

## KERNKONSEPTE / KEY CONCEPTS/ KAKANYOKGOLO

**FAKULTEIT/FACULTY/LEGORO:** Natuurwetenskappe / Natural Sciences/Disaense tsa Tlhago

**SKOOL/SCHOOL/SEKOLO:** Omgewingswetenskappe en –ontwikkeling / Environmental Sciences and Development/Disaense tsa Tikologo le Tlhabololo

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**Bron:** Al onderstaande definisies is net so geneem vanuit die glossarium van die voorgeskrewe handboek. (Press, F., Siever, R., Grotzinger, J., Jordan, H. 2003. *Understanding Earth*. 4th ed. New York: W.H. Freeman.) Dit is in willekeurige volgorde.

**Source:** All following definitions have been taken unabridged from the glossary of the prescribed handbook. (Press, F., Siever, R., Grotzinger, J., Jordan, H. 2003. *Understanding Earth*. 4th ed. New York: W.H. Freeman.) / They are in random order.

**Motswedi:** Dithaloso tsothe tse di latelang di tserwe di sa fetolwa go tswa mo lenanefokong la buka e e tlhaotsweng. (ga le a neelwa ka thulaganyo epe).

Kernbegrip in Afrikaans	Definisie/verklaring in Afrikaans	Key concept in English	Definition/explanation in English	Kakanyokgolo mo Setswaneng	Tlhaloso/Thanolo mo Setswaneng
1. Verwering	Die algemene proses waartydens	1. Weathering	The general process that breaks up rocks into	1. Jego ya mafika	Thulaganyo ya kakaretso e e

	gesteentes in kleiner fragmente opgebreek word deur 'n kombinasie van fisiese en chemiese ontbinding.		smaller fragments by a combination of physical and chemical decomposition.		thubang mafika go a dira dikapetla tse dinnye ka tshwaragano ya go bola ga popego le ga sekhemikhale.
<b>2. Litifikasie/verharding</b>	Die proses waartydens sedimente deur verdigting en sementasie in vaste gesteente verander word.	<b>2. Lithification</b>	The process that converts sediments into solid rock by compaction and cementation.	<b>2. Thatafatso ya mafika</b>	Thulaganyo e e fetolang disedimente go nna lefika le le komota ka go le kgotlaganya le go le bopelela.
<b>3. Sediment</b>	'n Materiaal wat op die oppervlak van die Aarde deur fisiese, chemiese of biologiese agense afgeset word.	<b>3. Sediment</b>	A material deposited at Earth's surface by physical, chemical, or biological agents.	<b>3. Sedimente</b>	Sere se se tshololetsweng mo boalong jwa Lefatshe ke didiriswa tsa tota, sekhemikhale, kgotsa tsa ditheo tsa thutatshelo.
<b>4. Mineraal</b>	'n Vaste kristallynstof wat natuurlik voorkom; dit is gewoonlik anorganies en het 'n spesifieke chemiese samestelling.	<b>4. Mineral</b>	A naturally occurring, solid crystalline substance, generally inorganic, with a specific chemical composition.	<b>4. Minerale</b>	Sere se se tlhagelelang ka tlhago fela, se na le bokeresitale jo bo komota, ka kakaretso e le sesaboleng, ka motswako wa sekhemikhale o o kgethegileng.
<b>5. Kristallisasie</b>	Die groei van 'n vaste vorm van gas of	<b>5. Crystallization</b>	The growth of a solid form of gas or liquid	<b>5. Thorofatso</b>	Go oketsega ga mokgwa wa

	vloeistof waarvan die atoom- bestanddele in die regte chemiese verhoudinge en kristalrangskikking bymekaarkom.		whose constituent atoms come together in the proper chemical proportions and crystalline arrangement.		bokomota jwa gase kgotsa seedi se diatomo tse di se dirang di tlang mmogo ka manathoganyane a tota a sekhemikhale le thulaganyo ya keresitale.
<b>6. Magmakamer</b>	'n Magmagevulde holte in die litosfeer wat gevorm word wanneer stygende druppels gesmelte rots die omringende soliede rots wegstoot.	<b>6. Magma chamber</b>	A magma-filled cavity in the lithosphere that forms as ascending drops of melted rock push aside surrounding solid rock.	<b>6. Tšhembara ya Magma</b>	Mosima o o tletseng ka magma mo letokgolokweng le le bopang marothodi a a tthatlogang a lefika le le gakologileng a kgaphelang mafika a a komota a a dikologileng kwa thoko.
<b>7. Magnetiese stratigrafie</b>	Die tydsekwens van die ommekeer van die Aarde se magnetiese veld soos aangedui in die magnetiese fossielrekord van lawavloeilae.	<b>7. Magnetic stratigraphy</b>	The time sequence of reversals of Earth's magnetic field as indicated in the fossil magnetic record of layered lava flows.	<b>7. Go tthatlhagana ga mafika ka Semakenetiki</b>	Tatelano ya nako ya maphata a semakenetiki a poelomorago ya Lefatshe jaaka e bontshiwa mo rekotong ya fosele ya semakenetiki ya seretse se se tthatlaganeng sa kelelo.
<b>8. Vulkaniese geosisteem</b>	Die totale stelsel van gesteentes, magmas en wisselwerkinge om die volledige	<b>8. Volcanic geosystem</b>	The total system of rocks, magmas, and interactions to describe the entire sequence of	<b>8. Thulaganyofatshe ya Lekgwamolelo</b>	Thulaganyogotlhe ya mafika, dimagma, le ditsenagare go thalosa tatelano

	opeenvolging van gebeurtenisse, vanaf smelting tot by uitbarsting, te beskryf.		events from melting to eruption.		yotlhe go tswa go tlhaologo go ya go thunyo ya mafika.
<b>9. Plaattektoniek</b>	Die teorie wat voorstel dat die litosfeer in ongeveer 'n dosyn groot plate wat oor die Aarde se oppervlak beweeg, gebreek is.	<b>9. Plate tectonics</b>	The theory proposing that the lithosphere is broken into about a dozen large plates that move over Earth's surface.	<b>9. Dipoleite tsa teketoniki</b>	Teori e e tshitsinyang gore letokgolokwe e thubilwe go nna dipoleiti tse di ka nnang tosene ka palo tse di kgo lwane tse di tsamayang mo godimo ga boalo jwa Lefatshe.
<b>10. Aardbewing</b>	Die hewige beweging van die grond wat plaasvind wanneer gesteentes wat onder spanning verkeer skielik langs 'n nuwe bestaande fout breek.	<b>10. Earthquake</b>	The violent motion of the ground that occurs when rocks being stressed suddenly break along a new pre-existing fault	<b>10. Thoromolefatshe</b>	Tshuto e e maatla ya lefatshe e e diragalang fa mafika a a gateletsweng a thubega fela ka pele go tsamaelana le phoso e ntšhwa e e nnileng teng pele.
<b>11. Plooiing</b>	Die proses waardeur kristalkragte 'n korsarea só vervorm dat lae van gesteentes in plooi gedruk word.	<b>11. Folding</b>	The process by which crystal forces deform an area of crust so that layers of rock are pushed into folds.	<b>11. Momenagano</b>	Thulaganyo e mo go yona maatla a kerisetale a bopololang lefelo le le nang le legogo gore dillaga tsa lefika di kgoromeletswe go nna memeno fela.
<b>12. Metamorfe gesteente</b>	'n Gesteente wat gevorm word deur die transformasie van voorafbestaande,	<b>12. Metamorphic rock</b>	A rock formed by the transformation of preexisting solid rocks under the influence of	<b>12. Mafika a metamofiki</b>	Lefika le le tlhodilweng ke go agwa sešwa ga mafika a a komota a

	vaste gesteentes wat onder die invloed van hoë druk en temperatuur verkeer.		high pressure and temperature.		a ntseng a le teng pele mo tlhotlheletsong ya kgatelelo e e kwa godimo le themphereitšha.
<b>13. Orogenie</b>	Bergvorming, veral deur die plooiing en opstoot van rotslae, dikwels met gepaardgaande magmatiese aktiwiteit.	<b>13. Orogeny</b>	Mountain building, particularly by the folding and thrusting of rock layers, often with accompanying magmatic activity.	<b>13. Orokeni</b>	Kago ya dithaba, bogolosegolo ka momenagano le kgatelelo ya lefika, nako nngwe e le ka go patywa ke ditiro tsa magma.
<b>14. Subduksie</b>	Die versinking van 'n oseaniese plaat op 'n konvergerende plaatgrens. Die oorliggende plaat kan oseanies of kontinentaal word.	<b>14. Subduction</b>	The sinking of an oceanic plate at a convergent plate boundary. The overriding plate may become oceanic or continental.	<b>14. Go epa mesimana</b>	Go nweela ga poleiti ya lewatle mo molelwaneng o o kgatlhanelang fa poleiting. Poleiti e e botlhokwatlhokwa e ka nna ya selewatle kgotsa ya kontinente.
<b>15. Superposisie</b>	Die beginsel dat elke laag sedimentêre gesteente wat in 'n tektonies ongerepte reeks is, jonger is as die een daaronder.	<b>15. Superposition</b>	The principle that each layer of sedimentary rock in a tectonically undisturbed sequence is younger than the one beneath it.	<b>15. Maemomagolo</b>	Theo ya gore llaga nngwe le nngwe ya mafika a a ikgatileng mo tatelanong e e e teketoniki e sa kgoreletswa ke sepe se se ntšhwa mo go e e ka fa tlase ga yona.
<b>16. Transformasie-verskuiwing</b>	'n Plaatgrens waar die plate by mekaar verby skuif en daar nie litosfeer geskep óf	<b>16. Transform fault</b>	A plate margin at which the plates slide past each other and lithosphere is neither	<b>16. Phoso e e ntšhwafaditsweng</b>	Losi lwa lefika le go relela ga poleiti go fetaneng mo go lona mme ka go dira jalo

	vernietig word nie.		created nor destroyed.		go sa dirwa kgotsa ga sengwa letokgolokwe.
<b>17. Grondwater</b>	Die massa water wat onder die Aarde se oppervlak opgegaan is.	<b>17. Groundwater</b>	The mass of water stored beneath Earth's surface.	<b>17. Metsitlase</b>	Bokete jwa metsi jo bo bolokilweng ka fa tlase ga boalo jwa Lefatshe.
<b>18. Stollingsgesteente</b>	'n Gesteente wat deur die stolling van magma gevorm word voor- of nadat dit die oppervlak bereik het.	<b>18. Igneous rock</b>	A rock formed by the solidification of a magma before or after it reaches the surface.	<b>18. Lefika la seretse</b>	Lefika le le tlhodilweng ke go thatafala ga magma pele kgotsa morago ga le fitlha mo boalong jwa lefatshe.
<b>19. Kontinentale drywing</b>	Die grootskaalse beweging van kontinente oor die aardbol.	<b>19. Continental drift</b>	The large-scale movements of continents over the globe.	<b>19. Kgogolego ya sekontinente</b>	Tshutatshuto e e tlhagelelang ka bontsi ya dikontinente go ralala lefatshe.
<b>20. Tekstuur</b>	Die groottes en vorms van 'n rots se minerale kristalle en die wyse waarop dit saamgestel is.	<b>20. Texture</b>	The sizes and shapes of a rock's mineral crystals and the way they are put together.	<b>20. Phopholego</b>	Bogolo le popego ya dikerisetale tsa mafika a dimenerale le tsela e di beilweng mmogo ka yona.