This paper describes an approach for the development of educational technology resources for the support of constructivist learning in applied tertiary education. By applying the participatory engagement approach borrowed from citizen science and incorporating mobile technologies, a higher level of engagement is possible. An example is given from the development of a citizen science programme that can give structure to ePortfolios, project management, and the encouragement of reflection during placements, volunteer work, and work-based learning. A citizen science approach takes the educational technology experience beyond a reception of information, and more than just data collection, to involving a whole process approach. Lessons from this are then applied to an area of need in constructivist teaching. A proposal for a further application of the framework is described. This is then briefly extended to wider examples in vocational constructivist learning, with relevance to project, experiential and work-based learning in educational areas such as health, IT, sports, and engineering - what are appropriate educational technologies to support such a learning environment?