

# **Lesson: The Circle Of Life**

A core lesson on the way nature uses simple ideas, deep math, and repeating patterns to create life. We explore these patterns.

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## **Ecosystems Exist in 3D, X, Y, and Z**

A philosophical treatise on the deep relationship between the soil below, the ground and the air above. Told by a tree

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## **Applied STEM, Not a Meth House**

When I tried to bronze chain in oil in our oven and discovered Applied STEM, not a meth house.

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## **Things Break, And You Must**

# Replace Them

Living on an urban farm you learn three things real quick:

1. If it can go wrong it will so have a backup plan
2. The sun and the winter corrodes everything
3. Things are not as important as ideas

I was out doing my morning chores and my Weather App was telling me it was 10C so it should be fine to use the nozzle on my trusty 1,000 L IBC (Intermediate Beverage Container) – I didn't name these things – that also serves as my rain barrel in the livestock yard. I should have stopped when I felt resistance. But I kept pulling and SNAP! The Polypropylene handle for the nozzle just snapped clean off. Four years of steady reliability.

I was of course disappointed but not annoyed. I have seen so much oxidation and entropy here at Mezzacello I was hardly surprised. Rule number 1 – I knew this was going to happen. So I keep a spare IBC cube. Rule number 2 – I take a moment to count my blessings and marvel at the power of entropy. Staying grateful for what you have is important. Rule number 3 – I am wise enough to remember that an IBC with 270 L of water in the bottom is going to weigh 270Kg (595 lbs) so I pull out my handy dandy backup water pump. See Rule number 1 – always have a plan. Also it was a lot of work to convert 270 L to it's constituent pound weight. Whereas 270 L AUTOMATICALLY weighs 270 Kg. Why don't we use metric in America?

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# Sustainability and Renewal

The secret to sustainability is finding ways to reintegrate

waste and produce more than you started with. Repeat and add diversity.