

Steps of Design Thinking - Bird Beak Design

Empathy

Total time: 5 minutes

In this initial phase of design thinking, the **goal** is to *observe, share* and *listen*. Questions to ponder:

- How would a bird effectively use their beak?
- What features would that bird find helpful?
- Does location play a role?
- Do food sources play a role?

Remember, the more ideas generated, the easier the following steps will be!

Define

Total time: 5 minutes

The goal of this step is to unpack what you know and create a point of view. Items to keep in mind:

- What observations and thoughts from your initial “thinking out loud” list (empathy stage) will help make the best beak?
- Describe your POV in a simple sentence that includes action.

Remember, you want to be able to make something, not just think about it!

Ideate

Total time: 8-10 minutes

The goal of this step is to brainstorm (now is the time to push your imagination and generate possible solutions. Now might be a good time to:

- Check out available materials
- Sketch and label your ideas (materials, dimensions, parts, and functions)

Remember, the more ideas that you generate the better! Try to come up with at least 3 solutions

Prototype

Total time: 15-20 minutes

The goal of this step is simple - build your model! In fact, build more than one. Final touches and editing down to one model can happen in the last 2-3 minutes. Photo documentation is key. These images can be incredibly useful when you go back and edit your prototype.

Remember, builds do not always go according to plan - best to have a back up!

Test

Total time: 1 class period

Now it is time to start the laboratory activity. Have fun!

Remember, testing should inform your iterations. Keep your data in mind!