

## **Annotation of Evidence Set - Sequence One - Year 10 Geography Elective**

I planned and implemented a sequence of lessons using ICT and interactive data such as Google Public Data and the OECD Better Life Index to teach students how to interpret data to measure human wellbeing (Geography Elective - syllabus outcomes E5.1, E5.2, E5.10).

I introduced the concept of the geography of human wellbeing to the students by using “Maslow’s Hierarchy of Needs” to visually represent the needs we have as humans that contribute to whether we can have a high rate of human wellbeing. By using visual aids like this I am demonstrating my ability to differentiate for students who may benefit from visual representations (Tomlinson & Allan, 2000) **(1.3)**.

I then developed a lesson plan that incorporated both literacy and numeracy strategies. The lesson supported student’s literacy as the task was to look for the keywords in the glossary and write the definition in the book, I then checked the students understanding of the geographical terminology with strategic questioning. By asking students to understand and use geographical metalanguage in context I supported their literacy skills and ability to communicate geographical concepts and ideas. For the numeracy component, I focused on supporting student’s numeracy by teaching how to interpret radar graphs used on the OECD Better Life Index website, and how larger sectors of the graph represent the most important factors to that particular country’s human wellbeing **(2.5)**. It is important to include strategies for numeracy and literacy in all curriculum areas, as both of these components are key to opening up learning and understanding for students in all subject areas (ACARA, 2017).

After reflecting on this lesson and the comments from my supervising teacher, I noticed that the students became a little bit disengaged during parts of the lesson and that showing them the OECD Better Life Index website to start the lesson or planning a lesson for students to use the website themselves to find data would be engaging for them **(6.4)**. Therefore, with this constructive feedback from my supervising teacher I planned an ICT task incorporating the OECD Better Life Index website and Google Public Data. These online interactive data resources are useful for the assessment task, but are also engaging and therefore motivate students to complete the task **(3.4)**. According to Hattie (2009), using a scaffold makes students feel more capable of completing a task and therefore motivated to complete it. The ICT task I created was scaffolded, as each task was on a separate slide to allow students to work through each task at their own pace to accommodate for the needs of a diverse range of students **(1.3)**.

For formative assessment I asked students to upload their completed ICT task to the Google Classroom link so I was able to collect samples of student work **(5.1)**. By collecting these student work examples I was able to see how well students understood how to use Google Public Data and the OECD Better Life Index websites. I noticed that some of the students had trouble with knowing how to use the graphs to find information, therefore in the next lesson I offered feedback to students and demonstrated and modelled how to complete the task and went through the answers **(5.2)**. By collecting student work examples for formative assessment, as a response I was able to modify my teaching for the next lesson to include a review and demonstration of how to use these interactive data websites. According to William and Leahy (2015), this process of assessing to seeing where my students are at, and then using that data to inform my teaching is beneficial for students and maximises learning, therefore I embedded formative assessment into my planning and teaching.

In order to get feedback from my students I asked them to complete an Exit Card after the ICT task lesson to understand what they learnt from the task, what they enjoyed and what questions they still have. By using an Exit Card strategy for reflection I aimed to evaluate and improve my teaching strategies to suit the needs of my students and maximise learning and engagement **(3.6)**

## References

Australian Curriculum, Assessment and Reporting Authority (ACARA) (2017) Literacy. Retrieved from:  
<https://www.australiancurriculum.edu.au/f-10-curriculum/generalcapabilities/literacy/>

Australian Curriculum, Assessment and Reporting Authority (ACARA) (2017) Numeracy. Retrieved from:  
<https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/numeracy>

Hattie, J. (2010). *Visible learning: a synthesis of over 800 meta-analyses relating to achievement* ;. London: Routledge.

Tomlinson, C. A., & Allan, S. D. (2006). *Leadership for differentiating schools & classrooms*. Heatherton, Vic.: Hawker Brownlow Education.

William, D., & Leahy, S. (2015). *Embedding formative assessment: practical techniques for K-12 classrooms*. West Palm Beach, FL.: Learning Sciences International.

## PLANNING

# GOOGLE PUBLIC DATA TASK 1

1. Open this link : <https://www.google.com/publicdata/directory?hl=en>
2. Scroll down and click on the "Human Development Indicators" link
3. Look on the left-hand side of the page and you will see a list of different indicators
4. Click on "Education"
5. Then click on "Adult literacy rate"
6. Explore the data using the different graph and map options on the top right-hand side and answer the following questions

### **Questions:**

1. ***What data is the graph representing? (Click on the question mark next to "Adult literacy rate % ages 15 and older" to find the answer to this question)***
2. ***Why do we measure adult literacy rates?***
3. ***What source is this data from?***
4. ***What was the adult literacy rate of Niger in 2012?***
5. ***What was the adult literacy rate of Brazil in 2009?***
6. ***According to the map, which continent has the most countries with a low literacy rate? What do you think a low literacy rate means for human wellbeing?***

- After observing that the students really enjoyed using interactive data in the previous class I decided to create a scaffolded ICT task to engage students. This task also helps develop skills in interpreting graphs and accessing and understanding data for geographical research. **(2.6)**

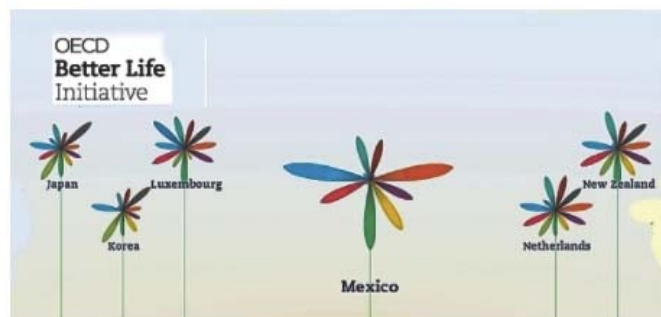
## MEASURING WELLBEING

- **Open the textbook to pages 300-301**
- **Find the definition of the words in bold and write them in your textbook**

- I developed lesson plans that incorporate both literacy and numeracy strategies. The literacy task supported students in recognising, understanding and using appropriate geographical terminology to communicate geographical concepts and ideas. The numeracy task focused on graphs and visual representation on data that helps support students numeracy and their understanding of geographical concepts. (2.5)

## USING RADAR GRAPHS

<http://www.oecdbetterlifeindex.org/responses/>



## TEACHING (ENGAGING STUDENTS)



- I chose to use these websites for an ICT task to engage students and demonstrate their usefulness for research in the geography of human wellbeing in different countries across the world. This was beneficial for their assessment task but also motivated the students to learn. (3.4)

## Public Data

- Human Development Indicators
  - Composite indices
  - Demography
  - Education
    - Adult literacy rate (% ages 15 a...
    - Education index
    - Expected Years of Schooling
    - Mean years of schooling (of adults)
    - Primary school dropout rate (% of ...)
  - Environmental sustainability
  - Gender

Clear

### Compare by Country

- Belarus
- Belgium
- Belize
- Benin
- Bhutan
- Bolivia (Plurinational State of)
- Bosnia and Herzegovina
- Botswana
- Brazil
- Brunei Darussalam
- Bulgaria

Clear selections



Search public data or change visualization



## Public Data

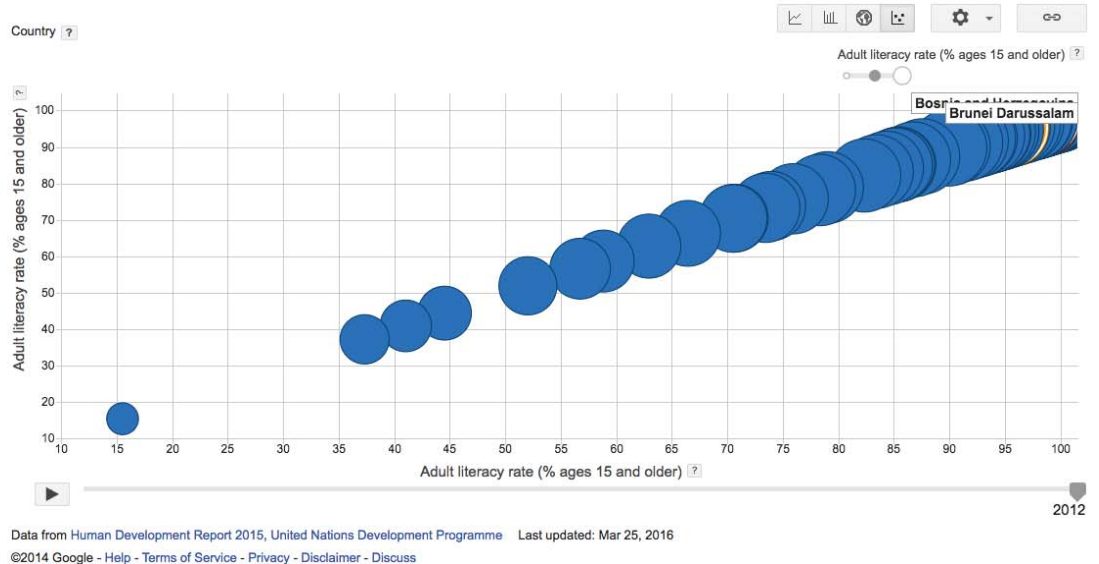
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  - Composite indices
  - Demography
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    - Adult literacy rate (% ages 15 a...
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## GOOGLE PUBLIC DATA TASK 1

1. Open this link : <https://www.google.com/publicdata/directory?hl=en>
2. Scroll down and click on the "Human Development Indicators" link
3. Look on the left-hand side of the page and you will see a list of different indicators
4. Click on "Education"
5. Then click on "Adult literacy rate"
6. Explore the data using the different graph and map options on the top right-hand side and answer the following questions

### Questions:

1. **What data is the graph representing? (Click on the question mark next to "Adult literacy rate % ages 15 and older" to find the answer to this question)**
2. **Why do we measure adult literacy rates?**
3. **What source is this data from?**
4. **What was the adult literacy rate of Niger in 2012?**
5. **What was the adult literacy rate of Brazil in 2009?**
6. **According to the map, which continent has the most countries with a low literacy rate? What do you think a low literacy rate means for human wellbeing?**

- By setting out each scaffolded ICT task on a separate slide students can work through each task at their own pace. (1.3)

## GOOGLE PUBLIC DATA TASK 2

1. Look on the left-hand side of the page and you will see a list of different indicators
2. Click on "Health"
3. Then click on "Life expectancy at birth"
4. Explore the data using the different graph and map options on the top right-hand side and answer the following questions

### Questions:

1. **What data is the graph representing?**
2. **Why do we measure life expectancy?**
3. **What source is this data from?**
4. **Watch the timeline on the bubble chart from 1980 to 2014.**
  - a) **Is life expectancy in most countries increasing or decreasing?**
  - b) **Did any countries move in between increasing and decreasing? If yes, why do you think this is so. (Click on the bubble to identify the country, this will help you answer the question).**
5. **What was the life expectancy of Australia in 2014?**

## OECD BETTER LIFE INDEX TASK

1. Open up this link: <http://www.oecdbetterlifeindex.org/#/33324323333>
2. Use the panel on the right to create your own better life index
3. Rate the topics in order of importance for you - the more colour in the bar, the more important it is to you
4. Submit your own created better life index to the OECD
5. Open the link <http://www.oecdbetterlifeindex.org/responses/>
6. Compare what your most important topic is with other people in Australia and the rest of the world.
7. Using the responses on the map answer the following questions

### Questions:

1. **According to the map, what is the most important topic to people in Australia?**
2. **According to the map, what is the most important topic to people in Mexico?**
3. **According to the map, what is the most important topic to the people of the country you have chosen for your assessment task?**

## ASSESSING

### Google Public Data

Through a line graph the data represent the decline or development of the percentage of adult over 15 years that can read and write.

It is important to measure literacy rates as it indicates education. And the importance of measuring education is it indicates human wellbeing.

The data comes from UNESCO Institute for Statistics.

15% of Nigerian's could read and right in 2012

90% of Brazilian's could read and right in 2009

Africa has the lowest literacy rates. This indicates that the country has low wellbeing

### Task 2

Number of years a newborn infant could expect to live if prevailing patterns of age-specific mortality rates at the time of birth stay the same throughout the infant's life.

It is important to measure newborn infant life expectance rate as it indicates health. And the importance of measuring health is it indicates human wellbeing.

- I used this ICT task as a formative assessment to assess student learning and their understanding of how to use Google Public Data and the OECD Better Life Index website to find and interpret relevant data related to human wellbeing indicators (5.1)

### Elective Geography Task

1. What is the Graph measuring? The percentage of the population ages 15 and older who can, with empathetic, both recite and write a short simple statement on their everyday life.
2. Why do we measure literacy rates? It is a good indicator of the systems that are in place so it also shows how well the country is run thus the quality of life.
3. What source is this data from? UNESCO Institution for Statistics (2015)
4. What was the adult literacy rate of Niger in 2012? 15.5%
5. What where the adult literacy rates for Brazil 2009? 90.3%
6. Which continent has the lowest literacy rates? Africa



Lesson Details			
Teacher Education Student		School	
Lesson duration	53 mins	Year: 10	Class: 10 Elective - Library lesson
Curriculum area	Geography	Topic: Human Wellbeing	Date: 18/10/2017
<b>Lesson Title/Focus:</b> What ways can we measure human wellbeing?			
<b>Syllabus Outcomes</b> GEE5-2 explains geographical processes and influences that form and transform places and environments GEE5-6 explains how perspectives of people and organisations influence a range of geographical issues GEE5-9 communicates geographical information to a range of audiences using a variety of strategies and geographical tools			
<b>Lesson Intentions (at the end of this lesson students will...knowledge, skills, attitudes, understandings)</b> <u>By the end of this lesson students will:</u> <ul style="list-style-type: none"> <li>Have discussed the different ways human wellbeing can be measured</li> <li>Have looked at different perspectives people and organisations have on measuring human wellbeing</li> </ul> <b>Graduate Teacher Standards addressed:</b> 2.6 Incorporates digital literacies - By using Google My Maps students can interactive with a world map to discover information, photo, videos and links about the different ways human wellbeing is measured			
<b>Assumed knowledge (ie topic, conceptual understandings, language structures and features, literacy, numeracy and ICT skills, previous stage outcomes)</b> <ul style="list-style-type: none"> <li>Students have covered the topics of sustainability</li> <li>Students have done a research action plan task</li> <li>Students have discussed the concept of human wellbeing and why it is studied in geography</li> </ul>			
<b>Differentiation</b> <ul style="list-style-type: none"> <li>The class has some EAL/D students therefore the incorporation of group projects and peer-assisted learning has been included to support student's literacy skills and develop communication and social skills</li> </ul>			
<b>Focus for</b>	<b>Literacy</b> <ul style="list-style-type: none"> <li>Understanding and using terminology appropriately and in context</li> <li>Comprehension Task</li> </ul>	<b>Numeracy</b> <ul style="list-style-type: none"> <li>Students develop an understanding of spatial distribution with the interactive Google My Map</li> </ul>	<b>ICT</b> <ul style="list-style-type: none"> <li>Students will be using an interactive Google My Map to engage with and make the content more meaningful</li> <li>Using Google Classroom to share resources</li> </ul>
<b>Resources and WHS</b> Whiteboard, projector, computer, Google Slides, worksheets, students' exercise books			

Teaching and Learning Sequence			
Timing	What teacher does and says	What students do and say	Assessment and feedback strategies
Introduction 10 mins	<ul style="list-style-type: none"> <li>T greets Ss</li> <li>T gives Ss clear and explicit instructions about the aims for the lesson</li> </ul>	<ul style="list-style-type: none"> <li>Ss greet T</li> <li>Ss listen to instructions and get ready for the lesson</li> </ul>	<ul style="list-style-type: none"> <li>Giving clear and explicit instruction</li> </ul>
Body 33 mins	<ul style="list-style-type: none"> <li>T gives Ss a worksheet to complete while watching two videos about Bhutan's Gross National Happiness Index and the Happy Planet Index</li> <li>T discusses with Ss the answers</li> <li>T explains group project to be done over the next two lessons - T gives Ss handouts</li> <li>T tells Ss to access the Google My Map on Google Classroom for an interactive map with information to help them with their project</li> <li>T asks Ss to then start planning and working on their project to design a poster or write a letter</li> </ul>	<ul style="list-style-type: none"> <li>Ss watch two videos and complete a worksheet about Bhutan's Gross National Happiness Index and the Happy Planet Index</li> <li>Ss discuss answers with the T</li> <li>Ss discuss group project with T - Ss receive handouts</li> <li>Ss access the Google My Map on Google Classroom for an interactive map with information to help them with their project</li> <li>Ss start planning and working on their project to design a poster or write a letter</li> </ul>	<ul style="list-style-type: none"> <li>ICT - using Google My Map</li> <li>Group project - collaborative learning</li> <li>Google Classroom – interactive resources</li> <li>Comprehension task with video</li> </ul>
Conclusion 10 mins	<ul style="list-style-type: none"> <li>T asks Ss a few review questions to check understanding</li> <li>T dismisses class</li> </ul>	<ul style="list-style-type: none"> <li>Ss answer a few questions to review the content from the lesson</li> <li>Ss say goodbye to the T</li> </ul>	<ul style="list-style-type: none"> <li>Strategic questioning</li> </ul>

Lesson Reflection: Consider - purpose and outcomes achieved, student engagement, questioning and discussion points clearly articulated, grouping, catered for individuals, timing.

The students were really engaged with the content and enjoyed ~~int~~ using the interactive Google My Map. It was a good way of incorporating content in an engaging form to motivate students. The students also appeared motivated to complete the Group project and enjoyed working

collaboratively

Lesson Details				
Teacher Education Student			School	
Lesson duration	53 mins	Year: 8	Class	10 Elective
Curriculum area	Geography	Topic: Human Wellbeing	Date	27/10/2017
<b>Lesson Title/Focus:</b> Geography of human wellbeing - measuring human wellbeing				
<b>Syllabus Outcomes</b> E5.1 identifies, gathers and evaluates geographical information E5.2 analyses, organises and synthesises geographical information E5.3 selects and uses appropriate written, oral and graphic forms to communicate geographical information E5.4 selects and applies appropriate geographical tools				
<b>Lesson Intentions (at the end of this lesson students will...knowledge, skills, attitudes, understandings)</b> By the end of this lesson students will: <ul style="list-style-type: none"> <li>• Have understood what a radar graph is</li> <li>• Used the OECD website to learn about what the Better Life Index is and how it is used to assess and represent geographical data about human wellbeing</li> <li>• Have drawn a radar graph using geographical data</li> </ul>				
<b>Assumed knowledge (ie topic, conceptual understandings, language structures and features, literacy, numeracy and ICT skills, previous stage outcomes)</b> <ul style="list-style-type: none"> <li>• Students have covered the topics of sustainability</li> <li>• Students have done a research action plan task</li> <li>• Students have discussed the concept of human wellbeing and why it is studied in geography</li> </ul>				
<b>Differentiation</b> The class has some EAL/D students therefore by grouping students to read through and work together on the comprehension questions students are supporting each other in developing their literacy skills				
<b>Focus for</b>	<b>Literacy</b> - Understanding and using terminology appropriately and in context - comprehension questions	<b>Numeracy</b> - Interpreting graphs and drawing graphs	<b>ICT</b> - Using interactive data to find geographical information	
<b>Resources and WHS</b> Whiteboard, projector, computer, Google Slides, worksheets, students' exercise books				

Teaching and Learning Sequence			
Timing	What teacher does and says	What students do and say	Assessment and feedback strategies
Introduction	<ul style="list-style-type: none"> <li>• T greets Ss</li> <li>• T asks Ss to read through the text and find the words in bold, then write the definition of the words in bold in their book – Ss can use the glossary in the textbook to find these words - Ss are able to work in their table groups</li> <li>• T checks definitions of these terms with the class</li> </ul>	<ul style="list-style-type: none"> <li>• Ss greet T</li> <li>• Ss read through the text and find the words in bold, then write the definition of the words in bold in their book – Ss can use the glossary in the textbook to find these words</li> <li>• Ss go through definitions as a class with the T</li> </ul>	<ul style="list-style-type: none"> <li>• Monitoring students</li> <li>• Observing students</li> <li>• Informal verbal feedback</li> <li>• Strategic questioning</li> </ul>
Body	<ul style="list-style-type: none"> <li>• T then asks Ss to answer 4 questions about measuring human wellbeing and answer them in their book</li> <li>• T goes through the answers with the Ss as a class</li> <li>• T shows students the OECD Better Life Index website and explains to Ss how the radar graphs can be interpreted on the website</li> <li>• T gives Ss a worksheet where they have to answer a few questions about how radar graphs are used on the OECD Better Life Index website and asks Ss to use data on the worksheet to draw their own radar graph</li> </ul>	<ul style="list-style-type: none"> <li>• Ss answer 4 questions about measuring human wellbeing and answer them in their book</li> <li>• Ss goes through the answers with the T as a class</li> <li>• Ss go through the the OECD Better Life Index website and learn how the radar graphs can be interpreted on the website</li> <li>• Ss are given a worksheet where they have to answer a few questions about how radar graphs are used on the OECD Better Life Index website</li> <li>• Ss use data on the worksheet to draw their own radar graph</li> </ul>	<ul style="list-style-type: none"> <li>• Whole class discussion</li> <li>• Strategic questioning</li> <li>• Monitoring students</li> <li>• Observing students</li> </ul>
Conclusion			

Lesson Reflection: Consider - purpose and outcomes achieved, student engagement, questioning and discussion points clearly articulated, grouping, catered for individuals, timing.

The students really enjoyed the OECD Better Life Index website and were interested in the radar graphs. They were a bit disengaged with the glossary and definition activity, so next lesson I will make sure

to get their attention by planning something engaging using these interactive sites.

Lesson Details				
Teacher Education Student	Elly-Kate McEwan		School	South Sydney High School
Lesson duration	53 mins	Year: 8	Class	10 Elective
Curriculum area	Geography	Topic: Human Wellbeing	Date	31/10/2017
<b>Lesson Title/Focus:</b> Geography of human wellbeing - interpreting data to measure human wellbeing				
<b>Syllabus Outcomes</b> E5.1 identifies, gathers and evaluates geographical information E5.2 analyses, organises and synthesises geographical information E5.3 selects and uses appropriate written, oral and graphic forms to communicate geographical information E5.4 selects and applies appropriate geographical tools E5.10 explains patterns, processes and issues associated with human activity at a range of scales				
<b>Lesson Intentions (at the end of this lesson students will...knowledge, skills, attitudes, understandings)</b> By the end of this lesson students will: <ul style="list-style-type: none"> <li>Have completed an ICT task using Google Public Data and OECD Better Life Index website to develop skills in interpreting data and graphs</li> <li>Have an understanding of how to use interactive data to assist students with their assessment task</li> </ul>				
<b>Assumed knowledge (ie topic, conceptual understandings, language structures and features, literacy, numeracy and ICT skills, previous stage outcomes)</b> <ul style="list-style-type: none"> <li>Students have covered the topics of sustainability</li> <li>Students have done a research action plan task</li> <li>Students have discussed the concept of human wellbeing and why it is studied in geography, they have also looked at the different perspectives countries, people and organizations have taken on measuring the human wellbeing and development of a country</li> </ul>				
<b>Differentiation</b> <ul style="list-style-type: none"> <li>Providing a scaffolded ICT task for students with explicit instructions and questions</li> <li>Using ICT and interactive data websites to engage students and assist them in completing their assessment task</li> </ul>				
<b>Focus for</b>	<b>Literacy</b> - Understanding and using terminology appropriately and in context	<b>Numeracy</b> - Interpreting interactive data and graphs	<b>ICT</b> - Using interactive data websites such as OECD Better Life Index and Google Public Data to access data and interpret it - Google Classroom	
<b>Resources and WHS</b> Google classroom, computers, Google Slides,				

Teaching and Learning Sequence			
Timing	What teacher does and says	What students do and say	Assessment and feedback strategies
Introduction	<ul style="list-style-type: none"> <li>T greets Ss</li> <li>T asks Ss to log in to Google Classroom and access the ICT task that was uploaded</li> <li>T asks Ss to follow the instructions and write their answers on a word document to be uploaded by the end of the lesson</li> </ul>	<ul style="list-style-type: none"> <li>Ss greet T</li> <li>Ss log in to Google Classroom and access the ICT task that was uploaded</li> </ul>	<ul style="list-style-type: none"> <li>Clearly outlining lesson intentions</li> </ul>
Body	<ul style="list-style-type: none"> <li>T monitors and helps Ss as they complete their ICT task</li> </ul>	<ul style="list-style-type: none"> <li>Ss complete their ICT task individually</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring students</li> <li>Observing students</li> <li>Prompting students</li> <li>Students upload their work to the Google Drive and T checks it</li> <li>Informal verbal feedback</li> </ul>
Conclusion	<ul style="list-style-type: none"> <li>T asks Ss to upload what they have completed for the task on Google Classroom</li> </ul>	<ul style="list-style-type: none"> <li>Ss upload what they have completed for the task on Google Classroom</li> </ul>	<ul style="list-style-type: none"> <li>Assesses how many students were able to complete the tasks within the lesson</li> </ul>

Lesson Reflection: Consider - purpose and outcomes achieved, student engagement, questioning and discussion points clearly articulated, grouping, catered for individuals, timing.

The task went really well. I also got students to fill out exit cards for this lesson to find out how much they learnt from the ICT task.