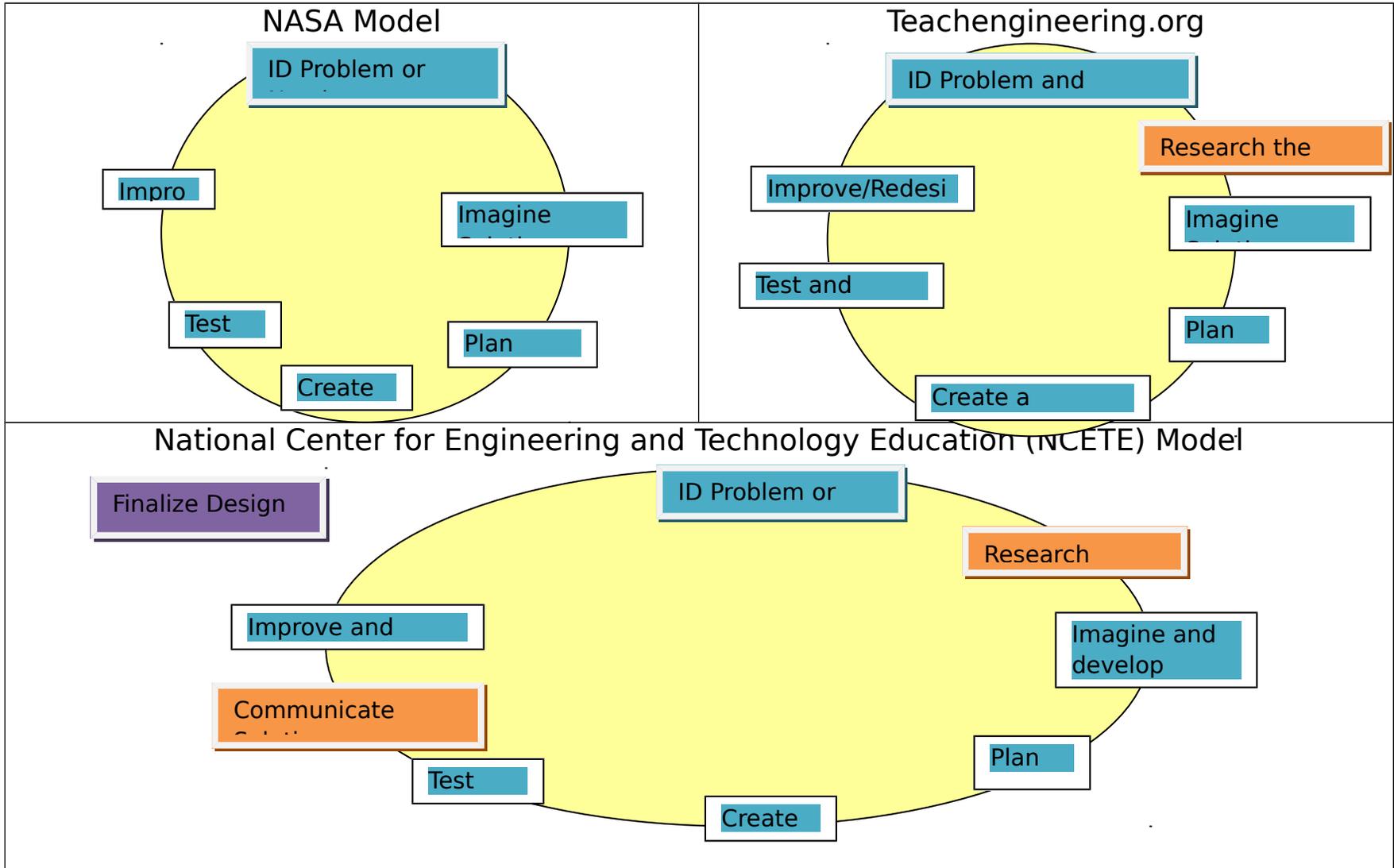


Engineering Design Process Models



Elaboration on the Engineering Design Models:

When comparing the three models, I notice that the NASA model is included in the other two models. It would be hard to represent these models in any other way due to their circular nature. All three models talk about the conditions and the limitations spelled out as a means to understand what has to be dealt with for the imagined solution. NASA model (adopted from the Boston Museum of Science) and the Teach Engineering Model are closely related. The only difference is the Engineering Design model has a research step. The Teach Engineering Model includes the need to research the problem by talking with experts and people of different backgrounds. Although it doesn't specifically have a research icon, the NASA model in the Ask stage does stress the need to ask lots of questions that need to be explored before beginning which can be seen as a form of research. In the Teach Engineering Model students research icon is included in their model. They specifically talk about the solutions that experts have come up with and what technologies might adapt to their needs. Both models are basically cyclical in nature.

The NCETE model and the Teach Engineering Model include the research step. NCETE model is different than the other two in that it seems to elaborate more on communicating of solutions and the finalizing of the design plan. The NCETE model also stresses that the order is not necessarily sequential and can jump back and forth between steps or skip steps. The NCETE model is a model that elaborates on the Massachusetts model and is nonlinear in nature. This model has arrows that skip from one step to the next without any specific order.