**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)