**Secondary 1**

**December exam- list of study topics**

**Characteristics of the Earth (**Pages 150-194 in red workbook**)**

 **Internal structure of the Earth**

 -crust, mantle, inner and outer core

**Biosphere**

-includes all life on earth

 **Lithosphere**

 - outer shell of the Earth made up of crust and the upper mantle

 - main relationships between the lithosphere and human activity (e.g. survival, agriculture, mining, land-use planning)

 -Relief (shape of the earth’s lithosphere) due geological and geophysical phenomena and human activity

- Rock formation

 -different types of rock ( igneous, metamorphic, sedimentary) and examples of each

 -where are they found

 -Minerals

 -properties of minerals (hardness, magnetism, colour)

 -Types of Soil

 -Relief (shape of the earth’s lithosphere) due

**Hydrosphere**

 - distribution of fresh water and salt water on the Earth's surface (e.g. glaciers contain inaccessible fresh water)

 -water cycle

**Atmosphere**

 - main layers of the atmosphere (troposphere, stratosphere, mesosphere, thermosphere)

 -composition of pure air at sea level (nitrogen, oxygen, carbon dioxide, water vapour)

 -relationships between the atmosphere and certain human activities (e.g. recreation, transportation, energy consumption)

**Geological and Geophysical phenomena**

 -Tectonic plates (massive pieces of the lithosphere that float on partially melted rocks of mantle)-form the continents and the bottom of the ocean

 -subduction zone (region of the Earth's crust where tectonic plates meet)

 -mid-oceanic ridge ( long underwater mountain ranges)

 -Orogenesis: formation of mountains (collision between tectonic plates-convergent movement)

 -Volcano (collision of tectonic plates- convergent movement)

 -Earthquake (tectonic plate movements: collisions-convergent movement, rubbing- transform fault, separation-divergent movement)

 -Erosion- different types of erosion (e.g. soils dried by the wind, fragmentation of rocks caused by water freezing and thawing, glaciers, running water)

 -Winds (e.g. convection movements, movement of air masses

 -Water cycle (phase changes, energy exchanges)

 -Natural energy sources (eg. solar energy)

 -Renewable and non- renewable energy resources (Sun, molten rock, moving water, oil, wind)

**Astronomical phenomena**

**Universal Gravitation**

 -definition and understanding of gravity (Pages 161-164 green workbook)

**Characteristics of the solar system**

 -characteristics of the planets in our solar system (distances, relative size, composition, categories of planets-divided by asteroid belt) (Pages 165-167- green workbook)

 - Cycles of day and night (Earth's rotation) (Pages 205-208-red workbook)

**Seasons**

 -Change of seasons due position of the Earth with respect to the Sun (tilt, revolution) (Pages 209-212 red workbook)

**Aurora borealis** (northern lights-North Pole) (Pages 180-183green workbook)

 - atmospheric layer in which the Aurora Borealis occurs (thermosphere)