



Competencies on Basic Sciences to underpin airway management

PACU Airway Learning and Teaching Resource

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Competencies : Basic sciences to underpin airway management

Core clinical learning outcomes:

- Understands the role of oxygen and carbon dioxide in metabolism
- Understands how airway structures function in enabling free flow of gases between atmosphere and lungs

Content Knowledge & skills	A. Function of oxygen and carbon dioxide in metabolism • Enables the trainee to understand how oxygen fuels the cells in metabolism and the need to eliminate carbon dioxide constantly
1.	Describes the process of 'metabolism'
2.	Explains the role of oxygen in metabolism
3.	Explains the role of carbon dioxide as the waste product of metabolism
4.	Rationalises the implications of obstructing the free flow of air to and from the lungs
5.	Explains why airway is always the first priority in post anaesthetic care
	B. Airway structures • Enables the trainee to understand how airway structures enable gas delivery to and from atmosphere to lungs
6.	Identifies the structures in the upper and lower airways explaining how they provide the passageway for oxygen and carbon dioxide to be transported to and from the lungs.

7.	Explains how the skeletal framework supports the nose and mouth
8.	Describes the nasal passages and discusses their function
9.	Identifies the structures of the oral cavity: • Hard and soft palate • Uvula • Tonsils • Teeth • Tongue • Salivary glands Discusses how these structures function to prepare food for swallowing
10.	Discusses the role of the pharynx as the common pathway for air, food and water
11.	Identifies the main structures of the larynx
12.	Explains the function of the epiglottis in airway protection
13.	Describes the anatomy of the glottis [vocal cords] and its function
14.	Describes the location and function of the oesophagus
15.	Describe the structure and function of the trachea
16.	Describe the structure and function of the : - bronchi - bronchioles - how do they differ in structure

17.	Describe the structure of the alveoli, their function and distribution in the lungs
18.	Describe the alveolar-capillary junction and how gases transfer across these membranes
	<i>C. Protective Reflexes</i> • <i>Enables the trainee to understand how basic reflexes protect the airway in normal health</i> •
19.	Describe the gag reflex and discuss it's function in normal health
20.	Describe the cough reflex and discuss it's function in normal health
21.	Describe the swallow reflex and discuss it's function in normal health