

Intellectual Property

And Why it is Important in STEAM Education



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CIVIC

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REFERENCED DOCUMENTS

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| 1 | 2020-1-UK01-KA201-078934 | | IPinSTEAM Proposal |
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Though it may not be the most exciting part of science, technology, engineering, arts, and mathematics (STEAM) to talk about, intellectual property has a very important place in these subjects in the modern world. Indeed, despite their centrality to the practical development and use of STEAM subjects in our lives, initial research shows that intellectual property issues are rarely covered when these subjects are taught, and certainly not in any detail.

Intellectual property itself is actually a centuries-old concept, with early debates around the modern understanding of it centring in large part on literary rather than STEAM concerns. It was internationalised as a branch of law and brought into more common, wider use in the 1800's, and so has had a significant impact on the history of STEAM as well as current practice. Almost every invention or design in modern life, from interplanetary rockets down to the simple, ubiquitous paperclip was protected with some form of intellectual property law. This serves a dual function of not only protecting the inventor's work, but also in formalising the product's design and implementation, with reproducibility a key factor in intellectual property processes such as patents.

In today's world, the importance of intellectual property in STEAM should be clear. The world's economy increasingly relies on ever more complex technologies, whether that is artificial intelligences, augmented realities, or 3D printers of varying designs and purposes. And this in turn means that an increasing number of technologies for which intellectual property must be considered. After all, the invention of a given device does not necessarily herald the end of its technological advancement, nor indeed the end of its relevance to intellectual property. The automobile, for example, was invented well over 100 years ago but patents and other such intellectual property tools continue to be used to protect and distinguish new automotive designs and advancements even today. It is important to recognise this importance for the benefit of the inventor protecting their ideas and creations, but for all STEAM participants too, who must be able to navigate concepts like plagiarism, copyright, and of course the patents of others when undertaking their own work.

This theme of STEAM subjects being of the utmost importance to the future and current economy is rarely disputed, and increasingly STEAM subjects are being accorded a concurrent prominence in curricula. But this does not always seem to extend to intellectual property, despite its previously mentioned evident importance in this vein. It will be all very well to train up a generation of talented engineers, scientists, mathematicians, and artists, but they will be limited in an important way if they do not fully understand the implications of intellectual property for their livelihoods and their craft. It is this problem, this gap, that the IPinSTEAM project is seeking to remedy: let us ensure that the next generation of STEAM practitioners are fully equipped to live up to their highest potential!

References

Bellis, M., (2019, 13 July), *The History and Invention of the Paperclip*. ThoughtCo.
<https://www.thoughtco.com/history-of-the-paper-clip-4072863>

Hoffman, W., (2016, 5 May) *NASA RELEASES ROCKET AND AIRCRAFT PATENTS FOR SPACEX AND BLUE ORIGIN TO SINK TEETH INTO*. Inverse. <https://www.inverse.com/article/15272-nasa-releases-rocket-and-aircraft-patents-for-spacex-and-blue-origin-to-sink-teeth-into>

Naja, A., (2020, 18 August), *United Arab Emirates: History And Evolution Of Intellectual Property*. Mondaq. <https://www.mondaq.com/trademark/977124/history-and-evolution-of-intellectual-property#:~:text=The%20earliest%20records%20relating%20to,from%20the%20rising%20of%20bread.>

Office for Harmonization in the Internal Market (Trademarks and Designs), (September 2015) *INTELLECTUAL PROPERTY AND EDUCATION IN EUROPE*.
<https://euipo.europa.eu/ohimportal/documents/11370/80606/IP+and+Education+final+report+September+2015>