



Professional Development
Service for Teachers

An tSeirbhís um Fhorbairt
Ghairmiúil do Mhúinteoirí

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Economics

Economics National Seminar 2

WORKBOOK



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Economics National Seminar 2

Session 1 9:30 - 11:00

Key Messages

- Economics is a subject for all and through its exploration students will be prepared and empowered to contribute to society and meet future challenges with confidence.
- Strand 1 is a unifying strand, the themes of which permeate all strands of the Specification and will be progressively developed over the course of senior cycle.
- The inquiry-based approach to teaching and learning cultivates students' critical thinking skills in Economics by encouraging them to ask questions relating to the world around them and apply their learning in differentiated, collaborative, creative and innovative ways.
- The collection, organisation, analysis and interpretation of data allows students to hypothesise and critically evaluate economic concepts and theories, allowing them to form justifiable opinions/conclusions around economic issues.

The Need for Change

The documents on the link below are useful to understand the processes behind and reasons for the adoption of this new specification.

<https://www.ncca.ie/en/senior-cycle/curriculum-developments/subjects-and-frameworks-in-development/Economics>



https://www.curriculumonline.ie/getmedia/3342d8a2-1e22-4f17-b82b-a8134fe16eb3/LCEconomics_spec_2018.pdf

Activity - Taking Stock

1. In light of your engagement with the suite of supports, how have you come closer to realising your vision for student learning in Economics?

You may find the following questions helpful to frame your responses:

What?

- ... is the reality in my classroom?
- ... was I trying to achieve?
- ... actions did I take?
- ... was the response of my students?
- ... were the outcomes for the students? Myself?
- ... feelings did it evoke about the teaching and learning of Economics?
- ... has changed about my thinking in relation to the teaching and learning of Economics?

So what?

- ... does this mean for my students?
- ... does this mean for my practice in the future?
- ... other knowledge can I bring to the situation?
- ... is my new understanding of the situation?
- ... broader issues arise from the situation?

Now what?

- ... do I need to do in order to move the students closer to achieving the learning outcomes in line with the vision and objectives set out?
- ... broader issues need to be considered if my approach is to be successful?
- ... might be the consequences of this action?

Reference:

Adapted from Rolfe, G., Freshwater, D., Jasper, M. (2001) Critical reflection in nursing and the helping professions: a user's guide. Basingstoke: Palgrave Macmillan.

2. What unexpected learning has emerged for you?

Activity



The Young Economist of the Year provides an opportunity for students (first to sixth year) to engage in an inquiry-based approach to exploring core economic concepts that are both topical and of relevance to the world in which they live. Students are encouraged to integrate the use of data and information, digital media with quality investigation and economic analysis and present their findings and conclusions in a variety of creative ways.

Read the extract provided from a sample of student work and, in your groups, consider the following questions.

- 1.1 (a) Which learning outcomes are reflected in this piece of work?
 (b) How has the student shown evidence of their knowledge and understanding of the facts and revealed insights of their engagement with the learning outcomes?

Learning Outcome	Evidence

- 1.2 How has the student shown evidence of inquiry?

1.3 How has the ability to research, select, organise and process information and data from a variety of sources with due regard for rigour been demonstrated?

2 Following on from this, consider the processes that could take place (might have taken place) in teaching and learning to support a student in achieving the learning outcomes and realising a piece of work such as this.

Activity

Pages 7-9 in this booklet contain a small sample of data sources and tools which may be used in the Economics classroom. You will be assigned one of these to explore in more detail. Refer to the learning outcomes in **Strand 2** on page 17 of the Specification - ***How are economic decisions made?***

Suggest ways that the data source could be employed to explore **one** learning outcome from any of the following headings.

2.1 The market economy

2.2 The consumer (demand)

2.3 The firm (supply)

2.4 Government intervention in the market

Resource:

Learning Outcome:

**Related Learning
Outcomes:**

Suggested use:

Useful Websites

Statistical Repositories	
<p><u>CSO website</u> The Central Statistics Office is Ireland's national statistical office mandated to impartially collect, analyse and make available statistics about Ireland's people, society and economy in a variety of formats.</p>	<p>https://www.cso.ie/en/</p>
<p><u>Eurostat</u> The statistical office of the European Union</p>	<p>https://ec.europa.eu/eurostat/</p>
Irish and International Data and Policy Information	
<p><u>ESRI</u> Economic and Social Research Institute provides evidence-based research used to inform public policy debate and decision-making in the areas of sustainable economic growth and social progress.</p>	<p>https://www.esri.ie/</p>
<p><u>Where Your Money Goes</u> A graphical, easy-to-use tool for examining gross (Voted and Non-Voted) Government expenditure over a period of ten years. The data is presented in a variety of interactive charts, the elements of which may be clicked on to show a greater level of detail.</p>	<p>https://whereyourmoneygoes.gov.ie/en/</p>
<p><u>OECD</u> The Organisation for Economic Co-operation and Development (OECD) is an intergovernmental economic organisation focussing on economic and social policy. Data collected and analysed is presented in various formats.</p>	<p>https://data.oecd.org/ireland.htm</p>
<p><u>Irish Government Departments Portal</u> Portal to Irish government departments for access to statistical data, publications and reports.</p>	<p>https://www.gov.ie/en/help/departments/</p>
Banking	
<p><u>Central Bank of Ireland</u> Houses a wide range of financial statistics, analysis and commentary and policy documents on a broad range of financial developments in Ireland. Its education section includes competitions, resources and interactive games.</p>	<p>https://www.centralbank.ie/</p>

<p>ECB Provides a range of financial statistics, analysis and commentary and policy documents on a broad range of financial developments in the EU. Survey results and research papers can be accessed along with an education section which offers “explainers” in simple language, details of youth initiatives, games and apps.</p>	<p>https://www.ecb.europa.eu/home/html/index.en.html</p>
Global Organisations	
<p>WHO Agency of the United Nations that is concerned with international public health. Provides access to international and country specific statistical data, analysis and reports along with up to date research publications and reports on health-related matters. Links are provided to other databases housing health-related data which can inform economic research and decision-making.</p> <p>World Trade Organisation An international organization dealing with the global rules of trade. Provides a range of trade statistics, economic analysis and research that aims to deepen understanding about trends in trade, trade policy issues and the multilateral trading system.</p> <p>World Bank An international organization dedicated to providing financing, advice and research to low and middle income nations to aid their economic advancement. It provides a range of statistics, data and research information on development issues presented in a variety of formats including interactive visualisation tools.</p> <p>UNESCO The United Nations Educational, Scientific and Cultural Organization is a specialised agency of the United Nations which seeks to build peace through international cooperation in education, the sciences and culture. Access to statistics, research publications, multimedia archives, a digital library and links to http://uis.unesco.org/ database for sustainable development goals.</p>	<p>https://www.who.int/</p> <p>https://www.wto.org/</p> <p>https://data.worldbank.org/</p> <p>https://en.unesco.org/</p>

Available on Scoilnet - Free access via the Scoilnet portal on school broadband network.

National Newspaper Archives

Ireland's national database of Irish newspapers from every county in the country, to the current date.

<https://www.scoilnet.ie/scoilnet/tools-for-teachers/>

JSTOR

A digital library that helps you explore a wide range of scholarly content through a powerful research and teaching platform.

<https://www.scoilnet.ie/scoilnet/tools-for-teachers/>

World Book Online

Unlimited access to World Book Online through Scoilnet! Access to reliable information via databases for learners at every level for an immersive learning experience.

<https://www.worldbookonline.com/advanced/home>

Interactive Data Visualisation Tools

Our World in Data

Brings together the data and research on long-run trends reshaping our world. Interactive data visualizations show how the world has changed and uses scientific literature to explain why in an attempt to understand some of the world's largest problems.

<https://ourworldindata.org/>

Gapminder

Online data visualisation tools for exploring a wide range of global statistics.

<https://www.gapminder.org/>

Statista

Provider of market and consumer data, reports, forecasts, studies and infographics. (Basic version is free)

<https://www.statista.com/>

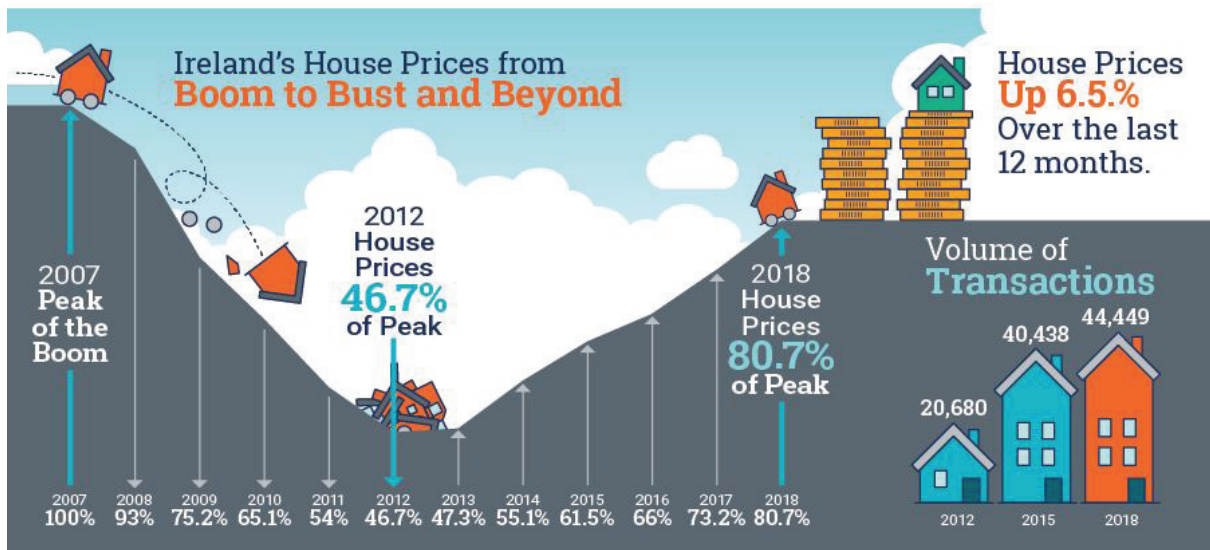
Others Shared

Session 2: 11.15 - 1.00

Key Skill	Elements
Information Processing	<p>Accessing information from a range of sources</p> <p>Selecting and discriminating between sources based on their reliability and suitability for purpose</p> <p>Recording, organising, summarising and integrating information</p> <p>Presenting information using a range of information and communication technologies</p>
Critical and Creative Thinking	<p>Examining patterns and relationships, classifying and ordering information</p> <p>Analysing and making good arguments, challenging assumptions</p> <p>Hypothesising and making predictions, examining evidence and reaching conclusions</p> <p>Identifying and analysing problems and decisions, exploring options and alternatives, solving problems and evaluating outcomes</p> <p>Thinking imaginatively, actively seeking out new points of view, problems and/or solutions, being innovative and taking risks</p>
Communicating	<p>Analysing and interpreting texts and other forms of communication</p> <p>Expressing opinions, speculating, discussing, reasoning and engaging in debate and argument</p> <p>Engaging in dialogue, listening attentively and eliciting opinions, views and emotions</p> <p>Composing and performing in a variety of ways</p> <p>Presenting using a variety of media</p>
Working With Others	<p>Working with others in a variety of contexts with different goals and purposes</p> <p>Identifying, evaluating and achieving collective goals</p> <p>Identifying responsibilities in a group and establishing practices associated with different roles in a group (e.g., leader, team member)</p> <p>Developing good relationships with others and a sense of wellbeing in a group</p> <p>Acknowledging individual differences, negotiating and resolving conflicts</p> <p>Checking progress, reviewing the work of the group and personally reflecting on one's own contribution</p>

<p>Being Personally Effective</p>	<p>Being able to appraise oneself, evaluate one's own performance, receive and respond to feedback Identifying, evaluating and achieving personal goals, including developing and evaluating actions plans Developing personal qualities that help in new and difficult situations, such as taking initiatives, being flexible and being able to persevere when difficulties arise Becoming confident and being able to assert oneself as a person</p>
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House Prices 2018



<https://www.cso.ie/en/interactivezone/visualisationtools/infographics/economy/>

Activity

Consider the infographic on Page 11. Selecting a learning outcome from Strand 2 describe how elements of Senior Cycle Key Skills could be developed by students while working with that data source.

Learning Outcome:

Information Processing

Critical and Creative Thinking

Communicating

Working With Others

Being Personally Effective

GAPMINDER TOOLS GUIDE

www.gapminder.org/tools

Lin / Log scale

X- and y-axis scales can be linear or logarithmic. A log scale can make it easier to see trends.

y-axis

Click here to select indicator for the y-axis

Sources and info

Click on (?) next to the indicator to view description, sources and additional info

Share graph

Creates a short link to the graph you've created. Share it with friends!

Language

If you're missing your language but want to help with translation let us know: info@gapminder.org

Blue Side panel

Shows up when the screen is large enough. When it's not, you can still reach all the things via buttons

Color

The countries on the graph are color-coded by regions. Click to choose another indicator for color

Search country

Start typing country name to find it in the selection list below

Select country

Select boxes to select specific countries (or click the bubbles)

Deselect

Click here to deselect all the bubbles

opacity slider

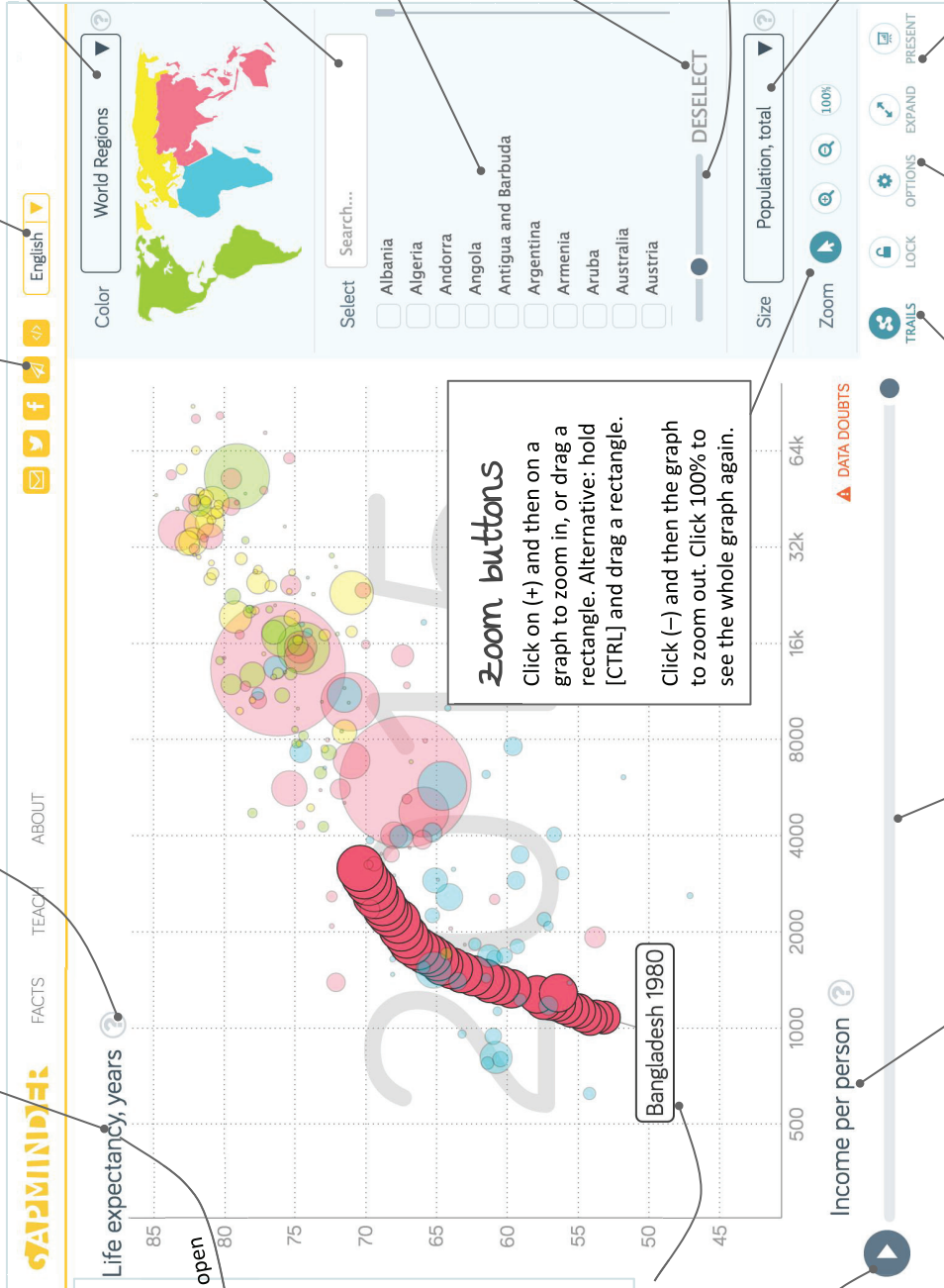
Drag to adjust visibility of non-selected countries

Bubble size

The size of the bubble normally represents the population of the country. Click here to make the size show another indicator

Expand

Toggles full-screen view. You can also increase font size in "Options"



Zoom buttons

Click on (+) and then on a graph to zoom in, or drag a rectangle. Alternative: hold [CTRL] and drag a rectangle. Click (-) and then the graph to zoom out. Click 100% to see the whole graph again.

More stuff..

Advanced controls, like "Size slider", "Play speed" and more are hiding here

Trails on/off

Click Trails to follow a selected country while the animation plays

Time

Drag the handle to change year

X-axis

Click here to select indicators for the x-axis

Bubble map

Scroll down to see the map and other tools



FEEDBACK www.getsatisfaction.com/gapminder/ MARCH 2016 THIS GUIDE IS ADAPTED FROM AN ORIGINAL IDEA BY WWW.JUICYGEOGRAPHY.CO.UK

Data Sources

Digital Sources

Gapminder.org - Online data visualisation tools for exploring a wide range of global statistics.

Gapminder - notes on use:

Non-digital sources

“The reports of the UN Intergovernmental Panel on Climate Change (IPCC) leave no room for doubt. The climate is warming. This is the case both globally and here in Ireland.¹ The changes we have seen are undoubtedly down to our emissions of heat trapping greenhouse gases (GHGs). The window of opportunity to avoid ever more severe impacts by reducing GHG emissions is rapidly closing. Climate change is not tomorrow's problem. Decisions taken today will significantly impact the climate and Ireland's exposure to climate change for many generations to come. Furthermore, several studies have highlighted how many recent extreme weather events have already been made considerably more likely due to human-induced climate change. It is imperative that the State takes action now.”

Report of the Joint Oireachtas Committee on Climate Action, p2

The purpose of carbon pricing is to put a cost on GHG emissions so that their social and environmental impact is reflected in the cost of fossil fuels. The Committee recommends increasing the existing carbon tax from €20 to at least €80 per tonne by 2030 when supports and protection mechanisms are in place, with the increased revenue being ring-fenced separately from general Exchequer funds by legislation.

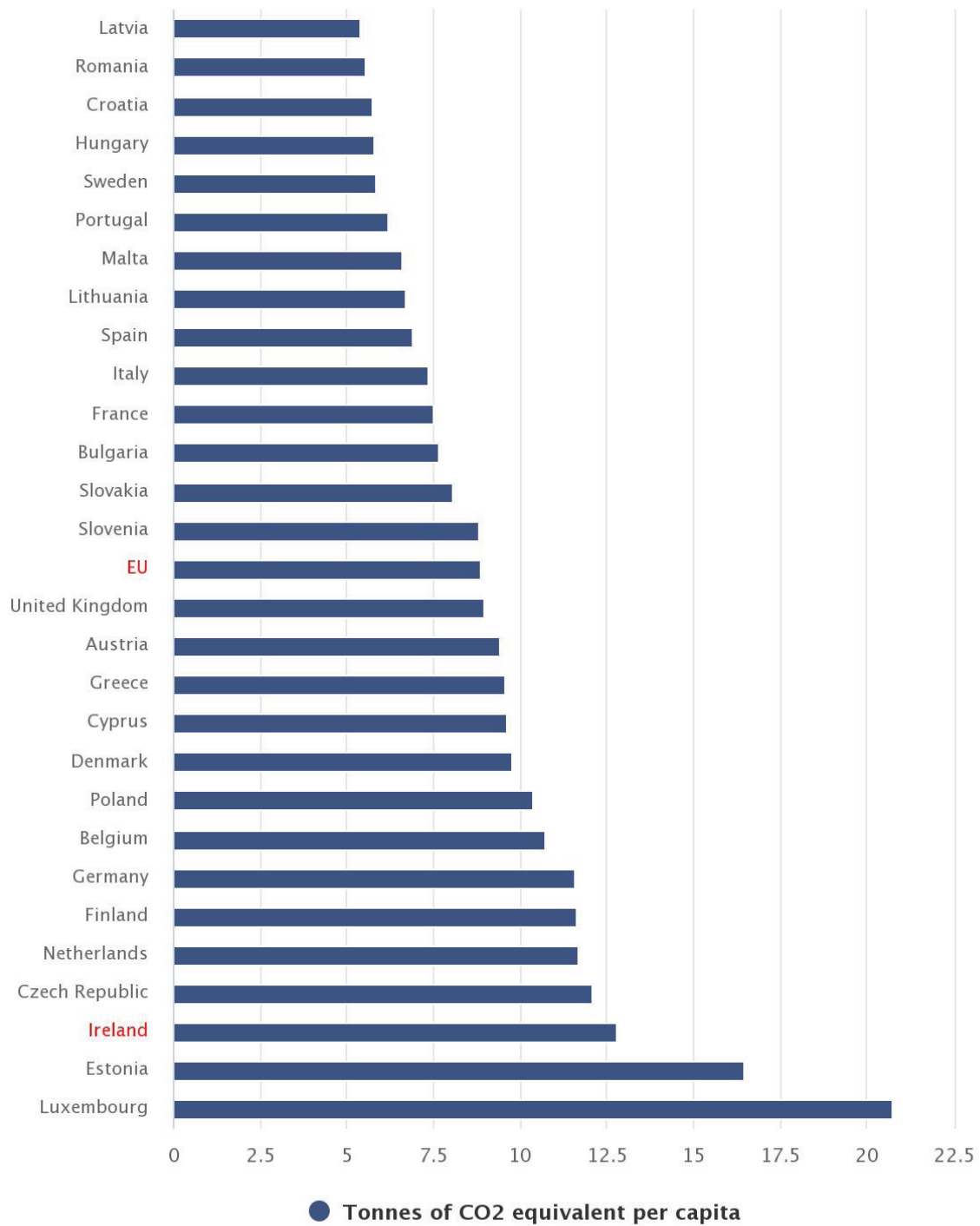
Report of the Joint Oireachtas Committee on Climate Action, p4

The Government must ensure that a balanced and equitable package of necessary financial incentives and instruments are put in place. These will need to be maintained for a sufficient period in order to make less polluting choices attractive, accessible and affordable for businesses, organisations and citizens so as to facilitate a societal shift to a low-carbon economy. These include both improved access to funding opportunities, grants and loans, but also pricing interventions to signal the much needed behavioural and investment change. The changes must be made at a pace and in such a way that the most vulnerable in society are protected. They must also be clearly communicated to the public to ensure the greatest possible level of public acceptance and uptake.

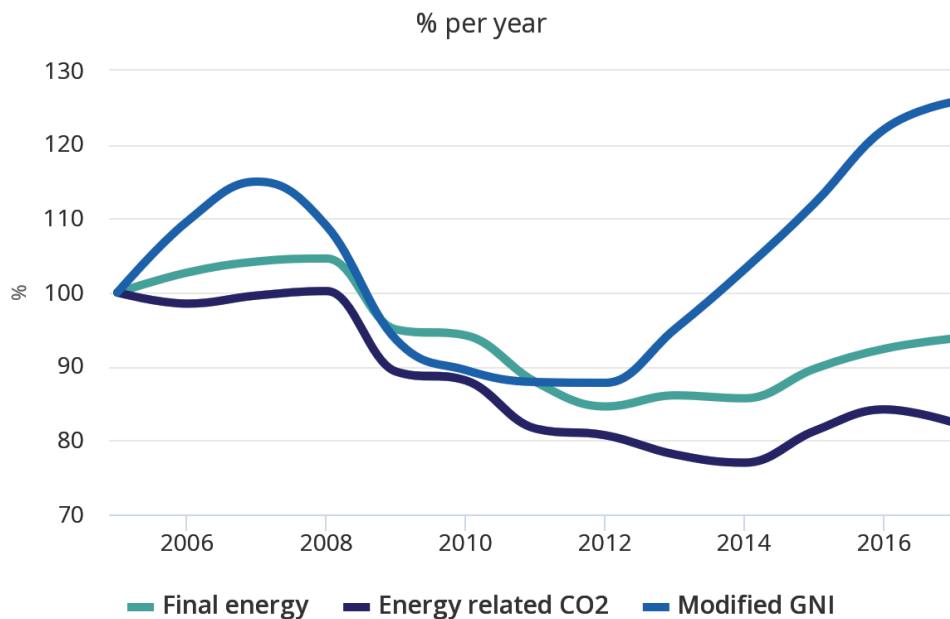
Report of the Joint Oireachtas Committee on Climate Action, p37

https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/joint_committee_on_climate_action/reports/2019/2019-03-28_report-climate-change-a-cross-party-consensus-for-action_en.pdf

EU: Greenhouse gas emissions per capita 2013



Source: Eurostat

Ireland: Economic activity, energy use and CO₂ emissions, SEAI 2019

Energy use is usually linked to economic activity. A growing economy leads to more goods being produced, purchased, transported, and more disposable income for people spend on travel or on heating their homes.

GDP is the most commonly used indicator for economic growth but in Ireland GDP can be disproportionately affected by the accounting of large multinationals. An alternative measure of economic activity developed by the Central Statistics Office is modified GNI.

Ireland's economy grew rapidly from the early 1990s up until the global financial crisis in 2007. Ireland's economy then contracted sharply between 2007 and 2010, and continued to shrink until 2012. From 2012 it returned to strong growth.

In Ireland, transport is the sector whose energy use is most sensitive to economic growth. Transport experienced the largest reduction in energy use during the recession and the largest growth since 2012. Most of this growth since 2012 has been from private car use.

In other sectors of the Irish economy energy use is not as closely tied to the economy. Ireland's economy is more based on the services sector than on manufacturing. Unlike most manufacturing, the services sector has lower energy use per unit of value added, and can significantly increase the value of its output without leading to a large increase in energy use.

Between 2011 and 2014 the economy grew, energy use remained flat and energy-related CO2 emissions fell. When emissions fall while the economy grows this is sometimes called absolute decoupling. Some reasons for this included:

- Record high energy prices
- Increased use of renewable energy technologies
- Higher efficiency vehicles, homes and businesses

Recent emissions trend

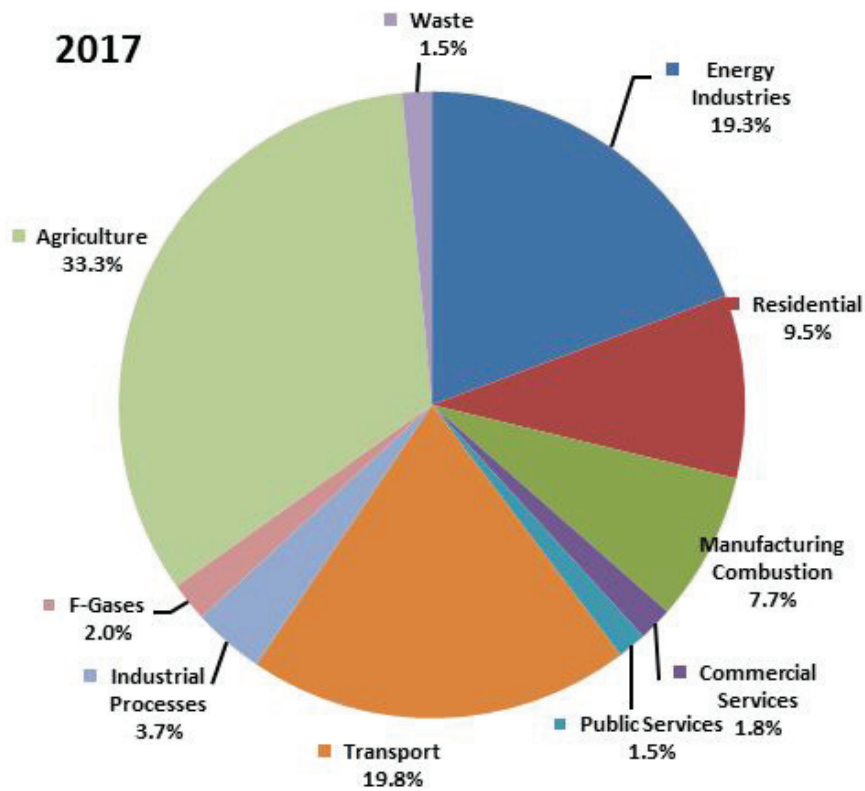
In 2015 and 2016, the economy continued to grow. At the same time energy use and associated CO2 emissions started to rise again, albeit at a slower rate than economic growth. This is sometimes called relative decoupling. Some reasons for this included:

- A fall in energy prices
- Economic growth
- Increased transport demand

Emissions fell in 2017 primarily due to lower use of coal in electricity generation and increased renewable generation mainly from wind.

www.seai.ie

Ireland's Greenhouse Gas Emission by Sector 2017, (EPA 2019)



- Energy Industries
- Residential
- Manufacturing Combustion
- Commercial Services
- Public Services
- Transport
- Industrial Processes
- F-Gases
- Agriculture
- Waste

Non-digital data sources - notes on use:

Reflecting on the Inquiry Task

What learning outcomes might students be exploring while engaging with this inquiry task?

Session 3: 2:00 - 3:30

Drawing on your experience of the rich task from session two earlier today identify and discuss what knowledge, attitudes and values students will need to develop in order to engage with economic data and information to form justified opinions and draw conclusions.

Knowledge	Attitudes and Values

How can we as teachers support these developments in class?

BLOOM'S TAXONOMY : More extended examples of skills, cue words and question stems

Competence	Skills Demonstrated	Question Cues:		
Knowledge	<ul style="list-style-type: none"> • Observation and recall of information • Knowledge of dates, events, places/major ideas • Mastery of subject matter • Factual recall 	list, define, tell, describe, identify, show, label, collect, examine, tabulate, quote, name, who, when, where, etc		
Knowledge Question stems:	Tell me about ...? Can you list ...? How many ...?	Where did ...? Who are the ...? Who said ...?	When did ...? Who wrote ...? When was ...?	What date did ...? What is ...? Where can you find ...?
Comprehension (understanding)	<ul style="list-style-type: none"> • Understanding information and grasp meaning • Translate knowledge into new context • Interpret facts, compare, contrast, order, group, infer causes and predict likely consequences • Suggest connections 	summarise, describe, extend, interpret, contrast, predict, associate, distinguish, estimate, differentiate, discuss, extend.		
Comprehension Question stems:	Can you list the sequence ...? What happened after ...? How do you know ...?	Who can explain ...? What is the difference between ...? How would you describe ...?		
Application	<ul style="list-style-type: none"> • Use information • Use methods, concepts, theories in new situations • Solve problems using required skills or Knowledge • Visualise actions in a real life/applied situation 	apply, demonstrate, change, calculate, complete, classify, illustrate, show, solve, test, examine, modify, relate, do, make, construct, discover, manufacture, make.		
Application Question stems:	How could this have happened in...? What factors would you change if ...? How would you react when ...?	What would you do if ...? What questions would you ask if ...? What would you need if ...?		
Analysis	<ul style="list-style-type: none"> • Seeing patterns & organization of parts • Recognition of hidden meanings • Identification of components • systematically consider data sets 	analyse, separate, order, explain, connect, classify, arrange, divide, compare, probe, explain, deduct, infer.		
Analysis Question stems:	How was this similar / different to ...? What was the problem with ...? What evidence proves ...?	Why did ... precede/follow ...? What are some of the motives behind ...? Do you think that ...?		
Synthesis	<ul style="list-style-type: none"> • Use old ideas to create new ones • Generalize from given facts • Relate knowledge from several areas • Predict and draw conclusions • Redefine what is known • Reconceptualise for new situations 	combine, integrate, modify, re-arrange, substitute, plan, create, design, invent, what if?, speculate, compose, formulate, prepare, rewrite, generalise, propose, model.		
Synthesis Question stems:	How would you design ... for ...? What would happen if ...?	What if we found out that ...? Could you see a possible solution to ...?		
Evaluation	<ul style="list-style-type: none"> • Compare and discriminate between ideas • Assess value of theories, presentations • Make choices based on reasoned argument • Verify value of evidence • Recognise subjectivity • Balancing evidence using criteria 	assess, decide, rank, grade, test, measure, recommend, convince, select, judge, explain, discriminate, support, conclude, compare, appraise, summarise.		
Evaluation Question stems:	Do you believe ...? How would you choose/assess ...? What would you judge ...?	Do you think ... is a good or bad thing? How effective is/are ...? On balance, what is the argument for...?		
Creativity	<ul style="list-style-type: none"> • Applies all of the previous categories to inform thinking and actions • Identifies and solves problems • Thinks independently and in new ways, able to originate and innovate • Collaborate as part of a team or be independent • Can empathise and shift perspective as needed 	design, imagine, conceive, innovate, hypothesise, investigate, produce, invent, experiment, craft, fashion, generate, inspire, excite, compose, vision, wrought,		
Creativity Question stems:	How would you respond to ...? How could you collaborate to ...?	Can you imagine how ...? If you had to find a new way to ...?		

Adapted from: Bloom, B.S. (Ed.) (1956) Taxonomy of educational objectives: The classification of educational goals: Handbook I, cognitive domain. New York; Toronto: Longmans, Green.

Gast (2019, 21)

Bloom's Taxonomy to support Critical Thinking

Suggested Verbs to Use to define the level of thinking and active challenge for Learning

1. KNOWLEDGE Identification and recall of information	Define Fill in the blank List Identify	Label Locate Match Memorise	Name Recall Spell	State Tell Underline
	Who? What? Where? When		Who? What? Where? When	
2. COMPREHENSION Organisation and selection of facts and ideas	Convert Describe Explain	Interpret Paraphrase Put in order	Restate Retell in your own words Rewrite	Summarise Trace Translate
	Re-tell in your own words. What is the main idea of		What difference exists between? Can you write a brief outline?	
3. APPLICATION Use of facts, rules and principles	Apply Compute Conclude Construct	Demonstrate Determine Draw Find Out	Give an example Illustrate Make Operate	Show Solve State a rule or principle Use
	How is an examples of? How is repeated to? How is significant?		Do you know of another instance where.....? Could this have happened to	
4. ANALYSIS Separating a whole into component parts	Analyse Classify Categorise Compare	Contrast Debate Deduct Determine the factors	Diagrams Differentiate Dissect Distinguish	Examine Infer Specify
	What are the parts or features of.....? Classify according to Outline/diagram/web/map		How does compare/contrast with? What evidence can you present for	
5. SYNTHESIS Combining ideas to form a new whole	Change Combine Compose Construct Create Design	Find an unusual way Formulate Generate Invent Originate Plan	Predict Pretend Produce Rearrange Reorganise Reconstruct	Revise Suggest Suppose Visualise Write
	What would you predict/infer from.....? What ideas can you add to? How would you create/design a new.....?		What solutions would you suggest for.....? What might happen if you combined..... with	
6. EVALUATION Developing opinions, judgements or decisions	Appraise Choose Compare Conclude	Decide Defend Evaluate Give your opinion	Judge Justify Prioritise Rank	Rate Select Support Value
	Do you agree that? Explain.....? What do you think about.....? What is most important?		Prioritise.....according to? How would you decide about.....? What criteria would you use to assess.....?	

Find at: <http://www.flickr.com/photos/vblibrary/4576825411/>

Ged Gast Creativity Consultant

22

Gast (2019, 21)

Select a learning outcome that was explored in the carbon tax inquiry in session two. Using the information on the previous pages construct two to three questions which challenge students' critical thinking skills in relation to that learning outcome. Use the space provided here to list those questions.

Learning Outcome:

Questions:

Based on the questions you have just developed consider the following;

1. What makes these questions effective?
2. How can they be used to support key skill development?
3. In what ways will these questions be used to support inclusion for all students in the class?

Assessment Criteria for the Research Study

Criteria	High Level of Achievement	Moderate Level of Achievement	Low Level of Achievement
Engagement with the topic			
Clarity and Insights Gained			
Relevance and Reliability			
Application of concepts and theories			
Manipulation of data			
Conclusions			
Reflection			

Having read the assessment criteria for the research study on pages 29-30 please consider the following questions:

1: In what ways could the different levels of knowledge on Bloom's taxonomy be used to develop the students' understanding of and engagement with the elements identified?

2: Consider what guidelines you can give your students when conducting research during their study of Economics based on your examination of the assessment criteria.

What Now?

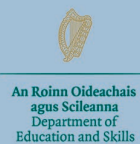
Please use this space to identify any steps or actions which you as a teacher can take based on your experiences today in your own classroom.

References

Gast Ged, (2019) Effective questioning and classroom talk to develop learning & higher order thinking, promoting imagination, speculation, creative thinking & to pitch a suitable challenge level p1-29 accessed May 7th 2019
http://www.nsead.org/downloads/Effective_Questioning&Talk.pdf



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