

# Break the Cycle

sustainability  
science for  
sustainable  
schools  
NSF-Funded GK-12 Project



# Bottled Water

- Every year, **28 billion** bottles of water are produced and consumed in the United States.
- It takes energy and resources to produce bottled water and we recycle only **1 in 5**.
- Is bottled water unsustainable?
- Using the pictures, recreate the life cycle of a bottle of water.



# Cradle to Grave



# What can we do to break the cycle?

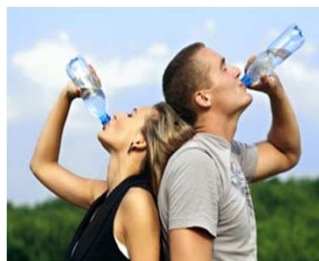
Most water bottles have a **linear** life cycle. The resources that go into making the plastic are not recycled or reused.

This is referred to as **cradle-to-grave life cycle**.



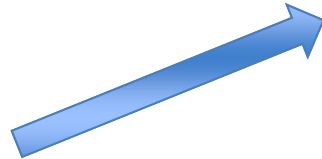
- What choices can we make as consumers to change the life cycle of bottled water?

# Recycle!

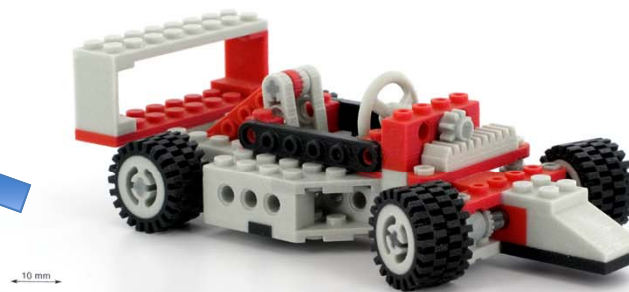
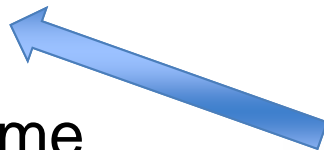


# Cradle to Cradle Manufacturing: Lego analogy

Circular  
life cycle



Pieces become  
something else after  
being used



10 mm



# Which are usually born again?



# Which are usually born again?



65%



66%



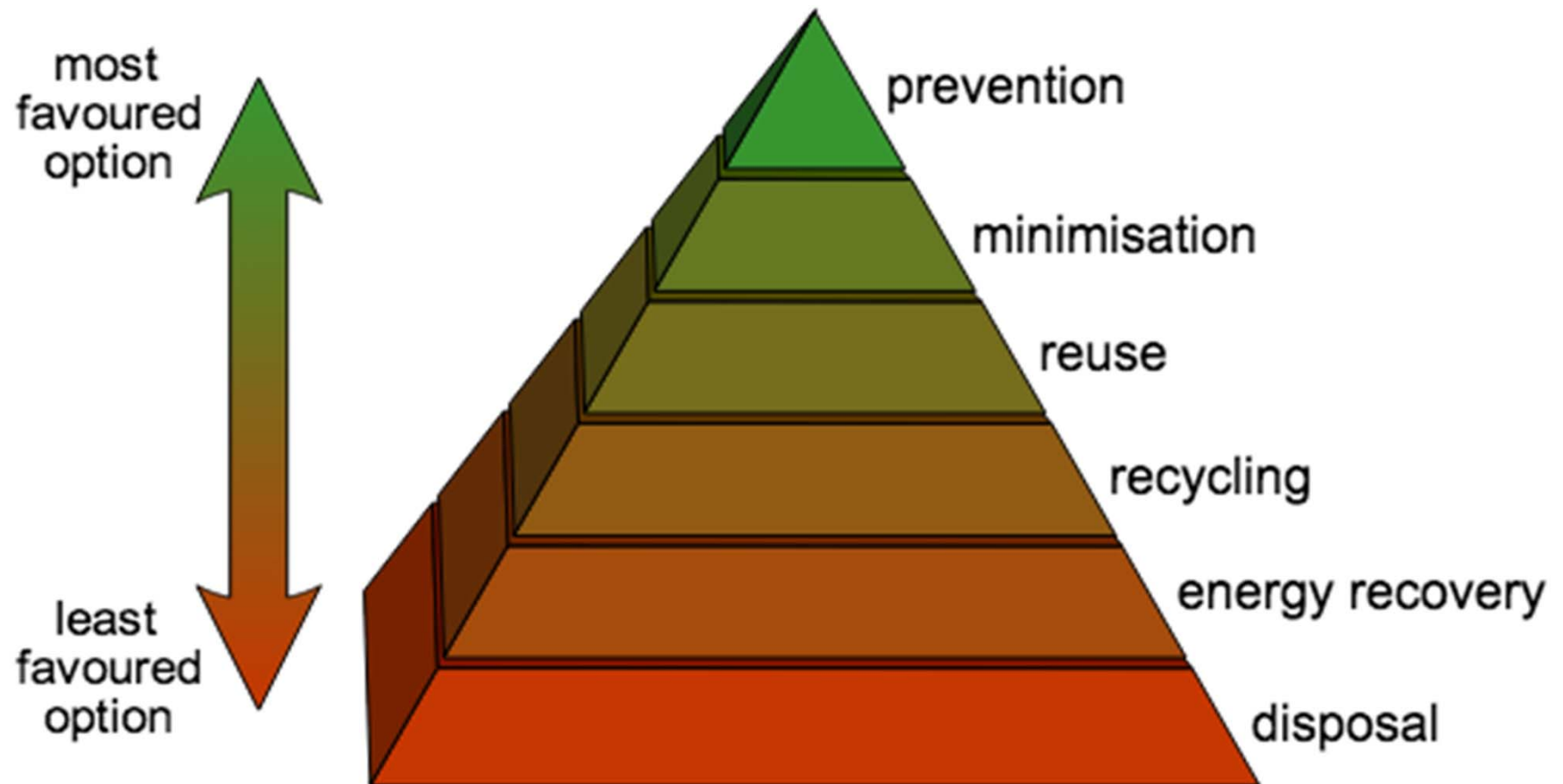
99%



20%



# How else can you break the cycle?

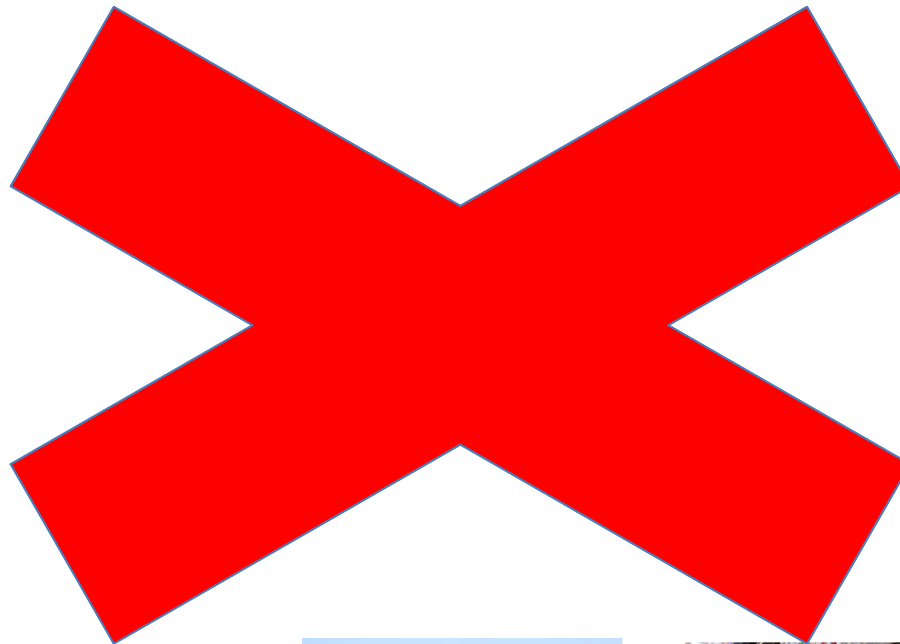




**RE-USE AND REDUCE!**

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# By using reusable water bottles and drinking tap water, we can break the cycle

- Why don't more Americans choose to drink tap water?

# Water Bottle Taste Test

- To see if bottled water really is superior to tap water, let's do a taste test as a class!!

# What about tap water's life cycle?

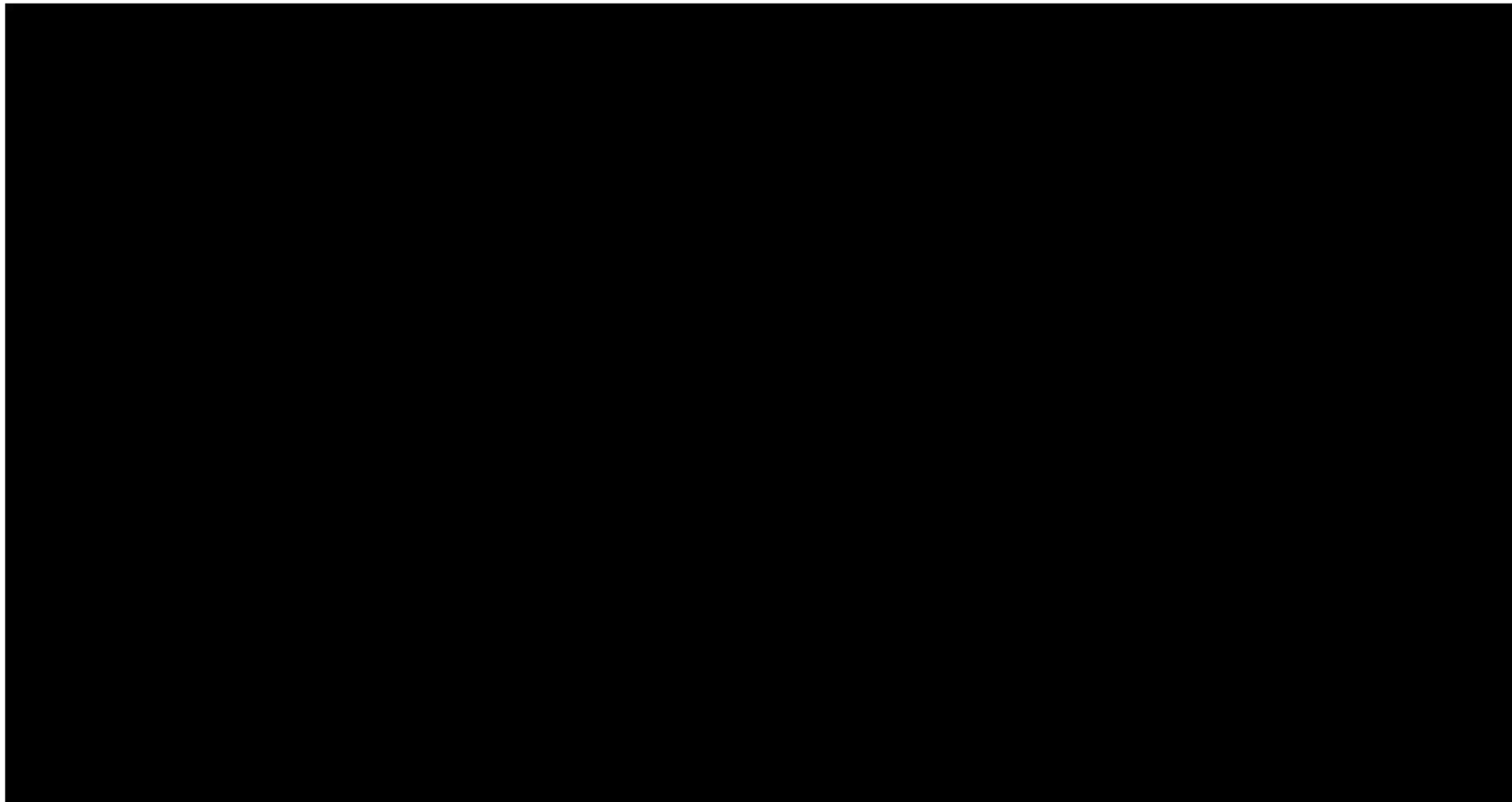
Find out where the water in your area comes from:

- <http://www.nature.org/all-hands-on-earth/water>

or

- <http://water.epa.gov/drink/local/>

# Where does tap water go?



<http://www.youtube.com/watch?v=oaXth88i7rk>

# For more information on Water Treatment:

- <http://www.epa.gov/ogwdw/watertreatmentplant/flash/index.html>