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I. **Biology**

Form 3

<u>Biology Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Scientific investigation	<ul style="list-style-type: none"> Beware of the potential hazards in biology-related researches. 	<ul style="list-style-type: none"> Recognize the importance of biosafety in biological researches. Recognize that there are corresponding policies to promote a healthy development of biotechnology and to prevent biological threats in China.

Form 4-6

<u>Biology Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Ecology	<ul style="list-style-type: none"> Recognize the impacts of human activities on ecosystems. Beware of the application of biological knowledge to human activities, e.g. policies in protecting the environment. 	<ul style="list-style-type: none"> Develop sensitivity and responsibility in striking a balance between the needs of humans and a sustainable environment. Recognize that there are corresponding pollution control and environmental protection policies to maintain ecological security of water, land, atmosphere and biological species in China.
Health and disease	<ul style="list-style-type: none"> Understand the causes and ways of transmission for some common infectious diseases using both first- and second-hand data collected from e.g. Hospital Authority, Department of Health. Discuss how the spread of some common infectious diseases can be reduced. 	<ul style="list-style-type: none"> Recognize the importance of improving social security by enhancing the capacities to respond to outbreaks of major and sudden infectious diseases. Recognize that there are corresponding disease control policies to reduce the spread of infectious diseases in China. Recognize the work of the Chinese Center for Disease Control and Prevention in developing systems for public health, providing corresponding training for scientific research, etc.
Mutation	<ul style="list-style-type: none"> Understand that radiations and some chemicals can cause mutation. 	<ul style="list-style-type: none"> Recognize that there are corresponding policies to maintain the nuclear security by enhancing national responsibility, international cooperation and nuclear safety culture in China.
Application of biotechnology	<ul style="list-style-type: none"> Understand the role of bacteria in the production of pharmaceutical products. Recognise the possible benefits and hazards of gene therapy. Recognise the potential application of stem cells in medicine. Recognise the use of transgenic animals and plants in scientific research, food industry and agriculture. Beware of the potential impact of biotechnology on society and the environment. 	<ul style="list-style-type: none"> Recognize the importance of biosafety in biological researches. Recognize that there are corresponding policies to promote a healthy development of biotechnology and to prevent biological threats in China. Recognize the development of gene therapy, stem cell research and transgenic research in China, and her collaboration with other countries in biotechnological research and medicine.

II. Business, Accounting and Financial Studies (BAFS)

Form 4

BAFS Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Business and Management Ch.1 Hong Kong Business Environment	Factors affecting business decisions <ul style="list-style-type: none"> Political and legal factors 	Understand the importance of maintaining a politically stable environment where foreign businesses find it safe to make investment. So it's necessary to improve the legal system and institutional mechanisms in order to enhance our capacity to respond to riots and protest. It's also important for businesses to comply with the new laws and regulations so that it facilitates a long-lasting stability of the whole country.
Business and Management Ch.1 Hong Kong Business Environment	Factors affecting business decisions <ul style="list-style-type: none"> Economic factors, e.g. trade policies, overall economic development, interest rate and rental level, etc. 	In order to continuously improve our country's overall economic strength, competitiveness and the ability to protect against different internal and external shocks and threats, it is important to have economic system security, which is the basic foundation for the development of our country.
Business and Management Ch.1 Hong Kong Business Environment	Recent development of Hong Kong Economy <ul style="list-style-type: none"> Economic relationship between Hong Kong and the Mainland Major international trade organizations, e.g. CEPA, WTO and APEC 	Hong Kong is a part of China, and is geographically close to the Mainland. It is important to have territorial security, which includes security of territory, natural resources, infrastructure, etc. The major ideas of territorial integrity and national unity are the basic conditions for the survival and development of a country, it is necessary to strengthen our national defense so that we can continue to strengthen international cooperation.
Business and Management Ch.1 Hong Kong Business Environment	Globalization	Globalization refers to the reduction and removal of barriers between national borders in order to facilitate flow of goods, capital, services and labour. However, we have to uphold our Chinese cultural values and cultural sovereignty in order to prevent negative cultural erosion. Cultural security should be strengthened by penetrating traditional Chinese culture, cultivating positive core values and sense of national unity so as to strengthen the positive influence of our culture.
Business and Management Ch.3 Business Ethics and Social Responsibilities	Stakeholders of a business <ul style="list-style-type: none"> Environment 	Community is the place where businesses are situated; natural environment is the place where we extract natural resources from. In the wake of ecological damage, environmental pollution, epidemics, ecological security must be ensured by implementing the concept of "green water and green mountains are golden mountains and silver mountains". Protecting national ecological security, including safety of water, land, and biological species should be carried out.
Business and Management Ch.3 Business Ethics and	How businesses can raise ethical standards	Unethical business behaviors damages the reputations of a business. It's important for managers and employees bear business ethics in mind when making decisions and carrying out tasks for the business. For

Social Responsibilities		example, in the mission statement, training session, code of ethics and corporate culture, national security should be strengthened as the basic conditions for the survival of a business.
Business and Management Ch.3 Business Ethics and Social Responsibilities	How business ethics and social responsibilities affect business decisions	Examples of business decisions are made after considering business ethics and social responsibilities, and they have to meet the basic national security requirements: <ul style="list-style-type: none"> • Avoid using exaggerated or misleading information in advertisement • Consider whether it will lead to a breach in national security law

Form 5

BAFS Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Financial Management Ch.4 Stock trading as an investment	The platform of stock trading in Hong Kong	In Hong Kong, the process of stock trading occurs through the Hong Kong Exchanges and Clearing Limited (HKEx) and it's one of the world's largest exchanges that conducted by online transactions. Internet security, such as network infrastructure, network operations, information security, is necessary to be strengthened in order to establish the awareness of cyberspace sovereignty, as well as to prevent threats such as infrastructure security risks, cyber-crimes, etc.
Financial Management Ch.4 Stock trading as an investment	Factors affecting share price: e.g. general economic situations, speculation, political factors, government policies, etc.	The economic situation will have an impact on business performance and share prices. It's important to develop economic security to improve our country's overall economic strength, competitiveness and the ability to protect against internal and external shocks and threats. We have to believe in our government and our country as they will support us to prevent from various risks and harm, in order to protect the fundamental interest of Hong Kong citizens.

Form 6

BAFS Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Cost Accounting Ch.19 Cost classification and terminology	Cost object Cost unit Limiting factor	It's important to ensure resources security, e.g. security of renewable and non-renewable resources in Hong Kong. As we face the problem of lacking in enough natural resources, there's a high degree of dependence of resources on foreign countries. We have to promote green development, recycle, reuse, and make good use of resources. Also, we can develop and investigate into new resources so that we become less dependent.
Cost Accounting Ch.22 Cost accounting and decision making	Make or buy decisions with limited capacity (resources) Hire, make or buy decisions with limited capacity (resources)	It's necessary to have technological security to develop more technological talents, facilities, equipment, applications, etc. It includes the security of technology and fields

		supported by technology. As there are problems, e.g. dependence on others in core technologies in the key areas and insufficient innovation capabilities, we must place emphasis on nurturing talents so as to achieve breakthrough in key technologies.
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III. Chemistry

Form 3

Chemistry Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Part 1 Planet Earth Chapter 4 Rocks and minerals Part II Microscopic World I Chapter 6 The Periodic Table	<ul style="list-style-type: none"> Recognize that rocks are an important source of minerals Describe the methods for the extraction of metals from their ores such as the physical method, heating, carbon extraction and electrolysis Development of the Periodic Table Patterns, Groups and Periods in the Periodic Table <p>A web-quest online research project on Rare Earth Elements (REEs):</p> <ul style="list-style-type: none"> Student should know that the Rare Earth Elements are the 15 lanthanide series elements, plus yttrium. The rare earth elements are all metal. Although rare earth elements are relatively abundant in the Earth's crust, they are rarely concentrated into mineable ore deposits. <p>During the past twenty years, there has been an explosion in demand for many items that require rare earth metals.</p> <p>Several pounds of rare earth compounds are in batteries that power every electric vehicle and hybrid-electric vehicle. As concerns for energy independence, climate change, and other issues drive the sale of electric and hybrid vehicles, the demand for batteries made with rare earth compounds will climb even faster.</p> <ul style="list-style-type: none"> REEs are used as catalysts, phosphors, and polishing compounds. These are used for air pollution control, illuminated screens 	<p>Study issues or news related to the security of non-renewable resources. The demand for rare earth elements has grown rapidly, but their occurrence in minable deposits is limited.</p> <p>It is the support of national development. Facing the problems of huge contradiction between supply and demand, high degree of dependence on foreign countries, low level of development and utilization, etc., we must insist on promoting green development and making good use of resources and markets from within and from abroad.</p> <p>China Enters the Market</p> <p>China began producing notable amounts of rare earth oxides in the early 1980s and became the world's leading producer in the early 1990s. Through the 1990s and early 2000s, China steadily strengthened its hold on the world's rare earth oxide market. They were selling rare earths at such low prices that the Mountain Pass Mine and many others throughout the world were unable to compete and stopped operation.</p> <p>For Defense and Consumer Electronics Demand:</p> <p>China capitalized on its dominant position and began restricting exports and allowing rare earth oxide prices to rise to historic levels.</p>

	<p>on electronic devices, and the polishing of optical-quality glass. All of these products are expected to experience rising demand.</p> <p>Guide students to discuss ways to solve problems and introduce to them measures to manage in Mainland China. Finally, teacher conclude that sustainable management of REEs is an important way to safeguard resource security.</p>	
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Forms 4-6

Chemistry Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Part II Planet Earth	<ul style="list-style-type: none"> • Describe the structure of an atom in terms of protons, neutrons and electrons • Identify isotopes among elements with relevant information • Describe the uses of isotopes in preservation of food, medical purposes, archaeological uses...etc. <p>A web-quest online research project on isotopes and radiation:</p> <ul style="list-style-type: none"> • Students should know the development and current status of the Technology of Isotope and Radiation in China. • The technique of radiation breeding, radiation sterilization of insects, the setup of food irradiating health standards, radiation process of food. • New radiation processed polymer materials and its industrialization. • The application of tracer techniques to old oil well, environment science, water projects, and the control of rivers. <p>Guide students to discuss ways to solve problems and introduce to them measures to manage in Mainland China. Finally, teacher conclude that sustainable management of radioactive isotopes is an important way to safeguard nuclear and resource security.</p>	<p>This Includes security of nuclear materials, nuclear facilities, nuclear technology, nuclear proliferation, etc. it is related to the future and destiny of humankind. In the wake of the challenges of nuclear accidents, nuclear-related terrorist activities, nuclear proliferation, nuclear confrontation, etc., political investment, national responsibility, international cooperation and nuclear safety culture must be enhanced in order to improve nuclear capacities and security comprehensively.</p> <p>Discussion that the technology of isotopes and radiation has largely contributed to and affect the Chinese economy.</p>

IV. Chinese

Form 1

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
單元一 記敘要素和方法	《岳飛之少年時代》 《中秋與花燈》 《背影》(MLP 及 ALP)	<ul style="list-style-type: none"> 了解國家重要歷史人物的事蹟，強化學生的民族情懷，滲入國家觀念，了解維護國家安全的重要性，有助培養學生對國家的歸屬感，並願意成為積極和負責任的公民。 了解國家優秀的文化傳統，認同維護文化安全是維繫國家、民族團結和國家穩定的重要基礎，明白愛護承傳中國文化是國民應有的責任。 學習傳統文化美德---孝道，承傳中國傳統美德，維護家庭的和諧穩定，進而團結民族，對社會穩定發展作出貢獻。
單元二 景物描寫 (ALP)	生活文化元素篇章---三個成立海洋保護區的原因	<ul style="list-style-type: none"> 研習與生態安全和新型領域安全相關的課題，明白人類活動對生態和環境的影響，了解維護生態安全和新型領域安全的必要性。
單元四 詩國古今遊	《燕詩》	<ul style="list-style-type: none"> 學習傳統文化美德---孝道，承傳中國傳統美德，維護家庭的和諧穩定，進而團結民族，對社會穩定發展作出貢獻。
單元七 說明方法和順序	《故宮博物院》	<ul style="list-style-type: none"> 通過認識中國傳統建築及名勝---故宮，認識中國傳統建築文化，培養對中國文化的自豪感，明白愛護承傳中國文化是國民應有的責任，了解保育文物、維護傳統文化的重要性。

Form 2

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
單元二 人物描寫	《差不多先生傳》(MLP&ALP)	通過對篇章創作背景及人物形象的學習，認識並了解中國重大歷史事件---新文化運動的目的、貢獻，了解國家在發展及進步的過程中，人民的精神意志，從欣賞過程中體會並汲取，增強歸屬感，加強民族精神。
單元六 借物抒情	《愛蓮說》	學習傳統文化美德---君子潔身自愛的文化精神，承傳中國傳統美德，有助學生認同中國傳統文化，培

		養對國家的歸屬感，並願意成為積極和負責任的公民。
單元八 論點論據	《說勤》	學習傳統文化美德---勤奮刻苦，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。
單元三 文言基礎 (ALP)	(生活文化) 古代中國重視勤勞務實：象徵中國勤勞務實精神的動物—牛	

Form 3

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
單元三 記敘、描寫抒情	《歸園田居》	學習傳統文化中人與自然的關係，明白人類與自然生態並存的和諧關係概念，也明白保育環境的重要，並樂於在生活中實踐。 通過學習文學作品，認識中國傳統文學之美，培養對中國文化的自豪感，進而培養對國家的歸屬感。
單元九 文言選讀	《論語八則》、《論四端》	通過學習儒家經典作品，學習傳統文化美德---仁義禮智等文化精神，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。
單元二 借物抒情 (ALP)	《植物中的四君子》	學習傳統文化美德---君子的多項特質，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。
單元六、七 論証方法 (ALP)	《古代君臣關係》	認識中國傳統美德---愛國，明白維護國家安全的責任，了解每名香港居民都有同樣責任，並願意成為積極和負責任的公民。

Form 4

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
單元一 理解要旨	《岳陽樓記》	深入了解中國傳統文人「以天下為己任」的美德與抱負，從中明白公民責任---維護社會穩定是國家長治久安的必由之路，以及維護國家領土完整及國體，提升學生對國家、民族及社會的認同感、歸屬感、責任感。
單元二 理清脈絡	《廉頗藺相如列傳》	
單元四 景物描寫	《醉翁亭記》	
單元五 世道人心	《師說》	學習傳統文化---師道，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。

Form 5

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
單元七 真知灼見	《魚我所欲也》	學習傳統文化美德----捨生取義的精神，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。
單元十一 遊說與駁論	《論仁、論孝、論君子》	學習傳統文化美德----君子的多項特質，承傳中國傳統美德，有助學生認同中國傳統文化，培養對國家的歸屬感，並願意成為積極和負責任的公民。
單元十二 論點論據	《出師表》、《六國論》	深入了解中國傳統文人「忠君愛國」的美德，從中明白公民責任----維護社會穩定是國家長治久安的必由之路，以及維護國家領土完整性的重要性，提升學生對國家、民族及社會的認同感、歸屬感、責任感。

Form 6

Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
文化專題探討	孝道精神及友道精神	學習傳統文化美德----孝道及友道的文化精神，承傳中國傳統文化精神，有助學生認同中國傳統文化，認同維護文化安全是維繫國家、民族團結和國家穩定的重要基礎。

V. Chinese History

Form 1

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
大一統帝國的出現	<ul style="list-style-type: none"> 秦帝國的建立 秦始皇的中央集權措施 國家版圖的初定 南平百越，香港成為中國的一部分 	<p>範疇一：認識國家安全的定義及國家安全的十三個領域。</p> <ul style="list-style-type: none"> 建立國家觀念 認識中華民族的發展 建立香港與中國的歷史關係

Form 2

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
民族英雄的認識	<ul style="list-style-type: none"> 討論「民族英雄」的定義。 介紹岳飛、文天祥、袁崇煥、林 	<p>範疇一：認識國家安全的定義及國家安全的十三個領域。</p>

	則徐事蹟。 <ul style="list-style-type: none"> • 認識犧牲自己維護國家安全的高尚人格。 	<ul style="list-style-type: none"> • 認識維護國家安全的重要。 • 建立總體國家安全觀。 • 以歷史人物為學習對象。
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Form 3

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
認識中華人民共和國的建國及其發展	<ul style="list-style-type: none"> --- 國共內戰後，新中國的成立 --- 認識中華人民共和國建國初期的政治發展 --- 改革開放及外交發展 	範疇一：認識國家安全的定義及國家安全的十三個領域 <ul style="list-style-type: none"> --- 認識國家憲法及基本法 --- 認識國家重要機構，例如：人民代表大會 --- 認識國家在政治運動中的發展及如何走出改革之路 --- 中國如何與世界互動

Form 4

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements

Form 5

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
元明清行省制度的影響	<ul style="list-style-type: none"> --- 認識行省制的出現背景及發展 --- 行省制對現今國家地方制度的影響 --- 行省制的優點與中央集權的異同 	範疇一：認識國家安全的定義及國家安全的十三個領域 <ul style="list-style-type: none"> --- 認識國家地方政治體制的來源源 --- 討論現今國家地方制度的特色，例如：民族自治區、特別行政區

Form 6

Chinese History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
討論知識分子對時代的回應 --- 以何啟和梁啟超為例	<ul style="list-style-type: none"> --- 認識何啟和梁啟超的生平 --- 認識他們所處的時代及當時的改革要求 --- 討論何啟的救國思想及其教育理念 --- 討論梁啟超的維新理想及其愛國精神 	範疇一：認識國家安全的定義及國家安全的十三個領域 <ul style="list-style-type: none"> --- 認識不同背景但都同具愛國精神的歷史人物 --- 從愛護香港到關心中國 --- 認識國家發展及其安全與知識分子的志業和責任是息息相關

VI. **Citizenship and Social Development**

Form 4

<u>Citizenship and Social Development</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Module 1: One Country Two Systems	<ul style="list-style-type: none"> a. Students understand the historical background and importance of One Country Two Systems. b. Students understand the contents of the Basic Law and the Constitution of the PRC. 	<p>Political security</p> <ul style="list-style-type: none"> a. Students understand that political security is the foundation of national security, ensuring people’s security, safeguarding national interests, and continuously improving the sense of satisfaction, happiness, and security.
Module 2: Identity	<ul style="list-style-type: none"> a. Students feel proud of being Chinese nationals. b. Students understand the rights and responsibilities of being Chinese nationals. 	<p>Cultural security</p> <ul style="list-style-type: none"> a. Students appreciate the cultural values of our nation. b. Students are aware of the threats to the cultural security of our country. c. Students reflect on ways to strengthen excellent traditional Chinese culture.

VII. **Computer and Information Technology**

Form 1

<u>Computer and Information Technology</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Unit 2 : IT and Society Chapter 2 : Data Privacy and Security	<ul style="list-style-type: none"> • Realizing private information should not be exposed on the Internet • Judging whether information collected for online registration is reasonable 	<ul style="list-style-type: none"> • Students analyse the interpretations of social and international issues by different media and understand the implications behind. • Students can analyse the reliability and validity of information rationally and critically from different perspectives, thereby raising their awareness of safeguarding national security and being law-abiding citizens.
Unit 2 : IT and Society Chapter 6 : Understanding the impact of cyberbullying	<ul style="list-style-type: none"> • Understanding the impact of cyberbullying 	

Forms 2 and 3

<u>Computer and Information Technology</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Unit 2 : Modern Technologies	<ul style="list-style-type: none"> • Realizing the advancement of technologies. • Understand the working principals of the latest technologies. 	<ul style="list-style-type: none"> • Students analyse the interpretations of social and international issues by different media and understand the implications behind.

	<ul style="list-style-type: none"> Discuss the possible use of modern technologies to safeguard the national security. 	<ul style="list-style-type: none"> Students can analyse the reliability and validity of information rationally and critically from different perspectives, thereby raising their awareness of safeguarding national security and being law-abiding citizens.
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Forms 4 to 6

<u>Computer and Information Technology Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Core Unit E: Social Implications (Threats and Security on the Internet)	<ul style="list-style-type: none"> Know, from the users' perspective, possible security threats on the Internet. Demonstrate the control of intrusion using security applications on a computer. Discuss the possible privacy threats on the Internet, and suggest ways to maintain privacy. Be aware of information encryption technologies so as to prevent eavesdropping and interception. Explain authentication and authorization as a means to control access of information on the Internet. Know about security used in electronic transactions. 	<ul style="list-style-type: none"> Students analyse the interpretations of social and international issues by different media and understand the implications behind. Students can analyse the reliability and validity of information rationally and critically from different perspectives, thereby raising their awareness of safeguarding national security and being law-abiding citizens.

VIII. Design and Technology

Form 1

<u>Design and Technology Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Operations and Manufacturing	Design Consideration	<p>Explanation on how technologies may have positive & negative impacts on ethical issues related to people. Examples on how technology influences business & daily life, in respect of environmental issues and possible ways of protection.</p> <p>Environmental issues related to design, production and sales of product</p> <p>Support by examples from China</p>

Form 2

<u>Design and Technology Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Information and Communication Technology	Computer Networks	<p>Explanation on how technologies may have positive & negative impacts on ethical issues related to people. Examples on how technology influences business & daily life, in respect of environmental issues and possible ways of protection.</p>

		Environmental issues related to design, production and sales of product Support by examples from China
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IX. Economics

Form 4

<u>Economics</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Market failure (externalities) -sustainability	<p>Externalities of production and consumption: Explain, using diagrams and examples, the concepts of externalities of production and consumption, and the welfare loss associated with the production or consumption of a good or service.</p> <p>Evaluate, using diagrams, the use of policy responses, including market-based policies (taxation and tradable permits), and government regulations, to the problem of externalities of production and consumption.</p>	<p>Use examples from China to demonstrate how externalities can be managed (by the government) to safeguard national security such as ecological security, biodiversity security and polar security.</p> <p>Tougher legislations on pollution The Chinese government has cracked down on pollutions with great success in recent years. Legislations on pollutions includes the Soil Pollution Prevention and Control Law 2019 and Water Pollution Prevention Act in 1996. The government has also actively enforced such legislations to achieve the goal of minimizing externalities from pollution. https://chinadialogue.net/en/pollution/8512-how-china-s-new-air-law-aims-to-curb-pollution/</p> <p>Investment in renewables (subsidies for merit goods) Renewable energy is another area that the Chinese government has put much emphasis on. It can be seen as a merit good, as its consumption lowers carbon emissions from traditional energy sources. The government has subsidized such merit goods in order to tackle market failure from positive externalities, such as for solar panels. https://www.reuters.com/article/us-china-energy-renewables-idUSKCN1T0109</p>

Form 5

<u>Economics</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Supply-side Policy	<p><u>Supply-side policy and economic growth:</u> Explain, using diagram, how supply-side policy leads to economic growth in the long run.</p>	<p><u>Supply-side policy in China in safeguarding economic security</u> Introduce the plans and initiative for long term development including Made in China 2025, China Standards 2035 Initiative and investment in infrastructure such as 5G networks, industrial internet, inter-city transportation and rail system, data centers, AI, ultra-high voltage power transmission, and new-</p>

		energy vehicle charging stations. Research work on achievements made in infrastructure and their impacts on economic growth in China will be conducted.
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Form 6

<u>Economics</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
International Trade • How international cooperation enhance trade?	<u>Impacts of economic integration on economy</u> Explain how international cooperation can enhance free trade among member countries.	<u>Belt and Road Initiative and economic growth</u> Introduce the infrastructure network that China is establishing through the initiative, including Silk Road Economic Belt, 21st Century Maritime Silk Road, Ice Silk Road, Super Grid. Explain how the initiative enhance economic growth and safeguard national security in different domains such as economic security and polar security.

X. English

Form 1 MLP

<u>English</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Culture (Festivals)	<ul style="list-style-type: none"> • Reading Skills: Chinese New Year • Reading Comprehension 'Feast of Symbols' • Researching different Chinese Festivals for SDL / Presentation / Writing 	<ul style="list-style-type: none"> • Cultural Security: Sense of belonging and identity. • Connecting to beliefs, customs and traditions in order to deepen sense of unity, belonging and national pride. • Through learning about the origins of different Chinese festivals, the Chinese culture is kept alive, interest in traditional culture and practice are maintained.

Form 1 ALP

<u>English</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Extension to <i>The City of Ember</i> unit in the second term about adversity and survival	<ul style="list-style-type: none"> • To identify setting of novel - underground city with depleting resources because of its unsustainable set up. • To understand setting of novel - rich backdrop provokes reflection of way of living. • To research into environmental problems globally and locally, then discuss creative solutions to adopt on global and individual level. 	<ul style="list-style-type: none"> • Ecological Security: To research into China's action plans which ensure the environment that people rely on is not threatened to promote harmonious development of man and nature. • Resource Security: To research into China's development of renewable energy which ensures balanced use of natural resources to commit to sustainable development.

Form 2 MLP

English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Animals (Endangered species)	<ul style="list-style-type: none"> • Reading comprehension ex. regarding endangered species in China and other countries. • Listening activities related to endangered species in China and other countries. • Vocabulary pertaining to description of the current situation faced by endangered species in China and other countries. • Follow up speaking and sharing sessions on how we can protect endangered species in China. • Self-directed research on endangered animals in China (SDL). 	<ul style="list-style-type: none"> • Ecological Security: what difficulties the endangered animals in China are facing and how China is tackling the problem to safeguard biodiversity.

Form 2 ALP

English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Extension of race <ul style="list-style-type: none"> • <i>The Forgotten Colour</i>: The struggles of Chinese-Americans in a black and white world • How Chinese-Americans are conveniently ignored and marginalized amidst the Civil Rights movement in America 	<ul style="list-style-type: none"> • Learn about the first wave of Chinese immigrants (i.e. manual labourers) to America and their struggles and hardships as well as contribution to the country. (pictures, drawings and written accounts will be shown to students) • Learn about the unfair and racist policies enacted specifically for Chinese-Americans (documents, anecdotes and images will be shown/distributed to students) • Learn how subsequent generations of Chinese-Americans quietly fought their way up the social ladder by valiantly going against the tide. (real-life accounts and videos shown) • Research and discussion: what the US government and state governments are currently doing to eradicate racism towards Chinese-Americans. 	Cultural Security: how Chinese-Americans maintain a strong Chinese identity despite their American upbringing. A difficult balancing act but one that they are proud of: <ul style="list-style-type: none"> • How Chinese-Americans and other overseas Chinese are bonding over the rise of anti-Asian sentiment in America and the West. • How Chinese-Americans' non-confrontational approach is garnering sympathy and support from around the globe.

Form 3 MLP

English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Crime – New Reports. Unit 7 Technology and the future. Unit 4	<ul style="list-style-type: none"> Vocabulary items that constitute criminal activities that threaten national security e.g. arson, rioting, vandalism, doxing. Reading about cases from news reports about cases of offenders being charged by the police. Highlight how China has revolutionized digital payments such as Alipay and We Chat Pay. Videos on the prevalence of Alipay used in China. Assessment question on digital wallets for a 1-sided argumentative essay. Look at the success of technology companies such as DJI (Drones), smartphones Xiaomi, BYD electric cars. 	<ul style="list-style-type: none"> Learn about how these activities flout and infringe upon the national security law under the Social Security aspect of maintaining harmony in society. Learn about the consequences of these crimes and punishments. Technological Security: How these systems are secure. How China is now regulating these businesses such as Alipay and protecting data privacy. These MNCs have achieved worldwide recognition for their successes and excellent products. Emphasize how China has modernized and is capable of manufacturing highly sophisticated and complex technology products.

Form 3 ALP

English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Novel: <i>Lord of the Flies</i>	Explore how anarchy happened on the island: a weak government, people’s loss of faith in the government, strong oppositions against the establishment.	Social Security: Explore how institutional mechanisms can be implemented to be able to respond to outbreaks that destabilize a society.

Form 4 DSE

English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Novel: <i>American Born Chinese</i>	<ul style="list-style-type: none"> Explore the themes of racism and discrimination, self-worth and self-confidence, teenage struggle and growth. Learn about Chinese culture, legends and how they relate to our modern world. Analyse the text and understand literary devices and elements such as characterization, narrative point-of-view, symbolism, etc. Decipher graphic clues and compare them with textual clues in a written novel. 	Cultural Security: Fighting discrimination and stereotypical views against Chinese is crucial to protecting and embracing our identity despite being in a foreign country and being raised in a highly westernized world. <ul style="list-style-type: none"> Common ungrounded stereotypes of Chinese people in the eyes of westerners. How teenagers should stand up for themselves in the face of bullies picking on them because of their race. How teenagers should accept and embrace their identity and family root. How teenagers should respect each other’s cultural heritage.

Form 5 DSE

<u>English Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
<p>Extension of the E-sports: How not to fall victim to cyber-crime and phishing</p> <p>Extension of Oxford Advanced Set 3 Paper 1: Opportunities and Challenges of the Greater Bay Area Initiative (GBAI)</p>	<p>Students are taught what cyber-crime is and the different kinds of cyber-crime on the world wide web. (short videos will be shown and article(s)/worksheet(s) distributed)</p> <ul style="list-style-type: none"> • Students will learn about the most prevalent types of cyber-crime that teenagers fall victim to as well as common tactics used by scammers. • Students will also be taught ways to protect themselves from cyber-crime. • Students will learn about the intricacies of the GBAI and its pros and cons • Students will conduct research and make a short PowerPoint presentation on the impact of the GBAI on high school and university students. 	<p>Internet Security: it only takes a spark - how safeguarding oneself means safeguarding one's society and country.</p> <ul style="list-style-type: none"> • Promoting and advocating web safety is akin to securing the borders of the country. <p>Economic Security: how the GBAI reinforces China's unique socialist market economy and strengthens the country's economic status on the world stage.</p> <p>Territorial Security: how the GBAI unites the country and makes China more complete than ever.</p>

Form 6 DSE

<u>Subject: English Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
<p>Cultural Preservation:</p> <ul style="list-style-type: none"> • Revitalization of Tai Kwun (DSE2020 Paper 1A) • e-payments for <i>lai see</i> (DSE2019 Paper 4 Q.7.2) 	<ul style="list-style-type: none"> • Reading: Students will learn from the case of Tai Kwun how cultural and historical heritage is preserved and its implications on the modern society of Hong Kong. • Speaking: Students will explore from the case of giving <i>e-lai sees</i> the importance of traditional Chinese culture and how these values are exercised and preserved in modern society. • Extended activities: Students will be guided to discuss why it is important to preserve Chinese culture and traditional values and other means of cultural preservation. 	<p>Cultural Security:</p> <ul style="list-style-type: none"> • how cultural heritage are preserved via revitalization projects. • how Chinese culture and traditional values are preserved in modern society. • why it is important to preserve traditional culture and values in light of globalization and technological advancement.

XI. Food and Home Management

Form 1

Food & Home Management Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Festival Cooking : Cooking for Chinese New Year	<ul style="list-style-type: none"> To know the traditional kinds of foods served in Chinese New year Learn to make one or two dishes like Turnip Pudding (蘿蔔糕) , Fried Pastry Dumplings (油角) etc. 	<ul style="list-style-type: none"> Learn the meanings behind the dishes Discuss the meanings of Chinese New Year , some Do's and Don'ts during Chinese New year

Form 2

Food & Home Management Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Festival Cooking : Cooking for Dragon Boat Festival	<ul style="list-style-type: none"> Learn to make the Rice Dumplings(粽子) To introduce the ingredients and show the proper way of making the dumplings 	<ul style="list-style-type: none"> To discuss the origin & meanings of eating Rice Dumplings during the festival To memorize the Poet who sacrificed himself for the country

XII. Geography

Form 3

Geography Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Population problems – Just about numbers?	<ul style="list-style-type: none"> Physical features and administrative divisions of China Population of China and its structure Internal movement of people in response to various factors Population of Hong Kong and its structure Development of new towns and roads in response to the changing pattern of population in Hong Kong 	<ul style="list-style-type: none"> Cultural security Ecological security Economic security Resource security Social security Territorial security
Living with natural hazards	<ul style="list-style-type: none"> Natural hazards in China and Hong Kong Physical features of Hong Kong Hazard managements in Hong Kong 	<ul style="list-style-type: none"> Ecological security Resource security

Form 4 DSE

Geography Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Managing river & coastal environments	<ul style="list-style-type: none"> Major rivers in China and Hong Kong Ecological services offered by river and coastal environments Modifications of river and coastal environments in Hong Kong 	<ul style="list-style-type: none"> Ecological security Resource security

	<ul style="list-style-type: none"> • Sustainable management of water resources in China and Hong Kong 	
Dynamic Earth	<ul style="list-style-type: none"> • Landform development caused by endogenetic processes of Hong Kong and South China • Distribution and management of geological resources in Hong Kong • Management of reclamation materials • Slope management and landside prevention in Hong Kong 	<ul style="list-style-type: none"> • Ecological security • Resource security

Form 5 DSE

<u>Geography</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Weather and climate	<ul style="list-style-type: none"> • Climatic zones of China • N-S & E-W variation of climate in China: causes and characteristics • Seasonal occurrence of weather systems in Hong Kong and the Zhujiang Delta Region • Distribution of weather hazards in China • Causes and impacts of drought in North China • Measures and strategies adopted to tackle droughts in North China 	<ul style="list-style-type: none"> • Ecological security • Resource security
Climate change	<ul style="list-style-type: none"> • Causes and impacts of climate change • Mitigation and adaption measures taken by governments, including Hong Kong and the Chinese governments • Challenges on international cooperation against climate change 	<ul style="list-style-type: none"> • Ecological security • Polar security • Resource security
Disappearing green canopy	<ul style="list-style-type: none"> • Distribution of tropical rainforests • Ecological services provided by tropical rainforests • Impacts of tropical deforestation at global, regional, national and local levels 	<ul style="list-style-type: none"> • Ecological security • Resource security

	<ul style="list-style-type: none"> • Possible compromises between development and conservation and the consequences of different decisions made at global, regional, national and local levels • Sustainable management of tropical rainforests 	
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Form 6 DSE

<u>Geography</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Changing industrial location	<ul style="list-style-type: none"> • Distribution of iron and steel centres in China • Resource distribution of China • Factors leading to the changing locations of iron and steel centres in China • The significance on the location of iron and steel centres on the economic, industrial, military, and urban development of China 	<ul style="list-style-type: none"> • Ecological security • Military security • Resource security

XIII. History

Form 3

<u>History</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
International conflicts and threats to peace in the 20 th century	<ul style="list-style-type: none"> • Relations among countries in Europe, America and Asia and reasons for their conflicts before the two world wars. • Wars and inventions: the total war, new military warfare, and other inventions 	<ul style="list-style-type: none"> • Students understand the opportunities and challenges the country faces when taking part in international affairs through examples such as the Belt and Road Initiative, trade conflicts between China and the USA, and issues related to climate change.

Form 4 DSE

<u>History</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Conflicts and Cooperation in the Twentieth-Century World	<ul style="list-style-type: none"> • Europe at the beginning of the 20th century – sources of rivalries and conflicts; attempts at making peace • Political, social, economic and cultural significance of the two world wars • Origins, development and characteristics of the Cold War • Attempts at reconstruction, 	<ul style="list-style-type: none"> • Students understand the opportunities and challenges the country faces when taking part in international affairs through examples such as the Belt and Road Initiative, trade conflicts between China and the USA, and issues related to climate change.

	<p>economic cooperation and integration in Europe after World War II</p> <ul style="list-style-type: none"> • Population and resources; environmental protection; medicine and science and technology 	
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Form 5 DSE

<u>History Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Modernization and Transformation in Twentieth-Century Asia	<ul style="list-style-type: none"> • The development of HK as an international city: relationship with the mainland and its role in the Asia-Pacific Rim • Socialist modernization in the Maoist period and the evolution of “socialism with Chinese characteristics” in the post-Mao period 	<ul style="list-style-type: none"> • Students have an in-depth understanding of the principles of “One Country, Two Systems” and the relationships between the Central Government and the HKSAR. Students study related issues based on this principle.

Form 6 DSE

<u>History Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Modernization and Transformation in Twentieth-Century Asia	<ul style="list-style-type: none"> • Post-colonial developments in Asia and the evolution of ASEAN 	<ul style="list-style-type: none"> • Students understand the opportunities and challenges the country faces when taking part in international affairs through examples such as the Belt and Road Initiative, trade conflicts between China and the USA, and issues related to climate change.

XIV. Integrated Humanities

Form 1

<u>Integrated Humanities Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Topic 2: History, culture and heritage of early Hong Kong region	<p>Students should know</p> <ul style="list-style-type: none"> • Who were the four major dialect groups in Hong Kong • Who were the five great clans in the New Territories • Where the early settlers lived • Know the features of walled village • The difference between modern schools and those in the past • Be able to name some of the intangible cultural heritage 	<p>Understanding some traditional Chinese culture and realise the importance of the culture to our country which helps protect of independence and dignity (cultural security)</p>
Topic 9: Rights & Responsibilities of	<p>Students should know</p> <ul style="list-style-type: none"> • Their rights and responsibility as a 	<p>Understand the responsibility of Hong Kong citizens to help protect national security</p>

Citizens (module 21)	Hong Kong resident <ul style="list-style-type: none"> What the rule of law is 	
Topic 10: Hong Kong government and I (Module 22)	Students should know <ul style="list-style-type: none"> The principle of “one country two systems” How the government makes decisions How the Chief Executive, District Council Members and Legislative Councilors are elected in Hong Kong 	Understand the importance of political security. Eligible voters should vote in the election in order to protect the institution. By electing the suitable person to be the Chief Executive and also members of the LegCo which can help contribute to development of Hong Kong and at the same time the security of the regime.

Form 2

Integrated Humanities Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Topic 3: Role of Chinese Government in the Economy	Students should know <ul style="list-style-type: none"> The development of China as a socialist market economy and its features The objectives of China’s five-year plans and the institutions and developments responsible for formulating economic policies The identification of the different ways of tackling inflation by the Central Government and the HKSAR Government 	Understand the role of the government in the formulating economic policies and its importance in protecting economic security of China
Topic 4: Life of Chinese Nationals	Students should know <ul style="list-style-type: none"> The continuity and changes of traditional family concepts in modern society The importance of the Spring Festival through analysing the phenomenon of the Spring Festival travel season The phenomenon of commercialization of festivals 	Understanding some traditional Chinese culture and realise the importance of the culture to our country which helps protect of independence and dignity (cultural security)
Topic 5.1: Food Problem	Students should know <ul style="list-style-type: none"> The major farming regions in China The major farming problems and the causes in China The scientific farming methods used and how they help in China The negative impact of using scientific farming methods to solve the farming problem in China 	Understand the importance of soil, water, atmosphere and biodiversity for the survival of human and realise the importance of ecological security under the threat of pollution, ecological destruction and pandemic
Topic 5.2: The trouble of water	Students should know <ul style="list-style-type: none"> The major rivers in China The relationship between the general relief, climate and the distribution of 	Understand the importance of soil, water, atmosphere and biodiversity for the survival of human and realise the importance of ecological security under the threat of pollution, ecological destruction and pandemic

	<p>wet and dry regions</p> <ul style="list-style-type: none"> • The causes and harmful effects of flooding and drought in China • The measures for solving water problems in China including: • Three Gorges Dam Project • The South-North Water Transfer Project 	
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Form 3

Integrated Humanities Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
<p>Topic 1: An overview of the political system of China (5 lessons)</p>	<p>Students should know</p> <ul style="list-style-type: none"> • The status, functions, composition and term of the NPC • The status and the authority of the President of the People’s Republic of China • The authority of the State Council • The status, composition and authority of the judiciary • The differences between the judicial systems of Hong Kong and the mainland • The relationship between the CPC and China • The channels for people’s supervision of the government and comment on their effectiveness 	<p>Understand the political system of China and hence the security of the institution.</p>
<p>Topic 5: The Geography of disease (10 -12 hrs)</p>	<p>Students should know</p> <ul style="list-style-type: none"> • Why do so many of us get sick at the same time? • How does the disease spread? • Why do the risk and impact of infectious diseases vary in different places? • Are we safe? If not, what can we do? 	<p>Understand how the stability of our society would be affected when a pandemic hits our country. A sound mechanism is needed to respond to the pandemic in order to protect the social security.</p>
<p>Topic 8: Scramble for Energy</p>	<p>Students should know</p> <ul style="list-style-type: none"> • Why do we have to struggle for energy resources? • What are the other problems with the current energy resources? • What alternatives do we have? • How can future energy demand be met in a more sustainable way? 	<p>Understand the importance of developing both renewable and non-renewable energy in order to meet the increasing demand. Understand the importance of protecting the national resources and developing green technology in order to protect the energy security.</p>

Liberal Studies Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Module 3.2 : Modern China— Sustainable development	<ul style="list-style-type: none"> a. Students can analyse the challenges reform and opening-up pose to cultural and environmental conservation. b. Students can evaluate the effectiveness of different measures to conserve the environment and heritage. 	<p>Cultural security</p> <ul style="list-style-type: none"> a. Students appreciate the cultural values of our nation. b. Students are aware of the threats to the cultural security of our country. c. Students reflect on ways to strengthen excellent traditional Chinese culture. <p>Ecological security</p> <ul style="list-style-type: none"> a. Students understand how the safety of water, land, atmosphere, biological species, etc. are related to national security. b. Students are aware of threats such as ecological damage, environmental pollution, epidemics, etc. c. Students support the concept of "green water and green mountains are golden mountains and silver mountains". d. Students reflect on ways to protect the national ecological security of our country.
Module 3.3: Modern China— Governance	<ul style="list-style-type: none"> a. Students can describe the principles and structure of the political system of China. b. Students can describe the major functions of major political organs. 	<p>Political security</p> <ul style="list-style-type: none"> a. Students understand that political security is the foundation of national security, ensuring people's security, safeguarding national interests, and continuously improving the sense of satisfaction, happiness, and security.
Module 3.4: Modern China— National strength	<ul style="list-style-type: none"> a. Students and explain the meaning of comprehensive national power, hard power and soft power. b. Students and explain China's relationships with other countries. c. Students can evaluate the effectiveness of different measures in enhancing China's national strength. 	<p>Cultural security</p> <ul style="list-style-type: none"> a. Students appreciate the cultural values of our nation. b. Students are aware of the threats to the cultural security of our country. c. Students reflect on ways to strengthen excellent traditional Chinese culture. <p>Ecological security:</p> <ul style="list-style-type: none"> a. Students understand how the safety of water, land, atmosphere, biological species, etc. are related to national security. b. Students are aware of threats such as ecological damage, environmental pollution, epidemics, etc. c. Students support the concept of "green water and green mountains are golden mountains and silver mountains". d. Students reflect on ways to protect the national ecological security of our country.

		<p>Territorial security</p> <ol style="list-style-type: none"> Students understand that it is necessary to strengthen our national defense and diplomatic capabilities in order to safeguard territorial security. <p>Military security</p> <ol style="list-style-type: none"> Students understand that it is important to maintain military security. Students are aware of the challenges and potential risks of war brought by the profound changes of international military conditions. Students support Chairman Xi Jinping’s thought of strengthening the military, and comprehensively promote the modernization of national defense and the military. <p>Economic security</p> <ol style="list-style-type: none"> Students understand the importance of economic security. Students are aware of major risks and challenges to the fundamental interests of the country. <p>Technological security</p> <ol style="list-style-type: none"> Students understand the importance of technological security. Students reflect on ways to maintain technological security of our nation. <p>Internet security</p> <ol style="list-style-type: none"> Students understand the importance of internet security. Students are aware of internet security. Students reflect on ways to maintain technological security of our nation.
<p>Module 3.5 : Modern China— Chinese culture and modern life</p>	<ol style="list-style-type: none"> Students can identify traditional Chinese family concepts. Students can explain the changes and continuity of family concepts and patterns in Chinese communities in modern world. Students can identify the functions of traditional Chinese customs. Students can explain the reasons for the continuation and loss of traditional Chinese customs. 	<p>Cultural security</p> <ol style="list-style-type: none"> Students appreciate the cultural values of our nation. Students are aware of the threats to the cultural security of our country. Students reflect on ways to strengthen excellent traditional Chinese culture.

Liberal Studies Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Module 4.3: Globalization-- Cultural globalization	<ul style="list-style-type: none"> a. Students can identify the features of cultural globalization. b. Students can evaluate the impact of cultural globalization. 	<p>Cultural security</p> <ul style="list-style-type: none"> a. Students appreciate the cultural values of our nation. b. Students are aware of the threats to the cultural security of our country. c. Students reflect on ways to strengthen excellent traditional Chinese culture.

XVI. Mathematics

Junior Forms (Form 1 to Form 3)

Mathematics Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Introduction of the number pi	<ul style="list-style-type: none"> • Let students learn the definition of the number pi as the ratio of the circumference of a circle to its diameter and how the ancient mathematicians attempt to find the approximate values of pi using different methods, especially the Chinese one. Liu Hui's pi algorithm was invented by Liu Hui, a Chinese mathematician. Before his time, pi was often taken experimentally as three in China, while Zhang Hang (78 – 139) rendered it as 3.1724. Liu Hui was not satisfied with this value. Liu Hui was the first Chinese mathematician to provide a rigorous algorithm for calculation of pi to any accuracy. 	<ul style="list-style-type: none"> • Let students know that mathematics in China emerged independently by the 11th century BC. The Chinese independently developed a real number system that includes significantly large and negative numbers, more than one numeral system, algebra, geometry, number theory and trigonometry. Appreciate the Chinese mathematicians' effort in their attempt to find the approximate value of the number pi and their effort and contribution towards the development of mathematics in China.

Junior Forms (Form 1 to Form 3)

Mathematics Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Proof of the Pythagoras' Theorem	<ul style="list-style-type: none"> • Introduce to student different proofs of Pythagoras' theorem through different kind of activities. Appreciate that one of the very interesting pictorial proof of the Pythagoras' theorem (known as the Kou-ku theorem in China) was provided by the ancient Chinese mathematician Zhao Shuang. 	<ul style="list-style-type: none"> • Let students know that China has also developed mathematics in a very early age by introducing the proof of the Kou-ku theorem by the ancient Chinese mathematician Zhao Shuang. In addition, the teacher may also introduce the history related to this topic so that students can appreciate the great thinking of ancient people, especially the Chinese.

XVII. **Music**

Form 1

<u>Music Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Timbre - Sound of Chinese Instruments	Students will learn about the timbre of different traditional Chinese instruments.	<p>Cultural security</p> <ul style="list-style-type: none"> To strengthen the understanding of authentic Chinese music tradition. To enhance cultural safety through understanding the origin of traditional Chinese music culture and how different Asian music cultures influence each other historically.

Form 2

<u>Music Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
History - Classical era	Understanding how G.F. Handel drew inspiration from a national anthem to create String Quartet No. 62, Op. 76 No. 3 "Emperor" through listening and comparison.	<p>Cultural security</p> <ul style="list-style-type: none"> To enhance the understanding of how musical gestures influence the understanding of text by comparing three national anthems (Chinese, German, and UK). To enhance political safety by gaining a deeper understanding of the Chinese national anthem lyrics.

Form 3

<u>Music Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cantopop	<ul style="list-style-type: none"> Listen to 6 different Cantopop songs including 《勇敢的中國人》、《沉默是金》. Create a Music Video by GarageBand and iMovie on iPad with 1 of the selected Cantopop songs including 《勇敢的中國人》、《沉默是金》. 	<p>Cultural security</p> <ul style="list-style-type: none"> To awaken threats such as external ideological penetration, negative cultural erosion, declining cultural self-confidence and centripetal force through introducing the history of Japanese invasion during WWII To strengthen excellent traditional Chinese culture, cultivating patriotic core values and sense of national unity through introducing the lasting value in the content of lyrics in 《沉默是金》

Form 4

<u>Music Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Film Music	Music as an atmosphere enhancement.	Cultural security <ul style="list-style-type: none"> To enhance the perception of emotion and atmosphere through musical gesture with “Crouching Tiger Hidden Dragon” 臥虎藏龍 bamboo forest fighting scene as an example. To enhance cultural safety through understanding the international influence of Chinese composers in film music.

Form 5

<u>Music Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
World Music - East Asia	Bayin (八音) - Classification of Chinese instruments The story of Chinese scale (三分損益法) Music cultures in China <ul style="list-style-type: none"> Guqin (古琴) Jiangnan Sizhu (江南絲竹) Chinese Opera (中國戲曲) Revolutionary Yang-ban Model Plays (革命樣板戲) 	Cultural security <ul style="list-style-type: none"> To strengthen excellent traditional Chinese culture, cultivating patriotic core values and sense of national unity through introducing some representative music cultures from China

XVIII. Physical Education

Form 1

<u>Subject: Physical Education Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Athletics	Students learn those basic techniques in Track and field.	Students appreciate those successful Athletes from our Country and recognize those winners of Olympics Games and international competitions such as Liu Xiang and Su Bingtian.

Form 2

<u>Subject: Physical Education Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Swimming	Students learn those basic techniques in different swimming styles.	Students appreciate those successful swimmers from our Country and recognize those winners of Olympics Games, such as Fu Yuanhui, Jiao Liuyang and Liu Xiang.

Form 3

<u>Subject: Physical Education</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Football	Students learn those basic techniques in playing Football.	Students understand the modern football transformed from ancient Chinese Football Game (蹴鞠). Students understand the recent development of football game in China.

Form 4

<u>Subject: Physical Education</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Basketball	Students learn those basic techniques in playing Basketball.	Students understand the recent development of basketball game (CNBA) in China. Students appreciate those successful Basketball players from our Country such as Yao Ming.

Form 5

<u>Subject: Physical Education</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Volleyball	Students learn those basic techniques in Volleyball.	Students understand our Women Volleyball National Team are one of the leading and most successful squads in women's international volleyball, having won ten championships titles in the three major international competitions of volleyball, including five World Cups (1981, 1985, 2003, 2015, 2019), two World Championships (1982, 1986) and three Olympic titles (1984, 2004, 2016).

Form 6

<u>Subject: Physical Education</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Dragon Boating	Students learn those basic techniques in Dragon Boating.	Students understand the traditional culture and value of our country through the Dragon Boating Activity.

XIX. **Physics**

<u>Physics</u> Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Section V Radiation safety	<ul style="list-style-type: none"> Represent radiation equivalent dose using the unit sievert Discuss potential hazards of ionizing radiation and the ways to minimize the radiation dose absorbed Suggest safety precautions in handling radioactive sources 	Students need to: <ul style="list-style-type: none"> - Recognize the advantages and disadvantages / potential risks in using nuclear energy. - Recognize the necessity in maintaining nuclear safety (核安全), new area safety (新型領域安全), resource safety (資源安全) and ecosystem safety (生態安全) in using nuclear energy
Section V	<ul style="list-style-type: none"> Realise the release of energy in a 	

Nuclear fission and fusion	<p>nuclear fission and fusion</p> <ul style="list-style-type: none"> Realise nuclear chain reaction Realise nuclear fusion as the source of solar energy 	<p>Students' works reflecting:</p> <ul style="list-style-type: none"> search for information concerning the advantages in using nuclear energy in terms of resources for power generation and the disastrous consequences (to environment and ecosystem) of nuclear power plant accidents in various countries. acquiring information in how to maintain nuclear safety by visiting Daya Bay Nuclear Power Plant.
Section VIII Renewable and non-renewable energy sources	<ul style="list-style-type: none"> Describe the characteristics of renewable and non-renewable energy sources and give examples 	<p>Students need to:</p> <ul style="list-style-type: none"> Recognize the generation of greenhouse gas and greenhouse effect due to the use of fossil fuel in electricity generation.
Section VIII Environmental impact of energy consumption	<ul style="list-style-type: none"> Discuss the impact of extraction, conversion, distribution and use of energy on the environment and society Discuss effect of greenhouse gases on global warming 	<ul style="list-style-type: none"> Recognize the effect on ecosystem by greenhouse gases / effect. Recognize the necessity in maintaining nuclear safety (核安全), new area safety (新型領域安全), resource safety (資源安全) and ecosystem safety (生態安全) in using nuclear energy.

XX. Science

Form 1

Science Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Water	<p><u>Water Purification</u></p> <ol style="list-style-type: none"> The importance of water Impurities in natural water Methods of water purification 	<p>Through understanding general water purification system in Hong Kong, we can learn more about the infrastructure of our country. By watch related documentary, we can admire the technology used in the dam system and water purification system. In order to prevent the technology used to be used by other people. This suggests the needs of national security on protecting our technology.</p>
Cells, human reproduction and heredity	<p><u>Heredity and variation</u></p> <ol style="list-style-type: none"> Passing of traits to the next generation Variations Causes of variations Twins DNA and heredity 	<p>Through studying DNA, heredity and gene variation, we can understand how it would affect our society. With the advancement of biotechnology, when we apply our knowledge to many different fields, we have to consider the effect it may bring to our country. The potential social, moral, economic and environmental influences suggest the needs of the national security on Biosecurity.</p>

Form 2

<u>Science Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Acids and alkalis	<u>9.4 Corrosive nature of acids</u> Acid rain: causes and harmful effects	In acids and alkalis, we have learnt how acid rain is formed. Those acidic gases are one of the sources of air pollution. By studying the history of how Beijing severely reducing air pollutants in Beijing Olympics in 2008. We can see the determination of our country to reduce the pollutions and how she can tackle global issue in an effective way. By understanding the technology used and policy made by the governor, we can admire the determination and technology level of our county.
Force and motion	<u>11.6 Space Travel</u> 1. Launching rocket 2. Motion in space 3. Weightlessness 4. Returning to earth	In the topic of Space travel, student should learn the history about the development of our space travelling technology. Space contains lots of mysteries there. Different countries always compare with each other on the technology development for space travelling. It is necessary to have security law over the technology of our own country.

XXI. **Visual Arts**

Form 1

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Biological Security	Title: Responding to Nature Medium: Poster Design	<ul style="list-style-type: none"> To analyze relevant risks to human, animal and plant life and health and associated risks for the environment To list the protected species in Hong Kong To reviewing national capacity provision for biological security

Form 2

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cyber Security	Title: We Together! Secure Data! Medium: Bookmark Design	<ul style="list-style-type: none"> To encourage students to adopt data protection best practices To enhance their awareness of cyber security and draw their attention to the importance of information security To identify the relations between cyber security to national security

Form 3

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Social Security	Title: Getting Close to Community Medium: Photography + Computer Graphics	<ul style="list-style-type: none"> To express the vision of maintaining national security and safeguarding a beautiful homeland is constructed by everyone's concerted efforts To create a piece of artwork to show an interesting part in the community either in a realistic or imaginative way To apply golden ratio to capture the object with the use of camera

Form 4 DSE

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cultural Security	Title: Beauty of China Medium: Acrylic Painting	<ul style="list-style-type: none"> To encourage students to highlight China's diversified beauty as a global tourist destination

Form 5 DSE

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cultural Security	Title: Celebrate in Hong Kong with a. Chinese New Year b. Hung Shing Festival c. Birthday of Tin Hau d. Birthday of Buddha e. Cheung Chau Bun Festival f. Dragon Boat Festival g. Hungry Ghost Festival h. Mid-Autumn Festival *students can choose one festival to finish the artwork Medium: Optional	<ul style="list-style-type: none"> To encourage students to promote and pass on the traditional Chinese culture

Form 6 DSE

<u>Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cultural Security	Title: China Unlimited Medium: Optional	<ul style="list-style-type: none"> To encourage students to share their experiences and visions of China

XXII. IB Biology

Form 5

IB Biology Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Mutation	<ul style="list-style-type: none"> Understand that radiations and some chemicals can cause mutation. 	<ul style="list-style-type: none"> Recognize that there are corresponding policies to maintain the nuclear security by enhancing national responsibility, international cooperation and nuclear safety culture in China.
Application of biotechnology	<ul style="list-style-type: none"> Understand the role of bacteria in the production of pharmaceutical products. Recognise the possible benefits and hazards of gene therapy. Recognise the potential application of stem cells in medicine. Recognise the use of transgenic animals and plants in scientific research, food industry and agriculture. Beware of the potential impact of biotechnology on society and the environment. 	<ul style="list-style-type: none"> Recognize the importance of biosafety in biological researches. Recognize that there are corresponding policies to promote a healthy development of biotechnology and to prevent biological threats in China. Recognize the development of gene therapy, stem cell research and transgenic research in China, and her collaboration with other countries in biotechnological research and medicine.

Form 6

IB Biology Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Ecology	<ul style="list-style-type: none"> Recognize the impacts of human activities on ecosystems. Beware of the application of biological knowledge to human activities, e.g. policies in protecting the environment. 	<ul style="list-style-type: none"> Develop sensitivity and responsibility in striking a balance between the needs of humans and a sustainable environment. Recognize that there are corresponding pollution control and environmental protection policies to maintain ecological security of water, land, atmosphere and biological species in China.

XXIII. IB Business Management

Form 5

IB Business Management Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Topic 1.3	Organizational Objectives	<ul style="list-style-type: none"> Stability in the society, safety of the organization can improve profitability. Some firms may focus on their social responsibility to contribute to the society of HK

Topic 1.3 & 1.5	SWOT & External Environment	Political opportunities and threats If it's politically stable then there is less investment risk and higher investment incentives. If the country has a stable environment then the economy should likely improve and improve business opportunities Eg protests can harm the economic environment
Topic 1.4- Stakeholders		Legal compliance- rules and regulations Businesses must consider the laws of Hong Kong to ensure they are in compliance. Firms must ensure unfair business practices are avoided and that there is compliance with business legislation

Form 6

<u>IB Business Management Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Topic	Promotion	We must be careful not to use claims that violate national security law
Topic 5.4	Location	Before firms consider different locations and can increase employment opportunities in China Eg low costs

XXIV. **IB Chemistry**

Form 5-6

<u>IB Chemistry (IBDP bridging programme) Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Topic 4 – Atomic structure and bonding <ul style="list-style-type: none"> Structure of atomic particles The nature of electrons and electronic structure in atoms Bonding and structure of substances 	<ul style="list-style-type: none"> Know the nuclear stability of atoms can give rise to radioisotopes. Radioisotopes have uses that give rise to new technologies in nuclear medicine for diagnostic treatment and research, as tracers in biochemical and pharmaceutical research, and as 'chemical clocks' in geological and archeological dating. 	<ul style="list-style-type: none"> Ecological security – radioisotopes are extremely hazardous and their use is of international concern. The International Atomic Energy Agency (AEA) promotes the peaceful use of nuclear energy. The organization was awarded the Nobel Peace Prize in 2005. Resource security – the participation in collaborative research can impact on access to resources. The European Organisation for Nuclear Research (CERN) is run by twenty European Member States, with involvements from scientists from many other countries. It operates the world's largest particle physics research centre, including particle accelerators and detectors used to study

		<p>fundamental constituents of matter.</p> <ul style="list-style-type: none"> Technological security – technological talents, facilities and fields supported by technology impacts on ability to support national security. Dependence on others in core technologies hampers ability to innovate and achieve breakthroughs in key technologies e.g. PET (positron-emission tomography) scanners give three-dimensional images of tracer concentration in the body and can be used to detect cancer.
<p>Topic 8 – Acid-base equilibria</p> <ul style="list-style-type: none"> pH of aqueous solutions comprising of Bronsted-Lowry acids and bases The nature of buffers Titration curves, use of indicators and salt hydrolysis 	<ul style="list-style-type: none"> Understand the H^+ (aq) concentration in aqueous solutions is measured as pH. The pH of aqueous solutions is affected by the addition of substances known as Bronsted-Lowry acids or bases. Be able to determine and calculate the pH of strong acid, weak acid, strong alkali, weak alkali and buffer solutions. 	<ul style="list-style-type: none"> Ecological security – One of the most controversial aspects of acid deposition is that its effects often occur far from the source of the pollutants due to atmospheric weather patterns. In many cases, this means countries are suffering the impact of other countries' industrial processes. Legislation to reduce the impact of acid deposition is of political debate and international summits to develop international protocols.
<p>Topic 10 – Organic chemistry</p> <ul style="list-style-type: none"> Nomenclature, functional groups and classes of compounds in organic molecules Types of reactions to interconvert functional groups and reaction mechanisms Organic synthesis 	<ul style="list-style-type: none"> Know the main classes of organic compounds and the key functional groups. Know the reactions of each functional group and be able to interconvert one class of compound to another thus allowing for the synthesis of important organic molecules in providing chemical feedstocks for the manufacture of medicines, plastics, electronic componentry, etc... 	<ul style="list-style-type: none"> Resource security – the collaborative research and development of medicines can have wide ranging impact on threats such as epidemics, access to data pertaining to patents, etc... The study fundamental organic compounds link closely to key biomedical applications to the control of enzymic reactions essential to cellular organisms such as in the Krebs cycle for aerobic respiration. Social security – public health is the foundation of social harmony and stability. In the wake of threats such as major epidemics and pandemics, mass incidents, terrorist activities in biological entities, capabilities to respond to outbreaks of major and sudden infectious diseases is key from a sound knowledge and application of organic chemistry.

Form 5

IB Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
第一單元 〈讀者、作者和文本〉(文學部分)	<ol style="list-style-type: none"> 研讀《活著》，帶領學生體會福貴如何由富家公子變成平民，卻反而因學習面對困難而成長蛻變為一個富責任感、自強不息、愛惜家人的人；分析福貴面對困難的態度，了解活著的可貴。 同學須分組分析《活著》其他配角的存在價值、於主題的貢獻，並進行小組匯報。 同學須圍繞文本的人物形象建構、手法的使用等，寫作論文，以具體呈現對文本的深入了解。 	<ol style="list-style-type: none"> 從平民福貴曲折起伏的人生經歷，體會中國人民堅強、樂觀、勤勞、自強不息的面貌，欣賞中華民族的韌性，並提升同學對中國人的身份認同； 從福貴對家人態度的變化，與家人的互動，體會家人的愛於個人成長上的重要，並欣賞中國傳統仁愛重情的可貴。

Form 6

IB Chinese Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
第三單元 〈互文性：文本的相互聯繫〉	<ol style="list-style-type: none"> 研讀《撒哈拉歲月》，帶領學生了解三毛在沙漠經歷的異地風俗民情，呈現三毛對於當地弱小群體的關愛；分析三毛的愛情、婚姻及倫理道德觀。 同學須分組分析《撒哈拉歲月》的部分篇章，並進行小組匯報，剖析三毛對於當地風俗文化的看法，及當中運用的藝術手法。 同學須圍繞文本的人物形象建構、手法的使用等，與另一非文學文本作比較，以具體呈現對文本的深入了解。 	<ol style="list-style-type: none"> 從三毛記述撒於哈拉沙漠居住時所見的風俗民情，呈現她富同情心及富俠義精神的一面，體現中華文化精神的主流——重情重義； 從三毛對於婚嫁文化、婆媳關係的分享，呈現中國傳統孝敬長輩的孝道文化，及中華民族「兼愛」的美德。 了解人與自然的關係，認知人類活動對生態環境的影響和責任，認同維護生態安全、資源安全的必要性。

Form 5 IB (English A)

IB English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
<i>Persepolis</i> : Representation and Identity	<ul style="list-style-type: none"> To what extent is a text or work representative of one's identity? Exploring motives for writing <i>Persepolis</i> Understanding how Iran came under oppression from different powers 	<ul style="list-style-type: none"> Political Security: To learn how important National Security is to ensure people's security and safeguard national interests. To understand the link between the importance of National Security with stability of the country.

Form 6 IB (English B)

IB English Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Sharing the Planet <ul style="list-style-type: none"> What environmental and social issues present challenges to the world and how can these challenges be overcome? 	<ul style="list-style-type: none"> Students discuss, understand and evaluate a variety of personal, professional and mass media texts (written, audio & visual) on what environmental challenges we face in the 21st century in a local and global context. Students present and develop their ideas and opinions orally and in writing on topics such as deforestation, climate change, reducing unnecessary waste, adopting renewable resources and increasing sustainability awareness. Students will construct and support arguments via individual presentations/group discussions/writing tasks to practice a range of disparate communicative needs to develop international-mindedness and to understand the problems and consequences of these issues on the ecological environment and propose potential solutions. Students identify, generate and present ideas orally based on visual stimuli relating to the theme of Sharing the Planet (e.g photos of polluted oceans/plastic waste on beaches). Students use appropriate language to speculate about the implicit & explicit details of the visual stimuli relating to maintaining ecological security. 	<ul style="list-style-type: none"> Study issues related to the new Domain Security (sustainability, climate change, unnecessary waste, pollution). Understand how environmental issues presents challenges to the ecological environment and understand the necessity of Ecological Security.

XXVII. IB Economics

Form 5

IB Economics Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Supply-side Policy	<p><u>Supply-side policy and economic growth:</u> Explain, using diagram, how supply-side policy leads to economic growth in the long run using the example of China.</p> <p>Evaluate the strengths and constraints of supply-side policy.</p>	<p>Supply-side policy in China in safeguarding economic security</p> <p>Introduce the plans and initiative for long term development including Made in China 2025, China Standards 2035 Initiative and investment in infrastructure such as 5G networks, industrial internet, inter-city transportation and rail system, data centers, AI, ultra-high voltage power transmission, and new-energy vehicle charging stations. Research work on achievements made in infrastructure and their impacts on economic growth in China will be conducted.</p>

Form 6

IB Economics Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Economic Integration	<p><u>Types of economic integration</u> Compare and contrast different types of economic integration through the use of real-world examples.</p> <p><u>Impacts of economic integration on economy</u> Evaluate the positive and negative impacts of different types of economic integration on different stakeholders and economic growth.</p>	<p><u>Belt and Road Initiative and economic growth</u> Introduce the infrastructure network that China is establishing through the initiative, including Silk Road Economic Belt, 21st Century Maritime Silk Road, Ice Silk Road, Super grid. Explain how the initiative enhance economic growth and safeguard national security in different domains such as economic security and polar security.</p>

XXVIII. IB Geography

Form 5 – IBDP

Geography Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Changing population	<ul style="list-style-type: none"> Population distribution and economic development at the national scale, including voluntary internal migration, core-periphery patterns and megacity growth in China Global and regional trends in family size, sex ratios, and ageing 	<ul style="list-style-type: none"> Economic security Social security

Global climate – vulnerability and resilience	<ul style="list-style-type: none"> • Causes and impacts of climate change • Adaptation and mitigation strategies for global climate change led by civil society, corporates, and Hong Kong and Chinese governments • Challenges on international cooperation against climate change 	<ul style="list-style-type: none"> • Ecological security • Polar security • Resource security
Global resource consumption and security	<ul style="list-style-type: none"> • Global and regional progress towards poverty reduction, including the growth of the “new global middle class” • Global patterns and trends in the availability and consumption of food, water and energy • Distribution of natural resources in China • The disposal and recycling of consumer items, including international flows of waste in South Asia • The role of the UN Sustainable Development Goals and progress made toward meeting them 	<ul style="list-style-type: none"> • Ecological security • Nuclear security • Resource security

Form 6 – IBDP

Geography Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Power, places, and networks	<ul style="list-style-type: none"> • Global superpowers and their economic, geopolitical, and cultural influence, including China and USA • Powerful organizations and global groups, such as G20, IMF, and New Development Bank • Contemporary global networks and flows • Human and physical influences on global interactions, including our “shrinking world” and the forces driving technological innovation 	<ul style="list-style-type: none"> • Economic security • Cultural security • Technological security • Resource security • Overseas interest security

Human development and diversity	<ul style="list-style-type: none"> • The multidimensional process of human development and ways to measure it, including HDI and GII • The global spectrum of cultural traits and ethnicities and their effects on cultural diversity in different places, including examples of changing cultural landscape in the built environment in Africa by Chinese and cultural diffusion by Confucius Institutes • Diasporas influence cultural diversity and identity at both global and local scales, including examples of China towns • Geopolitical constraints on global interactions, including protectionism and resource nationalism 	<ul style="list-style-type: none"> • Cultural security • Social security • Resource security • Overseas interest security
Global risks and resilience	<ul style="list-style-type: none"> • The correlation between increased globalization and renewed nationalism/tribalization • Transboundary pollution (TBP) affecting a large area/more than one country, including examples of South Asia • Strategies to build resilience, including new technologies for the management of global flows of data and people, including cybersecurity and e-passports 	<ul style="list-style-type: none"> • Political security • Ecological security • Technological security • Internet security

XXIX. IB History

Form 5

IB History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
China and Korea 1910-1950	Rise of national identity in China: Yuan Shikai; Sun Yixian; 21 Demands (1915); New Culture Movement; Treaty of Versailles (1919); May Fourth Movement (1919); effects of warlordism	<ul style="list-style-type: none"> • Cultural Security: To develop an understanding of Chinese Culture such as Confucianism and Quietism, to consider China's place in relation to the outside world and its relationship with colonial powers • Cultural Security: Also to examine the Chinese response to colonial attempts to influence China and the growth of Chinese National Identity through the May 4th Movement and the New Culture Movement

IB History Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Cuba as an Authoritarian State	<p>Emergence of authoritarian states</p> <ul style="list-style-type: none"> • Conditions in which authoritarian states emerged: economic factors; social division; impact of war; weakness of political system • Methods used to establish authoritarian states: persuasion and coercion; the role of leaders; ideology; the use of force; propaganda <p>Consolidation and maintenance of power</p> <ul style="list-style-type: none"> • Use of legal methods; use of force; charismatic leadership; dissemination of propaganda • Nature, extent and treatment of opposition • The impact of the success and/or failure of foreign policy on the maintenance of power <p>Aims and results of policies</p> <ul style="list-style-type: none"> • Aims and impact of domestic economic, political, cultural and social policies • The impact of policies on women and minorities <p>Authoritarian control and the extent to which it was achieved</p>	<ul style="list-style-type: none"> • Economic Security: To consider how countries develop their economic systems and aim to promote development to continuously improve their countries economic strength, competitiveness and ability to cope with internal and external shocks and threats. Make comparisons with the Chinese experience.

XXX. IB Mathematics

Subject: IB Math Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
<p>Representing relationship: function</p> <p>2.2: Special functions and their graphs</p> <p>2.4: Operations with functions</p> <p>2.5: Function transformations</p>	<ul style="list-style-type: none"> • Creating a sketch from information given or a context, including transferring a graph from screen to paper. Using technology to graph functions including their sums and differences. • Determine key features of graphs. • To enhance students' knowledge of the China's Flag using function transformation concept. Students are to use Desmos to draw key features of China's flag and find their function. 	<ul style="list-style-type: none"> • To enhance students' understanding in China and its symbol.

<p>Correlation, causation and linear regression</p>	<ul style="list-style-type: none"> • Linear correlation of bivariate data. • Pearson’s product-moment correlation coefficient, r. • Scatter diagrams; lines of best fit, by eye, passing through the mean point. • Equation of the regression line of y on x. • Use of the equation of the regression line for prediction purposes. • Interpret the meaning of the parameters, a and b, in a linear regression $y = ax + b$. <ul style="list-style-type: none"> ○ To enhance students’ knowledge in analysis ability in use of statistics. By using the statistics provided by the government, students are asked to study the number of Hong Kong citizens who got Covid-19 and the recovery rate by applying the concept of regression line. Students will be able to analyze the statistical graph and determine whether it is misuse or not. 	<ul style="list-style-type: none"> • To enhance students’ understanding in the reliability of data analysis by graphical representation, hence students are able to distinguish its validity. This could help students in arousing the awareness in national security.
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Form 6

Subject: IB Math Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
<p>Measuring change-differentiation</p>	<ul style="list-style-type: none"> • Related rates of change. • Kinematic problems involving displacement s, velocity v, acceleration a and total distance travelled. <ul style="list-style-type: none"> ○ To enhance students’ knowledge in China and Hong Kong natural resources. By using the statistics provided by the government, students are asked to find out the rate of change of natural resources, e.g. rate of change of green land area and temperature among past 10 years. 	<ul style="list-style-type: none"> • Students could understand the effect of human activity on natural resources and their responsibility to protect the environment; hence they could understand the need of continuous development and recognize the importance on the safety in ecology, resources, and nuclear energy.

XXXI. IB Music

Form 5

IB Music Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Area of Inquiry 1: Chinese cultural music	<ul style="list-style-type: none"> Explore the relationship between Chinese world music and its contexts Understand how music expresses and communicates cultural messages World Music pieces of China to allow students discuss the use of musical elements (eg. how the piano mimics the Guzheng's playing technique in 'Yellow River Piano Concerto') 	<ul style="list-style-type: none"> Allow students to explore music within their local context Analyse diverse Chinese music material from personal and local contexts Understand how music is performed in social contexts, enhancing the traditional Chinese culture and sense of national unity

Form 6

IB Music Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Area of Inquiry 1: Chinese National Anthem	<ul style="list-style-type: none"> Explore music that expresses and communicates cultural messages, political ideas and preserve social traditions in Chinese National Anthem Identify musical prompts to analyse Chinese National Anthem by engaging primary and secondary sources to collect findings that inform the understanding of music within history and culture. Students are able to explain their musical understanding with accurate terminology 	<ul style="list-style-type: none"> Awareness of students local context- Chinese culture of patriotic core values Enhance political safety with lyrical analysis, and discuss the relationship between the national anthem's lyrics and music.

XXXII. IB Physics

Form 5

IB Physics Curriculum		National Security Education
Module/Theme	Learning elements	Learning elements
Mechanics	<ul style="list-style-type: none"> Understand the ideas of Newton's Laws, using force and motion to investigate and how can we apply the concepts in different examples, like vehicle, pistol, rocket. 	<ul style="list-style-type: none"> Promote the importance for the protection of national security. Comprehensively promote the modernization of national defense and the military, which can be used to encounter profound changes of international military conditions

	<ul style="list-style-type: none"> Show pictures and guide students to discuss the mechanics behind of different machine, understand the power of different machine and they can be used to protect our homeland 	
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Form 6

<u>IB Physics Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Energy Production	<ul style="list-style-type: none"> Understand how human activities cause pollution and damages to the ecological environment, thereby understand the need of the sustainable management of the natural environment. Show pictures of air and nuclear pollution by human activities and allow students to discuss how pollution affect the ecological environment so that students understand the importance of maintaining ecological security. Guide students to discuss ways to solve pollution problems and introduce different kinds of sustainable energy, meanwhile discuss the pros and cons of different kinds of energy 	<ul style="list-style-type: none"> Study issues related to new domain security (eg. ecological damage, environmental pollution) Understand impacts of human activities on the ecological environment and understand the necessity of ecological security and new domain security.

XXXIII. **IB Visual Arts**

Form 5 and 6

<u>IB Visual Arts Curriculum</u>		National Security Education
Module/Theme	Learning elements	Learning elements
Cultural Security	Exploration of decorative designs on blue and white china pottery and contemporary applications of traditional patterns in visual arts.	Student research and analyse decorative glazes on traditional pottery. Students recreate traditional patterns. Students learn how to create repeating patterns and employ them in their art making practice.
Cultural Security	Exploration of traditional lantern making techniques with rattan and rice paper.	Students research and analyse traditional lanterns exploring cultural context and significance including function and purpose. Students experiment and create sculptures using the techniques of lantern construction.