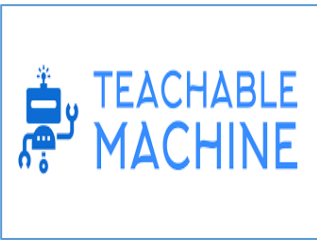




St John Fisher RC Primary School

Year Five Knowledge Organiser – Autumn Term One – Computing – AI

What we will be learning		Key Facts to Remember	
Weeks 1 - 4 I know: - How to understand the basics of AI and image recognition. - How to explore real-world applications of image recognition. - How to use Teachable Machine. - How to design an image recognition model. - How to prototype my image recognition invention. - How to evaluate and present my inventions.	- I can understand and explain the concept of artificial intelligence and image recognition. - I can describe how image recognition is applied in the real world and recognise examples. - I can use Teachable Machine to effectively create a simple image recognition model. - I can design and prototype an image recognition invention, including the purpose and how it works. - I can evaluate my invention's effectiveness and present my findings clearly to classmates, highlighting strengths and areas for improvement.		
	Key Vocabulary and Glossary		Interesting Facts
	Artificial Intelligence (AI) - The simulation of human intelligence in machines that are programmed to think and learn. Image Recognition - The ability of a computer or software to identify and process images from the real world. Machine Learning - A branch of AI that allows computers to learn from data and improve their performance over time without being explicitly programmed. Algorithm - A set of instructions or rules designed to perform a specific task. Data - Facts and statistics collected for analysis and reference. Label - A description assigned to a piece of data that can help identify it in image recognition tasks. Training Data - A dataset used to train a machine learning model, consisting of input data and corresponding outputs. Teachable Machine - A web-based tool by Google that allows users to create their own basic machine learning models using images, sounds, or poses. Prototype - A preliminary model of something, from which other forms are developed. Evaluation - The process of assessing the effectiveness or quality of a model or invention.		- AI can analyse images more quickly and accurately than humans in many cases, leading to advancements in healthcare, security, and technology. - Image recognition technology is used in everyday applications such as facial recognition on smartphones, tagging friends in photos on social media, and self-driving cars. - The first computer vision system was developed in the 1960s, but it wasn't until the rise of advanced algorithms that image recognition became effective.
Theme		Apps & Software	
Your image recognition invention! Think up your own invention that will use image recognition. Think of an idea that has two clearly defined things for the computer to recognise. For example: A bird feeder that can recognize birds and squirrels, and scares the squirrels off or Recycling bins which recognise if you are trying to put plastic bottles in the cardboard bin.			Teachable Machine Teachable Machine is a web-based tool developed by Google that allows users to create custom machine learning models without needing coding experience. It's designed to make machine learning accessible and approachable for everyone. You can use it to train a computer to recognize images, sounds, and even poses.
			SeeSaw An educational platform that can be used to create an electronic portfolio of children's completed digital work.