



EVIDENCE OF LEARNING E-PORTFOLIO BLOG

CONTEMPORARY CHALLENGES:
MAKING A DIFFERENCE
ECGE4006P

Sarah Roberts-Ogleby (2204676)
FOUNDATION DEGREE INCLUSIVE EDUCATION

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BLOG

POST 1

Countdown to Climate Change Catastrophe!



(ITU, 2020)

Climate change is a term that's been bandied about for years. We've all heard the term 'climate change', yet it doesn't seem to set people into a tailspin panic when watching the news. Instead, everyone just gets on with their day. So, what exactly is it and should we be more concerned?

Climate change is a term to describe "long-term shifts in temperature and weather patterns" (United Nations, 2023). These changes can be caused by "natural" forces or by "persistent anthropogenic changes in the composition of the atmosphere or in land use" (Watson *et al.*, 2001).

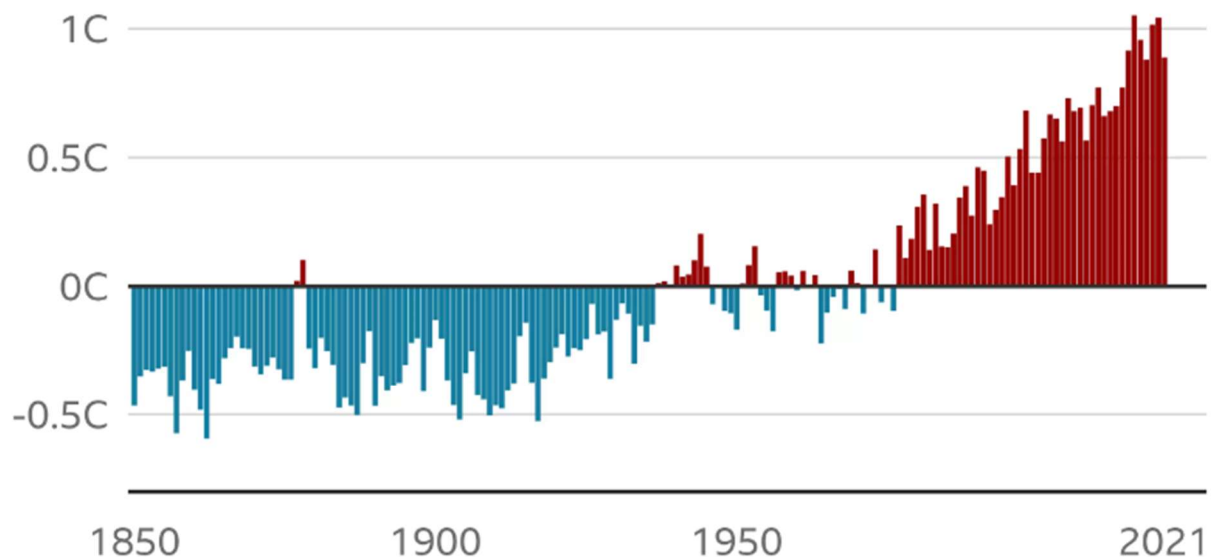
Out of all the problems we as humans face on this planet, climate change could be the biggest threat we will ever face (United Nations, 2023). After researching the historic and current information on this topic, I believe it is more important than social inequality, artificial intelligence technology taking over our daily lives and our health crisis due to inactivity or poor diet. I think climate change categorically trumps all these issues because unless we treat our planet more respectfully, Earth won't be a place we can inhabit. Therefore, all other threats to our well-being would be redundant.

The United Nations Framework Convention on Climate Change (UNFCCC) was established to combat climate change in 1992 (UNFCCC, 2023). However, current data shows that the

“global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years” (Lee *et al.*, 2023).

The world has been getting warmer

Annual mean land and ocean temperature above or below average, 1850 to 2021



Note: Average calculated from January 1951 to December 1980

Source: University of California Berkeley

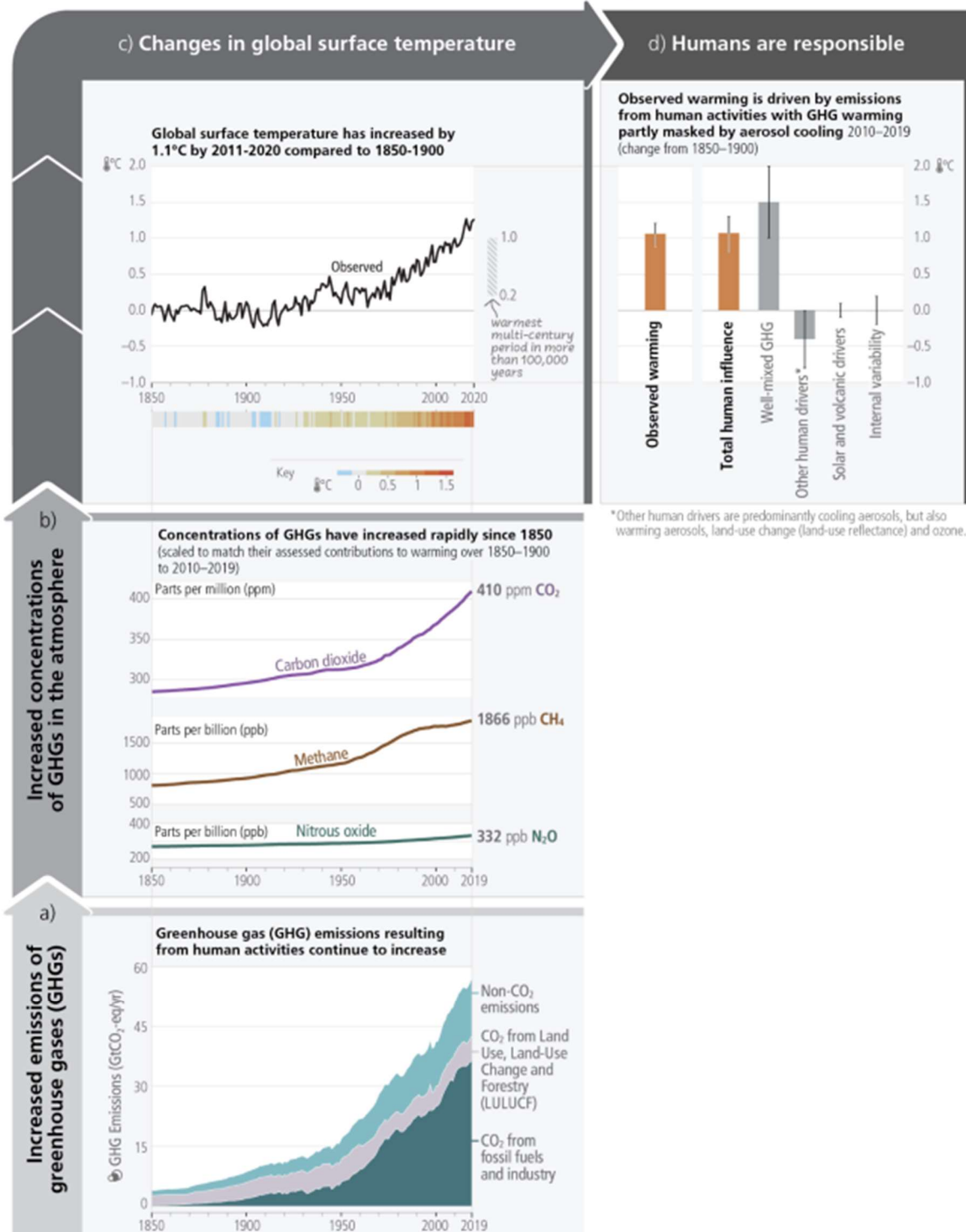
BBC

(BBC, 2023)

So why haven't we been doing more to slow down or stop these damaging effects, if we were made aware of this threat to our existence in the 1990s? The problem is that even though people are now acutely aware of the seriousness of climate change, few are willing to sacrifice their luxury lifestyles to act against it (Henley, 2021). Consequently, this inaction is catching up with us. Scientists are noticing extreme changes in weather and increased frequency of storms as Earth continues to warm up; as well as whole ice shelves collapsing and increasing numbers of species becoming extinct (Lee *et al.*, 2023).

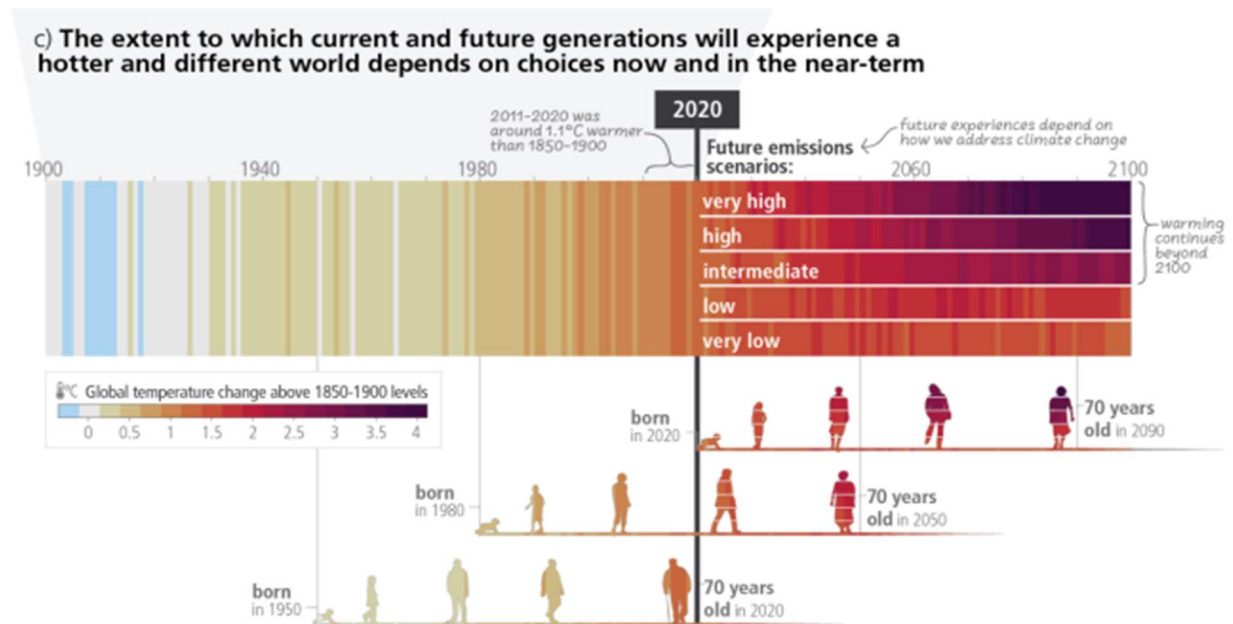
The main driver for global warming is the increase in greenhouse gases, namely Carbon Dioxide, Methane and Nitrous Oxide, which are caused by human influence; this anthropogenic effect is predicted to change our world as we know it if we do not swiftly take rapid action to reduce greenhouse gas emissions significantly (Lee *et al.*, 2023).

Human activities are responsible for global warming



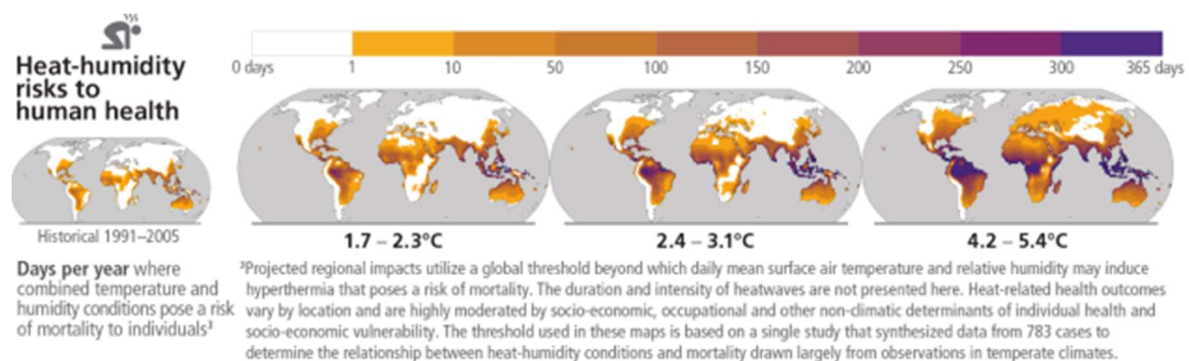
(Lee *et al.*, 2023)

“Global warming will continue to increase in the near term (2021–2040) mainly due to increased cumulative CO₂ emissions in nearly all considered scenarios and modelled pathways” (Lee *et al.*, 2023).



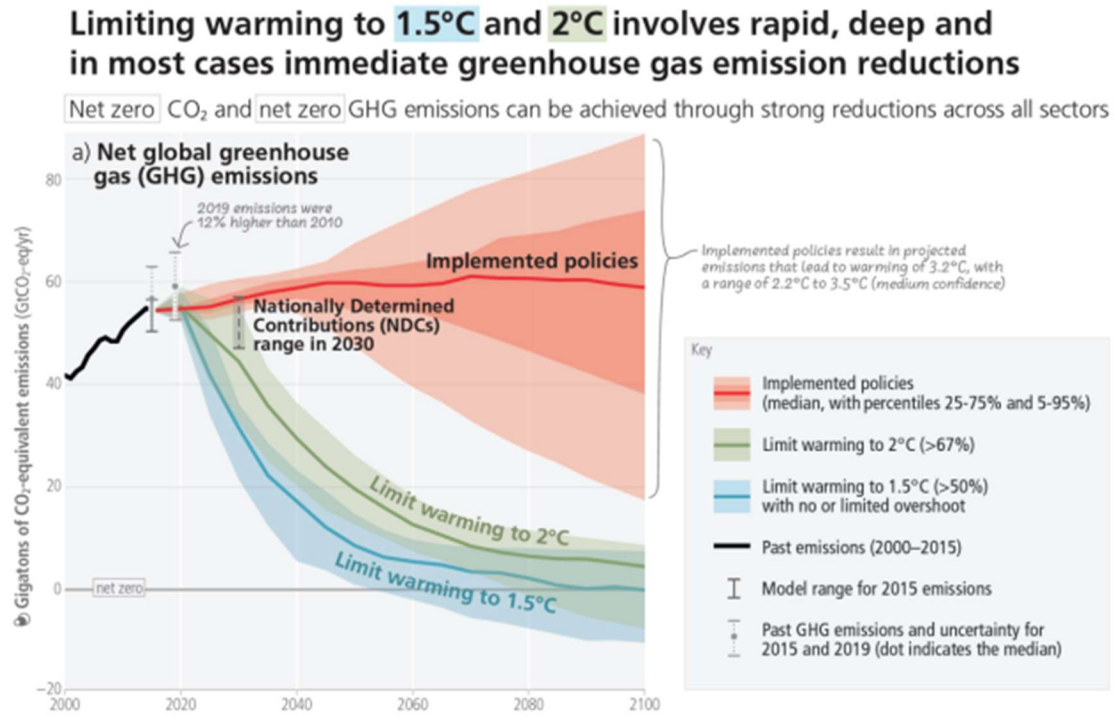
(Lee *et al.*, 2023)

With each incremental increase in global warming, the risk of unbearable heat-humidity conditions also increases.



(Lee *et al.*, 2023)

The information is stark and abundantly clear, we need to act now to save our planet and ourselves. We need to quickly make big, sustainable reductions in greenhouse gas emissions to see a marked reduction in global warming in the next few decades (Lee *et al.*, 2023).



(Lee *et al.*, 2023)

As Flannery (2005) states “on dead planets such as Venus and Mars, CO₂ makes up most of the atmosphere, and it would do so here if living things and Earth’s processes did not keep it within bounds”. We need to remember that we have a responsibility and a need to keep the Earth alive.

We have never been better equipped to solve the climate challenge – but we must move into warp speed climate action now.”

ANTÓNIO GUTERRES, United Nations Secretary-General, 20 March 2023

(United Nations, 2023)

Join me in raising awareness of this ticking timebomb today!

Share this post and read further posts for more information on how we can save our planet and humanity together!

POST 2

Informing and Influencing!



(United Nations, 2023)

In the last post, I discussed the need for greater and immediate action to create a positive impact on climate change. Now I want to address how this can be promoted successfully in schools. ‘Why schools?’ I hear you ask. The answer is that “the world is home to 1.8 billion young people between the ages of 10-24 – the largest generation in history” (United Nations, 2023). It makes sense to gather momentum from those upon whom climate change will have the biggest impact as they will tackle this in the longer term. How can we attract children’s interest in this gloomy topic? What will inspire them to learn about climate change and act against it?

Click on this link <https://youtu.be/TepyPRG6xkQ> to look at the Youth Climate Action Summit in 2019 (United Nations, 2023). Youth climate champions from over 140 countries came together to “share their solutions on a global stage” and demand quicker action from world leaders to “act now” to “reduce greenhouse gas emissions” (United Nations, 2023). This gave young people from around the world a voice and shows how powerful children can be.

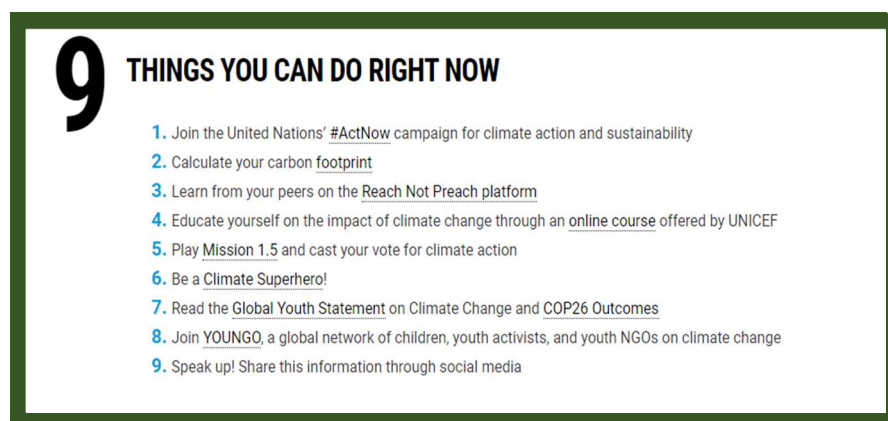


(Vucane, 2019)

In September 2022, the Welsh Government introduced a new curriculum for Wales with four core purposes that aim to ensure children become “ambitious capable learners”; “enterprising, creative contributors”; “ethically informed citizens” and “healthy, confident individuals” (Welsh Government, 2022). Topics such as climate change are approached “holistically through geography, history and impact on society” (Welsh Government, 2022). This encourages children to think of things in the context of the wider world, not just in their immediate surroundings and like Plato’s Cave Allegory it helps children to “reconsider their understanding of reality” (Secrets of Plato, 2023). Education can challenge disinformation

and combat bias by helping children “develop the skills they need to critically evaluate information and then make positive and responsible choices” (Hwb/Welsh Government, 2023). Education “motivates the young to take action” and can encourage negotiation within the school about what can be done better to tackle climate change (United Nations, 2023). This will influence the children to make lifestyle changes themselves and in a “ripple effect” bring about community action (Porter, 2007). According to Musselwhite and Pouffe (2012), there are five key influencing styles which must be used, to persuade as many children and their families as possible to act against climate change; these styles are namely rationalising, asserting, negotiating, inspiring, and bridging. This is the most effective way to positively influence and motivate people to act, as using just your own style of influencing means that you are potentially ineffective at convincing four others who may have other preferred styles (Musselwhite and Plouffe, 2012).

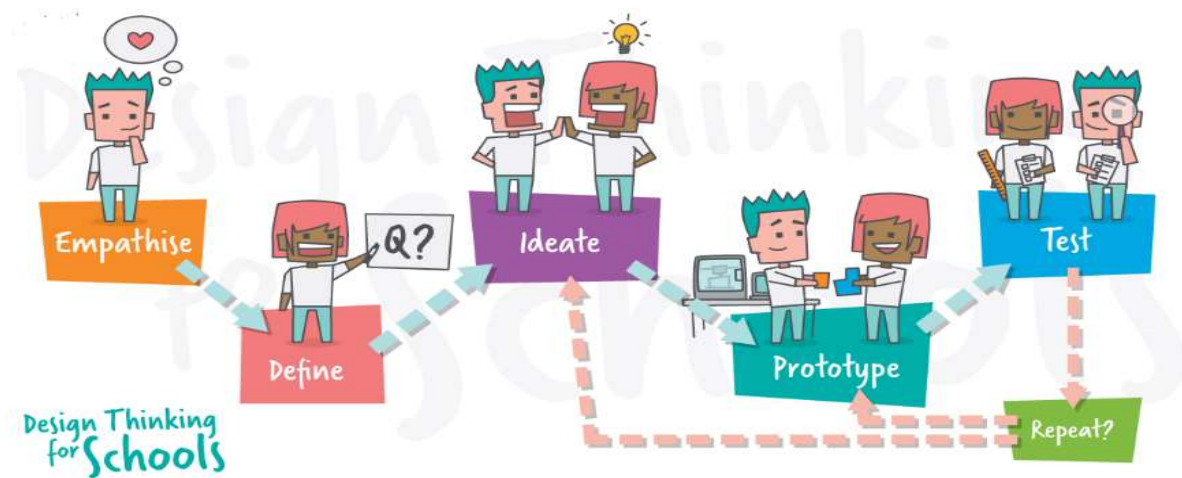
I think well-informed education and using this to influence an immediate change in attitudes and behaviour, will have the biggest impact on reducing greenhouse gas emissions and preventing a climate change catastrophe. Climate change impacts everyone (United Nations, 2023). However, as mentioned in my previous post very few are currently willing to change their lifestyle or inconvenience themselves to reduce their carbon footprint on the world (Henley, 2021). If schools facilitate rather than direct how children want to learn about climate change, then it will naturally attract their interest and motivate them to act (Porter, 2007). Teaching children how to find correct information will challenge biases and misinformation about climate change (Hwb/Welsh Government, 2023). Ultimately it will encourage children to think bigger and appeal to local governments, world leaders and companies, asking them to negotiate better working practices to bring about real and sustainable change to create a better future (United Nations, 2023).



(United Nations, 2023)

POST 3

Education → Design Thinking → Climate Change Action!



(Dimitriadis, 2023)

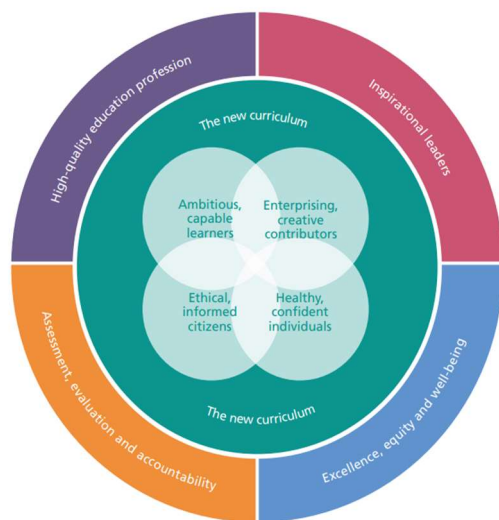
As discussed in my last post, people are resistant to climate change action due as they “fear the consequences to their daily patterns”; therefore, if we invest in the next generation being part of the “process that leads to change”, through design thinking approaches towards topics such as climate change in schools, it will diminish that resistance (Design Council, 2018).

Design thinking is a way of learning through being inquisitive and open to all possibilities and ideas. It can “have a positive influence on 21st century education across disciplines because it involves creative thinking in generating solutions for problems” (Razzouk and Shute, 2012). The five stages of design thinking, which are namely: empathise; define; ideate; prototype and test; links very well to the new Curriculum for Wales and its four core purposes, as this new curriculum focuses on children developing important life skills (Welsh Government, 2022). “Empathy” itself is stated “35 times” in the new Curriculum for Wales (Empathy Lab, 2023), so it is clearly recognised as a valuable skill for learners to have.

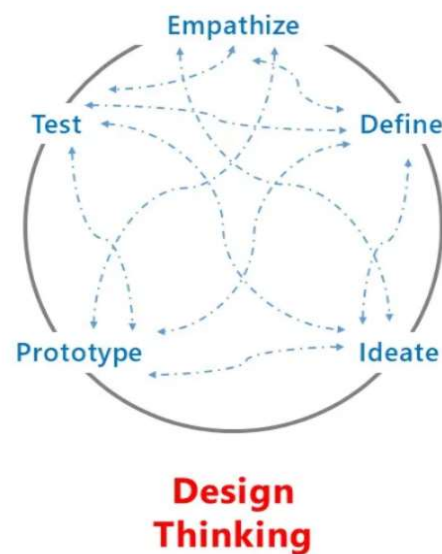
Ethically informed citizens will be created when pupils are defining problems through research and then analysing them; “design thinking may be considered as a great tool to be used in the teaching/learning process to develop twenty-first century skills” (Luka, 2014). Ambitious, capable learners are nurtured with ideation and brainstorming; compared to pupils learning through more traditional methods, those who learn through design thinking cycles show higher-order thinking skills and can “think outside of the box” (Razzouk and Shute, 2012). Whereas enterprising, creative contributors are developed through creating prototypes and testing their ideas. “Design thinking skills can be developed in various activities at

school, especially in group work and projects as one of the preconditions is team working and open communication” (Luka, 2014). Healthy, confident individuals are made through developing confidence with the trial-and-error method of the design thinking process. “The competence and confidence gained through learning to collaboratively construct knowledge can be transformative” (Welsh and Dehler, 2013)

Like design thinking, the four core purposes of the new Welsh curriculum also interlink with each other:



(Welsh Government, 2017)

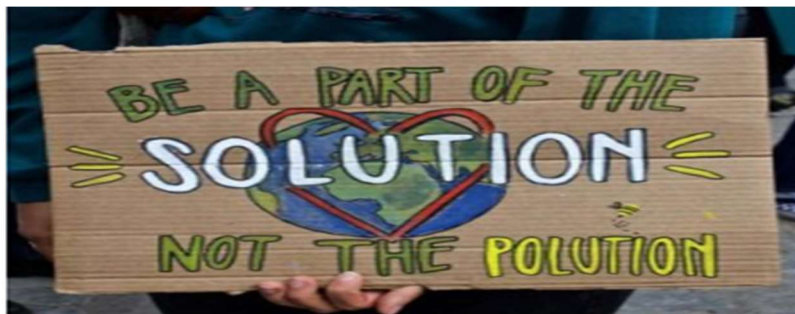


(Yoshida, 2019)

One of the main shortcomings, before the new Welsh curriculum was introduced last year, was the ability to assess pupils’ work regarding design thinking. The previous national curriculum was outdated, traditional and structured; it was first introduced in 1988 which was before climate change or other contemporary challenges were identified and it was out of touch with the modern world (Welsh Government, 2022). “Assessing these 21st century competencies is beyond the capabilities of most traditional assessment formats” (Razzouk and Shute, 2012). The new curriculum for Wales addresses this through guidance for learning rather than a strict set format, which means schools can develop their assessment arrangements to support their curriculum (Welsh Government, 2022). Other shortcomings could be school budgets having an impact on the prototype or testing phase of children’s ideas and “insufficient time to fully and critically evaluate ideas” (Panke, 2019). Additionally, pupil’s initial reactions to the design thinking approach may raise problems; due to “a lack of creative confidence or mastery, experiences of anxiety and frustration,

teamwork conflicts, wrong priorities, shallow ideas and creative over confidence” (Panke, 2019).

However, the merits of using design thinking to deal with contemporary challenges, such as climate change, in education are abundant. It allows children to develop their skills to survive in a modern world, with the ability to adapt and respond to new challenges, to find solutions to solve future problems. “Design thinking experiences, because they help students develop and maintain a beginner’s mind, facilitate development as integrative learners” (Welsh and Dehler, 2013).



(Global Goals, 2023)

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