Design & Technology—Product Design
Year 11 to Year 12 Transition Task

Introduction:
One of the key differences between GCSE and A Level is that for A Level, you are permitted to choose your own context or theme for your NEA. We recommend that this is based on your interests or ambitions.

Think: Is there a hobby or interest that you have? Is there a topic that you would like to know more about or are interesting in studying at University? If so, consider using your NEA as a chance to further your interest. It will also support future applications to Apprenticeships and Universities.

Your task will be to complete <u>one page of research</u> on this theme of your choice

Step1: Choose a theme. It could be a:

• Location (no larger than a city, no smaller than a room
• Hobby, lifestyle or activity
• Current affair or issue
• Occupation, lifestyle or subject (eg maths)

Step 2: Collect as much secondary information as you can about your chosen topic, place or stimulus.

• Figures and facts
• Key definitions
• Issues/ problems/ current 'news' or context eg. Articles, protests, politics.
• Images depicting the topic or theme. .

Be selective and make sure that you collect research from credible sources

Step 3: Complete a full investigation page, by exploring the: What, Why, When, Which, How of your topic
Use the questions below guide your full investigation the topic(s) and prompt early ideas for which element of your topic/issue you will address. You may need to conduct further research for this.

What is the topic/ issue: Explain the types, definitions, facts, opinions on it. (You may have done this in depth already).
Who is affected / most involved (including age, wealth, gender, ability/disability)
Where does the topic/ issue take place? Think about the locations, rooms, public & private spaces
Why does the topic/issue occur? Is there a history? Is it based on human behavior? Is it driven by popularity?
When does the topic/issue occur? Is there a time of day, year, is it random, is there a season?
How do you think you will find out a bit more about the topic/issue? Think about secondary and primary research activities you can do to understand it more.

You may present your work as you see fit, but include images.

<u>See examples on the next page for inspiration</u>

Examples

Motorsport Investigation

The Industry
○ The global motorsport industry is respected by many and consequently valued in the billions, with spectacular events, merchandise and sponsorships specifically contributing significantly to its continuously growing economy.

- Formula 1
Formula 1 is one of the most popular and widely followed motorsport events globally, with an average viewership of 1.11 million per race and an average age of 32, which is four years younger than in 2017, showing how younger aged people are starting to become more interested in the sport. It is where the peak of engineering and technology in motorsport is really displayed, showcasing extraordinary developments from astonishing aerodynamic designs to beautifully engineered 1.6-L V6 engines with hybrid technologies

- NASCAR
NASCAR is mainly followed in North America, where it is immensely popular, displaying an average of 2.86 million viewers per race in NA alone, which in fact was a 5% decrease from 2022. It is commonly known for its high-speed oval track racing, which is completely contrasting to that of Formula 1, and, again, its huge fan base of that of which is in fact 47% aged between 18-44, and includes celebrities which often contribute with opening ceremonies

- Formula E
A recently developed, up and coming type of motorsport is Formula E. It is the world's first all-electric racing series, promoting the movement of creating a more sustainable motorsport industry, while also creating a new form of racing with different interesting strategies which capitalise on the electric nature of the sport. It serves as a platform for these technological advancements in electric mobility, with its racing presence in major cities contributing as a catalyst for discussion on the future of transportation and raising awareness for climate change. Interestingly, it's also high in popularity among younger audiences, with 18% being aged 18-24 whereas in general motorsport it is only 7%

F1 Teams · "Attack Mode" Strategy Option (Formula E) · NASCAR Oval

Main Current Issues
○ *Diversity*: Lack of inclusivity of women and underrepresented groups in the main leagues of motorsport. In fact, around 13% of participation in karting came from female drivers, which dropped to 7% in formula and GT racing – Initiatives are being made to be more inclusive
○ *Sustainability*: Racing cars burn a lot fuel during races, releasing harmful gases to environment – Currently developing eco-friendly fuels and electric racing
○ *Well-being*: Balancing competitive intensity in races and physical safety and well-being of the drivers remains a key concern due to the dangerous nature of the sport

Daily Interactions (Fans/Followers)
○ *Podcasts and Videos*: Fans enjoy watching and listening to entertainment such as interviews with drivers, analysis of recent races and educational content that delves into the technical aspects of racing such as car set ups
○ *Gaming*: Followers often play motorsport-based videogames and simulators with each other online, which also creates online communities where followers can play, interact and talk about their shared passion in motorsport
○ *Merchandise*: Followers may engage in wearing team apparel, collecting model cars and other collectibles, displaying their loyalty and love or teams and drivers they support
○ *Social Media*: Fans interact with racing material, keep up with their favourite teams and drivers, and take part in conversations on current and upcoming races across a range of social media platforms.

McLaren F1 Merchandise · Gaming/Simulator Setup · Race Highlights · W Series (Female Inclusive Initiative)
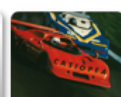
Culture and Cultural References
○ *National Pride*: Motorsport creates a great sense of national pride through its events, with fans passionately supporting drivers and teams representing their home countries
○ *Iconic Liveries*: Classic liveries such as the Gulf racing colours and Martini Racing stripes have become cultural symbols in motorsport
○ *Celebration of Technology*: The combination of speed and engineering is well-liked by fans, who see it as a cultural reference to advancement and innovation
○ *Traditions and Ceremonies*: From the checkered flag wave to the podium celebrations, motorsports are full of traditions. These customs enhance the cultural experience by creating a feeling of longevity and a link to the sport's past
○ *Music and Fashion*: Due to its spectacular nature, motorsport is often featured in popular music and fashion. Music videos, album covers and fashion collections sometimes may feature themes and imagery from motorsport racing, showing its true cultural influence world-wide

Podium Champagne Celebrations · Aerodynamics Display on Iconic Gulf Livery · Album Covers

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Theme 2: The challenge of storage space

The other theme I have decided to investigate is the ever present issue of storage, especially for people using their office space or desk to work or complete important tasks. As a student who has experienced such issues in the past, I believe I am well informed to research both the origin and consequences of this issue many people have faced since the start of the 21st century.

Psychological Impact of Storage Challenges
This An article written in 2022 explores the lack of ergonomic research, or consideration of storage that goes into much of house building around the world (Full article: Stuff and space in the home: space for storage as the forgotten design and well-being dimension in standardised housing (tandfonline.com)). The introduction initially explores the economic challenge of allowing for such improvements, and how modern ideals like en-suite bathrooms, utility rooms and larger bedrooms have impacts on the space available for other purposes. As a result of this, material possessions filling up rooms has served to often overwhelm inhabitants, negatively affecting their mental health. 'Stress, insomnia, and low mood are some of the consequences of spaces being overloaded with *stuff*'. These issues can be detrimental in work spaces as the stress of already trying to meet a deadline can be compounded by external conditions, causing both your quality of work and life to alter drastically.

Public Data
A survey taken in 2023 outlines the opinions of the public on their personal challenges with storage (Survey: 78% of Brits Say Homes Lack Storage - Clever Closet). One of the questions allowed people to assess the benefit of increased storage space on their organisation. This data indicates that 82% of people participating believe that such a project would improve the tidiness of their home. Despite the problem's extensive media coverage, it is clear that there is a large market of people in need of a new way that can aid their organisational challenges to improve their quality of life. Furthermore, another origin of this challenge was outlined, in a question asking people whether they had unnecessary items which filled their homes. Over 60% of the participants answered yes to the question, showing how often people struggle to throw things away, further decreasing storage space in a house. This could be due to emotional attachment or procrastination which causes people to delay doing jobs that need to be done. This is another opportunity in the market, where people may be looking for something that can appropriately organise such items so that they are less of a nuisance without necessarily disposing of them.

Alternative Viewpoints
In contrast, a study was done by the American Psychological Association, discussing of the benefits of a more messy desk and the creativity it can bring forth (A messy desk encourages a creative mind, study finds (apa.org)). This article demonstrates how there are two sides to this issue, and how there can be divided reactions in society. One side would be that a messy desk can encourage chaos, or more unique ideas. Despite this, it often up to personality as seeing someone else's workspace so unorderly could potentially cause others to stress and unproductive. An example of this could be a parent becoming frustrated at a child's messy room despite the creative benefits it could provide. Often parents spend a large duration of time responsible for the orderliness of their home and could become embarrassed if other family members or friends see a room in such a state. This highlights how there is an opportunity to solve this issue, making a product that could provide leeway for one's creative ambitions while allowing for the mess to be reorganised and tidied efficiently, freeing up a greater amount of space for storage of various forms.

Conclusion: This research has improved my awareness on the number of people affected by this issue, and how their problems could be solved by a product. Evaluating contrasting opinions can also allow me to make a product that can serve both organised and messy people without hindering their productivity and ambition.

Theme of choice
I have chosen to combine these themes as it allows me to have a clear problem that can be solved in society, through my product. Using inspiration from football also allows me to pursue and research something I am passionate about, motivating me to be more innovative and creative, potentially exploring an opportunity done sparsely in the past