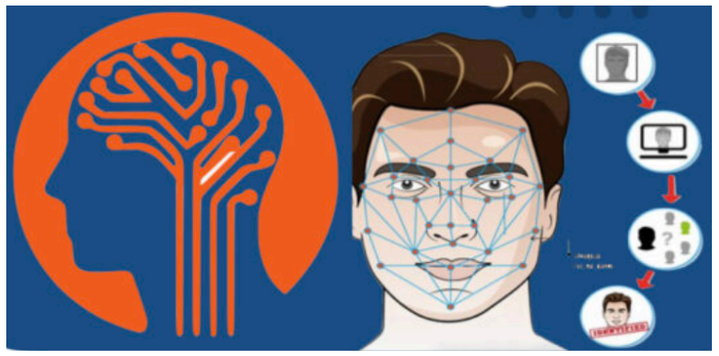
Artificial Intelligence and Machine Learning Knowledge Organiser

👨‍🎓 What are we learning about artificial intelligence and machine learning?

It is important to understand how computers work and how they learn like humans do. Humans constantly see, hear, touch, smell and taste new things, which goes into our memory. This helps us solve problems and perform new tasks. Computers are the same but they need a user to put the information into the computer's memory, helping it solve problems better and follow new instructions. For example, face and fingerprint unlocking of a phone or tablet. When we first use the device it takes a reading of our face or fingerprint but the more we use it, the computer is continually learning more about it, making it more and more secure each time. This is called *Machine Learning*. Computers can be programmed to do tasks by themselves, such as driverless cars or drones delivering mail - this is called *AI (Artificial Intelligence)*. As much as computers help us in these ways, it is important to understand the dangers of Machine Learning and AI too.

📖 Key knowledge

1. Understand how computers use information to learn by solving new problems and following new instructions.
2. Understand and use examples of machine learning.
3. Understand how artificial intelligence is used to perform tasks often only performed by humans.
4. Understand the potential dangers of AI.



🔠 Important Vocabulary

Machine Learning	Computers learn new information, which helps them work better and follow new instructions. For example, they can recognise our face or fingerprint each time we unlock our device, making it more secure. Have you also noticed how a tablet or phone suggests words as you are typing? As we type more, the computer learns what words we like to use and suggests better words more suitable us.
Artificial Intelligence (AI)	Computers can be programmed to work by themselves to perform important tasks, such as driverless cars, drones delivering mail or as lifeguards. The computers in these are programmed with the information they need for the task (such as a route they need to take) and they use machine learning to gain more knowledge (artificial intelligence) about the task it is performing.