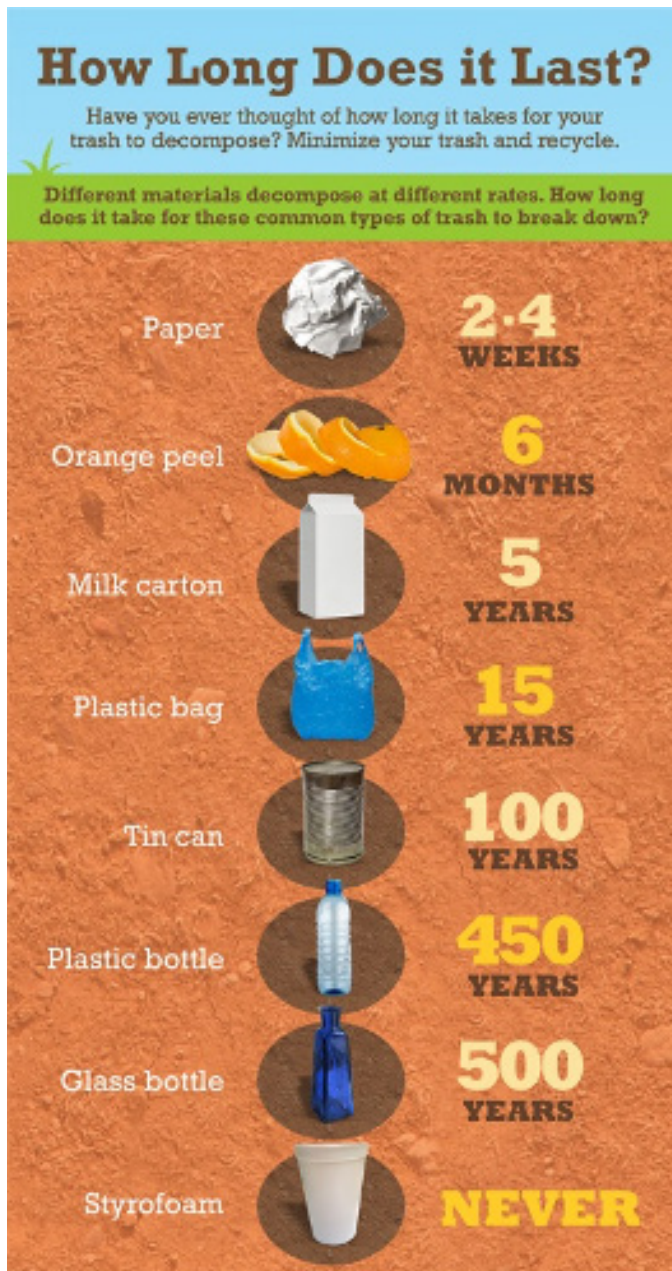


# WHAT IS A LANDFILL?

- A landfill is where waste is kept and is then buried with soil.
- A landfill has 4 basic components:
  - Bottom Liner - Usually made of clay or plastic, and its purpose is to create a barrier that isolates the landfill from the Earth.
  - A Leachate Collection System - A pipe system that collects contaminated water from the landfill.
  - Cover - A cap on top of the landfill to keep as much water as possible out.
  - Hydrogeological Setting - A layer made of crushed rock that prevents waste from escaping.



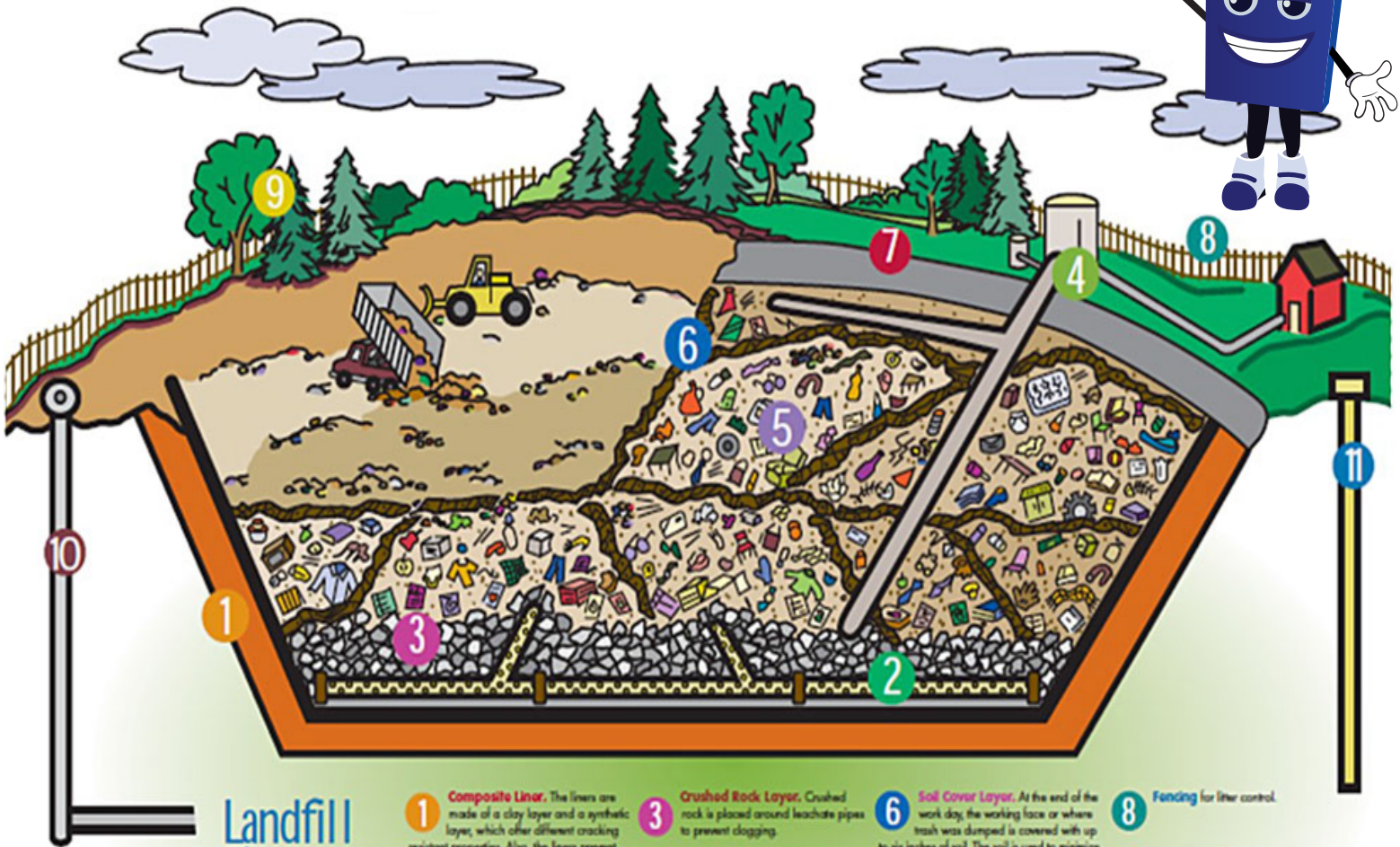
## HOW LONG DOES IT TAKE TO DECOMPOSE IN A LANDFILL?

- Paper usually takes about 2-4 weeks to decompose.
- In a landfill, an orange peel can take 6 months to decompose.
- A milk carton will take 5 years to decompose.
- Plastic bags take 15 years to decompose in a landfill.
- Tin cans can take 100 years to decompose.
- Plastic bottles take 450 years to decompose in a landfill.

## WHY ARE LANDFILLS IMPORTANT?

- Landfills keep city and county communities clean.
- They are designed to prevent environmental contamination.

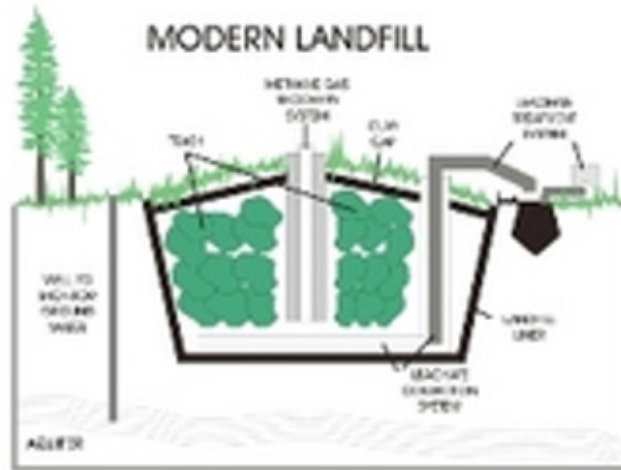
# Last stop For trash: A Landfill



## Landfill Layers & Protective Measures

- 1 Composite Liner.** The liners are made of a clay layer and a synthetic layer, which offer different cracking resistant properties. Also, the liners prevent leachate from seeping into the groundwater.  
*Clay Layer:* Re-compacted clay creates a natural layer due to its ability to clump together and hold in liquid.  
*Plastic Layer:* The liner is made from high density polyethylene (HDPE) or polypropylene chloride.
- 2 Leachate Collection Pipes.** Leachate pipes are placed on top of the plastic liner to collect leachate for treatment.
- 3 Crushed Rock Layer.** Crushed rock is placed around leachate pipes to prevent clogging.
- 4 Methane Gas Collection System.** Methane gas forms pockets at the center and bottom of the landfill, so pipes run throughout the landfill collecting the gas and sending it to a collection well.
- 5 Trash Layer.** Trash is dumped and compacted into cells, which can be several acres in size.
- 6 Soil Cover Layer.** At the end of the work day, the working face or where trash was dumped is covered with up to six inches of soil. The soil is used to minimize the odor, control litter and discourage animals and insects, thus, protecting public health.
- 7 Final Cap.** When a landfill is full and regulations state that it cannot accept more trash, it must be closed. A final cap is installed over the landfill. The cap is made from a synthetic plastic followed by a four foot layer of dirt. Grass and shallow rooted plants are planted on top to prevent the erosion of the soil cap.
- 8 Fencing** for litter control.
- 9 Vegetation** for sound and dust control.
- 10 Groundwater monitoring** to ensure protection of drinking water sources from leachate.
- 11 Continued methane collection and monitoring.**

# Landfill Word Search



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

BIODEGRADABLE  
 CONSERVE  
 HAZARDOUSWASTE  
 LANDFILL  
 LEACHATE  
 MUNICIPALWASTE  
 NIMBY

PCBS  
 PHOTODEGRADABLE  
 RECYCLE  
 REDUCE  
 REUSE





Name \_\_\_\_\_



I am a

trash collector.

Directions: Color the items I might use.

