MEMORANDUM: GRADE 7 SOCIAL SCIENCES

Activity 1: Understand tectonic plates pg70

1.1 The African, Antarctic, Eurasian, Indo-Australian, North American, South American and Pacific plates

1.2 They are named in accordance with the continents and oceans that are found on the plate, e.g. the African continent is found on the African plate.

1.3 Tabulated differences:

OCEANIC LITHOSPHERE	CONTINENTAL LITHOSPHERE
Denser - made from rock rich in iron and magnesium	Lighter - made from granite
Thinner - between 5-10km thick	Thicker - can extend from 35-70km above the continents

1.4 The asthenosphere is semi-molten, with temperatures ranging from 500 to 900 degrees, and it bends and flows under pressure. The lithosphere above it has a lower density, thus allowing it to float on the upper mantle.

Activity 2: Explain the movement of tectonic plates pg71

1. Oceanic plates - Pacific plate and Nazca plate; two big continental plates - North American plate, South American plate, African plate, Eurasian plate, etc.; two small continental plates - Indian plate and Iranian plate

2. Convergent, divergent and transform movements

    2.1 Plates move towards each other, away from each other and past each other in opposite directions, respectively.

3. Movement types:

3.1 transform
3.2 divergent
3.3 convergent

4. Caused the following:
    4.1 San Andreas Fault - plates grind past each other, build up pressure, then the crust snaps causing a catastrophic earthquake.
    4.2 Resulted from magma rising from within the Earth melting through the African plate and weakening the crust
    4.3 The Himalayas, which stand 3000km above sea level, resulted from the Indo-Australian plate's collision with the Eurasian plate pushing layers of sedimentary rock skyward.

5. The eastern part of Africa could be shed, the Pacific Ocean will narrow, the Atlantic Ocean will widen, India will move further northward into Asia, and the Andes will rise, among other things.

Activity 3: Identify the location of volcanoes pg73

1. Discussing questions:
    1.1 Volcanoes are found mainly among plate boundaries
    1.2 At these plate boundaries plates collide, causing one plate to slide under another. The mantle underneath melts to become magma, which pushes upwards through weak areas/ openings and then is forced through volcanic vents, thus causing volcanoes
    1.3 The Ring of Fire marks that area around the Pacific Ocean rim where plates collide forming a plate boundary of active volcanic and earthquake activity. It is an area of frequent volcanoes
    1.4 Because the plates move and collide nearly continuously in this area

2. The Hawaiian (Pacific Ocean) and Yellowstone (US) are hot spots. Other possible hotspots include the Saint Helena hotspot, the Eifel hotspot and the Iceland hotspot.