## Introduction to Biomimicry Shiva Subramaniam, Chief Innovation Officer Gopalakrishnan-Deshpande Centre for Innovation and Entrepreneurship Indian Institute of Technology - Madras

## Lecture – 33 Recap of Week 6

Hello, we are on week 7. I cannot believe that we have actually completed 6 weeks of learning biomimicry. You know, actually, I am getting a little nostalgic if I may use the word because we started this, personally, Mrinalini and I started this biomimicry journey about less than 2 years ago, of course, Professor Sivakumar and Professor Satya Sehadri were of great help. And we never once imagined that in such a quick time we would be able to speak to so many of you.

It is very encouraging to see your responses, and the questions that you are asking and it is always nice to know that something that you have learned and you are sharing with other people is now ready to be shared by all of you with other people, therefore, we create ripples of knowledge. Of course, I will get more nostalgic in the next session which will be our 8th week. I just thought I will share with you the joy that we are feeling when we are teaching biomimicry to all of you.

As usual, let us start with a little of recap from the last time. In week 5 and 6, you probably learned one of the most transformative pieces of knowledge for the future, for instance because the design principles of nature are not yet very popular, as biomimics, I think I can call all of you that, we also now know as biomimics that the design principles are fundamental to transformation, that the design principles will help us ask what should be the design that we should employ in the future.

The design principles are the ones that nature has used its time tested it works. So, the question is how long are we as human beings going to take to actually adopt the principles of how to design from nature? And I do not know how many of you are already thinking about using one or two or three principles in your own life. So, they were the design principles. We also thought that if ever we do biomimicry 2.0, then we should have much more discussions around the design principles.

You also learnt systems thinking and you would have started by now to become a systems thinker, you would have started to see the connections. I am sure every time food is being delivered to you, you are seeing the connections between the delivery boy and the restaurant and the bike that he is using and the connection between the bike and the fuel that the bike is using and thereby how that is causing a climate problem.

You would have seen the connection between the delivery boy and the restaurant owner and the chef in the restaurant and the food that is coming, the vegetables that are coming to the restaurant, how the vegetables are coming, which farm they are coming from, and how the farmer is dependent on rain, which goes back to climate change, etc. So as a systems thinker, you will start to look at the elements, the interconnections, the interdependencies, and the purpose of the system.

I am sure you are having great fun learning systems thinking. I am hoping that you have started to be a big-picture thinker. You also learned the 'Cats in Borneo' consequences in systems thinking, short-term, long term unintended consequence. I am sure you are going back in your own lives and looking at decisions you made that have had unintended consequences. I can give you lots and lots of examples of unintended consequences in my life.

And suddenly everything comes together. The whole purpose of systems thinking is to be able to understand something. When I understand a problem, I am no more frustrated by it and that for me has been the biggest benefit of systems thinking. I have been able to understand why things happen.