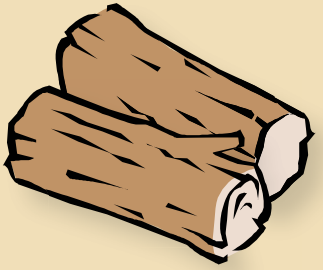
VA #1 Lake by a Small Town

VA #2 Biomass

Types of Biomass

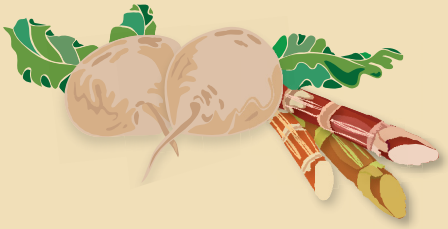


Plants
(wood and other plant parts)

Crops and Animals
(corn, rice, sugar cane, sugar beets, manure)

Energy Sources Created from Biomass

Biodiesel
(made from plant oils and animal fats)



Alcohol Fuel
(Ethanol, made from crops)

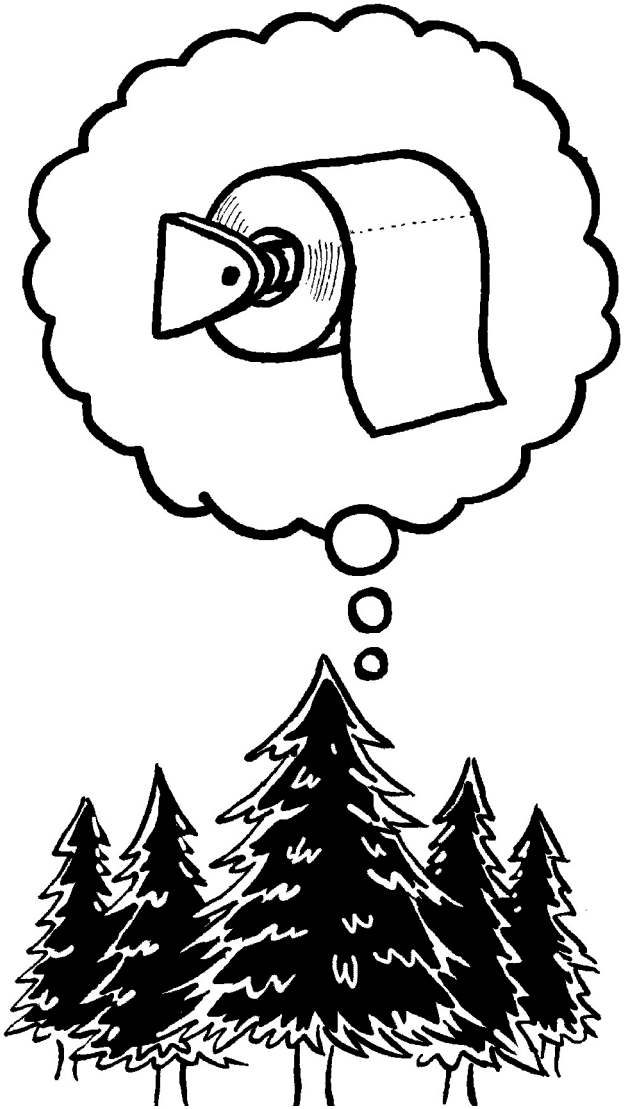
Biomass:

1. The total mass of living matter in a given area.
2. Organic material made from plants and animals.
3. Organic material used for fuel.

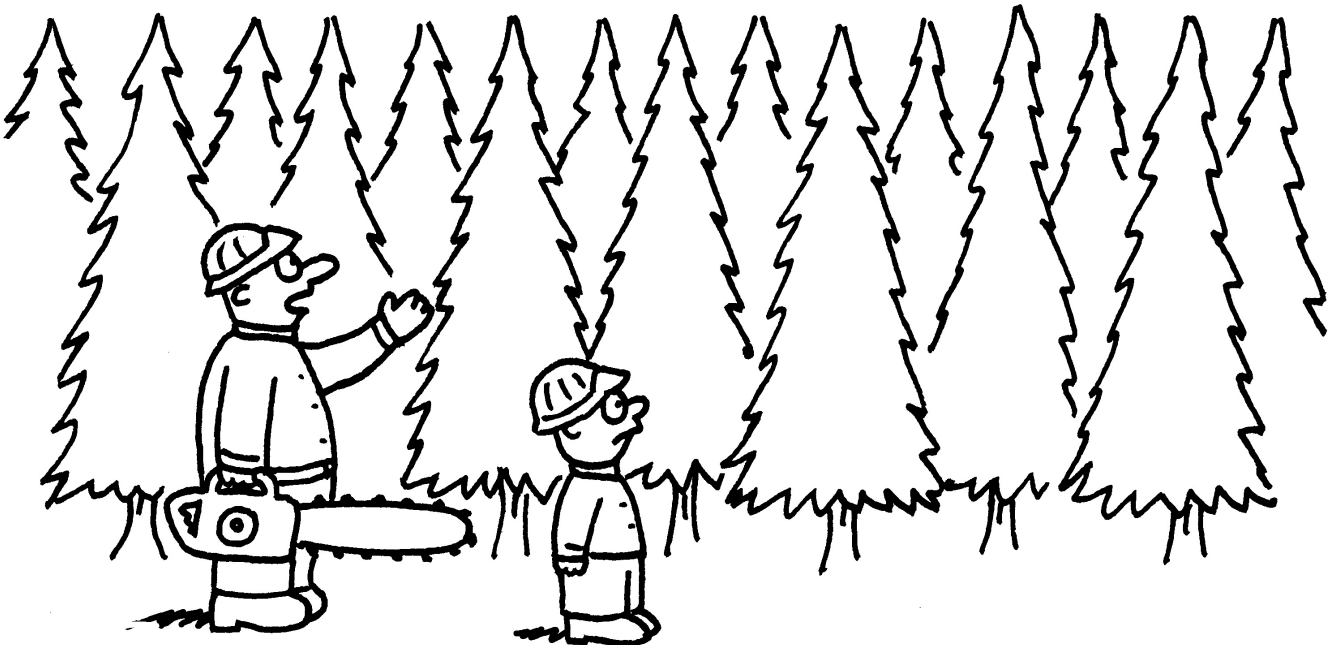
VA #3 Energy and Material Resources Table

Energy Resources	Material Resources

VA #4 Toilet Paper

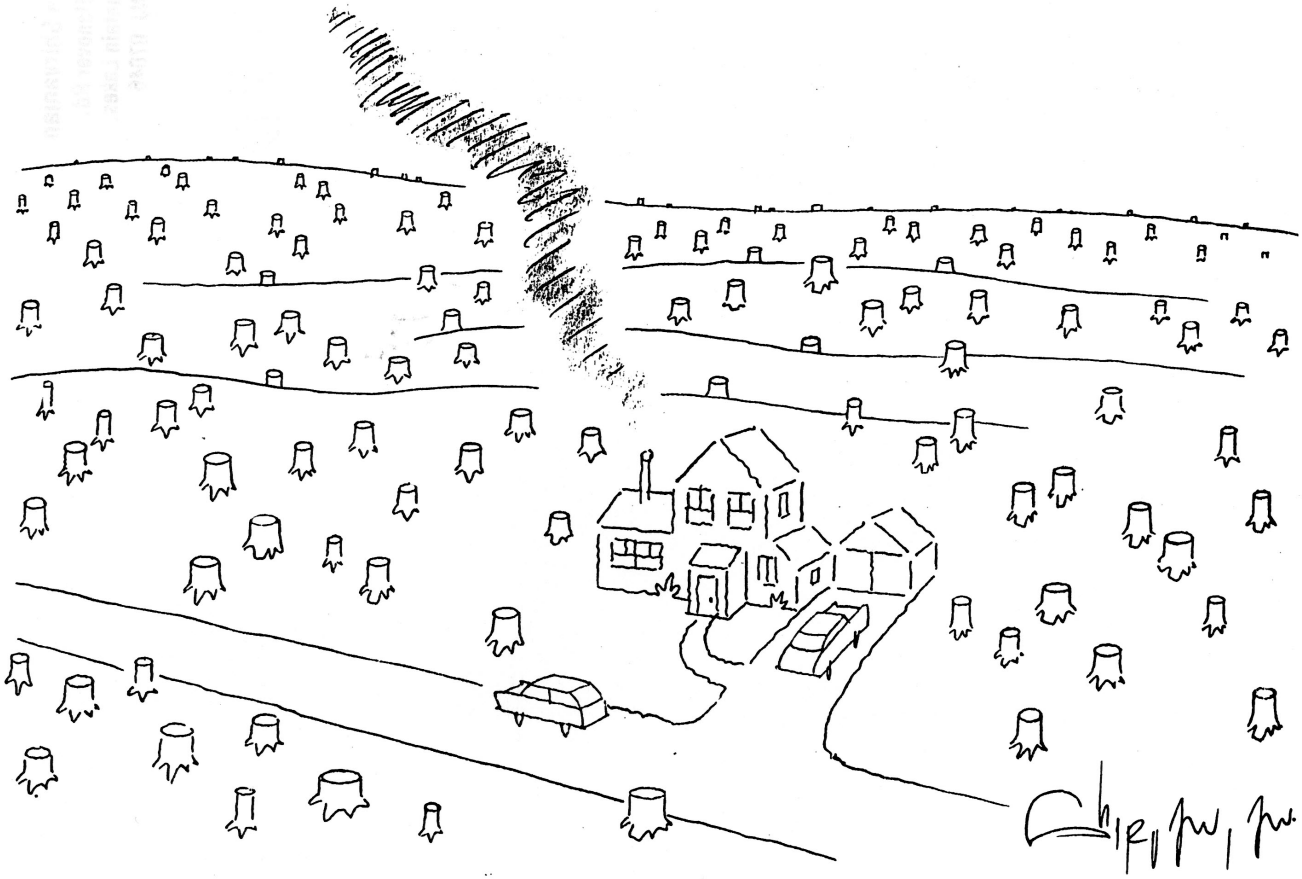


VA #5 Junk Mail



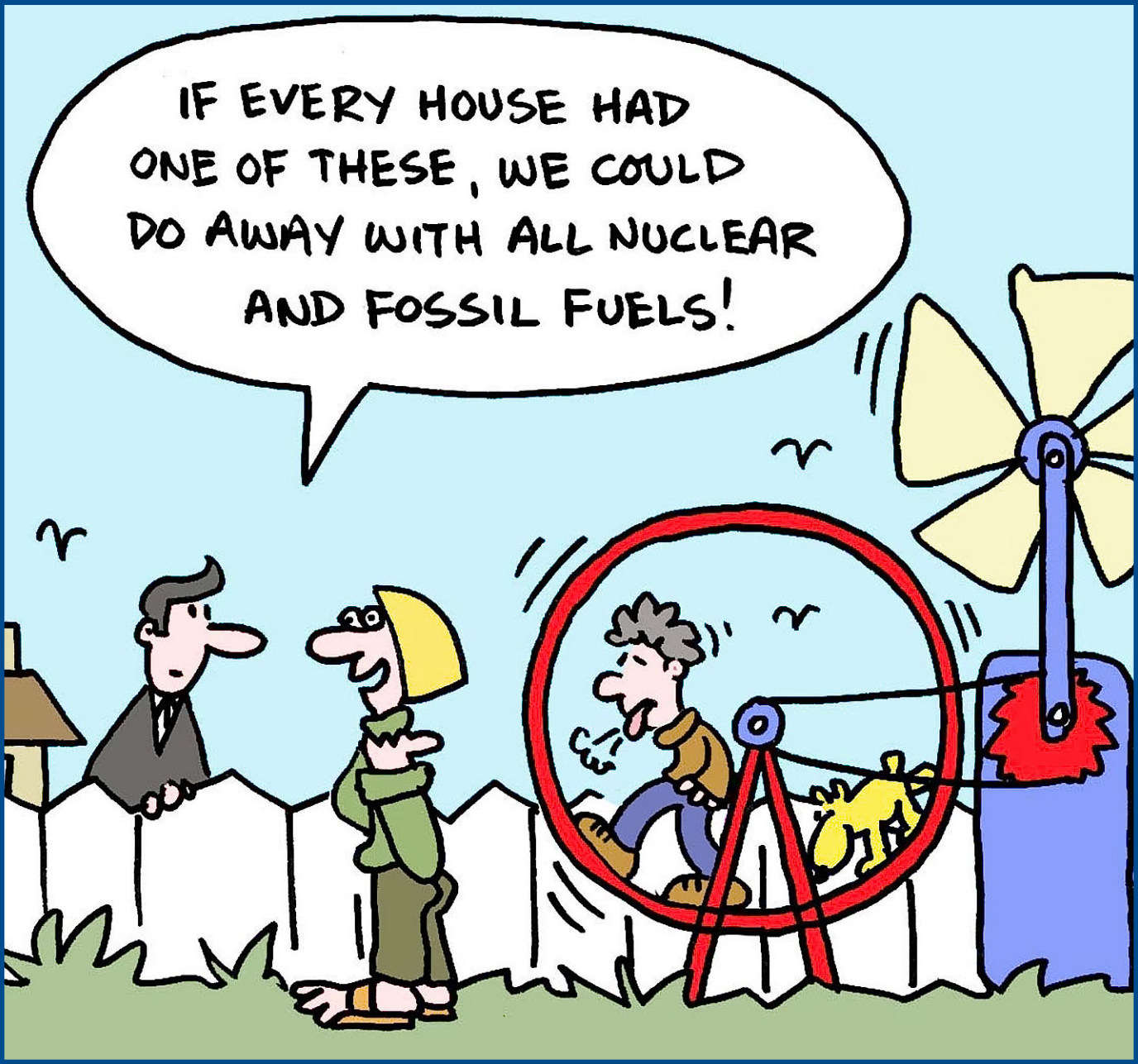
"One day son, all of this junk will be mail!"

VA #6 Wood-Burning Stove

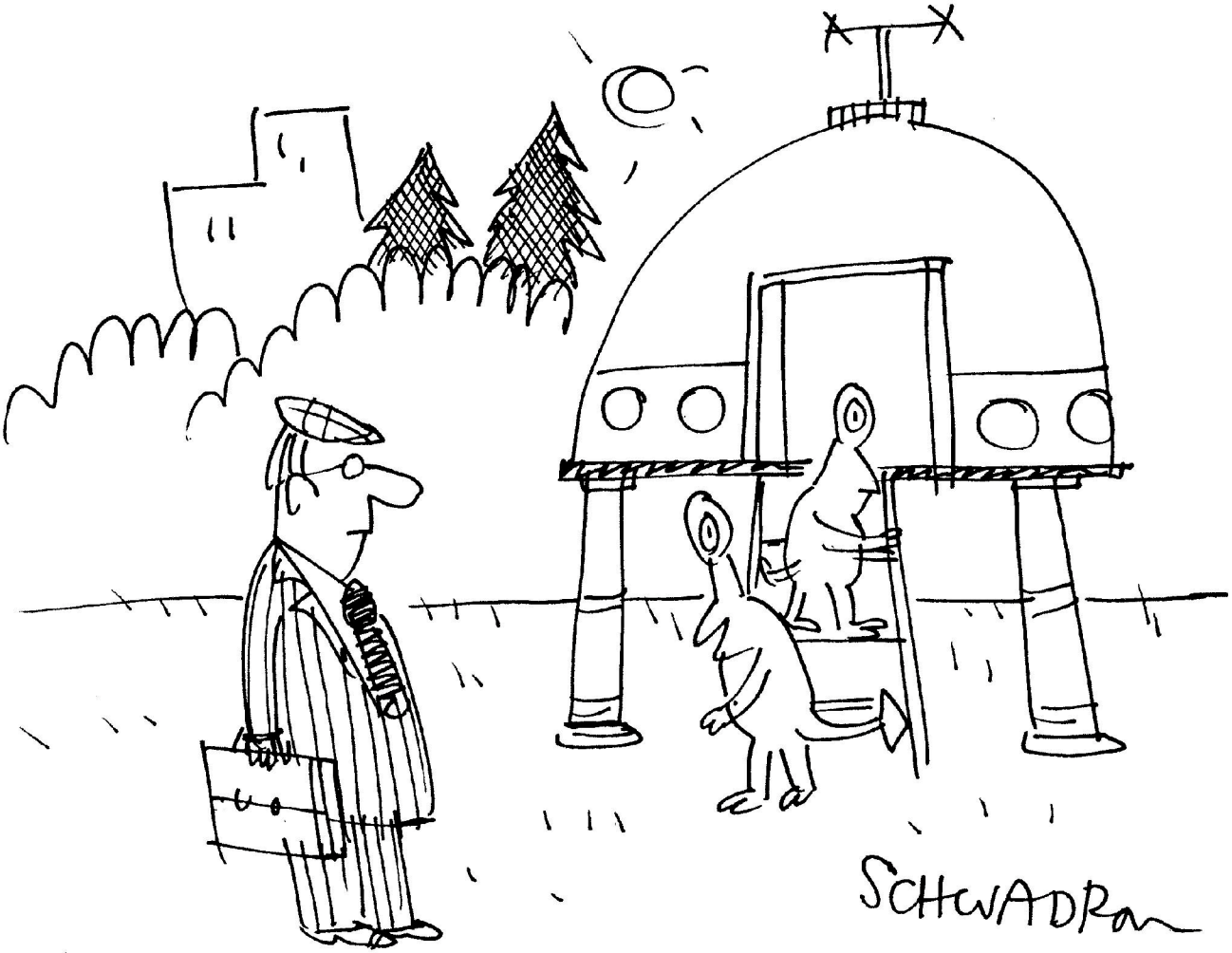


"Can you believe it? Since we installed our wood-burning stove, we've spent next to nothing on heating oil"

VA #7 Boy- and Dog-Powered Fan

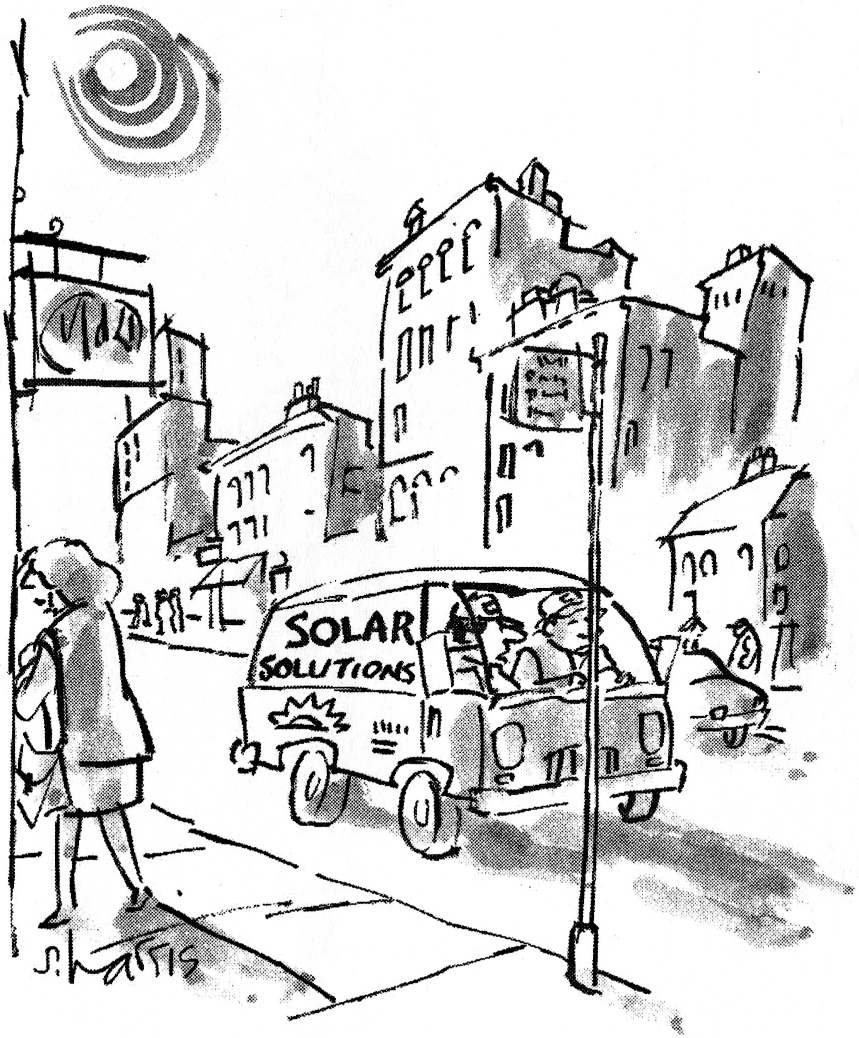


VA #8 Fossil Fuels



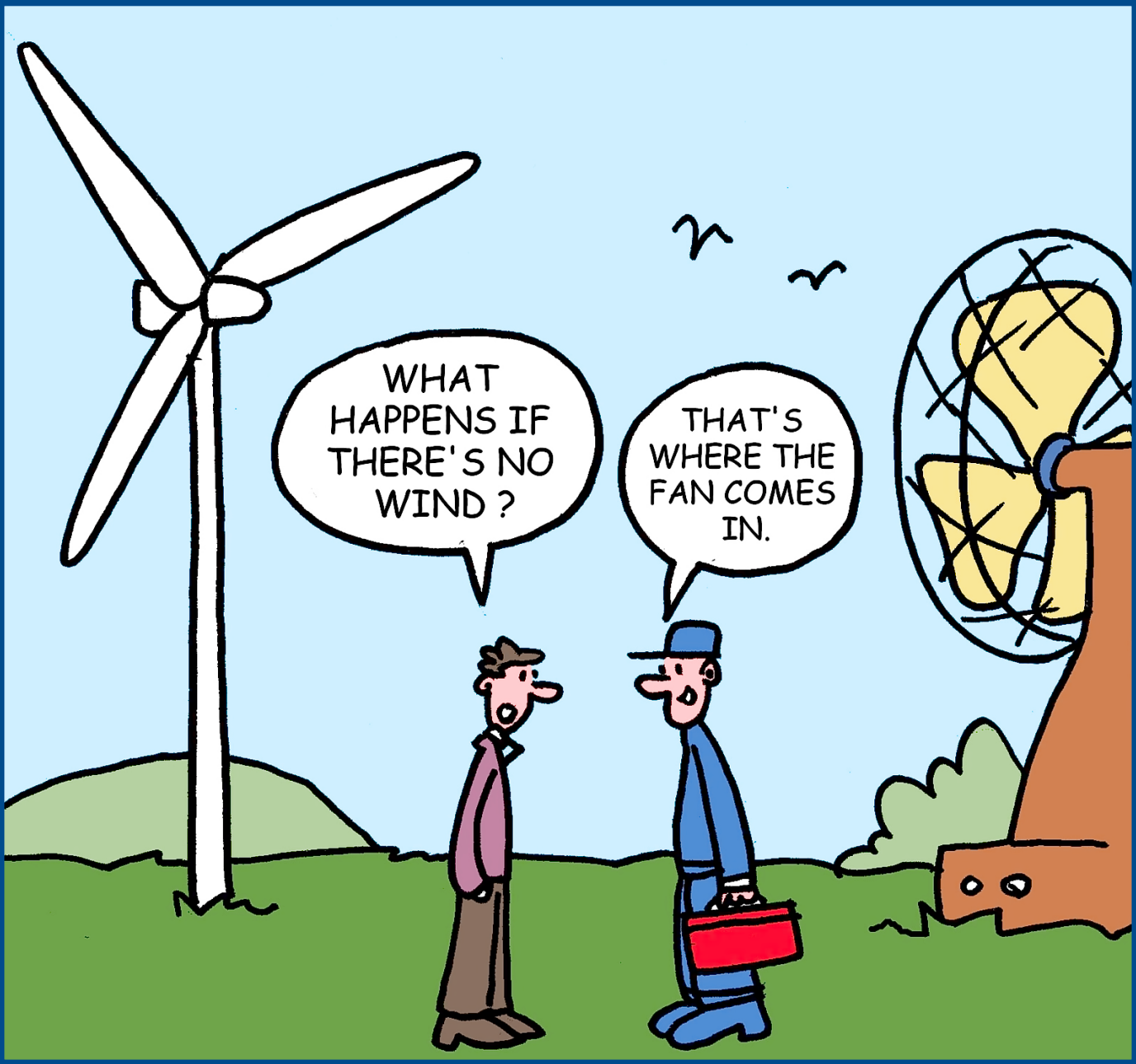
"WE CAME HERE BECAUSE OUR PLANET RAN OUT OF FOSSIL FUEL."

VA #9 Sunshine Going to Waste?



"When I think of all this sunshine going to waste…"

VA #10 Fans



VA #11 Fishing Scenarios

Scenario 1:
Imagine that everyone in the town fishes using a rod and reel. The people have a tradition–they never keep more than one fish to eat. One day, a newcomer brings a big net and starts scooping up hundreds of fish at a time. This person plans to sell the fish to a town far away.

Scenario 2:
Imagine that everyone in the town fishes using a rod and reel. The people start a new tradition–everyone in town decides to eat fish for every meal, every day. This means that they have to catch and keep many more fish than they used to.

Scenario 3:
Imagine that the fish population has dropped very low. Now there are not enough fish for everyone in the town to continue catching and eating. When people go to the lake with their rod and reel, they often come home empty-handed.

VA #12 Aquaculture

VA #13 Sample Decision Flowchart

Question:

Option 1 (Human Practices or Production):

Option 2 (Consumption):

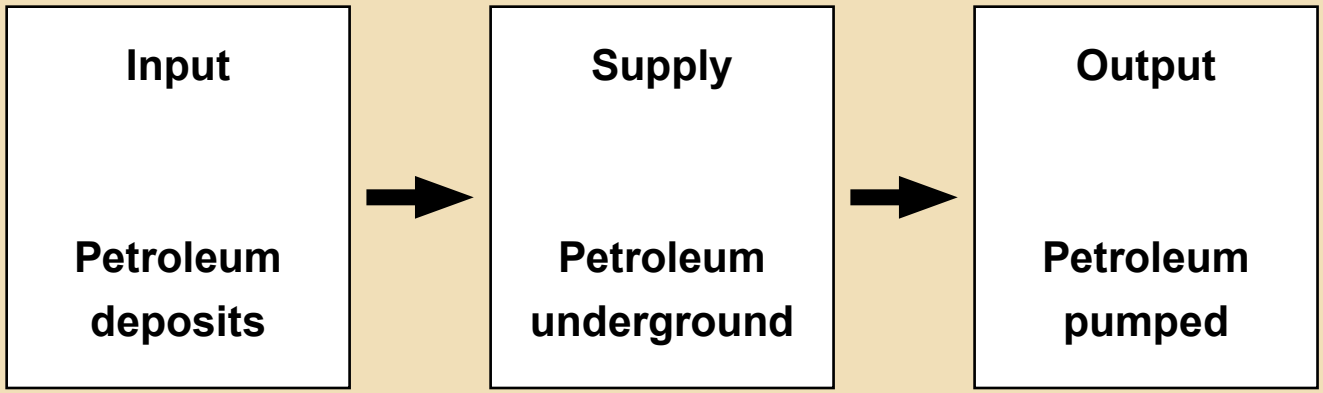
Pros	Cons	Pros	Cons

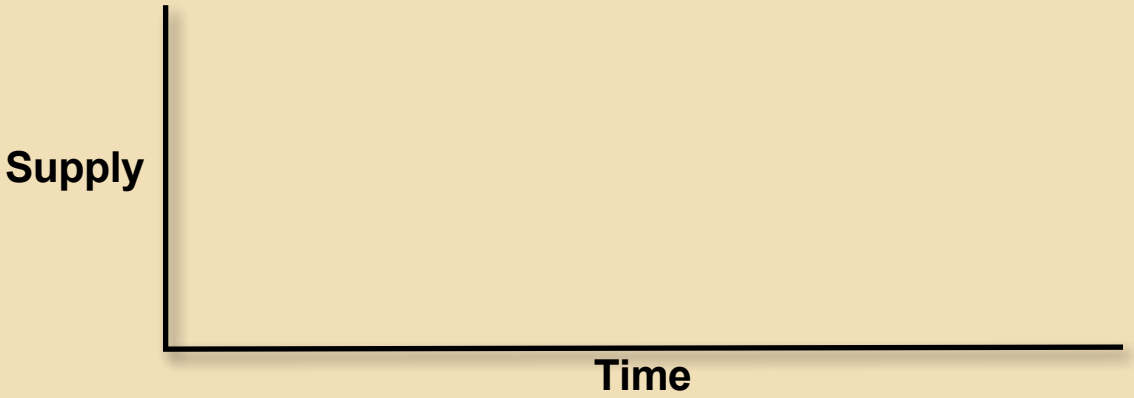
Decision

VA #14 Resources: Input, Supply, and Output

Input	Supply	Output
Rain or snowmelt	Water in a reservoir	Water from a faucet

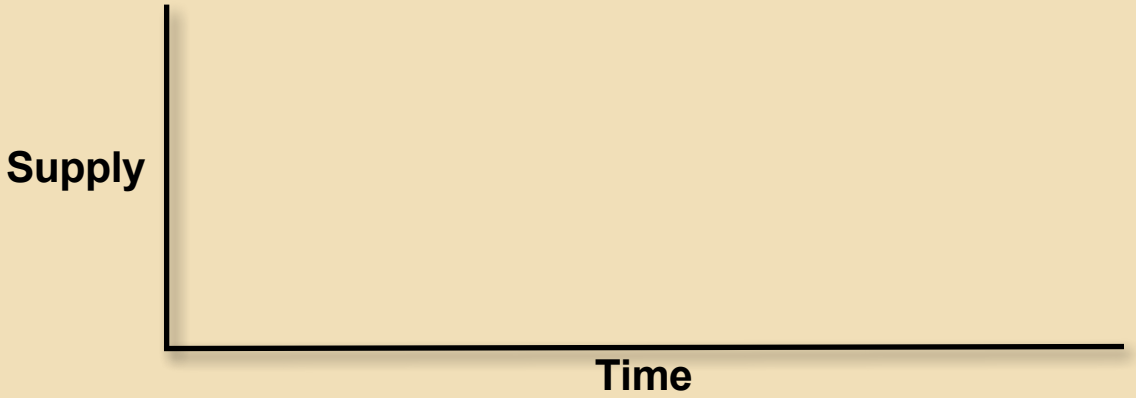
VA #15 Petroleum: What Type of Resource?





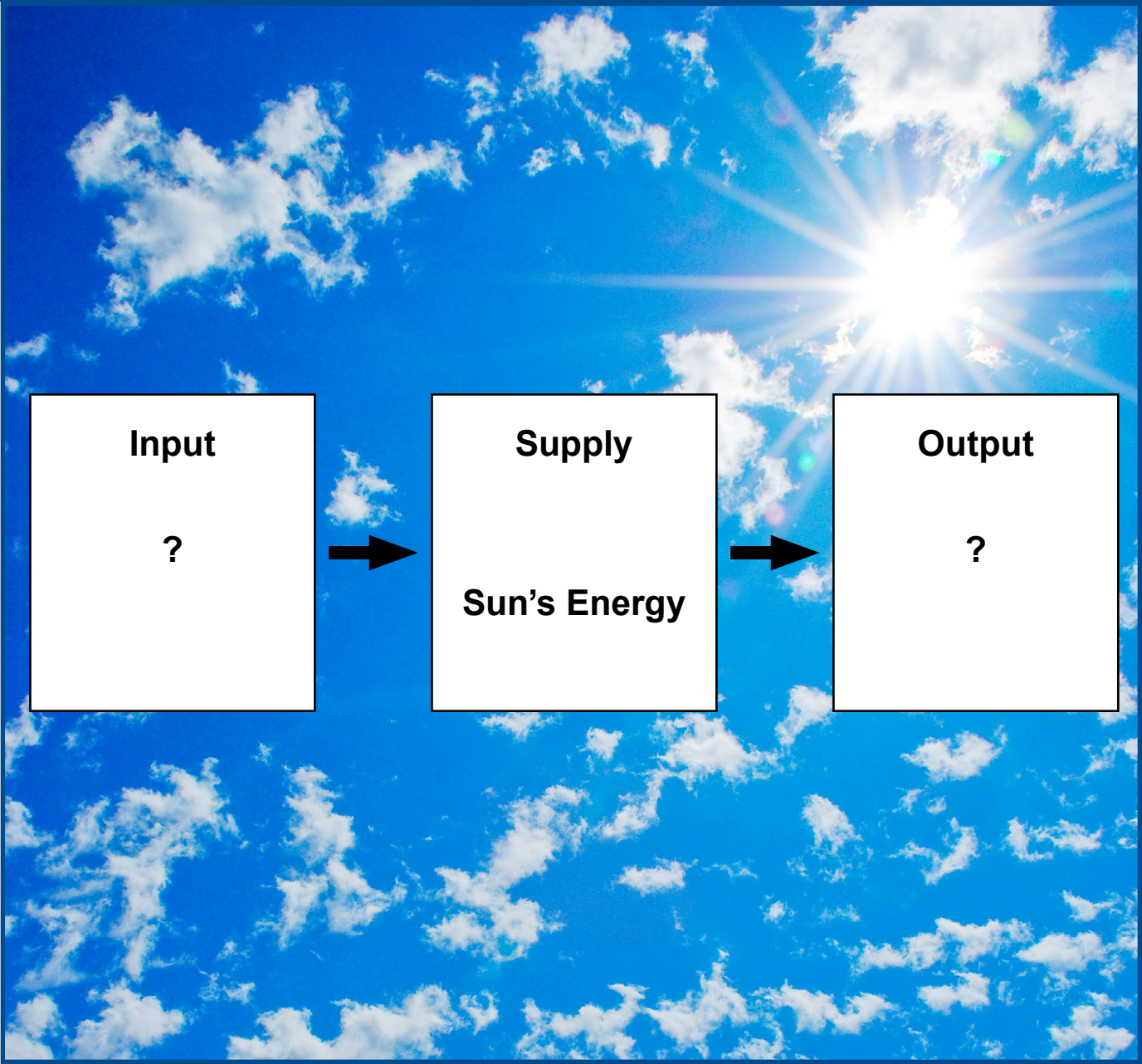
VA #16 Fish: What Type of Resource?

Input	→	Supply	→	Output
Fish born (or hatched)		Fish in ocean, rivers, lakes		Harvest at rate new fish produced



Input	→	Supply	→	Output
Fish born (or hatched)		Fish in ocean, rivers, lakes		Harvest faster than new fish produced

VA #17 Sun: What Type of Resource?



VA #18 Reclaimed Water