

WHAT IS DESIGN THINKING & HOW DOES IT HELP KIDS

We've all done it. Have you ever sat down to consider what takes priority for a day's work? Rarely do we consider the steps that lead us to beginning and finishing a task or project.

Design Thinking is the name, or methodology, given to the steps we use everyday to plan and solve problems. While adults use these problem solving skills professionally, most kids and youth are still in the formative stages of this skill development.

The process of Design Thinking was brought to the mainstream by IDEO and Stanford's d.school (founded by David Kelley). It helps people think creatively to solve problems and be more imaginative for designing almost anything! We know kids are imaginative, but this process helps funnel that imagination to create a more fluid and concise product or outcome. This helps them be more efficient and the quality of their work (or thinking) improves.

The best part is this method has life long effects. The younger the child, the better! This Design Thinking method is their "thinking-toolkit". Kids can use it to solve almost any problem and is a fundamental piece of the learn by making or maker-centric pedagogy which is the foundation of Brilliant Labs teachings.

BUILD A SUBMERSIBLE / SUBMARINE

DESIGN THINKING PROCESS GUIDING QUESTIONS

CALL TO MAKE

Did you ever wonder what was at the bottom of the oceans? Have you thought about what amazing ocean life we haven't discovered yet? Humans have only explored 5% of our oceans and we hardly understand the sea life we have discovered. Can we do more?

EMPATHIZE

How can we better understand ocean life without disturbing or destroying the many ecosystems within one of the planet's most important natural resources? Who and what depends on our oceans? Can we study our wonderful oceans without damaging and polluting it?

DEFINE

What are the various parts of a submarine or submersible? What makes it go up and down? How is air used to make submersibles function and how does pressure impact our designs? What materials can we use and what features can we add to help us research oceans without damaging the submarine or ocean life?

IDEATE

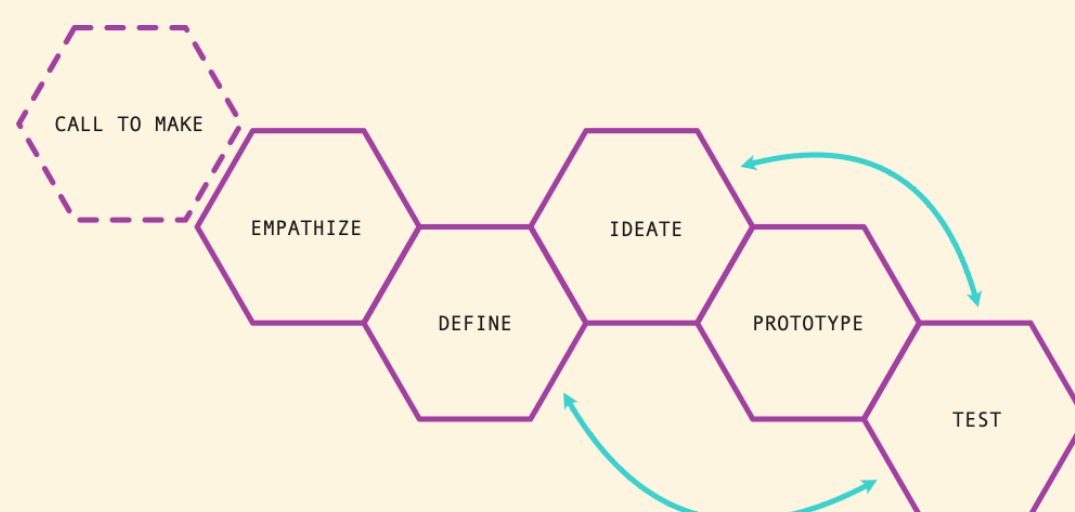
What materials can you use and where will you get the materials needed to build the submarine? What features should our submarine have to support research? What shape, size, abilities, and tasks should our submarine have or be able to complete? How will this influence our prototype design?

PROTOTYPE

What do we need to consider as we build our prototype? How will it go underwater and rise again? How will the materials we use make us change our design ideas? What research instruments and features can we add and how will they function or communicate with the research ship or save its research data?

TEST

Let's find some water and test our submersible or submarine! Does it float? Can it go underwater and return to the surface? What can we do differently to improve our design? If we had access to different materials would we change anything?



"Deep empathy for people makes our observations powerful sources of inspiration."
—David Kelley

