respiratory system, upper respiratory system,  breathing, lung, ventilation, nose, nostril, paranasal  sinuses, adenoids, laryngopharynx, nasopharynx,  pharynx, tonsils, epiglottis, glottis, Heimlich  maneuver, larynx, vocal cords, primary bronchi,  trachea, bronchial tree, bronchoconstriction,  bronchiole, bronchodilation, bronchospasm,  alveolus (lung), lobe, pleura, serous, surfactant  (respiratory), diaphragm, exhalation, expiration,  inhalation, inspiration, respiration, millimeters of  mercury (mmHg), bronchitis, emphysema, acute  respiratory distress syndrome (ARDS), chronic  obstructive pulmonary disease (COPD), lung cancer,  lung cancer, pneumothorax, sleep apnea | * Do Now *(8 minutes)* * Review Learning Objective *( minutes)* * Item 3 *( minutes)* * Item 4 *( minutes)* * Item 5 *( minutes)*   Item 6 *( minutes)*  lower respiratory system, upper respiratory system,  breathing, lung, ventilation, nose, nostril, paranasal  sinuses, adenoids, laryngopharynx, nasopharynx,  pharynx, tonsils, epiglottis, glottis, Heimlich  maneuver, larynx, vocal cords, primary bronchi,  trachea, bronchial tree, bronchoconstriction,  bronchiole, bronchodilation, bronchospasm,  alveolus (lung), lobe, pleura, serous, surfactant  (respiratory), diaphragm, exhalation, expiration,  inhalation, inspiration, respiration, millimeters of  mercury (mmHg), bronchitis, emphysema, acute  respiratory distress syndrome (ARDS), chronic  obstructive pulmonary disease (COPD), lung cancer,  lung cancer, pneumothorax, sleep apnea |
| **Beginning of Lesson**  **I Do**  **Science:** Engage & Explore | **Engage**: Curricular Resources  Textbook: Applied Anatomy & Physiology: A Case  Study Approach  • Chapter 10: The Respiratory System, pp. 346-  379  Suggested Activities  Engage  • Crash Course-Respiratory System, Part 1  • Crash Course-Respiratory System, Part 2 | **Explore**: Explore  EMC AA&P Workbook & Laboratory Manual:  Chapter 10: The Respiratory System, pp. 173-187  • Laboratory Activity 1: Histology of Lung  Pathology, p. 188  • Laboratory Activity 2: Lung Function Models  (Part 1): Lung Capacity Model, pp. 188-189  • Laboratory Activity 3: Lung Function Models  (Part 2(: Inspiration and Expiration Model, pp.  189-190 | **Explain**: Students will use evidence to describe in detail each problem along with the underlying cause of each imbalance. | **Elaborate**  • A Case Study: The White Lung Controversy, pp.  377-379  • Safe Smoke? Passage p. 361  • Airline Hypoxia Passage p. 363  • Asthma from Ozone Passage p. 366 | **Evaluate**  **• The Respiratory** System Review  • Chapter 10: The Respiratory System-Concept  Check pp. 378-379 |