

Economics enhanced support resources

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Diploma Programme

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IB mission statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand that other people, with their differences, can also be right.



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.

Purpose of this resource

This enhanced support resource has been written by IB educators to provide additional support to teachers and students.

The advice is neither prescriptive nor exhaustive, but is designed to provide teachers with information for the following approaches.

- Teaching through real-world issues
- Inquiry and concepts mapping
- Integrating concepts and inquiry

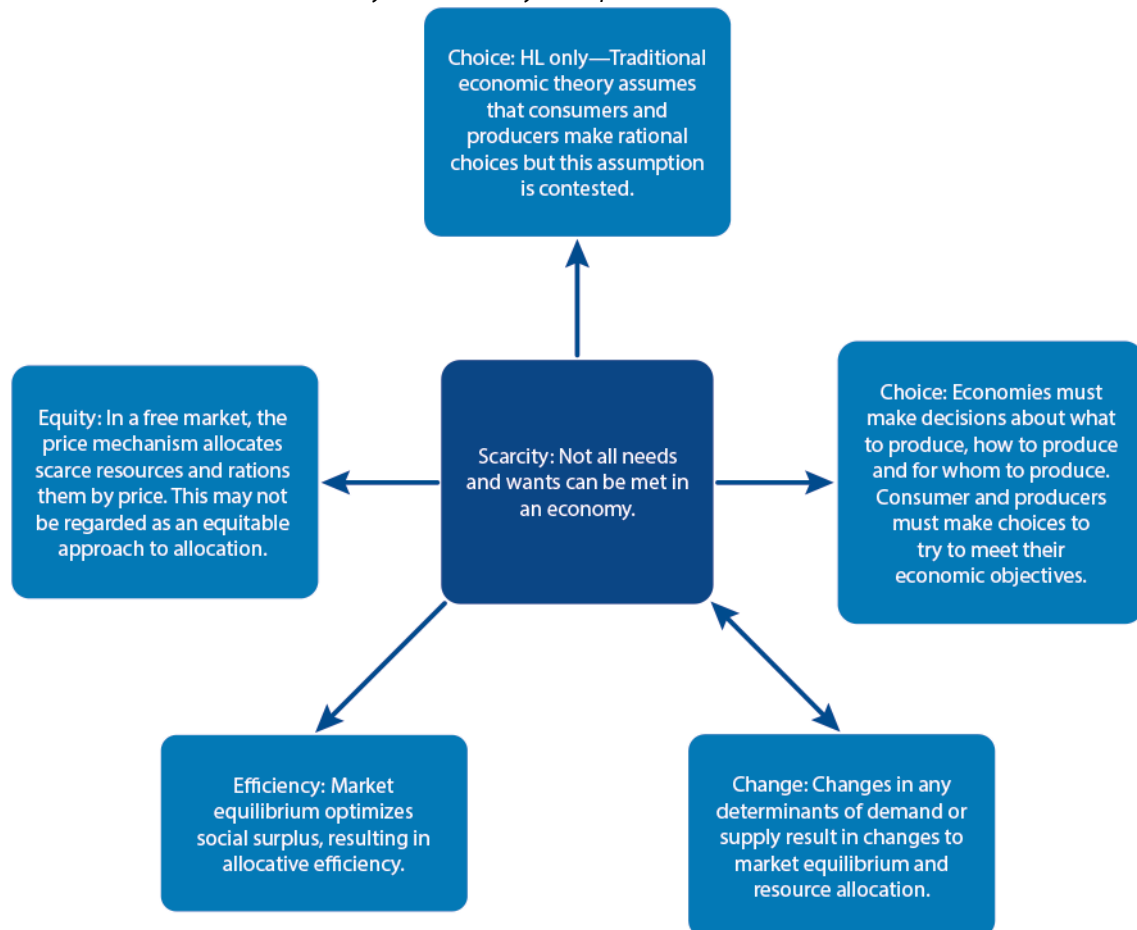
Real-world issue 1

How do consumers and producers make choices in trying to meet their economic objectives?

In this real-world issue, **scarcity** is a central key concept. As a result of scarcity, societies need to make choices about how to allocate resources which, in turn, has implications for equity and efficiency. Changes in the demand and supply of resources require consumers and producers to adapt their choices.

Figure 1

Scarcity is a central key concept in this real-world issue



Teacher-directed, case-based inquiry

Statement of inquiry: In a free market, the price mechanism determines the allocation and rationing of an economy's scarce resources.

1. The teacher splits the students into groups and provides each group with a news article/TV report focused on price changes of a certain good or service: for example, price rises of staple foods, an energy resource or “must-have” gadgets. Each group uses their article to contribute to Table 1.
2. Using the real-world examples from Table 1, students engage in discussion of the following inquiry questions.
 - How and why do **changes** in prices affect consumer and producer **choices**?
 - Why is the price mechanism effective in promoting allocative **efficiency**?
 - To what extent is rationing scarce goods and services according to consumers’ ability to pay **equitable**?
 - What should societies prioritize in deciding how to allocate scarce goods and services—**efficiency** or **equity**?

Table 1
Analysing the article

Article title	What changes have taken place to demand and/or supply? Why?	How is market equilibrium being restored? Illustrate with a diagram	How might consumer choices be affected?	How might producer choices be affected?
<i>Title</i>				
<i>Title</i>				

Teacher-guided investigation

Statement of inquiry: Primary commodities typically demonstrate high levels of price volatility.

1. The teacher leads a starter activity such as the following.
 - Students are shown a graph of commodity price index data over the last 10 years.
 - Students are asked to undertake an “I see, I think, I wonder” activity (Project Zero 2016). The teacher guides the discussion to elicit possible inquiry questions from the students.
2. Students are provided with a source of data on commodity prices, such as indexmundi.com. Students choose a commodity and a time period. They present their findings to the group. These findings could be based on the **following inquiry questions** or on those generated by the students.
 - How have prices for the commodity **changed** over the time period?
 - What are some reasons for these **changes**?
 - How might these **changes** affect consumers?
 - How might these **changes** affect producers?
 - How might price elasticity of demand (PED) and price elasticity of supply (PES) influence the price volatility of this commodity? (HL only)

Experiential learning

Statement of inquiry: The assumption that consumers and producers make rational choices is challenged by behavioural economists.

1. The teacher selects a small number of behavioural economics experiments to carry out with the students. Examples of such experiments can be found in Wikiversity, *Economic classroom experiments*. In addition, the book *Thinking, fast and slow* (Kahneman 2011) also provides many examples. Examples may be chosen to illustrate biases such as framing, anchoring, rule of thumb or availability.
2. Students are then assigned the following task: over the coming week, keep a record of three purchasing decisions that you make. For each purchase, keep a note of:
 - your decision—what you bought and when

- factors influencing your decision
 - what element/s of choice theory do you think your decision best illustrates? Why?
3. Following the first step, students reflect on the following inquiry questions.
- To what extent did I make rational decisions and **choices**?
 - To what extent am I aware of the factors affecting my **choices** as a consumer?
 - If consumers do not make rational **choices**, can allocative **efficiency** be achieved?

Mind mapping with the key concepts

At the end of the real-world issue activities, groups of students are allocated one of the key concepts: **scarcity, choice, equity, efficiency, change**.

They are asked to develop a mind map showing how this key concept is connected to the theory, examples and issues covered. Each group presents their map to the class.

References

IndexMundi. (No date). *Commodity prices*. www.indexmundi.com/commodities/

Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.

Project Zero. (2016). *See, think, wonder*. Harvard Graduate School of Education. www.pz.harvard.edu/resources/see-think-wonder

Wikiversity. (2021). *Economic classroom experiments*. https://en.wikiversity.org/wiki/Economic_Classroom_Experiments

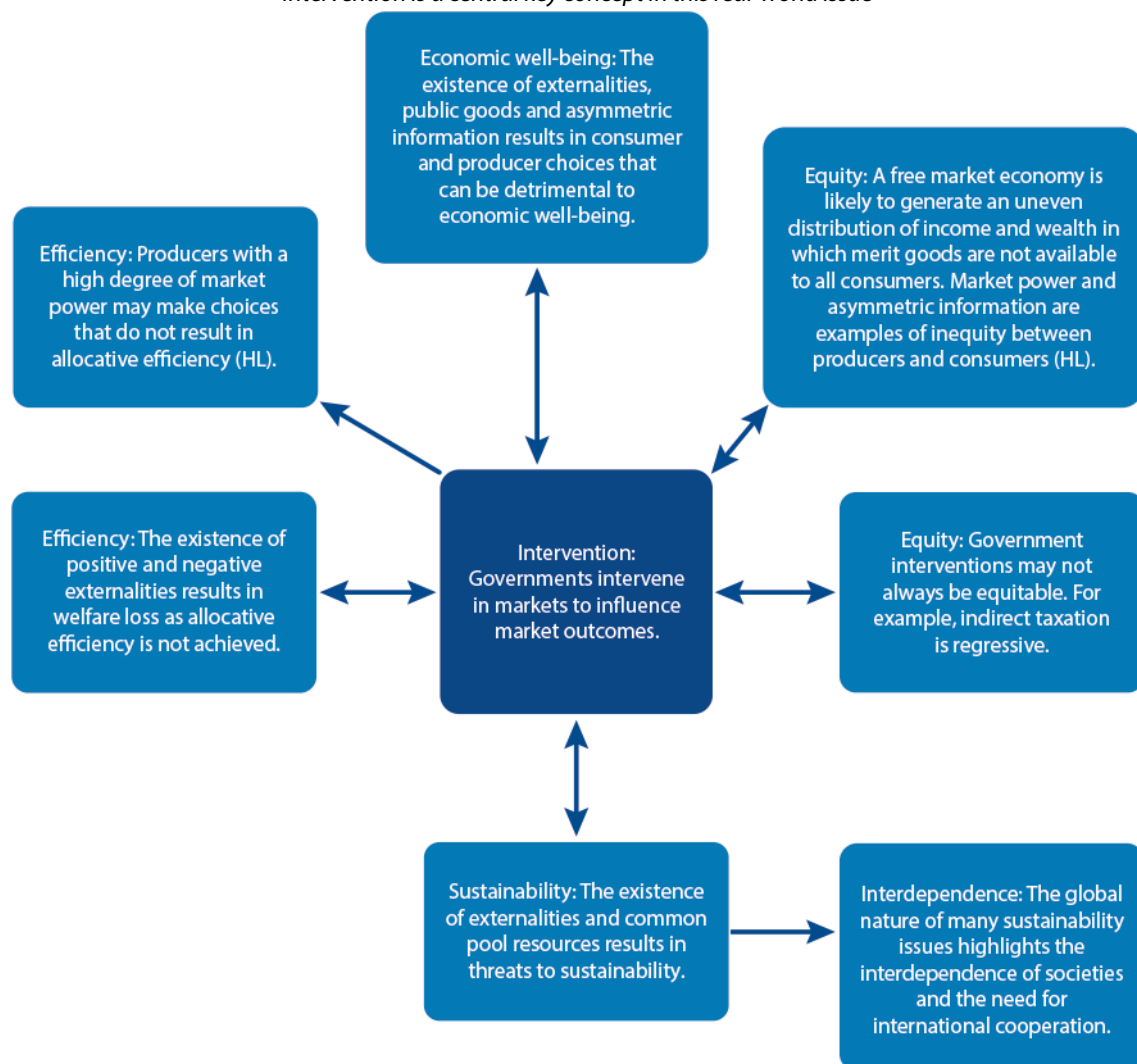
Real-world issue 2

When are markets unable to satisfy important economic objectives—and does government intervention help?

Intervention is a central key concept in this real-world issue. Market failure leads to reductions in efficiency and economic well-being, inequity and threats to sustainability. Government intervention at local, national and global levels is used to address this.

Figure 2

Intervention is a central key concept in this real-world issue



Teacher-directed or teacher-guided problem-based inquiry

Statement of inquiry: Overconsumption of demerit goods results in welfare loss and is detrimental to economic well-being. Government policy interventions vary in their effectiveness.

The problem may be chosen by the teacher, who also selects the resources. For example, a country specific example—policies to reduce the overconsumption of sugary drinks in Mexico; or a more general example—policies to correct the overconsumption of demerit goods and allow students to select the demerit good, geographical location and resources.

1. Based on their research, students answer the following inquiry questions.
 - What is the economic problem?
 - Who are the stakeholders involved?
 - What **interventions** have been proposed? How are they expected to work?
 - What new **interventions** could be considered?
 - What would be the most effective form of government **intervention**? Why?
2. Following this, students engage in a Socratic discussion in which they explore the following questions with reference to the real-world examples investigated.
 - How is the overconsumption of demerit goods affecting **economic well-being**?
 - How does government **intervention** address the problem?
 - What are the characteristics of effective government **intervention**?
 - When implementing policies, to what extent should governments prioritize **efficiency** over **equity**?
 - What policies do you consider to have been the most effective? Why?

Teacher-guided case-based inquiry

Inquiry statement: Firms with significant market power may behave in ways that are detrimental to efficiency, economic well-being and equity. Governments may decide to intervene in response to abuse of market power.

1. Students select their own case studies on the abuse of market power. The case should be one where the firm has been accused of abuse of power. The judgment on this may, or may not, still be a matter of investigation. Government intervention may, or may not, have been applied. Therefore, there are some standard inquiry questions. Other inquiry questions may be developed by the students based on their case study.
 - Standard inquiry questions may include the following.
 - In what ways is the firm accused of abusing its market power?
 - Which stakeholders are affected, and how?
 - Are there arguments to suggest that the firm has a positive impact on **efficiency**, **economic well-being** or **equity**? What might they be?
 - Possible further questions (choose one question).
 - What **intervention** has been applied? How effective has it been?
 - What **intervention** has been proposed? How is it expected to work?
 - What new **intervention** could be considered?
2. Students share their inquiry findings with peers. The peers act as a competition regulatory body. They are asked to decide the following.
 - Can it be determined that the firm's market power is resulting in a loss of **efficiency**, **economic well-being** or **equity**?

- Which, if any, **intervention** do you recommend and why?

“PechaKucha” presentations through the lens of a key concept

Students are asked to create a “PechaKucha” presentation on the topic “Environmental **sustainability**, challenges and solutions”.

PechaKucha (Japanese for “chit chat”) is a storytelling format. Students create a presentation of 20 slides. During the presentation, the students can speak for 20 seconds on each slide, a total of around six minutes. If this learning engagement is done after topics 2.1–2.7 have been covered, students will already have examples and ideas to build on, though depending on time, the teacher may recommend additional research. Students have a lot of flexibility in how they develop the presentation, but the following guiding questions can be used.

- What are some real-world examples of key threats to environmental **sustainability**?
- What are some challenges to promoting environmental **sustainability**?
- What are some effective solutions for promoting environmental **sustainability**?
- How might environmental **sustainability** be related to other key concepts: **economic well-being**, **equity** and **interdependence**?

Framer models for exploring key concepts

Blank Framer models (see the [Economics teacher support material](#), “Approaches to teaching” section for four of the key concepts: **economic well-being**, **equity**, **sustainability** and **efficiency**) are created at the start of the unit. These could be large wall displays or collaborative documents that all students can access.

Periodically throughout real-world issue 2, students are given time to add to the model collaboratively and reflect on the final product.

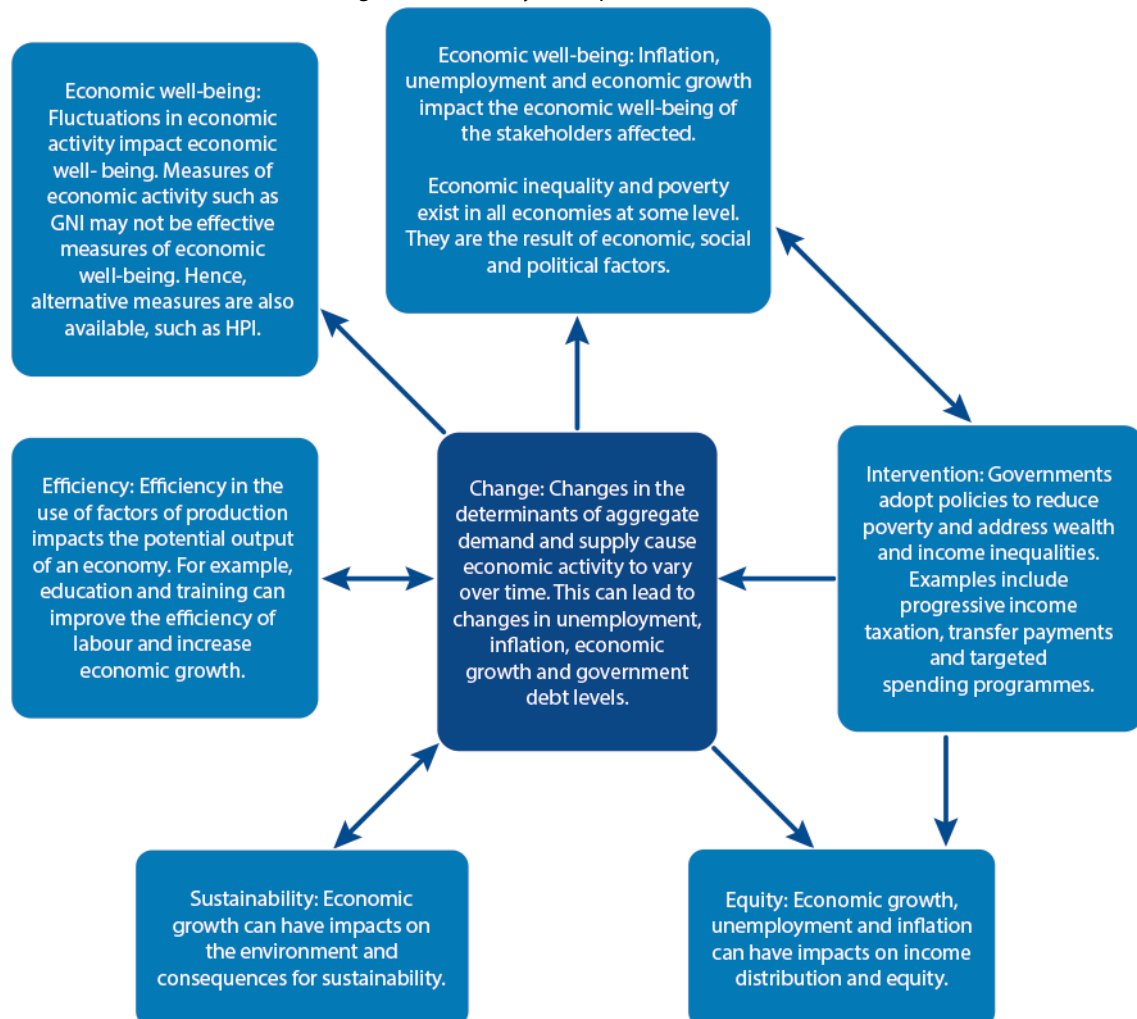
Real-world issue 3

Why does economic activity vary over time and why does this matter?

The impacts of fluctuations in economic activity over time make **change** a central key concept in this real-world issue. Changes in economic activity have impacts on efficiency, sustainability, economic well-being and equity. Government intervention may be used to improve economic well-being and equity and, in turn, these interventions may generate further changes in economic activity.

Figure 3

Change is a central key concept in this real-world issue



Teacher-guided inquiry

Statement of inquiry: Conflicts and trade-offs may exist between a government's macroeconomic objectives: economic growth, low unemployment, low and stable inflation, sustainable level of government debt (HL only).

1. In groups, students are allocated three Organisation for Economic Co-operation and Development (OECD) countries. Using the OECD online databank, they research data for the countries, over a 5–10 year period. At this stage, the choice of indicators should be determined by the teacher, to enable analysis of data across groups. For example:
 - Gross national income (per capita, US dollars/capita)
 - Real gross domestic product (GDP) forecast
 - Unemployment rate (total % of labour force)
 - Inflation (Consumer Price Index) (total/food/energy, annual growth rate %)
 - Income inequality (Gini coefficient)
 - Central government debt % GDP (HL only)
 - Central government deficit % GDP (HL only)
2. Data is collated on a collaborative document so that data from all countries can be viewed by the whole class. Students then discuss the following questions.
 - Which countries have been most successful in achieving their macroeconomic objectives?
 - Which individual macroeconomic objective has been achieved most successfully?
 - Which individual macroeconomic objective has been achieved least successfully?
 - What might explain this?
 - What patterns can be observed between the different macroeconomic objectives?
 - What might explain these patterns?
3. Groups of students select four countries of their choice. They research five additional indicators for the countries, two of which should be environmental indicators. They review the OECD Better Life Index for the selected countries.
4. Following the research, each group discusses the following questions, based on their findings, and presents to the class.
 - What appears to be the relationship between economic growth and environmental **sustainability**?
 - What appears to be the relationship between economic growth and **equity**?
 - Suggest possible reasons for these relationships.
 - In which of the four countries is **economic well-being** highest? Justify your choice.

Student-directed inquiry

Statement of inquiry: Green growth means fostering economic growth and sustainable development. A variety of strategies have been proposed to promote green growth.

Having set the general context, and some standard guiding questions, the teacher allows students to determine the specific direction of their inquiry. They may also develop their own additional questions. The inquiry may focus on a specific country and/or a specific strategy. It may focus on a success or on a challenge and how this might be overcome. A good starting point for students would be the OECD Green Growth resources but they may choose to research beyond this.

Standard guiding questions for all students.

- Why is green growth important?
- In what ways might pro-environment initiatives help an economy achieve other macroeconomic objectives?

- In what ways might pro-environment initiatives hinder an economy's ability to achieve other macroeconomic objectives?
- How might green growth be connected to **sustainability, equity, economic well-being** or **efficiency**?
- Should governments **intervene** to promote green growth?

Teacher-guided inquiry

Statement of inquiry: Unemployment has different causes and impacts different groups in society to varying degrees.

1. At the start of topic of unemployment the teacher provides the students with a range of unemployment data. A guided discussion takes place to explore the data. This could take the form of an "I see, I think, I wonder" activity (Project Zero 2016).
2. Good sources of data include Eurostat and the US Bureau of Labor Statistics. Data selected might include:
 - unemployment rate
 - unemployment by age
 - unemployment by gender
 - unemployment by educational attainment
 - long-term unemployment.
3. Students develop inquiry questions that they will address throughout their learning of the topic of "unemployment".
4. At the end of the topic, the teacher leads a class discussion focused on the questions developed by the students.

Concept-based exit cards

Towards the end of the real-world issue, students are given an exit card. They are asked to reflect on one key concept that they feel is strongly connected to their learning. On the exit card they write:

- the key concept
- how it is connected with the theories and issues covered.

The teacher collects the exit cards and shares some of the main themes in the following class.

References

- Eurostat. (1995-2021). *Eurostat: Your key to European statistics*. <https://ec.europa.eu/eurostat/>.
- OECD. (No date). *OECD Better Life Index*. <https://www.oecdbetterlifeindex.org/>.
- OECD. (2018). *Green growth and sustainable development*. <https://www.oecd.org/greengrowth/>.
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- Project Zero. (2016). *See, think, wonder*. Harvard Graduate School of Education. <http://www.pz.harvard.edu/resources/see-think-wonder/>.
- U.S. Bureau of Labor Statistics. (2016). U.S. Bureau of Labor Statistics. <https://www.bls.gov/>.

Real-world issue 4

How do governments manage their economy and how effective are their policies?

Intervention is a central key concept in this real-world issue. A government's choice of intervention must take into account its macroeconomic priorities as well as potential impacts on economic well-being and equity. The effectiveness of a policy intervention is impacted by political, economic, social and environmental factors.

Figure 4

Intervention is a central key concept in this real-world issue



Teacher-guided case-based inquiry

Statement of inquiry: The overarching goal of supply-side policies is to increase an economy's productive capacity and promote long-term economic growth. Supply-side policies vary in their effectiveness and in their impacts on stakeholders.

1. The teacher selects an economy to be the focus of the activity. Students are informed that, having carried out research into the economy, their task will be to recommend two supply-side policies to promote economic growth. This requires them to present an advisable course of action with appropriate supporting evidence/ reason in relation to a given situation.
2. The teacher may choose to direct the students towards specific resources or provide more general guidance. Labour laws, inequality, health and education standards, infrastructure and productivity are all relevant indicators. The World Economic Forum's Global Competitiveness Index, Country/Economy Profiles (World Economic Forum 2017–2018) is a useful resource.
3. Students or groups of students present their recommendations to the class. After the presentations of policy recommendations, the teacher guides a discussion or students are asked to reflect on the following.
4. Which of the following key concepts was the strongest factor in determining your policy decision: **efficiency, equity** or **economic well-being**?
5. To what extent might you have made a different choice, if you had considered this through a different key concept "lens"?
6. To what extent is the best **choice** of policy dependent on a country's current situation?

Teacher-guided inquiry

Students select one or more countries and collect data on interest rate, unemployment rate, inflation rate and economic growth over a 5- or 10-year period. The Trading Economics website (Trading Economics 2021) is a good source of this data.

Students collate the data in graphical or tabular form and consider the following questions.

- What relationships can you observe between interest rates and each of the other economic indicators?
- To what extent does it appear that monetary policy has enabled the country to achieve a low and stable rate of inflation, low unemployment and economic growth?
- What might have been the constraints on monetary policy over this period?
- How might different stakeholders have been affected by the monetary policy **choices**?
- What further information would be required in order to confidently determine the effectiveness of the country's monetary policy over this period?

Categorizing policies using concept graphs

The teacher creates several concept graphs, each with a different combination of key concepts on the x- and y-axes. See the *Economics teacher support material* section called "Possible concept-based learning activities" and figure 1 for further details.

At the end of real-world issue 4, groups of students write short summaries of the policies and examples they have learned on sticky notes. They then place each sticky note onto the concept graphs in the places they feel most appropriate. Different groups then compare and discuss the graphs they have created.

References

Trading Economics. (2021). *Trading economics: 20 million indicators from 196 countries*. <https://tradingeconomics.com/>.

World Economic Forum. (2017–2018). *World Economic Forum global competitiveness index, country/economy profiles*. <https://reports.weforum.org/global-competitiveness-index-2016-2017/country-profiles/>.

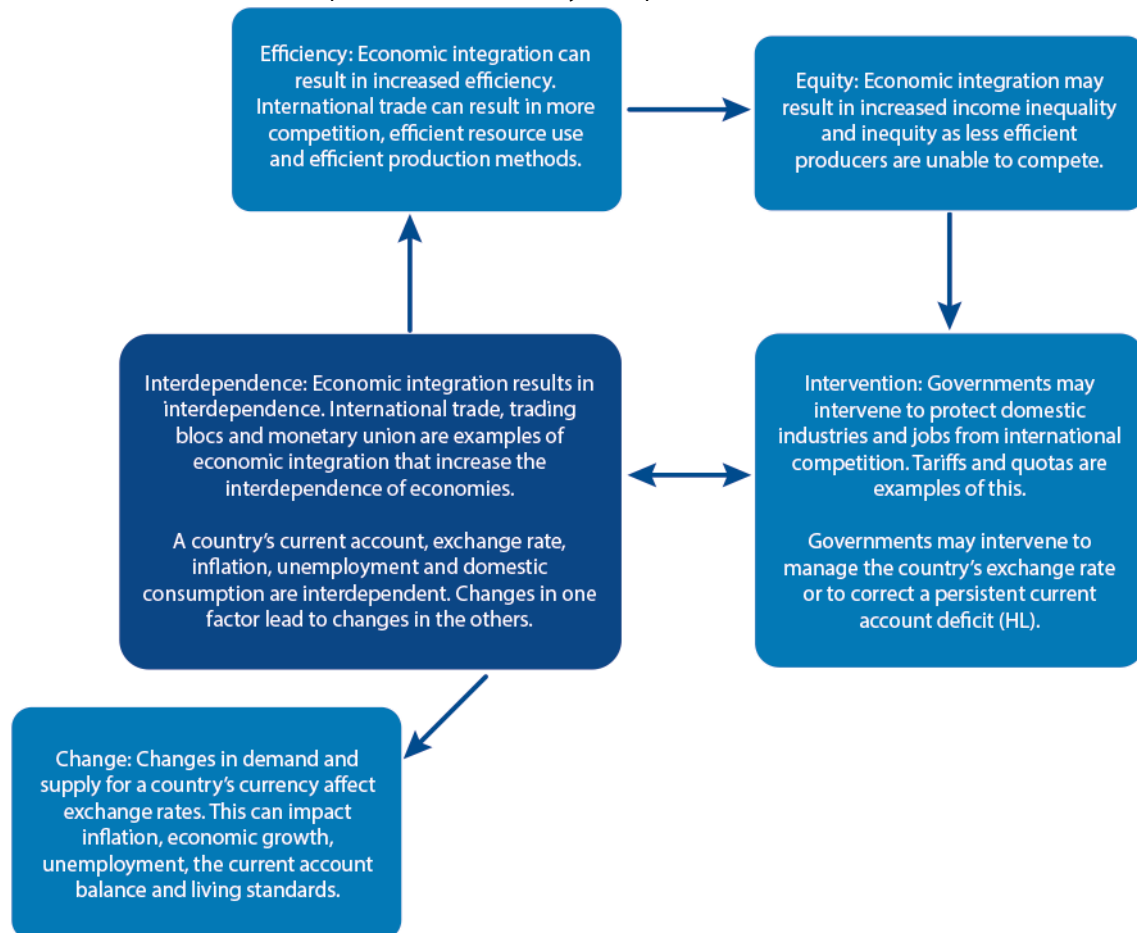
Real-world issue 5

Who are the winners and losers of the integration of the world's economies?

Interdependence is a central key concept in this real-world issue. Increased economic interdependence has both positive and negative impacts on efficiency, economic well-being and equity. It also exposes economies to greater degrees of change. Governments intervene in an attempt to manage the gains and losses from economic interdependence.

Figure 5

Interdependence is a central key concept in this real-world issue



Student-directed case-based inquiry

Statement of inquiry: Economic integration in the form of free trade agreements results in benefits and costs for stakeholders that may not be evenly spread.

This inquiry explores the impacts of the Association of Southeast Asian Nations (ASEAN) free trade area on its members. The overarching inquiry question is as follows.

- To what extent has the ASEAN free trade area resulted in improvements in **efficiency**, **economic well-being** and **equity** in member countries?

Students are required to develop their own inquiry questions, which should have a narrower focus. Some background research will be required to enable this. For example, students may choose to focus on one country or industry, and/or they may choose to focus on a defined range of indicators, for example, income, employment and equality. The students' choice of inquiry questions will then determine the resources they utilize.

Teacher-guided inquiry

Statement of inquiry: Change in the demand and supply of a currency has consequences for other economic indicators and for stakeholders in the economy.

1. Using an exchange rate database such as that of the European Central Bank statistics website (ECB 2021), students explore the exchange rate fluctuations of different countries and choose one for their focus. Alternatively, the teacher could choose a case based on knowledge of current economic events.
2. The students then search for recent news articles that can give insight into the changes. They may also research other key macroeconomic indicators for the country such as interest rates, current account balance and economic growth. They then answer the following.
 - Describe the **changes** in the exchange rate over the last two years.
 - Explain some of the possible causes of these **changes**.
 - How have these **changes** impacted the **economic well-being** of selected stakeholders?
 - What evidence is there of **interdependence** between the exchange rate and the current account?
 - Has any government **intervention** taken place to manage the exchange rate? If so, how effective has this been? If not, why might this be?

Applying the key concepts using connect, extend, challenge

This is adapted from Connect, Extend, Challenge (Project Zero 2015). The goal of the routine is to help students make connections between prior and new knowledge, in this case, related to key concepts. Following a new topic/case/problem learned, the teacher chooses a key concept, and asks students the following questions.

- How is the key concept connected to the topic/case/problem? In what ways is this connection similar to cases and issues you already know about?
- What new thoughts or ideas have you developed?
- What questions have been provoked?

References

European Central Bank. (2021). *Statistics*. <https://www.ecb.europa.eu/stats/html/index.en.html>

Project Zero. (2015). *Connect, extend, challenge*. Harvard Graduate School of Education. <http://pz.harvard.edu/resources/connect-extend-challenge>

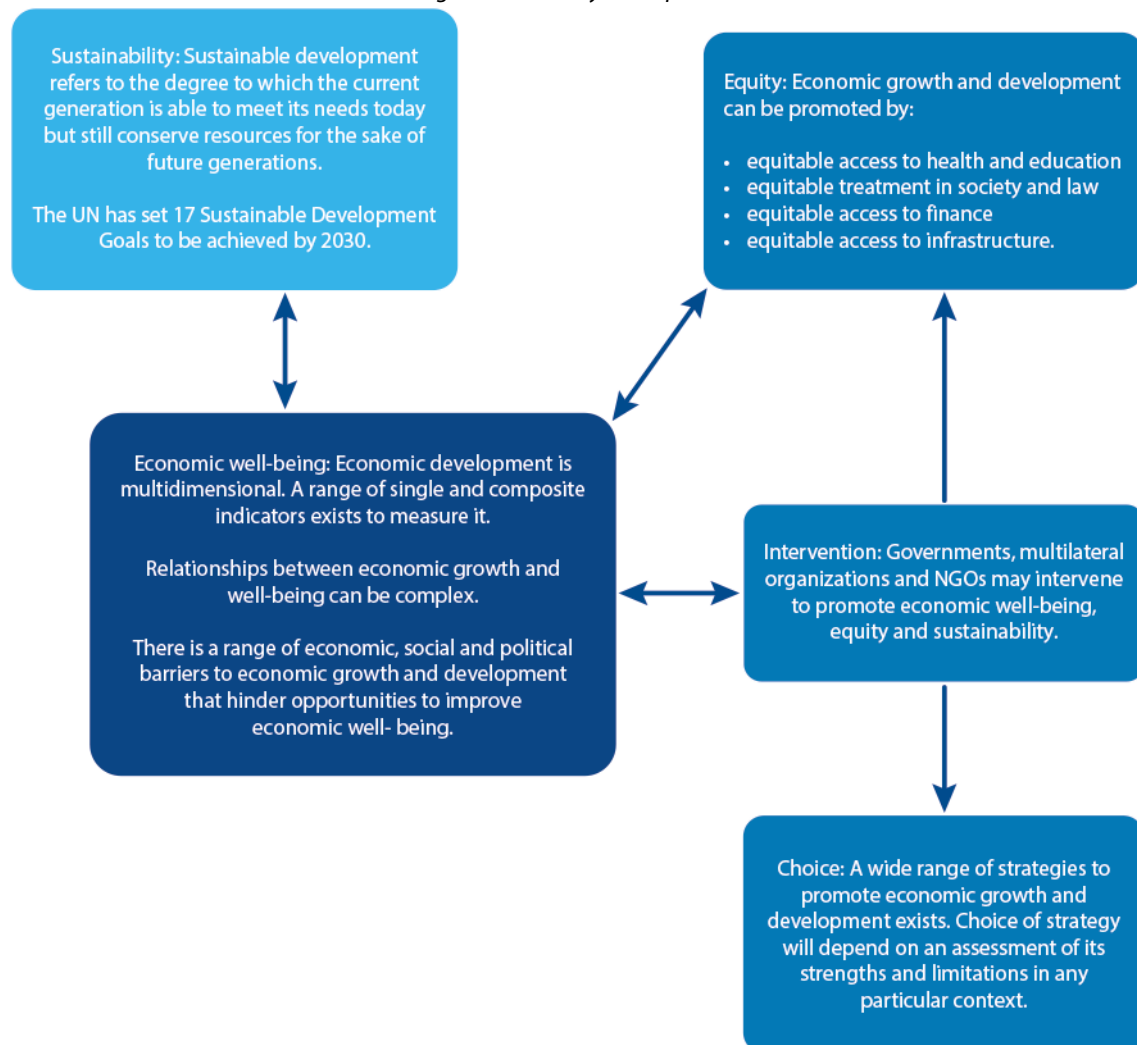
Real-world issue 6

Why is economic development uneven?

Economic well-being is a central key concept in this real-world issue as it is anchored in economic development. It has impacts on, and is impacted by, sustainability and equity. Choices of appropriate interventions for promoting economic development depend on economic, social, environmental and political factors.

Figure 6

Economic well-being is a central key concept in this real-world issue



Teacher-directed inquiry

Statement of inquiry: Economic development is multidimensional; however, the approach to measuring it has strengths and limitations.

1. Students choose five countries in a selected geographical region. For each country they collect the most recent data on the following composite indicators.
 - Human Development Index (HDI)
 - Gender Inequality Index (GII)
 - Inequality adjusted Human Development Index (IHDI)
 - Happy Planet Index
2. Students analyse the data and discuss the following.
 - How might **equity** and **sustainability** contribute to the **economic well-being** of citizens in a country?
 - Which of these indicators is the best for measuring the **economic well-being** of citizens in a country? Why?
 - To what extent does the best **choice** of indicator depend on the context of the countries being assessed?
 - Based on the data collected, which of the countries do you consider has the highest levels of economic development? Justify your decision.

Teacher-directed case-based inquiry

Statement of inquiry: Inward foreign direct investment (FDI) can have both positive and negative impacts on a country's economic growth and development.

1. The teacher chooses a case of a country that is heavily dependent on inward FDI in a specific sector. Suitable examples include the garment industry in Bangladesh and Cambodia.
2. Students are provided with source materials. Depending on time, they may be given the option to undertake further research. It should be noted that not all sources aim to present a balanced analysis. Students should be encouraged to consider reliability and bias as they research. For the case of the garment industry in Cambodia, a selection of sources could include the following.
 - World Bank data on Cambodia (The World Bank Group 2021)
 - *ASEAN Briefing: Cambodia's Garment Manufacturing Industry* (Rastogi, V 2018)
 - *Cambodia Garment and Footwear Sector Bulletin* (International Labour Organization 2018)
 - News articles such as *Will Cambodia's garment sector rebound after "horror year"?* (Blomberg, Dara 2020)
3. Students investigate the following questions.
 - In what ways has FDI in the garment industry promoted economic growth and/or economic development?
 - In what ways has FDI in the garment industry had a negative impact on economic growth and/or development?
 - On a scale of 1–5 (1=very harmful, 5=very beneficial), explain how you would rate the impact of FDI in the garment industry on the following in Cambodia:
 - equity
 - economic well-being
 - sustainability.

Teacher-guided inquiry

Statement of inquiry: Promoting sustainable economic development requires a range of multidimensional strategies, each of which has strengths and limitations.

1. Students begin by exploring the United Nations Development Programme's strategic initiatives (UNDP 2021b) which offer an integrated approach to achieving the UN sustainable development goals.

2. They then explore the “Stories” published under “Our impact” on the UNDP website (UNDP 2021a). Students select one of the “stories” that each illustrate a strategy applied in a specific geographical location. They present their findings on the following.
 - What problem or issue is being addressed? Why can this be considered a barrier to sustainable economic development?
 - What is the **intervention** being applied and what does it intend to achieve?
 - What are the strengths and limitations of the **intervention**?

References

- Blomberg, M. & Dara, M. (2020, December 18). *Will Cambodia's garment sector rebound after "horror year"?* Reuters. www.reuters.com/article/us-cambodia-garment-workers-feature-trfn-idUSKBN28S007
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- The World Bank Group. (2021). *Cambodia*. IBRD-IDA. <https://data.worldbank.org/country/KH>

Overview

The following additional lesson plan examples can be used by teachers to explore the course. The examples may be used as provided or adapted accordingly. Note that they are in two different forms (by unit or by integrating concepts and inquiry), showing the flexibility in approach.

Additional lesson plans

Unit 1: Introduction to economics

1.1 What is economics?

1.1 What is economics?	
<ul style="list-style-type: none"> Economics as a social science The problem of choice The production possibilities curve model (PPC) Modelling the economy 	
Conceptual understanding <ul style="list-style-type: none"> Economics is a social science characterized by interdependence, which focuses on how people interact with each other to improve their economic well-being, influenced and enabled by their values and their natural surroundings. Economic theories are based on logic and empirical data, using models to represent and analyse this complex reality. Individual and collective motivations and behaviours are complex and diverse, and their understanding entails the interaction of a variety of disciplines such as philosophy, politics, history and psychology. 	
Background information No background information is required.	Time required 40–45 minutes, including student presentations
Case-based inquiry (teacher directed) In this teacher-directed inquiry, students investigate and explain how economics, as a social science subject, could be characterized by interdependence, which focuses on how people interact with each other to improve economic well-being. Working in pairs, students read the following article about the way digital economy is blurring the boundaries between computer science and economics: Larson, G. (2021, March 31). Machine learning: Economics and computer science converge. <i>YaleNews</i> . https://news.yale.edu/2021/03/31/machine-learning-economics-and-computer-science-converge/ Then, using the internet, they investigate the nature of both the subjects: economics and computer science. In their pairs, students prepare a script for a short oral presentation (approx. 5 minutes) explaining how the interdependent nature of both subjects could remove the boundaries of traditional subjects. Students could consider the following inquiry questions. <ul style="list-style-type: none"> Why is economics considered a social science? How could innovation and research and development (R&D) bring two diverse subjects together? How could theoretical reasoning or quantitative methods be applied to social problems? 	
TOK link Many economists argue that economics as a social science is in its infancy, and that with time, as empirical testing methods and the quality of data improve, it will become more reliable in making accurate predictions. Do you agree with this statement?	

1.2 How do economists approach the world?

1.2 How do economists approach the world?

- Economic methodology
- Economic thought

Conceptual understanding

- Endless economic growth, based on the consumption of finite resources, cannot continue indefinitely. New economic models and social movements have challenged mainstream opinion about the purpose of growth and how the economy could be redesigned to support long-term prosperity.

Background information

Students should already have some knowledge and understandings of the following terms.

- Use of logic
- Use of hypothesis
- The *ceteris paribus* assumption
- Empirical evidence
- Refutation

Time required

40–45 minutes, including student presentations

Experiential learning

In this experiential learning activity, students explore the role of positive economics focussing on the use of logic, use of hypothesis, the *ceteris paribus* assumption, empirical evidence and refutation.

The class is divided in groups of three. Each group is given a pencil. For the first part of the activity, groups are asked to identify the different factors of production required to produce the pencil. Students discuss and share their answers within their group.

Students then watch the following video, where Nobel laureate Milton Friedman points out the remarkable degree of cooperation between people from many different countries, who've never even met, to make what appears to be a very simple product—a pencil.

Friedman, M. (2012). *I, Pencil*. Free to Choose Network. www.youtube.com/watch?v=67tHtpac5ws

In groups of three, students first debate whether they agree with this statement by Friedman: “the impersonal operation of prices that brought them together, and got them to cooperate to make this pencil so you could have it for a trifling sum”. They then prepare a (PowerPoint) presentation on how the following are connected to Friedman’s narrative:

- use of logic
- use of hypothesis
- the *ceteris paribus* assumption
- empirical evidence
- refutation.

Students should use the internet to define and/or describe the terms and connect them to the video they have watched.

Students could consider the following inquiry questions.

- Can economic theories be based without logic and empirical data?
- To what extent do the collective motivations drive economic activities?
- To what extent does the *ceteris paribus* assumption hold true for all the economic theories?
- Can an individual behaviour influence a collective motivation in any economic model?

TOK link

1.2 How do economists approach the world?

The teacher could wrap up the lesson by discussing the following TOK question: “How realistic are economic models? How can we know what to include or exclude in a model?”

Unit 2: Microeconomics

2.1 Demand

2.1 Demand

- The law of demand—relationship between price and quantity demanded
- Demand curve
- Relationship between an individual consumer’s demand and market demand
- Non-price determinants of demand
- Movements along the demand curve and shifts of the demand curve

Conceptual understanding

- Interaction between consumers and producers in a market is the main mechanism through which resources are directed to meet the needs and wants in an economy.
- Consumer and producer choices are the outcome of complex decision-making.

Background information

No background information is required.

Time required

20–25 minutes

Experiential learning

In this experiential learning activity, students explore the role of different choices that lead to different outcomes with regards to demand.

Every student is asked to follow the link below to start the simulation game about the demand for food trucks.

Lumen Learning. (no date). *Simulation: Demand for food trucks*. <https://courses.lumenlearning.com/introbusinesswmopen/chapter/simulation-demand-for-food-trucks/>

Students enter their choice for the price of a drink and are able to see the changes in quantity demanded by customers. Students are also able to understand how the change in determinants of demand would enable a shift of the demand curve.

Students could consider the following inquiry questions.

- Why does an increase in price not always lead to a decrease in the quantity demanded?
- To what extent does a change in the price of a good yield the same proportional changes in the quantity demanded?
- How do consumers and producers make choices in trying to meet their economic objectives?
- How do the concepts of change and economic well-being impact the demand for a good or service?

TOK link

To what extent does the assumption of rational consumer choice and rational self-interest play a role in building up this law of demand?

2.2 Supply

2.2 Supply

- The law of supply—relationship between price and quantity supplied
- Supply curve

2.2 Supply

- Relationship between an individual producer's supply and market supply
- Non-price determinants of supply
- Movements along and shifts of the supply curve

Conceptual understanding

- Interaction between consumers and producers in a market is the main mechanism through which resources are directed to meet needs and wants in an economy.
- Consumer and producer choices are the outcome of complex decision-making.
- Factor mobility is important in facilitating economic change and efficiency.

Background information

Students should already have some knowledge and understandings of the following terms.

- Law of demand
- Law of supply
- Determinants of demand and supply

Time required

40–45 minutes

Problem-based learning (PBL)—guided PBL investigation

In this PBL learning activity, students investigate the reasons for an increase in the price of lumber, which has increased by more than 252% during the Covid-19 pandemic in the United States.

In pairs, students watch the following video and source other news articles.

- Video: Wall Street Journal. (2021, 19 April). *How the pandemic made lumber America's hottest commodity*. www.youtube.com/watch?v=m_5MkGbXXKc/.

Each pair makes an infographic using any online infographic tools to explain the following.

- Identification of the issue/problem
- How is the increase in price associated with the supply of lumber?
- What are the major factors that influence the surge in price?
- How does an increase in price of lumber influence some key stakeholders?

(Example online infographic tools: venngage.com, piktochart.com, canva.com or visme.co)

Students can use the internet for further research. They should present their findings as an infographic (or a visual poster).

Students could consider the following inquiry questions:

- What does the relationship between price and the quantity supplied look like in the context of the lumber market in the US during the COVID-19 pandemic?
- Which non-price factors influence the supply of lumber?
- To what extent does the lumber market, as shown by the article and the video, defy the economic theory of supply and demand?

TOK link

To what extent should economic decision-making be based on ethical consideration as opposed to empirical evidence?

2.3 Competitive market equilibrium**2.3 Competitive market equilibrium**

- Demand and supply curves forming a market equilibrium
- Functions of the price mechanism
- Consumer and producer surplus

2.3 Competitive market equilibrium	
<ul style="list-style-type: none"> • Social/community surplus • Allocative efficiency at the competitive market equilibrium 	
Conceptual understanding <ul style="list-style-type: none"> • Welfare is maximized if allocative efficiency is achieved. • Constant change produces dynamic markets. 	
Background information Students should already have some knowledge and understandings of the following terms. <ul style="list-style-type: none"> • Demand • Supply • Market equilibrium 	Time required In-class time: 15 minutes Time outside class: Breaktime/lunch time, 15 minutes for 5 days
Experiential learning In this experiential learning activity, students develop an understanding of how the interaction of buyers and sellers in free markets enables goods, services and resources to be allocated. Students come to understand that relative prices, and changes in price, reflect the forces of demand and supply and help solve the economic problem. Resources needed: Home-baked goods (for example, biscuits or cookies), a place to sell the home-baked goods in school during break/lunch time. Duration: This exercise requires students to sell the home-baked goods for an entire school week. They will need 15–20 minutes (depending on the length of the school break). Scenario: In groups of 4/5, students sell home-baked goods. All groups should try to keep the size and ingredients the same so that price becomes the only major variable factor. Groups work out the cost of all the ingredients and the fixed costs. They then calculate the total cost per item and set a price for one item. Every day, groups should sell items at different prices and try to monitor the number of sales and the number of unsold items. Prices should be realistic (not less than the average cost of the item). All of the groups should collate the data and draw the market clearing quantity demanded/supplied and price, using this data. The groups then show their findings to the class and explain the following. <ul style="list-style-type: none"> • What is the final price the group would set for one home-baked good at the end of the week? • Why might keeping a lower price not be a good strategy in the medium and long term? • Why are some groups more or less successful in selling home-baked goods? • What are the other non-price factors that may have contributed to their sales? 	
TOK link How can policy-makers know the price that consumers are willing and able to pay in order to purchase a good or service?	

2.4 Critique of the maximizing behaviour of consumers and producers (HL only)

2.4 Critique of the maximizing behaviour of consumers and producers (HL only)
<ul style="list-style-type: none"> • Rational consumer choice • Behavioural economics in action • Business objectives
Conceptual understanding <ul style="list-style-type: none"> • Government intervention is effective, to varying degrees, in different real-world markets.

2.4 Critique of the maximizing behaviour of consumers and producers (HL only)**Background information**

No background knowledge of any economic theory is required.

Time required

40 minutes, including debating time

Case-based learning: guided investigation

In this teacher-guided inquiry, students investigate and explain how nudge theory could be useful in selected scenarios.

The teacher divides the class into four groups. Each group investigates different articles to evaluate the effectiveness of nudge theory in different contexts. The contexts and the links to the relevant articles are listed here.

Group 1: Nudge theory in negotiations—Gale, A. (2020). *Nudge theory in negotiations*. Management Today. www.managementtoday.co.uk/nudge-theory-negotiations/food-for-thought/article/1689854/.

Group 2: Nudge theory in workplaces—Agarwal, M. (2020). 'Nudging' to create a better workplace: Nudge theory in practice. Inc42. <https://inc42.com/resources/nudging-to-create-a-better-workplace-nudge-theory-in-practice/>.

Group 3: Nudge theory as a public policy tool—Lokeshwarri, S. K. (2020). *Is 'nudge' a desirable public policy tool?* The Hindu Business Line. www.thehindubusinessline.com/opinion/columns/is-nudge-a-desirable-public-policy-tool/article33126549.ece/.

Group 4: Nudge theory to prevent vaccine hesitancy during Covid-19—Jain, S. (2020). *Vaccine to vaccination: Using nudge theory to prevent vaccine hesitancy*. Observer Research Foundation. www.orfonline.org/expert-speak/vaccine-to-vaccination-using-nudge-theory-to-prevent-vaccine-hesitancy/.

Each group engages in a debate on the effectiveness of the nudge theory in modern life. The following resource could be used to help understand the process and the flow of a standard debate.

Manitoba. (No date). *Conducting a debate*. Manitoba. www.edu.gov.mb.ca/k12/cur/socstud/frame_found_sr2/tns/tn-13.pdf

Students could consider the following inquiry questions.

- How could a favourable decision be manipulated without taking away the power for people to choose?
- Why could the effectiveness of the application of nudge theory be debatable?
- What is the major factor that might influence the effectiveness of nudge theory?

TOK link

In many ways nudge theory is connected to manipulation and deception (in a positive way). To what extent can manipulation and deception ever be good for individuals and societies?"

2.5 Elasticities of demand**2.5 Elasticities of demand**

- Concept of elasticity
- Price elasticity of demand (PED)
- Importance of PED for firms and government decision-making
- **Reasons why the PED for primary commodities is generally lower than the PED for manufactured products (HL only)**
- Income elasticity of demand (YED)
- Importance of YED (HL only)

Conceptual understanding

2.5 Elasticities of demand	
<ul style="list-style-type: none"> Welfare is maximized if allocative efficiency is achieved. Interaction between consumers and producers in a market is the main mechanism through which resources are directed to meet the needs and wants in an economy. 	
Background information Students should already have some knowledge and understandings of the following terms. <ul style="list-style-type: none"> Law of demand and supply Some basic understanding of elasticity and how it is measured 	Time required 20 minutes
Case-based learning: teacher-directed investigation In this teacher-directed inquiry, teachers should use the following inquiry questioning methods for students to reflect on and construct their understanding of elasticity of demand. <ul style="list-style-type: none"> Open-ended questions that encourage wider discussion and elaboration Probing questions that dig deeper and provide a fuller picture Leading questions that are designed to lead the respondent towards a certain desired positive or negative route Funnel questions, which are questions that narrow to a specific point The following series of questions and sequence could be considered. <ul style="list-style-type: none"> What is the current price of fuel (petrol and diesel) per litre? Thinking as consumers, what would students do if the price of fuel were to increase sharply? What would consumers think if cars ran on water instead of petrol and diesel? What are the other precious liquids that are used in daily life? Compare the price of fuel to other common household items. How would consumers respond to a change in the price of fuel? If they went to the petrol station and prices had doubled overnight, what would they do? When students buy something every day and/or buy it frequently, what percentage increase in price would make them stop buying it? If their favourite cappuccino costs 25% more, would this stop them stop buying it? Ask students to imagine they are buying a car: would a 50% increase in the price of the car matter? Why do businesses (for example, coffee shops, restaurant owners, estate agents) like to know how consumers will react to price changes? Students are expected to gradually construct the meaning of elasticity of demand with the support of their teacher.	
TOK link Teacher could use the following TOK link as a plenary: "How reliable are quantitative evidence in generating knowledge in economics?"	

2.6 Elasticity of supply

2.6 Elasticity of supply
<ul style="list-style-type: none"> Price elasticity of supply (PES) Reasons why the PES for primary commodities is generally lower than the PES for manufactured products (HL only)
Conceptual understanding

2.6 Elasticity of supply

- Interaction between consumers and producers in a market is the main mechanism through which resources are directed to meet the needs and wants in an economy.
- Factor mobility is important in facilitating economic change and efficiency.

Background information

- Law of demand and supply
- Some basic understanding of elasticity and how it is measured

Time required

60 minutes

Problem-based learning (PBL)—guided PBL investigation

In this PBL activity, students investigate the reasons for an increase in the price of a sachet packet of ketchup in the US. Prices of ketchup sachets are up 13% since January 2020, and their market share has exploded at the expense of tabletop bottles.

Students go through the following articles and videos by themselves to explore the reason.

Article links

- Haddon, H. & Gasparro, A. (2021). *The new shortage: Ketchup can't catch up*. The Wall Street Journal. www.wsj.com/articles/the-new-shortage-ketchup-cant-catch-up-11617645189/
- Callahan, C. (2021). *Ketchup shortage hits restaurants across the United States*. Today. www.today.com/food/ketchup-shortage-hits-restaurants-across-united-states-t214038
- Dean, G. & Kay, G. (2021). *A ketchup shortage in the US is causing prices to spike—and it could get harder to find ketchup packets at restaurants*. www.businessinsider.com/ketchup-shortage-price-increase-us-restaurants-fast-food-delivery-heinz-2021-4

Videos

- CGTN America. (2021). *Why is the U.S. seeing a ketchup shortage?* CGTN America. www.youtube.com/watch?v=m5dyXFdiY8o
- Reuters. (2021). *Ketchup can't catch up with a surge in demand, WSJ reports*. Reuters. www.youtube.com/watch?v=kElqpBkbEkA

For the final submission, students present their arguments taking the following points into account.

- Why is the price of tomato ketchup sachets constantly rising during the COVID-19 situation?
- How could elasticity of supply be helpful in explaining this issue?
- What does the elasticity of supply of a ketchup sachet look like?
- Why would the elasticity of supply be different for ketchup bottles and ketchup sachets?

TOK link

The teacher could use the following TOK link as a plenary:

"To what extent should economic decision-making be based on cultural considerations?"

2.7 Role of government in microeconomics**2.7 Role of government in microeconomics**

- Reasons for government intervention in markets
- Main forms of government intervention in markets
- Government intervention in markets—consequences for markets and stakeholders

Conceptual understanding

- The market mechanism may result in socially undesirable outcomes that do not achieve efficiency, environmental sustainability and/or equity.

2.7 Role of government in microeconomics

- Governments have policy tools which can affect market outcomes, and government intervention is effective, to varying degrees, in different real-world markets.

Background information

No background information is required.

Time required

60 minutes

Case-based learning: teacher-driven investigation

In this case-based inquiry activity, initially driven by the teacher, students investigate the argument for and against the economic merits of agricultural subsidies in the European Union (EU), especially the EU's Common Agriculture Policy (CAP). Students evaluate the extent to which agricultural subsidies are in the best interest of relevant stakeholders.

Students go through the following article and videos by themselves to understand CAP.

Article link

- European Commission. (1995–2021). *The Common Agricultural Policy at a glance*. https://ec.europa.eu/info/food-farming-fisheries/key-policies/common-agricultural-policy/cap-glance_en/.

Videos

- EU Food & Farming. (2020). *Common Agricultural Policy, 1964*. www.youtube.com/watch?v=1jrVNAH7vP4/.
- EU2017EE. (2017). *Why do we need the Common Agricultural Policy in the EU?* www.youtube.com/watch?v=hvIVJUrj8tQ/.
- Euronews. (2020). *Common Agricultural Policy: What is it? How does it work? How might it be about to change?* www.youtube.com/watch?v=1f1BSnLD8XE/.

The teacher then divides the class into two on the basis of students arguing for and against the CAP. Students could use the following debating style format to structure their argument.

- Debating Europe. (2021). *Arguments for and against the Common Agricultural Policy*. www.debatingeurope.eu/focus/arguments-for-and-against-the-common-agricultural-policy/#.YI5n_ZMzZQI/.

TOK link

How can the governments know which industries are worth subsidizing?

2.8 Market failure—externalities and common pool or common access resources**2.8 Market failure—externalities and common pool or common access resources**

- Socially optimum output: marginal social benefit (MSB) equals marginal social cost (MSC) (MSB = MSC): allocative efficiency; social/community surplus maximized
- Government intervention in response to externalities and common pool resources
- Strengths and limitations of government policies to correct externalities and approaches to managing common pool resources
- Importance of international cooperation

Conceptual understanding

- Resource overuse, resulting in challenges to environmental sustainability.
- Governments have policy tools which can affect market outcomes, and government intervention is effective, to varying degrees, in different real-world markets.

Background information

No background information is required.

Time required

60 minutes

2.8 Market failure—externalities and common pool or common access resources**Problem-based learning (PBL)—guided PBL investigation**

In this PBL activity students explore how overfishing and pollution of plastics in the ocean are jeopardizing the ocean ecosystem and damaging economic sustainability. Students in groups of three will go through the following resources provided by the teacher and prepare a (PowerPoint) presentation to discuss the possible and most effective solutions to these market failures.

Students will go through the following articles and videos for the task.

Article links

- Ikechi-Uko, N. (2020). *The impact of overfishing on the economy, ecosystem and social life*. South Florida Media Network. <http://sfmn.fiu.edu/the-impact-of-overfishing-on-the-economy-ecosystem-and-social-life/>.
- Strauss, K. (2014). *Report: Overfishing bad for fish, but worse for the economy*. Environmental Defense Fund. www.edf.org/blog/2014/04/02/report-overfishing-bad-fish-worse-economy/.
- Wellings, R. (2017). *Is there a free-market solution to overfishing?* Institute of Economic Affairs. <https://iea.org.uk/is-there-a-free-market-solution-to-overfishing/>.

Videos

- Johnson, A. E. & Jacquet, J. (2017). *Will the ocean ever run out of fish?* TED-Ed. www.youtube.com/watch?v=WNdR808jMSA/
- Alux.com. (2019). *Overfishing: How long until we run out of fish*. www.youtube.com/watch?v=eoc_pu9Tt2Y/
- Still Incurable. (2018). *Overfishing crisis: Mark Carney says "time is running out"*. www.youtube.com/watch?v=ZUmwop4RFRw/

Students could consider the following inquiry questions for their presentation.

- What is a common pool resource? What are the major characteristics?
- Why do governments intervene in response to common pool resources?
- What are the major problems governments face in dealing with common pool resources?
- Which specific types of government intervention (out of nine types in the *Economics guide* (for first assessment 2022) would be the most effective or least effective in the context of overfishing?

TOK link

How do we know the right time for a government to intervene in an economic problem?

2.9 Market failure—public goods**2.9 Market failure—public goods**

- Public good
- Government intervention in response to public goods

Conceptual understanding

- The market mechanism may result in socially undesirable outcomes that do not achieve efficiency, sustainability and/or equity.
- Resource overuse, resulting in challenges to environmental sustainability.
- Government intervention is necessary in different real-life scenarios.

Background information

Students should preferably have some knowledge and understandings of the following terms.

- Public good and merit good

Time required

40–45 minutes

2.9 Market failure—public goods	
<ul style="list-style-type: none"> A free rider problem 	
<p>Problem-based learning (PBL)—guided PBL investigation</p> <p>In this PBL activity, students explore different facets of the free rider problem and the tragedy of the commons. Students should watch the following videos and consult different resources to understand the theoretical framework of these.</p> <ul style="list-style-type: none"> Amendolare, N. (2017). <i>What is the tragedy of the commons?</i> TED-Ed. www.youtube.com/watch?v=CxC161GvMPc/ Marginal Revolution University. (2018). <i>What is the free rider problem?</i> www.youtube.com/watch?v=Uo51GDk8G1Q Khan Academy. (2021). What are public goods? www.khanacademy.org/economics-finance-domain/microeconomics/market-failure-and-the-role-of-government/externalities-topic/a/public-goods-cnx <p>Once students are familiar with the content, the teacher divides the class into three groups. Each group investigates the reasons for the free rider problem and explore why it is regarded as an economic problem. The group should also conduct further research into real-life examples of such issues. Possible exploration topics for each group include the following.</p> <p>Group 1: Free-riding leads to the under-production and/or overconsumption of a public good or service. Possible context: Wikipedia users</p> <p>Group 2: Overconsumption and over-exploitation of public goods can often lead to the tragedy of the commons. Possible context: public beaches exploited by tourists.</p> <p>Group 3: Free riders do not consider the external costs of their activities. Possible context: plastics damaging the natural environment.</p> <p>Students could consider the following inquiry questions.</p> <ul style="list-style-type: none"> Why might free-market systems fail to achieve allocative efficiency, resulting in either an over-allocation of resources or an under-allocation of resources? Why might the production of public goods lead to market failure? 	
<p>TOK link</p> <p>While discussing a merit good, the teacher may start a discussion on the topic of contraception. Contraception is often argued as a merit good, but in some religions and cultures it is regarded as sinful and seen as something that undermines religious and family values. How would a policy-maker know if contraception is a merit good or not?</p>	

2.10 Market failure—asymmetric information (HL only)

2.10 Market failure—asymmetric information (HL only)	
<ul style="list-style-type: none"> Asymmetric information Responses to asymmetric information 	
<p>Conceptual understanding</p> <ul style="list-style-type: none"> The market mechanism may result in socially undesirable outcomes that do not achieve efficiency, environmental sustainability and/or equity. Government intervention is necessary in different real-life scenarios. 	
<p>Background information</p> <p>Students should already have some knowledge and understandings of the following terms.</p> <ul style="list-style-type: none"> Asymmetric information Adverse selection 	<p>Time required</p> <p>40–45 minutes</p>

2.10 Market failure—asymmetric information (HL only)

- Moral hazard

Case-based learning—self-directed inquiry

In this case-based self-directed inquiry activity, students research the following inquiry question:

“Asymmetric information can lead to opportunistic behaviour in markets.”

Students choose two topics from those listed below and explore ways in which governments and individuals respond to minimize this opportunistic behaviour through legislation, provision of information, signalling or screening.

Topics

- Insurance policies
- Telecommunication services
- Real estate
- Job market
- Second-hand cars
- Food manufacturers

As the final outcome, students design a poster in support of the inquiry question using the two topics they have chosen.

Students could consider the following inquiry questions for their poster.

- Why might free-market systems fail to achieve allocative efficiency, resulting in either an over-allocation of resources or an under-allocation of resources?
- What are adverse selection and moral hazard?
- Can a government or individual completely eliminate the opportunistic behaviour of a producer or consumer through intervention?

TOK link

Can asymmetric information ever be deemed to be ethical in the real world of economics?

2.11 Market failure—market power (HL only)**2.11 Market failure—market power (HL only)**

- **Perfect competition—many firms, free entry, homogeneous products**
- **Monopoly**
- **Imperfect competition**
- **Rational producer behaviour**
- **Degrees of market power**
- **Advantages of large firms having significant market power**
- **Risks in markets dominated by one or a few very large firms**
- **Government intervention in response to abuse of significant market power**

Conceptual understanding

- The market mechanism may result in socially undesirable outcomes that do not achieve efficiency, environmental sustainability and/or equity.
- Market failure, resulting in allocative inefficiency and welfare loss.
- Governments have policy tools which can affect market outcomes, and government intervention is effective, to varying degrees, in different real-world markets.

Background information**Time required**

2.11 Market failure—market power (HL only)	
Students should already have some knowledge and understandings of the following terms.	40–45 minutes
<ul style="list-style-type: none"> • Market power • Perfect competition • Monopoly 	
Case-based learning—self-directed inquiry <p>In this case-based self-directed inquiry activity, students investigate two real-life incidents and link them to the unit they have studied. They are expected to research, explore the timeline, find out key issues, and identify the key economic theories to connect and evaluate the outcome by conducting individual research.</p> <p>Case 1</p> <p>In 2019, the European Union fined three car manufacturers, BMW, Volkswagen and Daimler, a total of €100 million for forming a cartel to buy steel. These three German car manufacturers colluded with steelmakers for the purchasing of the steel required for making gear wheels, steering rods and other important items.</p> <p>Case 2</p> <p>In 2004, the European Union fined Microsoft €497.2 million for abusing its “near monopoly” with its Windows operating system to crush competitors and gain the upper hand in markets for digital media players and low-end servers.</p> <p>Students should present their research using an infographic. They may consider the following inquiry questions for their presentation.</p> <ul style="list-style-type: none"> • Why might oligopolistic firms in the cartel agree to simultaneously raise their price to exploit customers by changing premium price? • How do the oligopolists adopt a pricing strategy to set prices at the level that discourages new firms from entering the industry? • What form of government intervention is effective in limiting the monopoly power of a firm? 	
TOK link <p>To what extent would an increase in competition in the economy be deemed as undesirable?</p>	

2.12 The market’s inability to achieve equity (HL only)

2.12 The market’s inability to achieve equity (HL only)	
<ul style="list-style-type: none"> • Workings of free-market economy may result in an unequal distribution of income and wealth 	
Conceptual understanding <ul style="list-style-type: none"> • Inequity, resulting in inequalities. • Governments have policy tools which can affect market outcomes, and government intervention is effective, to varying degrees, in different real-world markets. 	
Background information <p>Students should already have some knowledge and understandings of the following terms.</p> <p>Equity and equality</p>	Time required <p>40–45 minutes</p>
Case-based learning—teacher-directed inquiry <p>In this case-based, teacher-directed inquiry activity, students look at the United Nations’ website about the empowerment of women and investigate why a government might choose to improve gender equalities and the empowerment of women.</p>	

2.12 The market's inability to achieve equity (HL only)

In pairs, students explore the following websites and videos from the UN Women channel to become familiar with the content required to do the activity. They then choose a country and investigate the intervention of the government in terms of empowerment of the women in that country. Students should cover the country profile, government initiatives for the empowerment of women and the impact of the initiatives. As the final output, students carry out a 10-minute verbal presentation on their findings.

The Generation Equality Forum is a global movement for gender equality, convened by UN Women and co-hosted by the governments of Mexico and France.

- UN Women. (2010–2021). www.youtube.com/user/UNWomen/.
- UN Women. (2018). *Facts and figures: Economic empowerment*. www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures/.

Students could consider the following inquiry questions for their oral presentation.

- To what extent could equity be achieved without government intervention in markets?
- To what extent does intervention in markets always bring about improved economic well-being?

TOK link

How can policy-makers claim to know when an economic problem is sufficiently large to warrant a government intervention?

Activity 1

Economic thought group activity

Focus: Unit 1
Key concept: Change
ATL focus: Research, collaboration and communication skills
Objective: To guide students to attempt a 10-mark question in Paper 1 Economics SL/HL
Inquiry task: Economic thought group activity
<p>Curriculum expectation: 1.2 How do economists approach the world?</p> <p>Economic thought: origin of economic ideas in a historical context</p> <p>18th century: Adam Smith and <i>laissez faire</i></p> <p>19th century: classical microeconomics (utility); the concept of the margin; classical macroeconomics (Say's law); Marxist critique of classical economic thought</p> <p>20th century: Keynesian revolution; rise of macroeconomic policy; monetarist/new classical counter revolution</p> <p>21st century: increasing dialogue with other disciplines such as psychology and the growing role of behavioural economics; increasing awareness of the interdependencies that exist between the economy, society, and environment, and the need to appreciate the compelling reasons for moving toward a circular economy.</p>

Task

The teacher uses a series of steps to facilitate the group activity.

Step 1: Presentation

In groups, students prepare slide presentation based on their chosen economic schools of thought. Each slide should not have more than 20 words on it and images need to be cited. The groups could consider the following themes.

- Group 1: Feminist economics, behaviour economics, Austrian economics
- Group 2: Marxian and ecological economics
- Group 3: Institutionalist, evolutionary and complexity economics
- Group 4: Neoclassical and Keynesian economics

Each group then presents to the rest of the class for no more than 10 minutes. The presentation should explain the various economic thought processes. The slide presentations can be shared in a group folder.

Main source of reference

Network for Pluralist Economics (Netzwerk Plurale Ökonomik e.V.). (No date). *Discover the perspectives of economics*. www.exploring-economics.org/en/orientation/#discover/.

Students could research other sources to gain further understanding of their chosen economic school of thought.

Presentation rubric

The teacher can create their own presentation rubric or find and credit other sources.

Example source: Utah Education Network. (No date). *Oral presentation rubric*. www.uen.org/rubric/previewRubric.html?id=19/.

Step 2: Written assignment

The teacher explains the demands of the 10-mark level descriptors given in the “External assessment markbands—SL and HL” section of the *Economics guide* (first assessment 2022) and then assigns a possible question as a group/individual activity so the students should be given around 25 minutes to plan and write their answers. The teacher then marks the assessment based on the level descriptors.

Example of a 10-mark question

Explain how economic ideas have changed in a historical context from the 18th century to the 21st century. [10 marks]

Activity 2

Does government intervention help?

Focus: Unit 2	
Key concept: Intervention	
ATL focus: Thinking skills, research, collaboration and communication skills	
Objective: To guide students to attempt 15-mark questions in Paper 1 Economics SL/HL	
Inquiry task: When are markets unable to satisfy important economic objectives	
Curriculum expectation: 2.7 Role of governments in microeconomics	
The following topics need to be covered before this activity is undertaken in the classroom.	
Reasons for government intervention in markets <ul style="list-style-type: none"> Influencing market outcomes in order to: <ol style="list-style-type: none"> earn government revenue support firms support households on low incomes influence level of production influence the level of consumption correct market failure promote equity. 	Main forms of government intervention in markets <ul style="list-style-type: none"> Price controls: price ceilings (maximum prices) and price floors (minimum prices) Indirect taxes and subsidies Direct provision of services Command and control regulation and legislation

Task

The teacher uses a series of steps to facilitate the class activity.

Step 1: Review of types of government intervention

Students individually access and read the following material on the main types of government interventions and make notes while they read.

tutor2u. (2021). *Direct and indirect taxes*. <https://www.tutor2u.net/economics/reference/direct-and-indirect-taxes>

Corporate Finance Institute. (2015–2021). *Subsidy*. CFI Education Inc. <https://corporatefinanceinstitute.com/resources/knowledge/economics/subsidy/>.

Economics Help. (2021) *Price controls – advantages and disadvantages*. www.economicshelp.org/blog/621/economics/price-controls-advantages-and-disadvantages/.

SafetyLine. (2021). *Lone worker legislation vs regulation: What's the difference?* Tsunami Solutions Ltd. <https://safetylineloneworker.com/blog/legislation-vs-regulation-whats-difference/>.

Step 2: Creating presentations

The teacher divides students into small groups or students form their own groups. Each group researches and identifies examples of the various types of government intervention in an economy of their choice. Each group prepares a slide presentation which includes:

- an example/examples for **each type** of intervention in the recent past (less than five years)

- the **reasons** why the government might be intervening
- the consequence of the intervention on households, producers, government and the economy as a whole.

Students then present the examples of their chosen economies to the whole class and share their slide presentation.

Teachers can ensure that various types of economies are covered, ranging from developed to developing economies, newly industrialized economies to oil economies including economies across continents so that diverse perspectives are explored in the class. Teachers can also provide web addresses of leading newspapers and journals from various economies to facilitate effective research based on the currency, relevance/coverage, authority, accuracy, purpose (CRAAP) test for critiquing information.

Purdue University. (2021). *SURF introduction to literature reviews: Database search tips—CRAAP test for critiquing information*. Purdue University Libraries and School of Information Studies.

Presentation rubric

The teacher can create their own presentation rubric or find and credit other sources.

Example source: Utah Education Network. (No date). *Oral presentation rubric*. www.uen.org/rubric/previewRubric.html?id=19

Step 3: Written assignment

The teacher explains the demands of the 15-mark level descriptors for paper 1 in the “External assessment markbands—SL and HL” section of the *Economics guide* (first assessment 2022) and then assign questions as a group/individual activity so the students should be given around 45 minutes to plan and write their answers. The teacher will mark the assessment based on the level descriptors.

Example of a 15-mark Paper 1 question

Using real-world examples, discuss the consequences of a price ceiling on stakeholders. [15 marks]

Activity 3

How do governments manage their economy and how effective are their policies?

Focus: Unit 3
Key concept: Sustainability
ATL focus: Thinking skills, research, collaboration and communication skills
Objective: To guide students to attempt 15-mark questions in Paper 2 Economics SL/HL
Inquiry task: How do governments manage their economy and how effective are their policies?
<p>Curriculum expectation: 4.10 Economic growth and/or economic development strategies Strategies to promote economic growth and/or economic development</p> <ul style="list-style-type: none"> • Trade strategies <ul style="list-style-type: none"> a. Import substitution b. Export promotion c. Economic integration • Diversification • Social enterprise • Market-based policies <ul style="list-style-type: none"> a. Trade liberalization b. Privatization c. Deregulation • Interventionist policies <ul style="list-style-type: none"> a. Redistribution policies including tax policies, transfer payments and minimum wages • Provision of merit goods <ul style="list-style-type: none"> a. Education programs b. Health programs c. Infrastructure including energy, transport, telecommunications, clean water and sanitation • Inward foreign direct investment • Foreign aid <ul style="list-style-type: none"> a. Humanitarian aid/development aid b. Debt relief c. Official Development Assistance (ODA) d. Non-governmental organizations (NGOs) • Multilateral development assistance <ul style="list-style-type: none"> a. The World Bank b. International Monetary Fund • Institutional change

- a. Improved access to banking, including microfinance and mobile banking
- b. Increasing women's empowerment
- c. Reducing corruption
- d. Property rights
- e. Land rights

Task

The teacher asks students to research the economies of different countries. The teacher uses a series of steps to facilitate the class activity.

Step 1

Students, in small groups of four to five, are to choose one country and research the methods used by the country to achieve economic growth and development.

Step 2

Students in each group will collaboratively prepare a slide presentation that includes the following.

1. Group research that should cover the economic trends, geographic trends, environmental trends, demographic trends, political structure, cultural factors, and health and educational systems that influence the chosen country. A maximum of five slides is required and approximately 45 minutes should be spent on this.
2. The economic indicators of the chosen economy. A maximum of two slides is required and 45 minutes should be spent on this.

Step 3

Each member of the group is assigned a specialized area of research once the teacher has facilitated and ensured the students gained a general understanding of the following terms.

1. Trade strategies, diversification and social enterprise
2. Market-based policies and interventionist policies
3. FDI, aid, multilateral assistance
4. Institutional change

Step 4

In their groups, students research and discuss their specialized areas about how the chosen economy will be able to achieve economic growth and economic development by 2030 as given in the United Nation's sustainable development goals. Thirty minutes should be spent on this.

United Nations. (No date). *Sustainable development goals*. www.un.org/sustainabledevelopment/economic-growth/

Example of research area: What trade strategies will have to be in place to achieve the UN's sustainable goal of "Decent work and economic growth" by 2030?

Step 5

In each group, the collaborative slide presentation should contain each student's contribution from their chosen areas of research. There should be 2 to 3 slides per student.

Step 6

Students regroup as a whole class and each group presents their PowerPoint/Google slides.

Step 7

The teacher discusses the 15-mark paper 2 HL/SL level descriptors given in the "External assessment markbands—SL and HL" section of the *Economics guide* (first assessment 2022) with the whole class.

Step 8

The teacher hands out a paper 2 question paper to the students and asks them to individually answer the 15-mark question. The students are asked to plan their answers and incorporate the ideas or points learned through their group activities and presentations from other groups. Students have 40 minutes to write their answers.

Example of a 15-mark question in paper 2

Using information from the text/data and your knowledge of economics, discuss methods that Country X's government might employ to achieve greater economic growth and/or economic development. [15 marks]

Activity 4

How do governments manage their economy and how effective are their policies?

Focus: Unit 2, 3, 4
Key concept: Intervention, equity, economic well-being
ATL focus: Thinking skills, collaboration and communication skills
Objective: To guide students to attempt the 10-mark questions in paper 3 economics HL
Inquiry task: How do governments manage their economy and how effective are their policies?
Curriculum expectation: Broad conceptual understanding of Units 2, 3 and 4 subject concepts and theories

Task

The teacher uses a series of steps to facilitate the class activity.

Step 1

The teacher assigns a paper 3 HL question to the class (from the “Specimen assessments” given in the “Assessment” section of the Economics webpage (first assessment 2022) on the programme resource centre). Students, in small groups of three to four, are to solve part (a) of a paper 3 question.

Step 2

Once part (a) questions have been completed, students remain in their groups and then complete a fishbone analysis to identify the major causes and effects that have evolved in part (a) of the paper 3 specimen. In their discussions, students identify the main causes and effects that are related to producers, consumers, government, economy, foreign countries and other relevant stakeholders involved from the questions in part (a)

More can be read about fishbone analysis through the following link.

American Society for Quality. (2021) *Fishbone diagram*. <https://asq.org/quality-resources/fishbone/>.

Fishbone analysis is a general tool often used by business organizations to understand the cause and effect relationship in an organization. This tool can be adapted to understand the cause and effect relationship of an economy as given in the context of text/data provided in paper 3.

Step 3

Once the groups of students have completed the fishbone analysis, they can now brainstorm individually for possible economic solutions/policies to the problems/negative effects discovered through the use of the fishbone analysis tool.

To assist in the brainstorming, they can use the “Crazy Eights” design thinking technique. This article explains how to use the tool.

Stevenson, S. (2019). *How to run a Crazy Eights workshop*. Prototypr.io. <https://blog.prototypr.io/how-to-run-a-crazy-eights-workshop-60d0a67b29a/>.

This is a popular design thinking strategy that encourages students to come up with various ideas to solve problems in a short period of time, which is then followed by discussion of the best ideas and a vote to

identify the best fit idea/policy. Students need not sketch ideas but should write about the possible solutions e.g. increase interest rates, implement price control, etc.

Once possible solutions/policies have been generated, students can present their top three ideas of solutions/policies to the group.

This can then be followed by an evaluation of the solutions/policies using a model such as the feasibility, viability and desirability analysis model. More on this can be found in the following article.

Orton, K. (2017). *Desirability, feasibility, viability: The sweet spot for innovation*. Innovation Sweet Spot. <https://medium.com/innovation-sweet-spot/desirability-feasibility-viability-the-sweet-spot-for-innovation-d7946de2183c/>.

Feasibility, viability and desirability analysis is often used in business organizations as well as in design thinking to evaluate an idea or a solution/policy.

It can help to evaluate whether a policy is needed in the economy (desirability), whether it is implementable (feasibility) and whether it is sustainable (viability). Hence, the model can be applied to an economy as given in the context of text/data provided in paper 3.

Step 4

After each group has identified and evaluated their best solution/policy, the teacher can organize a class debate between the various groups to hear the different policy viewpoints to further strengthen students' understanding of economic policies.

Step 5

Students are then asked to individually answer part (b) of a paper 3 question, which can then be marked by the teacher based on the level descriptors given in the *Economics guide* (first assessment 2022).

Example of a part (b) paper 3 question

Using the data provided and your knowledge of economics, recommend a policy which could be introduced by the government of Country X in response to the expected fall in the world price of coffee.
[10 marks]