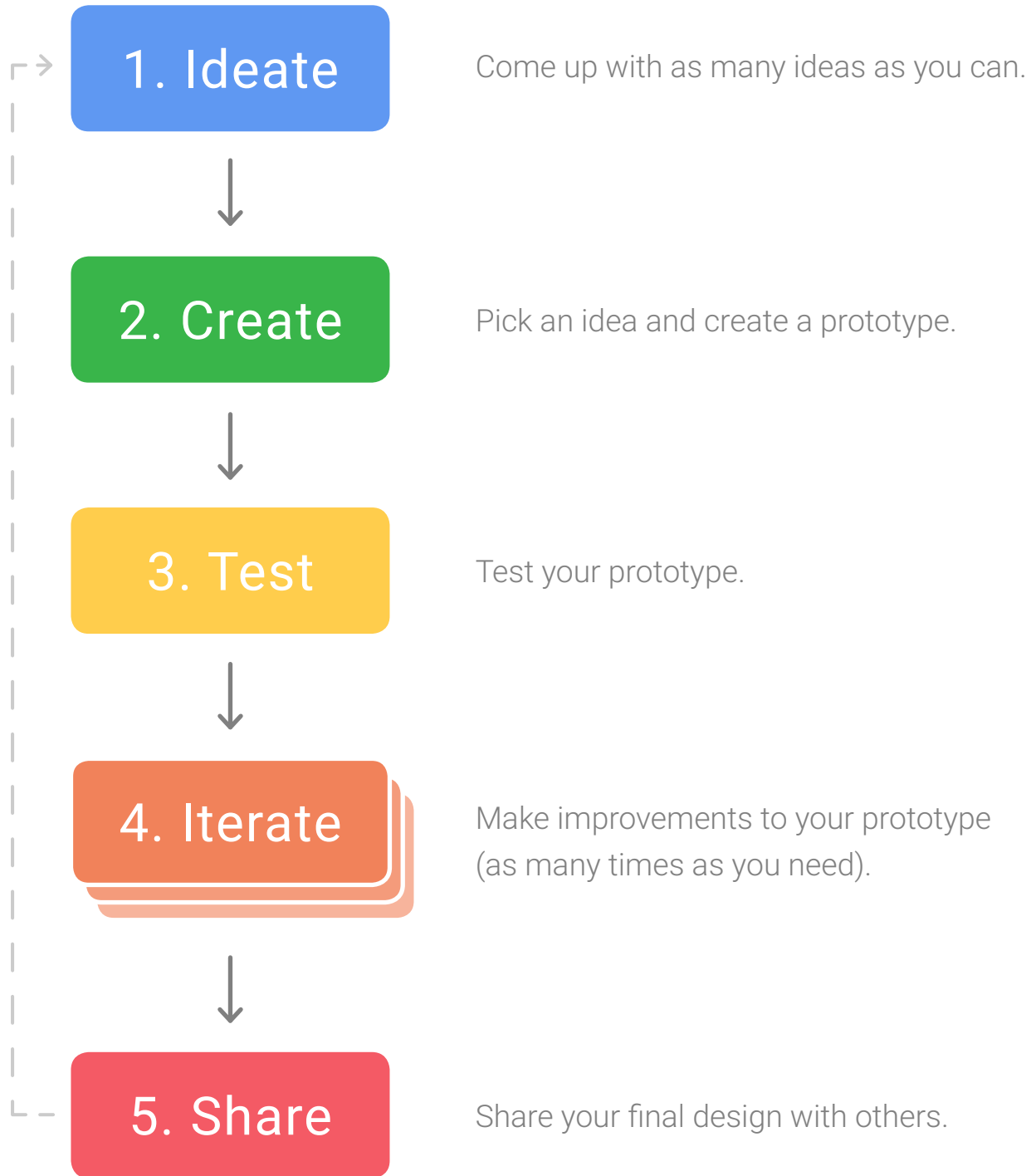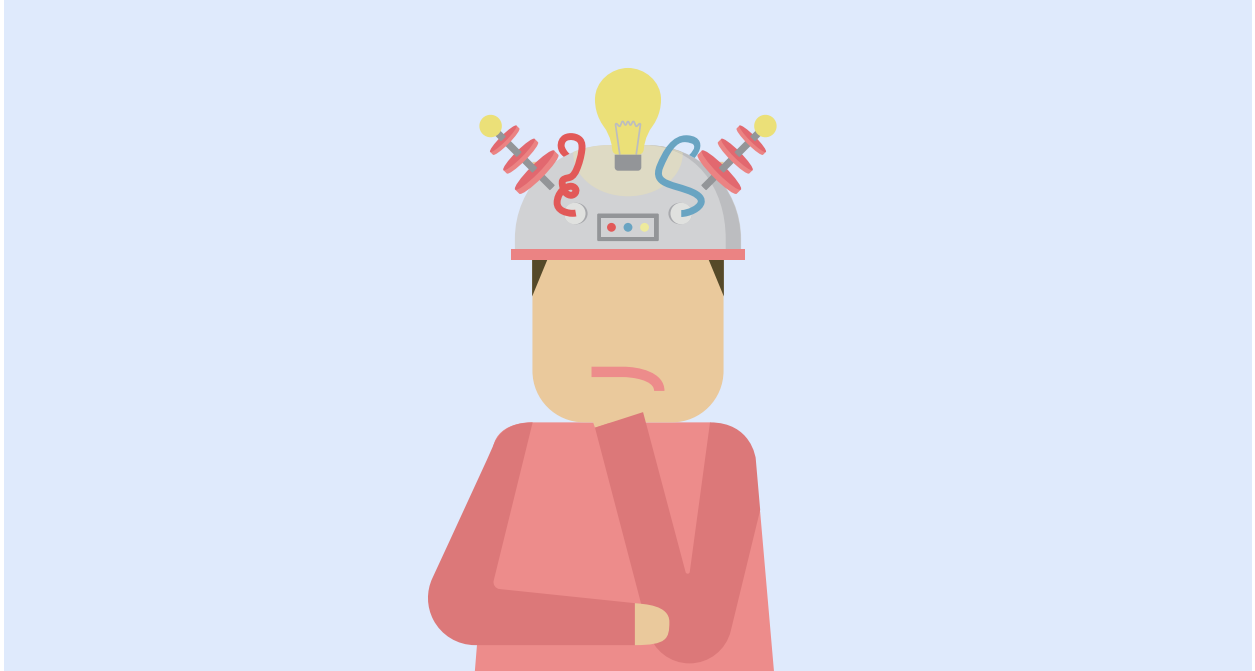TINKERINE™ U

# Introduction to the Design Cycle

# What is the Design Cycle?

The Design Cycle is a simplified version of real-world design processes used by engineers and designers across various industries. It's a cycle, meaning that the process is iterative rather than a single linear path from start to finish.

This is the process you'll be using in the Tinkerine Challenges! (u.tinkerine.com/challenges)

**1. Ideate** — Come up with as many ideas as you can.

**2. Create** — Pick an idea and create a prototype.

**3. Test** — Test your prototype.

**4. Iterate** — Make improvements to your prototype (as many times as you need).

**5. Share** — Share your final design with others.

# 1. Ideate

The first step to tackling a design challenge is to come up with as many ideas as you can. Jot them down or sketch them out to keep a record. Don't worry about whether each idea would work or not just yet. The focus here is to get the creative juices flowing.

Once you have a healthy pool of ideas, examine each of them more closely and choose one to pursue. This could be the one with the most promising functionality, or simply the one that you think you would enjoy creating the most.
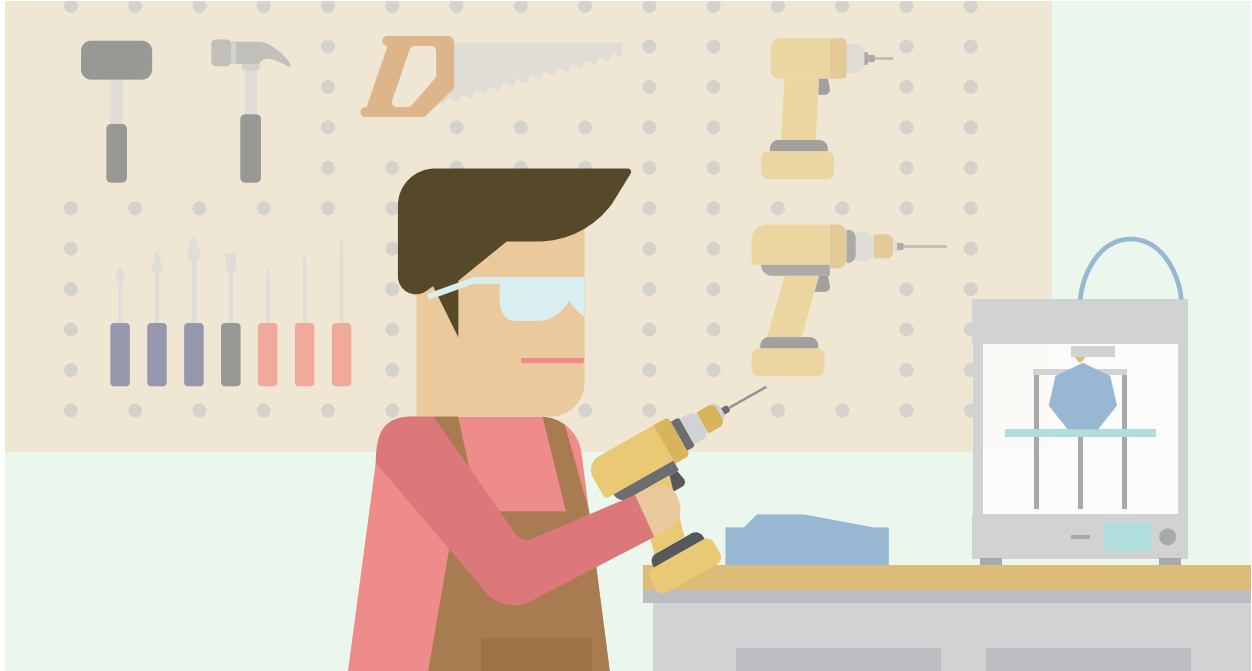
# 2. Create

Once you have decided on an idea, it's time to validate it by creating a prototype. This is the time to clearly define the constraints you're working within and the goals you're working towards. Knowing these requirements will help you stay focused throughout your design process.

Be aware of the resources available to you, and select the right tool for the right job. For instance, 3D printing is excellent for prototyping. Take advantage of it!
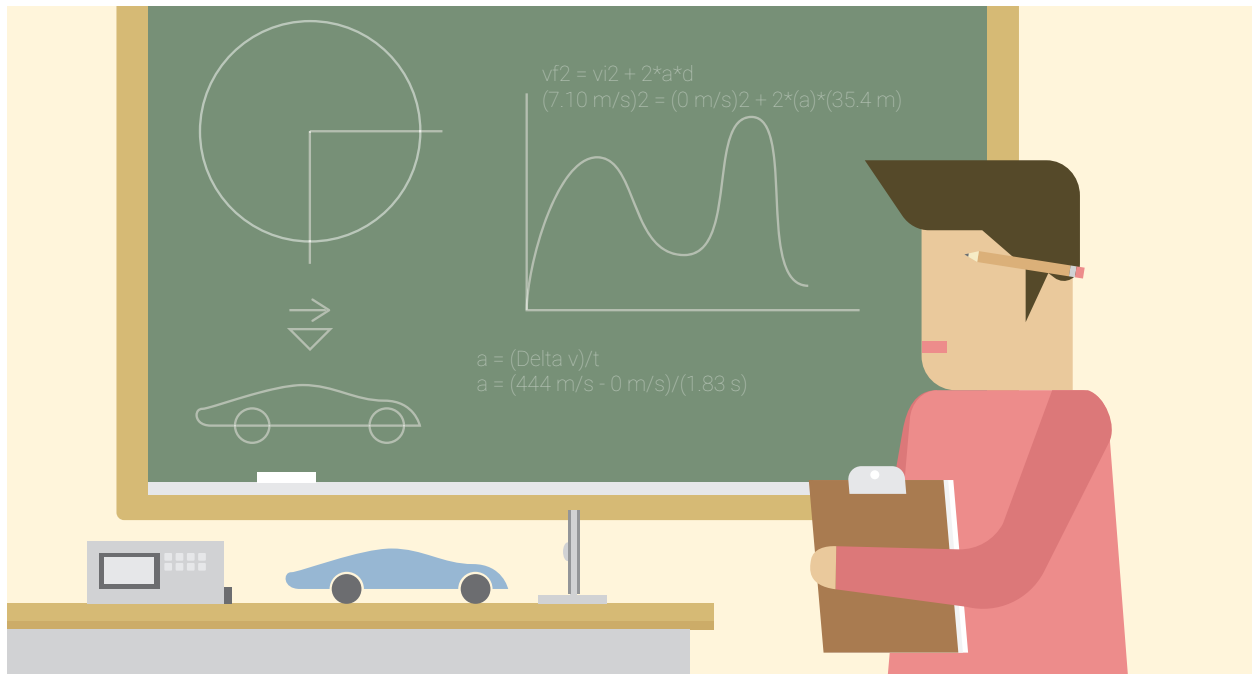
# 3. Test

With your first prototype completed, it's time to put it to the test. Does it achieve the goals you have defined? What worked? What didn't work? Don't forget to record these findings to help you come up with ways to improve your design.

It's also a good idea to ask others to try using your prototype. You'll often be surprised at the variety of feedback you receive.

# 4. Iterate

Using your findings from the tests, try to make improvements to your design. Don't be afraid to completely take it all apart and start from scratch if it comes down to it.

With each new iteration, continue to test it, record your findings, and make improvements. Repeat this cycle as many times as you deem necessary (within the time constraint, of course).
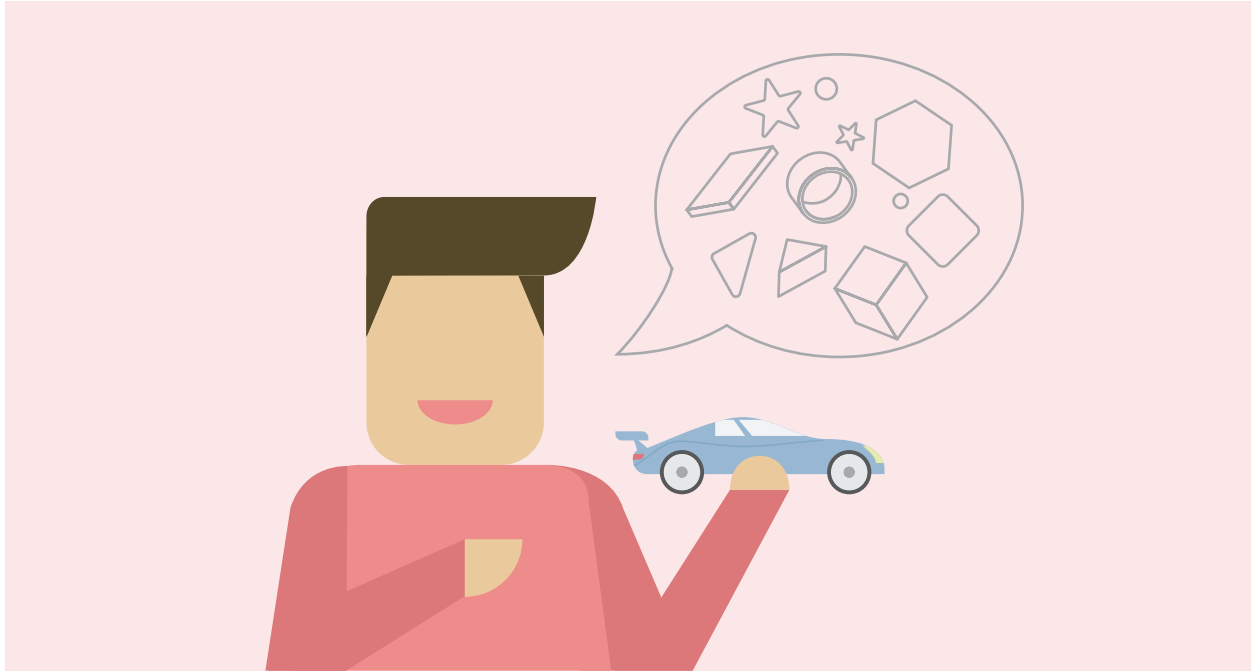
# 5. Share

The last step of the design cycle is to share your design and your overall experience with others. Tell the story of how you went from your original ideas to your final design. Be proud of what you have accomplished!

You may receive more feedback at this stage. It's useful to note them down in case you wish to further improve your design in the future.

You're ready.
Now go out there and
design something!

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