**SCHEME OF WORK**

**Name of Teache**r: **Class**:S.4 **Stream Term**: 1 **Year** 2024

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| **WEEK** | **P’D**  **S** | **THEME** | **TOPIC** | **COMPETENCE**  **/**  **OBJECTIVE** | **LEARNING**  **OUTCOMES** | **SUGGESTED/**  **LEARNING**  **METHODS** | **RESOURCES** |
| 29/4/24 To  3/5/24 | 7 | Heat quantities and vapors | * Heat capacity * Latent heat * Applications of heat capacity and latent heat | Learners should be able to   * Plan, carry out and report on an investigation to find the effect of heat energy on the temperature of different materials of the same mass and explain heat capacity. * discuss and explain the applications and implications of the high specific latent heat and heat capacity of water * draw the heating curve and * research the difference between saturated and unsaturated vapour * explain how a pressure cooker works. | * Understand the role that oceans play in global temperature regulation • the loss or gain of heat when a material changes state in terms of the particle theory * Understand why land and sea heat up and cool at different rates and the implications for the direction of sea breezes at different times of day understanding about the nature of heat change * Understand why why water boils at a temperature less than 100 0 C at the top of a mountain * Explain the specific latent heat of fusion of ice, and the application of latent heat in refrigerators | * Research * Class discussion – * Guided discovery * Co-operative learning * Active learning * Socratic questioning | * Learner's book and teacher's guide (vision, Baroque and fountain) * Drawing instrument |
| 6/5/24 To  9/5/24 | 7 | Refraction | Refraction of light  Refractive index  Total internal reflection  Dispersion of light  Mixing of colors | Learners should be able to:   * investigate and explain with diagrams, how a ray of light is refracted as it passes between two adjacent media * explain phenomena such as the apparent bending of a stick in water and determine refractive index of glass * investigate and report on total internal reflection and critical angle * explain on a poster how prisms can be used instead of plane mirrors in periscopes * investigate and report on the causes of light dispersion and how a prism splits white light into coloured light by refraction * explain dispersion of light, such as oil on water and rainbows * In groups, learners use light filters to investigate and report on why coloured objects appear coloured | Learners should     * Understand total internal refraction and its applications * Understand dispersion of light * Understand the mixing of colors and color filters. | * Research * Class discussion * Guided discovery * Coperative learning * Active learning * Socratic questioning | -Learner's book and  teacher's guide (vision, Baroque and fountain) -Drawing instrument |