

<p><b>The Curriculum and Approaches to Learning</b></p>	<p><b>Key Programmes / Competitions</b></p>
<p>The O-Level Geography syllabus is organised by topics that are grouped according to clusters to achieve a balance between breadth and depth of content coverage. By using geographical concepts and methods in lessons at YSS, students would elevate the relevance and applicability of Geography. Furthermore, students will be able to understand key geographical concepts such as space, place, physical and human processes, environmental and cultural diversity and interdependence and skills to develop in them an appreciation of the physical and human environment.</p>	<ul style="list-style-type: none"> <li>• Teaching through inquiry-based, differentiated instructions and making thinking visible</li> <li>• Reflective learner through self-reflection in their skill sets and knowledge</li> <li>• Assessment for learning approaches to assess students and provide feedback to help them improve</li> <li>• NUS Geography Challenge</li> <li>• Geographical Investigation to connect classroom lessons to real-life context</li> </ul>

Term / Week  Term 1	Learning Experiences (chapter, activity)	Learning Outcomes & Assessment
0	<b>Back-to-School Programme</b>	N.A
1-2	<p><b><u>Topic 4.1 – Plate Tectonics</u></b></p> <p><b><u>KQ4.1.1 – What is the plate tectonic theory?</u></b></p> <p><b>Plate tectonic theory</b></p> <ul style="list-style-type: none"> <li>a) Earth’s internal structure consists of core, mantle and crust, including continental and oceanic crusts</li> <li>b) explains how forces within Earth drives global plate movements</li> </ul> <p><b>Convection currents</b></p> <ul style="list-style-type: none"> <li>a) within the hot softened mantle below the crust</li> <li>b) being the driving force of overlying plates</li> </ul> <p><b>Slab-pull force</b></p> <ul style="list-style-type: none"> <li>a) gravity-controlled subduction of denser oceanic plate</li> <li>b) drags the rest of the plate along</li> </ul> <p><b><u>KQ4.1.2 – How does seafloor spreading support the plate tectonic theory?</u></b></p> <p><b>Seafloor spreading</b></p> <ul style="list-style-type: none"> <li>a) magma rises through mid-ocean ridges</li> <li>b) forms new oceanic crusts</li> </ul> <p><b>Evidence from age of rocks</b></p> <ul style="list-style-type: none"> <li>a) younger rocks are found nearer the crest of mid-ocean ridges</li> <li>b) rocks get progressively older further away from mid-ocean ridges</li> </ul> <p><b>Evidence from limited sediment accumulation</b></p> <ul style="list-style-type: none"> <li>a) destruction of older oceanic crusts at trenches</li> <li>b) oceanic crusts younger than continental crusts</li> </ul>	<p><b><u>Content Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Experiential learning to better understand the internal structure of the earth</li> </ul> <p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Annotating of diagram</li> <li>• Comparison of the different layers of the internal structure of the earth</li> <li>• Data response question - using figure to describe and explain</li> </ul>

<p>3-4</p> <p>CNY Celebration On 28/1/2025 to 30/1/2025</p>	<p><b><u>KQ4.1.3 – How does magnetic striping support the plate tectonic theory?</u></b></p> <p><b>Magnetic striping</b></p> <ul style="list-style-type: none"> <li>a) normal and reversed polarity</li> <li>b) stripes of rock on the seafloor with alternating magnetic properties</li> </ul> <p><b>Evidence from rock composition</b></p> <ul style="list-style-type: none"> <li>a) basalt is a volcanic rock that forms the oceanic crust</li> <li>b) contains minerals that can be influenced by Earth’s magnetic field</li> </ul> <p><b>Evidence from rock patterns</b></p> <ul style="list-style-type: none"> <li>a) alternating polarity forms a striped pattern</li> <li>b) not random or isolated occurrences</li> </ul> <p><b><u>KQ4.1.4 – What happens at plate boundaries when tectonic plates move?</u></b></p> <p><b>Divergent plate boundaries</b></p> <ul style="list-style-type: none"> <li>a) plates move away from each other</li> <li>b) results in mid-ocean ridges, volcanoes including submarine volcanoes and volcanic islands, rift systems and earthquakes</li> </ul> <p><b>Convergent plate boundaries</b></p> <ul style="list-style-type: none"> <li>a) plates move towards each other</li> <li>b) results in fold mountains, volcanoes including submarine volcanoes, oceanic trenches and earthquakes</li> </ul> <p><b>Transform plate boundaries</b></p> <ul style="list-style-type: none"> <li>a) plates slide past each other</li> <li>b) results in faults and earthquakes</li> </ul>	<p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Data response question - using figure to describe and explain.</li> <li>• Short-answer question</li> <li>• Describe the characteristics of landforms and phenomena associated with divergent plate movements.</li> <li>• Explain the causes of landforms and phenomena associated with divergent plate movements.</li> </ul>
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<p>5–6</p>	<p><b><u>Topic 4.2 – Earthquakes and volcanoes</u></b></p> <p><b>KQ4.2.1 – How do tectonic processes affect the magnitude of earthquakes?</b></p> <p><b>Tectonic processes of earthquakes</b></p> <ul style="list-style-type: none"> <li>a) stress builds up and exceeds strength of the fault</li> <li>b) sudden release of seismic waves, radiating energy from the focus</li> </ul> <p><b>Magnitude of earthquakes</b></p> <ul style="list-style-type: none"> <li>a) affected by amount of energy released through ground movement</li> <li>b) recorded using seismometers</li> </ul> <p><b>Measuring earthquakes</b></p> <ul style="list-style-type: none"> <li>a) Richter Scale measures local magnitude of earthquakes</li> <li>b) Moment Magnitude Scale measures larger earthquakes more reliably</li> </ul>	<p><b><u>Content Activity:</u></b></p> <p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Data response question using figure to describe and explain.</li> </ul>
<p>7-8</p> <p>W8 – WA1 (during curriculum time)</p>	<p><b><u>Revision for WA1</u></b></p> <p><b>Weighted Assessment 1</b></p> <ul style="list-style-type: none"> <li>• Tectonics Cluster Topic 1 (1.1 to 1.4)</li> <li>• Climate Cluster Topic 3 (3.1 to 3.4)</li> <li>• Skills to be tested: <ul style="list-style-type: none"> <li>○ Data response question</li> <li>○ Evaluative question</li> <li>○ Short-answer question</li> </ul> </li> </ul>	

<p>9-10</p>	<p><b>KQ4.2.2 – How do tectonic processes affect the magnitude of volcanic eruptions?</b></p> <p><b>Tectonic processes of volcanic eruptions</b></p> <p>a) magma consisting of dissolved gases is less dense forces its way upward and breaks through weak areas in the Earth's crust</p> <p><b>Magnitude of volcanic eruptions</b></p> <p>a) determined by amount of dissolved gases and magma viscosity b) stratovolcanoes erupt violently and shield volcanoes emit magma gently</p> <p><b>Measuring volcanic eruptions</b></p> <p>a) Volcanic Explosivity Index measures relative explosivity of historic eruptions b) considers the volume of ejected materials, height of eruption cloud b) and duration of the eruption</p>	<p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Data response question - using figure to describe and explain.</li> <li>• Describe the characteristics of landforms and phenomena associated with convergent and transform plate movements.</li> <li>• Explain the causes of landforms and phenomena associated with convergent and transform plate movements.</li> <li>• Draw annotated cross section of a volcano</li> </ul>
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**March Holiday**  
**[15/3/2025 to 23/3/2025]**

Term / Week  Term 2	Learning Experiences (chapter, activity)	Learning Outcomes & Assessment
1	<p><b>KQ4.2.3 – How might distribution of earthquakes and volcanoes influence the location of tectonic hazards?</b></p> <p><b>Distribution of earthquakes</b></p> <ul style="list-style-type: none"> <li>a) along all plate boundaries</li> <li>b) largest concentration at the Pacific Ring of Fire</li> </ul> <p><b>Distribution of volcanoes</b></p> <ul style="list-style-type: none"> <li>a) located near convergent and divergent plate boundaries</li> <li>b) hot spot volcanoes are found away from plate boundaries</li> </ul> <p><b>Distribution of tectonic hazards</b></p> <ul style="list-style-type: none"> <li>a) most located near plate boundaries, and near earthquakes and volcanoes</li> <li>b) tsunamis and volcanic ash may spread beyond geographic region</li> </ul> <p><b>KQ4.2.4 – How might tectonic hazards affect the natural and human systems?</b></p> <p><b>Earthquake hazards and their impacts</b></p> <ul style="list-style-type: none"> <li>a) hazards include ground shaking, soil liquefaction, landslides and tsunamis</li> <li>b) impacts include destroying ecosystems, properties and infrastructure, disrupting services, and causing injury and loss of life</li> </ul> <p><b>Volcanic eruption hazards and their impacts</b></p> <ul style="list-style-type: none"> <li>a) hazards include tephra, volcanic gases, lava flows, pyroclastic flows, lahars and volcanic landslides</li> <li>b) impacts include destroying ecosystems, properties and infrastructure, disrupting services, and threaten public health and causing injury and loss of life</li> </ul>	<p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Data Response Question - using figure to describe and explain</li> <li>• Describing the distribution of tectonic plates through the use of maps</li> <li>• Short-answer question</li> </ul> <p><b><u>Content Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Flipped Classroom – to promote self-directed learning using articles showing hazards by earthquakes and volcano and benefits by volcanoes</li> </ul> <p><b><u>Skill Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Data Response Question - using figure to describe and explain</li> <li>• Annotation of photograph</li> </ul>

	<p><b>Benefits of volcanic eruptions and living near volcanoes</b></p> <ul style="list-style-type: none"> <li>a) volcanic eruption provides fertile soil for farming after volcanic materials are broken down and weathered, and makes available valuable minerals and building materials</li> <li>b) living near volcanoes allow harnessing of geothermal energy and tourism activities</li> </ul>	
<p>2</p> <p>Hari Raya Aidilfitri (31/3/2025)</p>	<p><b>4.3.1 – How does disaster risk management help achieve sustainable development?</b></p> <p><b>Disaster Risk Management</b></p> <ul style="list-style-type: none"> <li>a) prevent, reduce and manage disaster risks thus strengthening resilience</li> <li>b) apply plans and actions which are developed into various strategies by communities</li> </ul> <p><b>Disaster risk and loss</b></p> <ul style="list-style-type: none"> <li>a) brings about serious economic, social and environmental consequences</li> <li>b) costly for individuals and countries, and may hinder development</li> </ul> <p><b>Reducing disaster risks</b></p> <ul style="list-style-type: none"> <li>a) important for disaster-prone developing countries</li> <li>b) cost-effective investment in preventing future losses, thus contributing to sustainable development</li> </ul>	<p><b><u>Content Activity:</u></b></p>

3-4

Good Friday  
(18/4/2025)

**4.3.2 – Why do disaster risks related to earthquakes and volcanic eruptions vary across places?**

**Tectonic disaster risk**

- a) interaction between tectonic hazards, and vulnerability and exposure to earthquakes and volcanic eruptions
- b) results in potential loss of human lives and damage to properties

**Factors influencing disaster risks caused by earthquakes**

- a) nature of hazards including duration and time of shaking
- b) vulnerable conditions including quality of building design and construction, soil and rock properties, and exposure including population density and distance from epicentre

**Factors influencing disaster risks caused by volcanic eruptions**

- a) nature of hazards including chemical composition of magma
- b) vulnerable conditions including availability of surface and ground water facilitating the development of lahars, prevailing wind conditions affecting distribution of tephra, and exposure including presence of human settlements

**4.3.3 – How effective are the strategies in building communities’ resilience to earthquakes and volcanic eruptions?**

**Strengthening resilience**

- a) important for communities living in hazard-prone zones
- b) to resist, adapt and recover from impacts of disasters in a timely and efficient manner

**Content Activity:**

- Essay writing on effectiveness of strategies in building communities’ resilience

**Skills Focus:**

- Evaluation



	<p><b>Strategies in building community resilience</b></p> <ul style="list-style-type: none"> <li>a) reducing exposure including land use planning, reducing vulnerability including hazard resistant building designs, and monitoring and warning systems</li> <li>b) increasing preparedness for response and recovery</li> </ul> <p><b>Challenges in building community resilience</b></p> <ul style="list-style-type: none"> <li>a) extent of community's resources</li> <li>b) capability of community to organise itself for disasters</li> </ul> <p><b>4.3.4 – How effective are the disaster management strategies after an earthquake or a volcanic eruption?</b></p> <p><b>Disaster management</b></p> <ul style="list-style-type: none"> <li>a) organisation, planning and application of strategies</li> <li>b) responding to and recovering from disasters</li> </ul> <p><b>Disaster management strategies</b></p> <ul style="list-style-type: none"> <li>a) disaster response includes search and rescue efforts, timely evacuation, and provision of basic social and psychosocial services to affected communities</li> <li>b) disaster recovery includes restoring and improving facilities and living conditions of affected communities</li> </ul> <p><b>Challenges in disaster management</b></p> <ul style="list-style-type: none"> <li>a) lack of domestic resources, including technological and financial resources</li> <li>b) engaging relevant stakeholders to collaborate and integrate disaster management strategies into their practices</li> </ul>	<p><b><u>Content Activity:</u></b></p> <ul style="list-style-type: none"> <li>• Essay writing on effectiveness of strategies in disaster management</li> </ul> <p><b><u>Skills Focus:</u></b></p> <ul style="list-style-type: none"> <li>• Evaluation</li> </ul>
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**Topic 5.1 – Small island city-state****5.1.1 – What are the natural characteristics of Singapore?****Size and elevation**

- a) small landmass with limited natural resources
- b) low-lying island

**Climate**

- a) tropical equatorial climate
- b) experiences Northeast and Southwest monsoons

**Ecosystems with large biodiversity**

- a) land-based ecosystem including tropical rainforests
- b) coastal ecosystems including inter-tidal areas, mangroves and coral reefs

**5.1.2 – What are the human characteristics of Singapore?****Economic characteristics**

- a) diversified economy
- b) wide range of service and manufacturing industries

**Social characteristics**

- a) open and globalised
- b) densely populated and well connected internationally

**Political characteristics**

- a) independent sovereign state
- b) active contributor to global initiatives

<p>6</p> <p>Labour Day (1/5/2025)</p>	<p><b>5.1.3 – What are Singapore’s vulnerabilities?</b></p> <p><b>Limited land and natural resources</b></p> <ul style="list-style-type: none"> <li>a) difficult to achieve sustainable urban development</li> <li>b) vulnerable to food, water and energy insecurities</li> </ul> <p><b>Changing demographics</b></p> <ul style="list-style-type: none"> <li>a) decreasing birth rate, ageing population and increasingly diverse society</li> <li>b) vulnerable to labour shortage and economic slowdown</li> </ul> <p><b>External shocks and global uncertainties</b></p> <ul style="list-style-type: none"> <li>a) environmental, social and economic uncertainties</li> <li>b) vulnerable to climate change, pandemics and financial crises</li> </ul> <p><b>5.1.4 – What contributes towards Singapore’s resilience?</b></p> <p><b>Resilient in terms of survival</b></p> <ul style="list-style-type: none"> <li>a) Singapore is able to overcome national crises</li> <li>a) b) effective management of economic recessions and pandemics</li> </ul> <p><b>Resilient in terms of adaptability</b></p> <ul style="list-style-type: none"> <li>a) Singapore adapts to changing circumstances</li> <li>b) puts in place robust infrastructure and strong systems</li> </ul> <p><b>Resilient in terms of thriving</b></p> <ul style="list-style-type: none"> <li>a) Singapore thrives as a small island city-state</li> <li>b) focused on building a liveable and sustainable city</li> </ul>	
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7-8

Vesak Day  
(12/5/2025)

## **5.2 – Challenges and Opportunities**

### **5.2.1 – How might climate change affect Singapore?**

#### **Impacts of climate change**

- a) rising sea level
- b) increased daily mean temperatures and changing weather patterns

#### **Challenges due to climate change**

- a) floods, urban heat island effect, vector-borne diseases
- b) threats to biodiversity, food and water insecurities

#### **Opportunities created to adapt to climate change**

- a) land reclamation, coastal management, increasing health resilience
- b) high technology farming and development of water technologies

### **5.2.2 – How might tectonic hazards affect Singapore?**

#### **Impacts of tectonic hazards**

- a) not susceptible to majority of tectonic disasters
- b) major tectonic movements close to the Sunda Megathrust may still affect Singapore

#### **Challenges due to plausible occurrence of tectonic hazards in the region**

- a) destruction of structures built on reclaimed land, and threat of floods from a mega earthquake
- b) threat of ash clouds from volcanic eruptions affecting health and disrupting the economy

#### **Opportunities created to mitigate and adapt to tectonic hazards in the region**

- a) national preparedness plans, use of technology to monitor tectonic movements
- b) partnerships between countries on disaster response and recovery

**Student Learning Festival Week 2025**

<p>9</p>	<p><b>5.2.3 – How might tourism activity affect Singapore?</b></p> <p><b>Impacts of tourism activity in Singapore</b></p> <ul style="list-style-type: none"> <li>a) economic and social impacts</li> <li>b) environmental impacts</li> </ul> <p><b>Challenges affecting tourism development in Singapore</b></p> <ul style="list-style-type: none"> <li>a) intensifying regional competition and increasingly discerning visitors</li> <li>b) ageing population, resource constraints and threats from global uncertainties</li> </ul> <p><b>Opportunities created to mitigate and adapt to impacts of tourism activity in Singapore</b></p> <ul style="list-style-type: none"> <li>a) benefits due to growing Asia and develop partnerships with stakeholders to spearhead placemaking initiatives</li> <li>b) trial sustainability solutions and develop skilled workers</li> </ul>	
<p>10</p>	<p><b>Sec 4E5N Mother Tongue Intensive Week</b></p>	

**June Holiday Break**

Term / Week	Learning Experiences (chapter, activity)	Learning Outcomes & Assessment
<p><b>Term 3</b></p> <p>1 – 2</p> <p>Youth Day (7/7/2025)</p>	<p><b>5.3 – Sustainable and resilient Singapore</b></p> <p><b>5.3.1 – Why is sustainable development important for Singapore?</b></p> <p><b>Ensure competitive economy</b></p> <ul style="list-style-type: none"> <li>a) attract investments</li> <li>b) provide employment opportunities</li> </ul> <p><b>Ensure sustainable environment</b></p> <ul style="list-style-type: none"> <li>a) clean and healthy environment</li> <li>b) excellent air and water quality</li> </ul> <p><b>Achieve high quality of life for all</b></p> <ul style="list-style-type: none"> <li>a) foster community spirit</li> <li>a) facilitate active participation in sustainable development</li> </ul> <p><b>5.3.2 – How does Singapore approach sustainable development?</b></p> <p><b>Building up resilience crucial to achieving sustainable development</b></p> <ul style="list-style-type: none"> <li>a) increases Singapore’s capacity to survive, adapt and thrive</li> <li>b) on-going process involving past, present and future actions</li> </ul> <p><b>Integrated master planning key to achieve sustainable development</b></p> <ul style="list-style-type: none"> <li>a) adopts long-term approach in reviewing land-use plans and demands</li> <li>b) strikes a balance between economic and social development</li> </ul>	

	<p><b>Dynamic urban governance key to achieve sustainable development</b></p> <ul style="list-style-type: none"><li>a) political leadership sets clear direction and cooperation among different government agencies to implement and execute policies</li><li>b) public service and institutions with well-thought out systems and processes</li></ul> <p><b>5.3.3 – What are Singapore’s efforts in sustainable development?</b></p> <p><b>Environment and climate resilience efforts</b></p> <ul style="list-style-type: none"><li>a) cleaning and greening Singapore</li><li>b) mitigation efforts include green buildings and clean energy, and adaptation efforts include water resilience and food resilience</li></ul> <p><b>Economic resilience efforts</b></p> <ul style="list-style-type: none"><li>a) deepen and diversify international connections and strengthen business capabilities to innovate</li><li>b) encourage Singaporeans to acquire and utilise deep skills</li></ul> <p><b>Social resilience efforts</b></p> <ul style="list-style-type: none"><li>a) develop skills throughout life through SkillsFuture national movement and mobilising communities in preparedness measures</li><li>b) creating shared spaces to bring people together, offer input to government planning and address social concerns</li></ul> <p><b>5.3.4 How might Singapore continue to develop sustainably?</b></p> <p><b>Environmental considerations</b></p> <ul style="list-style-type: none"><li>a) life-support systems of the global environment and nature in providing ecosystem services</li><li>b) limitations of Singapore’s physical environment and possible threats including transboundary haze and climate change</li></ul> <p><b>Economic and social considerations</b></p> <ul style="list-style-type: none"><li>a) ability of Singapore’s society to advance its economy</li><li>b) commitment and contribution from all stakeholders in society</li></ul>	
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	<p><b>Political considerations</b></p> <ul style="list-style-type: none"> <li>a) good governance with strong political willpower</li> <li>b) commitment to develop and improve long term sustainable development plans</li> </ul>	
3	<b>Buffer week</b>	
4 – 8 National Day Celebration on W6-7	<p><b>Revision for Preliminary Exam:</b></p> <ul style="list-style-type: none"> <li>• Sec 3 and Sec 4 topics</li> <li>• Practice AO1+2 and AO 1+3 questions</li> </ul> <p><b>Topical Revision on</b></p> <ul style="list-style-type: none"> <li>• Geography in Everyday Life Cluster</li> <li>• Climate Cluster</li> <li>• Tectonic Cluster</li> <li>• Tourism Cluster</li> <li>• Singapore Cluster</li> </ul>	<p><u>Skills Activity:</u></p> <ul style="list-style-type: none"> <li>• Drill students on key skills <ul style="list-style-type: none"> <li>• Data Response Question</li> <li>• Evaluation Question</li> <li>• GI Skills</li> </ul> </li> <li>• Timed Practices using TYS Specimen Papers</li> </ul>
8 – 10 Teachers' Day Celebrations on W10	<p><b>Preliminary Exam</b></p> <ul style="list-style-type: none"> <li>• Refer to exam format and topics</li> </ul>	
<b>September Holiday Break</b>		



Term / Week	Learning Experiences (chapter, activity)	Learning Outcomes & Assessment
Term 4		
1	<b>Script Checking</b>	
2 – 5  Graduation Day on W2	<b>Revision for O Level Exam:</b> <ul style="list-style-type: none"> <li>• Weather and Climate GI</li> <li>• Weather and Climate</li> <li>• Tectonics</li> <li>• Tourism</li> <li>• Food</li> </ul>	<u>Skills Activity:</u> <ul style="list-style-type: none"> <li>• Drill students on key skills <ul style="list-style-type: none"> <li>• Data Response Question</li> <li>• Evaluation Question</li> <li>• GI Skills</li> </ul> </li> <li>• Timed Practice using TYS and HEG Papers</li> </ul>
5– 8 Deepavali (20/10/2025)	<b>O Level Exam</b>	

*\*All information is correct at the time of publication and may be subjected to change.*