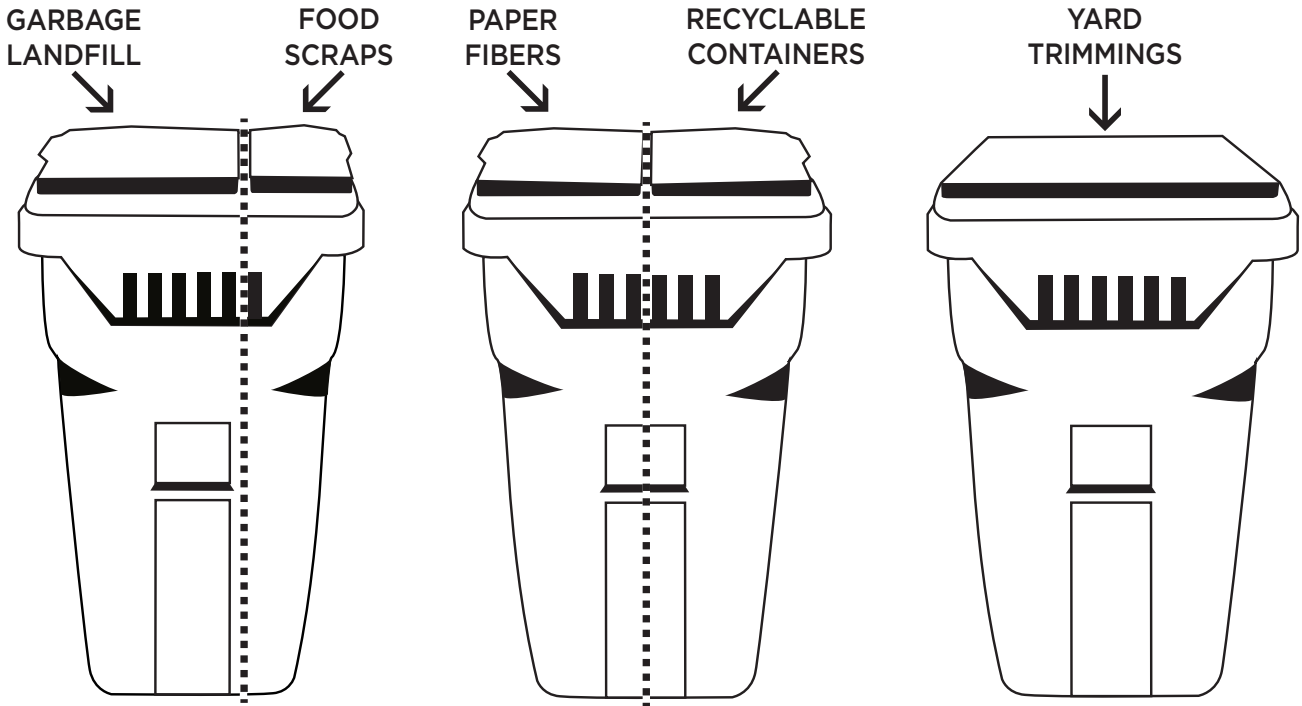


# Be a Super Sorter!



**Fill the carts in with the correct colors!**

**Gray for Garbage**

**Brown for Food Scraps**

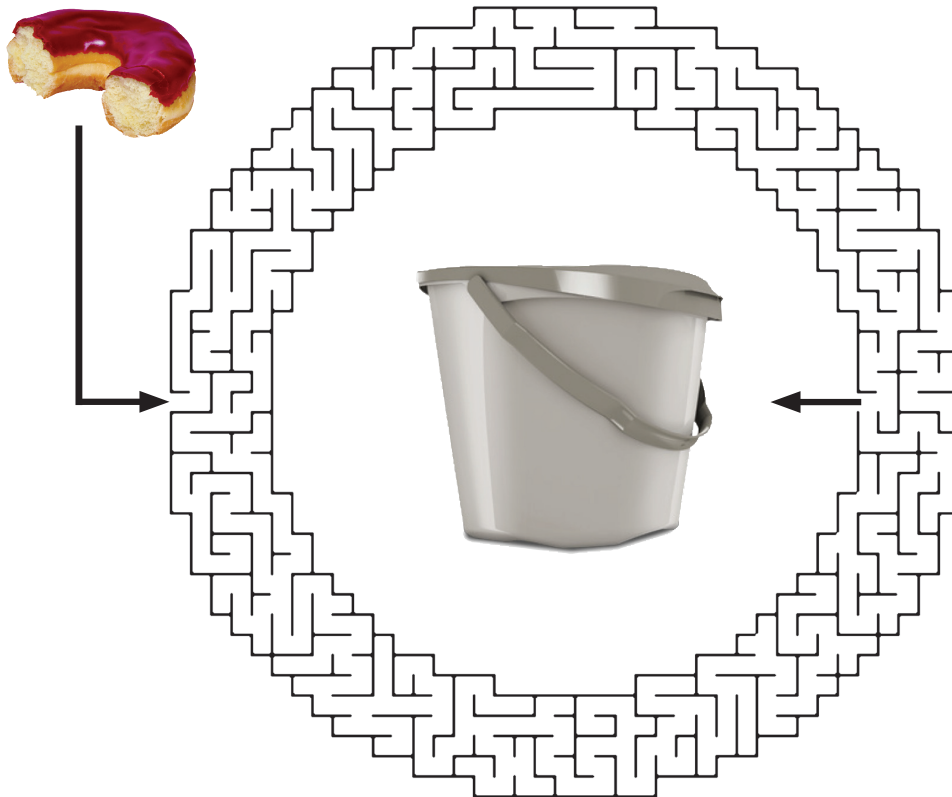
**Blue for Recycling**

**Green for Yard Trimmings**

## The Handy Kitchen Pail.

Use it to store your food scraps until you empty it into the food scraps side of your gray garbage/food scraps split cart. Do not place the pail at the curb for collection.

Follow the maze to put the donut in the kitchen pail!



## What Belongs in the Food Scraps?

All Fresh, Frozen, Cooked & Moldy Food Scraps, Including:

- peels, pits & rinds.
- dairy products.
- bread & pasta.
- coffee grounds & tea leaves.
- meats & bones.
- backyard fruit & vegetables.

### Food-Soiled Paper

- soiled napkins & paper towels
- soiled newspaper & kraft paper bags




# Fork to Feed: The SAFE Process

**1** Homes and restaurants separate food scraps.




**2** Food scraps are collected using specially designed collection carts, bins and trucks.




**3** Food scraps are taken to a SAFE\* pre-processing facility.



**4** A series of augers, grinders and screens size and separate the material.



**5** Contaminants are composted or landfilled; depending on the amount of source contamination.



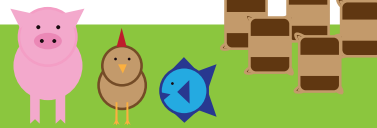
**6** A mash is produced and sent to a SAFE production facility.



**7** The mash is processed into a nutrient-rich meal used in non-ruminant animal feed.



**8** Animals are fed. Food is produced.



## Word Scramble

Unscramble the letters to create terms mentioned in the diagram to the left. Use the letters in the circles to spell out the process described in the diagram.

\_\_\_\_ \_ ( ) \_\_\_\_ \_

PEARSEAT

( ) \_\_\_\_ \_

ODOF CARPS

\_\_\_\_ \_ ( ) \_\_\_\_ \_

STURCK

\_\_\_\_ \_ ( ) \_\_\_\_ \_

FASE

\_\_\_\_ \_ ( ) \_\_\_\_ \_

LITCFYI

\_\_\_\_ \_ ( ) \_\_\_\_ \_

GREASU

\_\_\_\_ \_ ( ) \_\_\_\_ \_

ESCROU

\_\_\_\_ \_ ( ) \_\_\_\_ \_

DRUCTOPOIN

\_\_\_\_ \_ ( ) \_\_\_\_ \_

SOCERSPED

\_\_\_\_ \_ ( ) \_\_\_\_ \_

LAMINA EDEF

\_\_\_\_ \_

( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )

\_\_\_\_ \_

## DID YOU KNOW?

- 25% of the food Americans buy is thrown away.
- Retail value of preventable food waste = \$166 billion/year.
- 25% of U.S. fresh water goes to producing food we throw away.
- American's pay \$1.3 billion a year to landfill food waste.
- Organic waste produces 135 million tons of greenhouse gases/year.
- 4% of total U.S. oil consumption is used for food production.

Source: Natural Resources Defense Council  
[http://www.nrdc.org/living/eatingwell/files/foodwaste\\_2pgr.pdf](http://www.nrdc.org/living/eatingwell/files/foodwaste_2pgr.pdf)



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# MATERIAL LIFE CYCLES

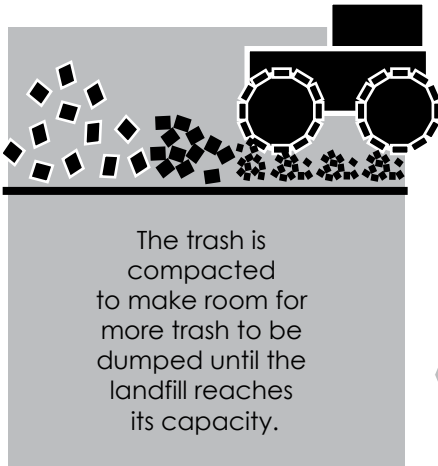
## Waste to Landfill



Utilization of non-recyclable or non-compostable materials.



Trash put in garbage can.



The trash is compacted to make room for more trash to be dumped until the landfill reaches its capacity.



Trash is brought to landfill and dumped.



Garbage truck picks up trash.

### WORD SEARCH

- COMPACTION
- DUMP
- FINITE
- GARBAGE
- LANDFILL
- METHANE
- POLLUTION
- RECYCLE
- REDUCE
- RESOURCES
- REUSE
- TRASH
- TRUCK
- WASTE

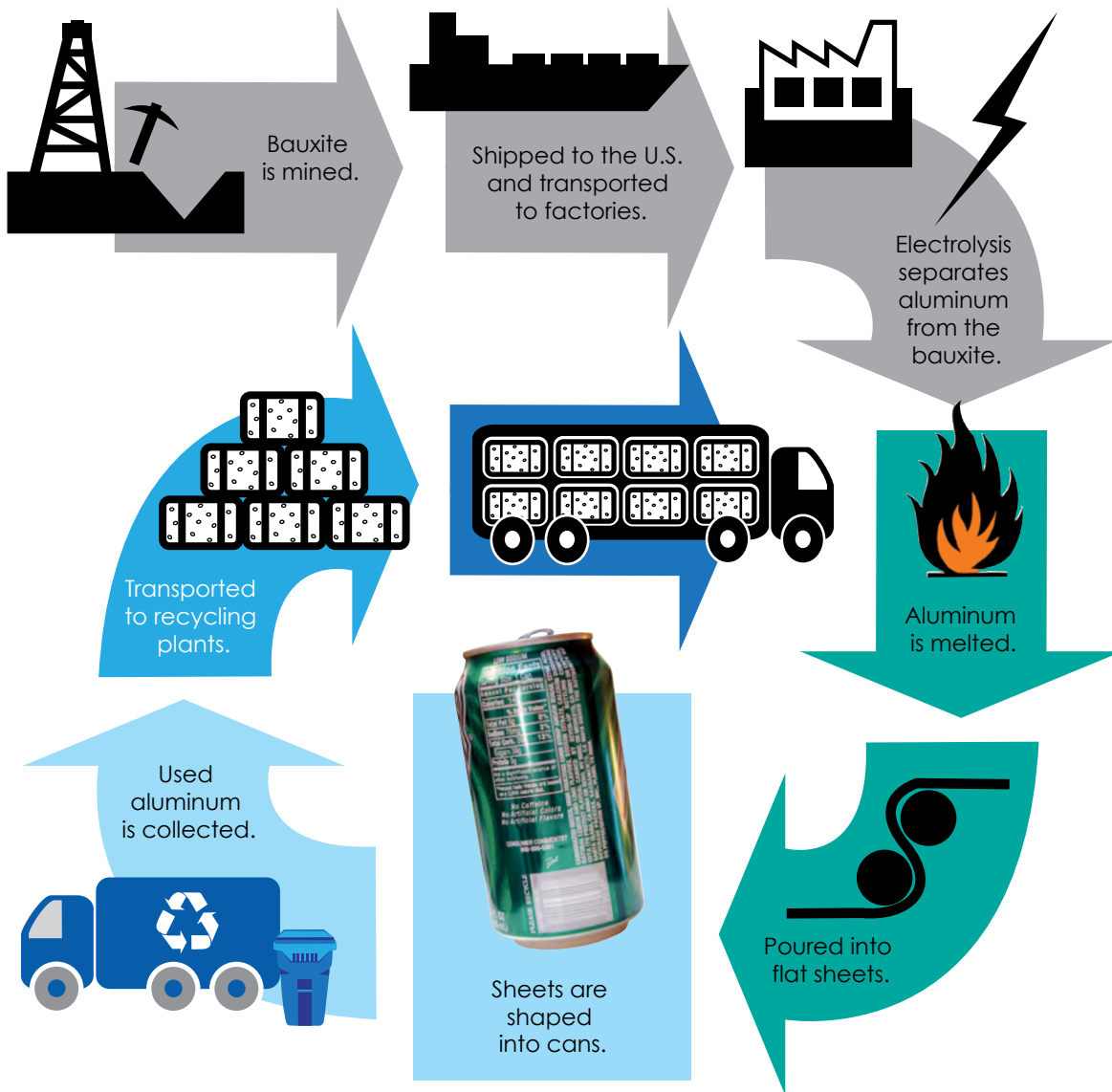
### DID YOU KNOW?

- The average American creates 4.38 lbs of garbage per day.
- 135 million tons of garbage went to American landfills in 2012.
- Landfills create 17.5% of all man-made methane gas. Methane contributes to global warming.
- Materials that are dumped at a landfill never enter the economic market again. This causes us to use more of Earth's precious finite resources and in so doing use more energy and create more pollution.
- We can take better care of the planet by learning to reduce, reuse, recycle and compost!

N E B B W N B D N J Y E H I O  
 K D T I D E I O O R B C B K E  
 U G Z I T N I Y I L T U K D R  
 T T Q S N T B E T N Q D K M V  
 F R A K U I E L C Y C E R J G  
 L W U L S H F F A Z Y R Q I A  
 K A L C D P M Z P K H C I E R  
 V O N U K E D N M W Z F R E B  
 P R M D T R E S O U R C E S A  
 V P G H F N J L C L B O U R G  
 M W A U N I V N B J L E S R E  
 Y N S X G A L J I W V G E H S  
 E J T R A S H L N A V D Y O B  
 G T F I I E H F F Z N S P O Z  
 D Y T Z P R P R G R Q H I B C

# MATERIAL LIFE CYCLES

# Aluminum Manufacturing



## WORD SEARCH

- ALUMINUM
- BAUXITE
- CANS
- ELECTROLYSIS
- FACTORIES
- MANUFACTURING
- MINE
- RECYCLE
- REDUCE
- REUSE
- SHEETS

## DID YOU KNOW?

- Recycling aluminum uses only 5% of the energy required to create aluminum from bauxite.
- Water pollution is reduced 97% when using recycled aluminum instead of bauxite.

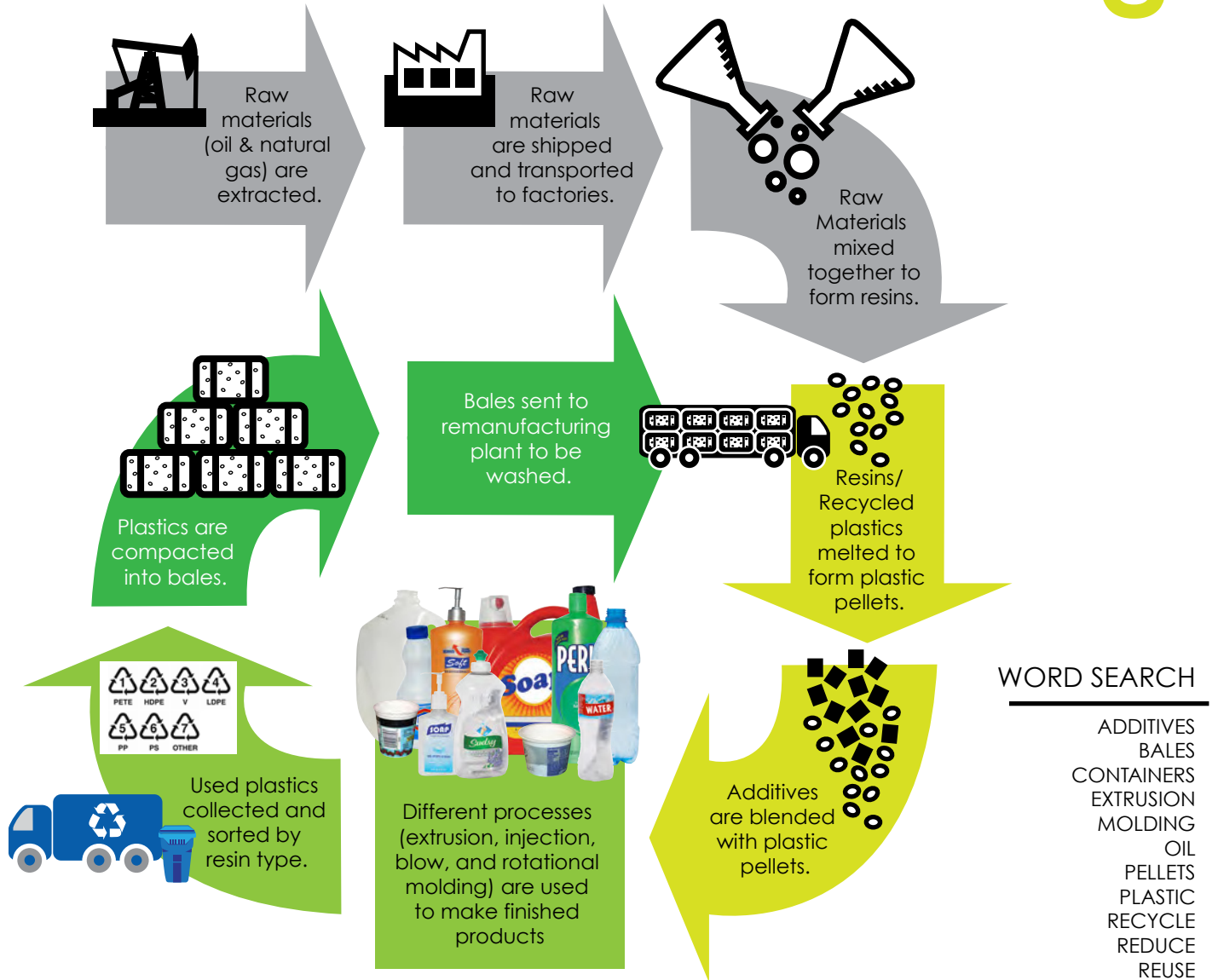


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S S V N S X P L F I M N M K N  
 M E H H O U K J W P U A E K O  
 H T I E S M C T R V N T R J W  
 H E K R E T G X S U I H F L V  
 B B R C O T N A F X M E X M F  
 V O W I W T S A U P U U R T R  
 M T F W H H C A D W L X M O E  
 W J F L H T B A G I A T K U D  
 E F B B U Q L A F S N A C I U  
 N N Y R O Y M R E C Y C L E C  
 D X I S I S Y L O R T C E L E  
 I N A M N E R Y E J Y K U X I  
 G P K J A I U U R Z F D B Y J  
 D F J M O N S V K G L G N Y O  
 U V T G P E Z S F F T R W Y P

# MATERIAL LIFE CYCLES

# Plastic Manufacturing



## WORD SEARCH

- ADDITIVES
- BALES
- CONTAINERS
- EXTRUSION
- MOLDING
- OIL
- PELLETS
- PLASTIC
- RECYCLE
- REDUCE
- REUSE
- TUBS

## DID YOU KNOW?

- Recycling plastic uses only 12% of the energy required to make plastics from raw materials.
- Every pound of recycled PET plastic flakes used reduces greenhouse gas emissions by 71%, rather than using raw materials to make PET plastics.



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I A C W D E Q S M R G S V J O  
A D S O C X I X T Q E Y P M C  
G D I U A T L R I E O U V X A  
T L D T S R R O F C L E S V M  
K E P I B U W G K D P L M E E  
R M K J T S A D K L U C E N T  
B A L E S I N W A U M Y T P U  
T P B D O O V S O E K C G A B  
G S W Z L N T E J T J E Q B S  
Y Z E L Y I Q M S U J R K F U  
H G I Y C G N I D L O M M S U  
Z F G H M A I E X U B U S K D  
A Z D T Y W P D Z V Y U A O F  
T D C O N T A I N E R S R Z I  
B H G N M Y Q T F X P L P H



# MATERIAL LIFE CYCLES

# Compost Manufacturing



## WORD SEARCH

- COMPOST
- CONSERVE
- CONTAMINANTS
- CURING
- DECOMPOSITION
- EROSION
- FOODSCRAPS
- NITROGEN
- ORGANIC
- RECYCLE
- REDUCE
- REUSE
- RUNOFF
- SCREENING
- SHRED
- WINDROWS
- YARDWASTE

## DID YOU KNOW?

- Compost conserves water by increasing water holding capacity of soil by 3-10%.
- Compost stabilizes soil pH, and reduces soil erosion and runoff.



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Z O N W C R D W O E R P T T S  
 B Y N O U I I Z L D E N S L T  
 C C A N I N N C E S D I O W N  
 L U O R D T Y A P M U T P D A  
 E F R R D C I A G M C R M Z N  
 F E O I E W R S A R E O O L I  
 Y W S R N C A Y O F O G C V M  
 S H R U S G F S S P F E L H A  
 M H G D E R H S T X M N S Q T  
 I S O L Y R B U T E U O I T N  
 Q O S C R E E N I N G C C Y O  
 F E V R E S N O C R Y Y E E C  
 W Y O X A P P V M T Q S F V D  
 Y H H M N C I A J V T D X O M  
 E R O S I O N G Y S U P L S K

# MATERIAL LIFE CYCLES

## Paper Manufacturing



People have three options after they are finished using paper products.



**LANDFILL**  
If paper is landfilled, the cycle is broken.

**REUSE/ROT**  
Paper is composted or reused for packaging, arts & crafts, animal bedding, or other products.



Material is transported to manufacturers to create new products.

**RECYCLE**  
Paper products are collected. Recycling centers separate material.

### WORD SEARCH

- BALES
- CRAFTS
- ENERGY
- LOGS
- PAPER
- PAPERMILLS
- POLLUTION
- RECYCLE
- REDUCE
- REUSE
- ROT
- TREES
- COMPOST
- WOODPULP

### DID YOU KNOW?

When new products are made from recycled paper instead of virgin wood pulp:

- Energy use is reduced by 64%.
- Water use is reduced by 50%.
- Air pollution is reduced by 74%.
- 17 trees are saved.
- 5 times more jobs are created.









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S C D S T H V P F Z S P C C W  
 Q L O I Q F L Z I N T T V R K  
 V X L M J U E T E O R W T A C  
 U G K I P S J N S I W K K F R  
 K K B D M O E W X T S O W T E  
 U R O I E R S E C U D E R S P  
 Y O U S G U E T D L J K L U A  
 W T U Y Y Z W P W L Q B D A P  
 R E C Y C L E Q A O X U P N B  
 R L S G T O H W H P H G U H B  
 Y A O U I F G L N C G T Y D M  
 C W S G Z K D Q E V U E Q W Z  
 Y F M J S Q F S G I F M P Q R  
 M U Q E P W L O T R E E S F C  
 U T E N U J U X H Y X D D D Q



# Recycling Conserves Water!

-  Making paper from recycled fibers uses **49% less** water than making paper from **virgin fibers**.
-  Recycling one ton of **paper** saves **7,000** gallons of water.
-  Recycling one ton of **glass** requires **50% less** water (**12,000 gallons**) than making glass from raw materials.
-  Recycling **aluminum** creates **97% less** water **pollution** than making new **metal** from ore.
-  Recycling steel **saves 40%** of water used to make **steel** from ore.
-  It takes 3-gallons of water to produce 1-gallon of **bottled water**.

## Word Scramble

Unscramble the letters to create terms used in the bullet list to the left. Use the letters in the circles to spell out what you can do by recycling.

\_\_\_\_\_ (○)  
**EARPP**

\_\_\_\_\_ (○)  
**SLAGS**

\_\_\_\_\_ (○) \_\_\_\_\_ (○)  
**LYCINRECG**

\_\_\_\_\_ (○) \_\_\_\_\_ (○)  
**IVRING BRIEFS**

\_\_\_\_\_ (○)  
**SLAGOLN**

\_\_\_\_\_  
**MUMLINUA**

\_\_\_\_\_ (○)  
**LINTLOUPO**

\_\_\_\_\_ (○)  
**ALMET**

\_\_\_\_\_ (○)  
**LESTE**

\_\_\_\_\_ (○) \_\_\_\_\_ (○) \_\_\_\_\_ (○)  
**DOTLBET EWTAR**

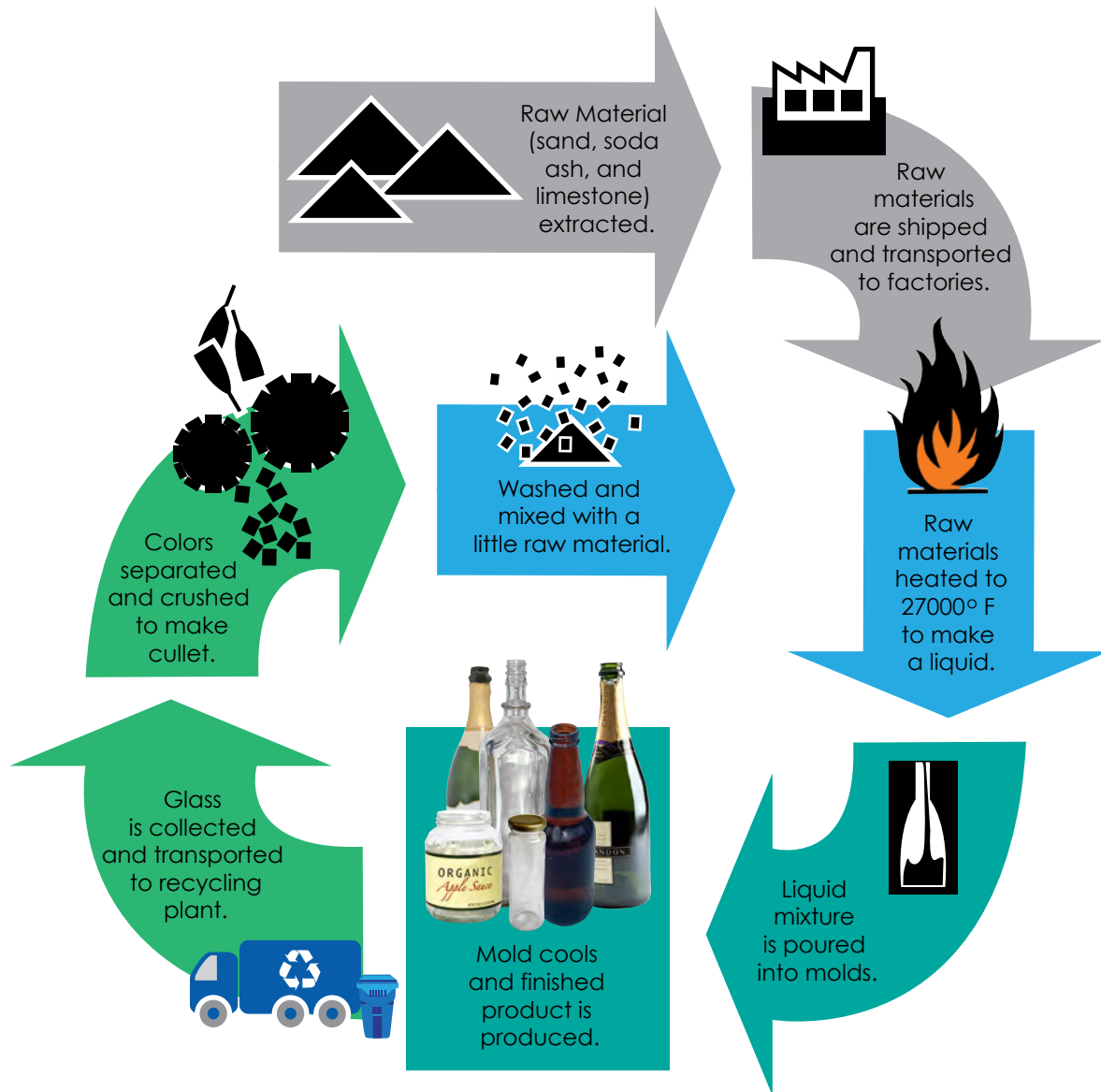
\_\_\_\_\_  
 ○ ○ ○ ○ ○ ○ ○ ○  
 ○ ○ ○ ○ ○ ○ ○ ○  
 \_\_\_\_\_  
 \_\_\_\_\_



**Sources:**  
[conservatree.org](http://conservatree.org)  
[www.epa.gov](http://www.epa.gov)  
[www.deq.state.or.us](http://www.deq.state.or.us)  
[www.cleanair.org](http://www.cleanair.org)  
[www.coastal.ca.gov](http://www.coastal.ca.gov)  
[www.nemcog.org](http://www.nemcog.org)

# MATERIAL LIFE CYCLES

# Glass Manufacturing



## WORD SEARCH

- BOTTLES
- COLORS
- CULLET
- FACTORIES
- GLASS
- JARS
- LIMESTONE
- LIQUID
- MOLDS
- RECYCLE
- REDUCE
- REUSE
- SAND
- SODAASH

## DID YOU KNOW?

- Every ton of glass recycled saves over a ton of natural resources.
- For every 10% of recycled glass used to make new glass, the energy cost drops 2-3%.



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E D N J Z V S H K Z S K E L B  
 J N G Y U E S H C R E A G Z B  
 A V O L X A B O Q V I X Z F F  
 R M H T A T L M E X R E U S E  
 S Z T D S O Q U Q E O P Q S D  
 L R O D R E S Y Q H T K G D B  
 I S K S F P M A R E C Y C L E  
 Q S L L L Y B I N R A B O O A  
 U T E L L U C O L D F Q S M X  
 I E G L C L A I T C U S G D O  
 D C C F O P G I W T A V K T G  
 Z H B U M Y O H B L L R E F F  
 U K W K D D X G G C Q E V L S  
 M S V R M E C O C V R I S H T  
 Q O V X D J R R Q H I U O C E



ALUMINUM LIFE CYCLE WORD SEARCH SOLUTION

S S + + + + + M + M + +
+ E H + + + + + U A E + +
+ + I E + + + + + N T + + +
+ + + R E + + + + + U I + + + +
+ + + + O T + + F X M + + + +
+ + + + + T S A U + U + + + R
+ + + + + C A + + L + + + E
+ + + + + T B A + + A + + + D
E + + + U + + + F S N A C + U
+ N + R + + + R E C Y C L E C
+ + I S I S Y L O R T C E L E
+ N + M + + + + E + + + + +
G + + + + + U + + + + + +
+ + + + + S + + + + + +
+ + + + + E + + + + + + +

- (Over, Down, Direction)
ALUMINUM (11, 8, N)
BAUXITE (7, 8, NE)
CANS (13, 9, W)
ELECTROLYSIS (15, 11, W)
FACTORIES (9, 9, NW)
MANUFACTURING (13, 1, SW)
MINE (4, 12, NW)
RECYCLE (8, 10, E)
REDUCE (15, 6, S)
REUSE (10, 11, SW)
SHEETS (2, 1, SE)

COMPOST LIFE CYCLE WORD SEARCH SOLUTION

+ + N + C R + W + E R + T + S
+ Y + O U I I + L + E N S + T
C + A N I N N C + S D I O + N
+ U O R D T Y A P + U T P + A
+ F R R D C I A G + C R M + N
F E O I E W R S + R E O O + I
+ W S R N C A + O + O G C + M
S + + U S G + S + P + E + + A
+ + + D E R H S T + M N + + T
+ + O + + R + + + E + O + + N
+ O S C R E E N I N G + C + O
F E V R E S N O C + + + E C
+ + + + + + + + + + + D
+ + + + + + + + + + + +
E R O S I O N + + + + + + +

- (Over, Down, Direction)
COMPOST (13, 7, N)
CONSERVE (9, 12, W)
CONTAMINANTS (15, 12, N)
CURING (1, 3, SE)
DECOMPOSITION (15, 13, NW)
EROSION (1, 15, E)
FOODSCRAPS (1, 12, NE)
NITROGEN (12, 2, S)
ORGANIC (11, 7, NW)
RECYCLE (4, 7, NE)
REDUCE (11, 1, S)
REUSE (6, 10, NW)
RUNOFF (6, 1, SW)
SCREENING (3, 11, E)
SHRED (8, 9, W)
WINDROWS (8, 1, SW)
YARDWASTE (2, 2, SE)

GLASS LIFE CYCLE WORD SEARCH SOLUTION

E + + + + + H + + S + + + +
J N + + + + S + C + E + + + +
A + O + + A + O + + I + + + +
R + + T A + L + + + R E U S E
S + + D S O + + + + O + + S +
L + O + R E S + + + T + + D +
I S + S + + M A R E C Y C L E
Q + + + + + B I N + A + + O +
U T E L L U C O L D F + S M +
I E + + + + + T + + S + + +
D + C + + + + + T A + + + +
+ + + U + + + + L L + + + +
+ + + + D + + + G + + E + + +
+ + + + E + + + + + S + + +
+ + + + + R + + + + + + +

- (Over, Down, Direction)
BOTTLES (7, 8, SE)
COLORS (9, 2, SW)
CULLET (7, 9, W)
FACTORIES (11, 9, N)
GLASS (9, 13, NE)
JARS (1, 2, S)
LIMESTONE (9, 9, NW)
LIQUID (1, 6, S)
MOLDS (14, 9, N)
RECYCLE (9, 7, E)
REDUCE (7, 15, NW)
REUSE (11, 4, E)
SAND (7, 6, SE)
SODAASH (2, 7, NE)

PAPER LIFE CYCLE WORD SEARCH SOLUTION

+ + + + + E C R A F T S S V
+ + + + + L N + + + + G + E P
+ + + + C + E + + + O + R L L
+ + + Y + + R + + L + M + A U
+ + C + + + G + + + I + P B P
N E + + + + Y + + C + A + + D
R O + + + + + O + P + + + O
+ + I S L L I M R E P A P + O
+ + + T + + P + R E S + + + W
+ + + + U O + + + + D U + + +
+ + + + S L S E E R T U E + +
+ + + T + + L + + + + + C R +
+ + I + + + + O + + + + E +
+ N + + + + + P + + + + +
G + + + + + + + + + + + +

- (Over, Down, Direction)
BALES (14, 5, N)
CRAFTS (8, 1, E)
ENERGY (7, 1, S)
LOGS (10, 4, NE)
PAPER (13, 5, SW)
PAPERMILLS (13, 8, W)
POLLUTION (9, 14, NW)
RECYCLE (1, 7, NE)
REDUCE (9, 8, SE)
REUSE (14, 12, NW)
TREES (11, 11, W)
VERMICOMPOSTING (15, 1, SW)
WOODPULP (15, 9, N)

PLASTIC LIFE CYCLE WORD SEARCH SOLUTION

+ + + + + E + S + R + + + + +
A + + O C X + + T + E + + + +
+ D I U + T + + + E + U + + +
+ L D + + R + + + + L E S + +
+ E + I + U + + + + P L + E +
R + + + T S + + + L + C E + T
B A L E S I + + A + + Y + P U
+ + + + + O V S + + + C + + B
+ + + + + N T E + + + E + + S
+ + + + + I + + S + + R + + +
+ + + + C G N I D L O M + + +
+ + + + + + + + + + + + +
+ + + + + + + + + + + + +
+ + C O N T A I N E R S + + +
+ + + + + + + + + + + + +

- (Over, Down, Direction)
ADDITIVES (1, 2, SE)
BALES (1, 7, E)
CONTAINERS (3, 14, E)
EXTRUSION (6, 1, S)
MOLDING (12, 11, W)
OIL (4, 2, SW)
PELLETS (14, 7, NW)
PLASTIC (11, 5, SW)
RECYCLE (12, 10, N)
REDUCE (1, 6, NE)
REUSE (10, 1, SE)
TUBS (15, 6, S)

GARBAGE LIFE CYCLE WORD SEARCH SOLUTION

+ E + + + + + N + E + + + +
+ + T + + E + O O + + C + + +
+ + + I T + I + I + + U + + +
T + + S N T + + T + + D + + +
+ R A + U I E L C Y C E R + G
L W U L + + F + A + + R + + A
+ A L C D + M + P + + + + R
+ O N U K E + + M + + + R + B
P + M D T R E S O U R C E S A
+ P H F + + + C + + + U + G
+ + A + + I + + + + + S + E
+ N + + + + L + + + + + E + +
E + T R A S H L + + + + + +
+ + + + + + + + + + + + +
+ + + + + + + + + + + + +

- (Over, Down, Direction)
COMPACTION (9, 10, N)
DUMP (5, 7, SW)
FINITE (7, 6, NW)
GARBAGE (15, 5, S)
LANDFILL (1, 6, SE)
METHANE (7, 7, SW)
POLLUTION (1, 9, NE)
RECYCLE (13, 5, W)
REDUCE (12, 6, N)
RESOURCES (6, 9, E)
REUSE (13, 8, S)
TRASH (3, 13, E)
TRUCK (1, 4, SE)
WASTE (2, 6, NE)

FORK TO FEED  
WORD SCRAMBLE SOLUTION

RECYCLING SAVES WATER  
WORD SCRAMBLE SOLUTION

S E P A R A T E  
 F O O D S C R A P S  
 T R U C K S  
 S A F E  
 F A C I L I T Y  
 A U G E R S  
 S O U R C E  
 P R O D U C T I O N  
 P R O C E S S E D  
 A N I M A L F E E D

P A P E R  
 G L A S S  
 R E C Y C L I N G  
 V I R G I N F I B E R S  
 G A L L O N S  
 A L U M I N U M  
 P O L L U T I O N  
 M E T A L  
 S T E E L  
 B O T T L E D W A T E R

C O N S E R V E W A T E R

F O R K T O F E E D

DONUT MAZE SOLUTION

