

PAITCH PALS



ACTIVITY BOOK





clean



beautify

Keep Austin Beautiful can help you earn an "I Keep Austin Beautiful" patch!



CLEAN up a park, school, creek or neighborhood in your area and we will provide you with a FREE Cleanup Kit including:

- Trash Bags
- Gloves
- Litter Pick-up Tools
- Poison Ivy Block
- A First Aid Kit & more!



Beautifying your neighborhood just got easier with these KAB resources:

- Over 300 tools available for checkout
- Seed donations
- Soil and mulch provided for gardening projects
- Assistance in identifying and coordinating a project



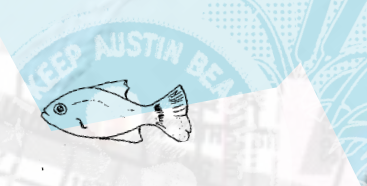
Contact KAB to schedule a presentation for your group.

educate



Keep Austin Beautiful

- 512.391.0617
- www.keepaustinbeautiful.org



CLEAN, BEAUTIFY, and **EDUCATE** to earn an “I Keep Austin Beautiful” patch! Patch Pals invites Scouts, other community youth groups, and you to take action to Keep Austin Beautiful.

IT'S EASY.... Complete one activity from each section below and submit a Patch Pals Application to receive your “I Keep Austin Beautiful” patch.

CLEAN

- Participate in a KAB cleanup
- Organize your own cleanup
- Adopt-a-Creek through KAB
- Think of ways to reduce waste

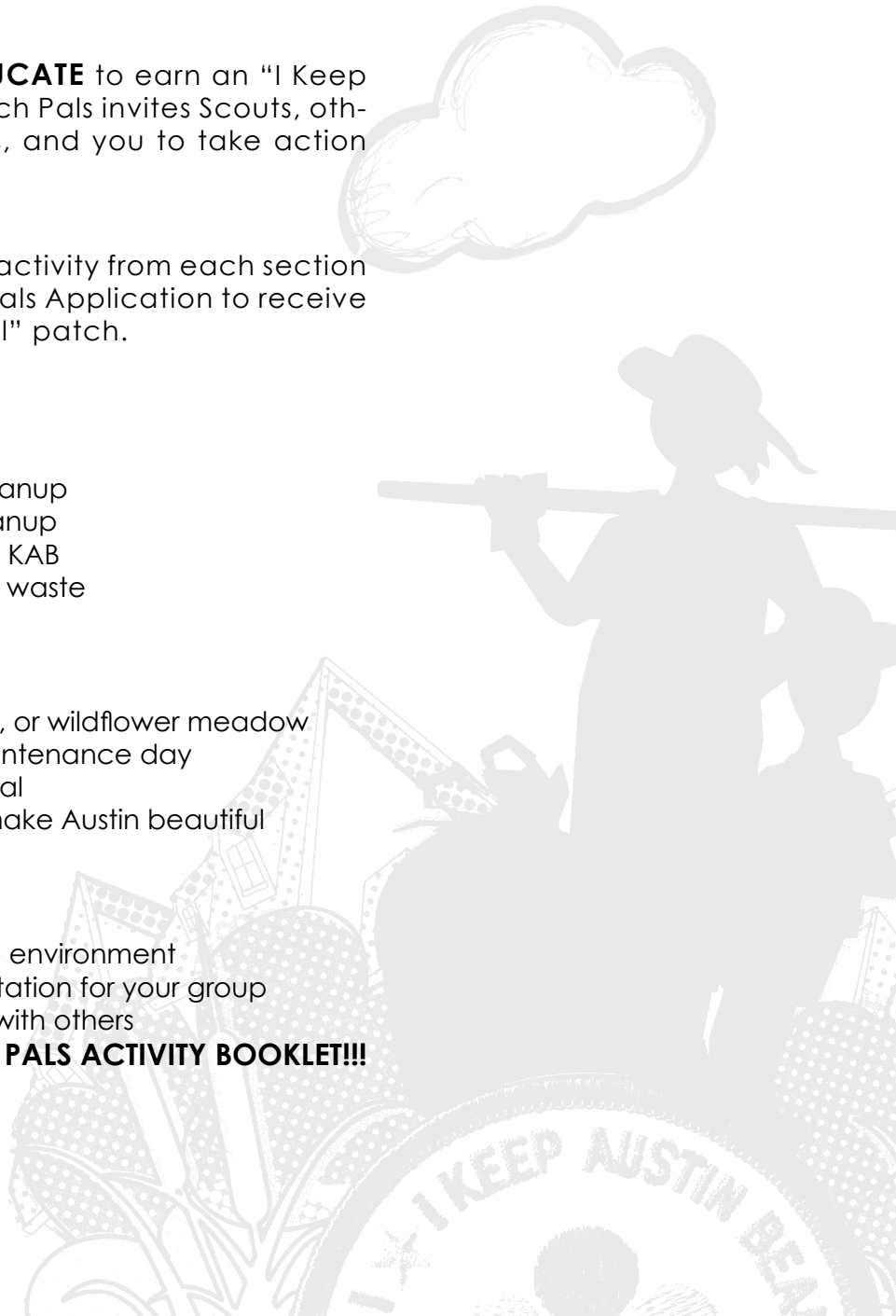
BEAUTIFY

- Remove graffiti
- Plant a flower bed, tree, or wildflower meadow
- Participate in a trail maintenance day
- Design and paint a mural
- Find your own way to make Austin beautiful

EDUCATE

- Mark storm drains
- Read a book about the environment
- Schedule a KAB presentation for your group
- Share your knowledge with others

COMPLETE THE PATCH PALS ACTIVITY BOOKLET!!!



CLEAN



FLAG IT AND BAG IT

While most waste ends up in trash bins and then landfills, litter is carelessly dropped or left on the ground in public places.

Litter is not only ugly but also dangerous.

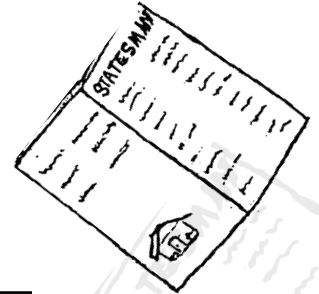
Why is litter bad?

It blocks ditches which can lead to flooding.
Toxic chemicals from litter pollute air and water.
It's poisonous to animals.
Animals get tangled in litter.

The US spends \$37 million a year to clean up litter.

How would you spend \$37 million?

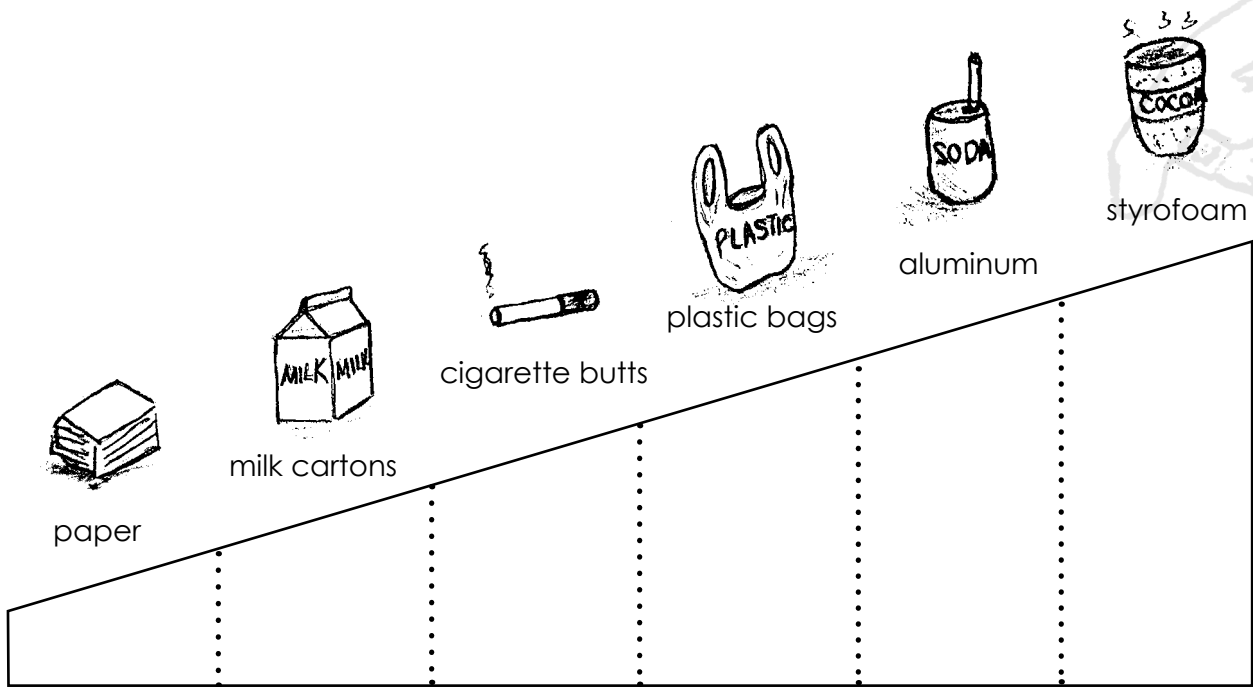
List four reusable items and how you can re-use them:



REDUCE LITTER. Pick up at least one piece of trash a day. Participate in a KAB trash cleanup.

LITTER LIFELINE

How long do you think it takes for each of these common litter items to decompose?*



- a. _____ months
b. _____ years
c. _____ years
d. _____ years
e. _____ years
f. _____ years

*Decompose: the breaking down of materials to become part of the soil.



PATCH CHALLENGE

CLEAN THE SCENE

Gear up with gloves and a garbage bag and scout your neighborhood to see what kinds of litter you find; keep a tally below. Recycle or throw away what you find.

TYPE:	NUMBER FOUND:
PLASTIC *	_____
GLASS *	_____
CLOTH	_____
PAPER *	_____
FOOD	_____
METAL *	_____
STYROFOAM	_____
OTHER	_____

* Can be recycled



Trash has a story...**What does the litter you found tell you about the people who left it there?**

W'ATER DA WORDS?

Unscamble the bolded letters

1. All living things need **TAWER** to live.

	○		○	
--	---	--	---	--

2. All the earth's water moves through the **ODHYR – ECLYC**.

			○	○	–	○				
--	--	--	---	---	---	---	--	--	--	--

3. **GDRIKNIN** water comes from lakes, rivers, and **RNDGOU** water.

		○										○
--	--	---	--	--	--	--	--	--	--	--	--	---

4. Less than 1% of all water on the earth is **SEFRH**.

	○			
--	---	--	--	--

5. One toilet **HULSF** uses 2–7 gallons of water.

	○			
--	---	--	--	--

6. A 5-minute **ERHSWO** uses 15–25 gallons of water.

		○			
--	--	---	--	--	--

7. Take the Patch Challenge below to help **ECOSNVRE** water.

	○					○	
--	---	--	--	--	--	---	--

Unscamble the circled letters to answer the question below.

What is the source of Austin's drinking water?

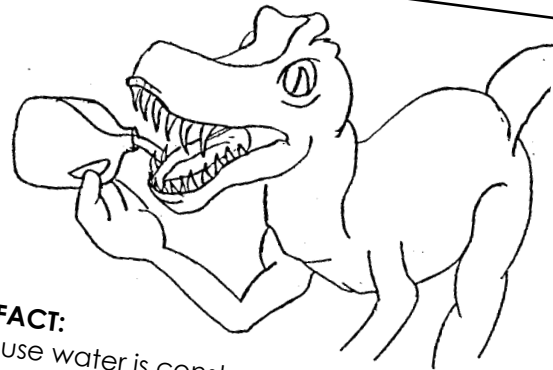


--	--	--	--	--	--	--	--

--	--	--	--	--

SAVE WATER. Turn off the faucet when brushing your teeth. Take a shorter shower. Don't flush trash down the toilet – it is not a trashcan.

POLLUTION SOLUTIONS



FUN FACT:
Because water is constantly recycled, you could be drinking water that a **Dinosaur** also drank!

WORD MATCH

Draw a line to the correct definition

- | | |
|---------------|--|
| 1 WATERSHED | A An underground layer of rock that stores water from rain and streams. |
| 2 AQUIFER | B An indicator of good water quality that keeps clean water healthy. |
| 3 STORM DRAIN | C Rainwater flowing over the land that collects pollutants. |
| 4 DRAGONFLY | D The area of land that sheds water to a creek, lake, or aquifer. |
| 5 RUNOFF | E Roadside grates designed to drain storm water from roofs, roads, and parking lots. |

List four ways you can protect your watershed and keep local creeks clean.

- 1 _____
- 2 _____
- 3 _____
- 4 _____



INVESTIGATE. Visit www.cityofaustin.org/watershed to find out what watershed you live in.



CREEK-A-BOO

Take a sneak peek at a local creek.

NAME OF CREEK _____

DATE _____

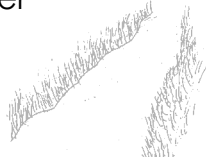
CLARITY

- crystal clear
- cloudy like lemonade
- looks like tea
- as dark as rootbeer



WATER FLOW

- what water?
- totally a trickle
- steady on the move
- catch me if you can



LITTER

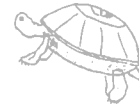
- picture perfect
- time to clean
- looks like a landfill

CREEK NOTES:

Keep your local creek clean. Pick up after your pet.

WATER LIFE

- fish
- turtles
- algae
- bugs
- plants
- other _____



ODOR

- summer breeze
- what smell?
- sweaty socks
- rotten eggs



FINAL QUALITY RATING

- give me a drink
- I'd swim in there
- I've seen cleaner
- grime central



BEAUTIFUL



BLOOMING WITH CREATIVITY

Texas has over **5,000** native species of wildflowers!

Watch for wildflowers blooming from March to May at one of these sites:

Lady Bird Johnson Wildflower Center
Zilker Botanical Garden
Along a Texas highway
www.lone-star.net/wildflowers/flowers.htm



What is your favorite wildflower and why?

Wildflower names often describe how a wildflower looks.

Invent your own wildflower.

Draw what it would look like.

What would you call it?

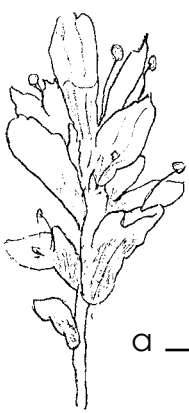


GROW GREEN. Green your backyard or neighborhood by planting a native plant species or wildflowers.

WHICH WILDFLOWER?

Match the wildflower to the correct description.

- 1 **PINK EVENING PRIMROSE** Four velvety pink petals with a yellow eye in the middle.
- 2 **BLUEBONNET** The state flower of Texas; filled with layers of blue petals pointing up.
- 3 **MEXICAN HAT** Looks like a hat with a pointy tip.
- 4 **INDIAN PAINTBRUSH** Orange tips of a paintbrush grouped together.
- 5 **INDIAN BLANKET** Orange petals with a touch of yellow on the tips and jagged edges.
- 6 **BLACK-EYED SUSAN** A miniature version of a sunflower.
- 7 **COREOPSIS** A spinning pinwheel of yellow petals.
- 8 **GAYFEATHERS** Groups of feathery purple petals that look like a rabbit's tail.



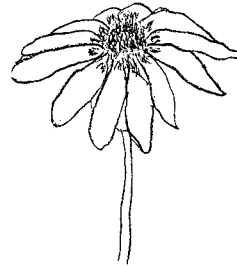
a _____



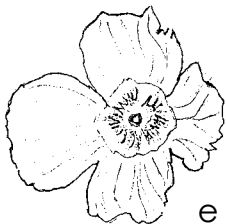
b _____



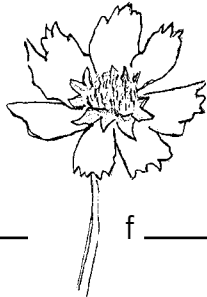
c _____



d _____



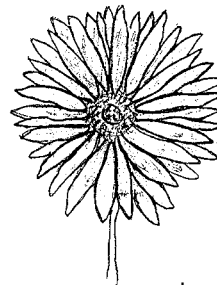
e _____



f _____

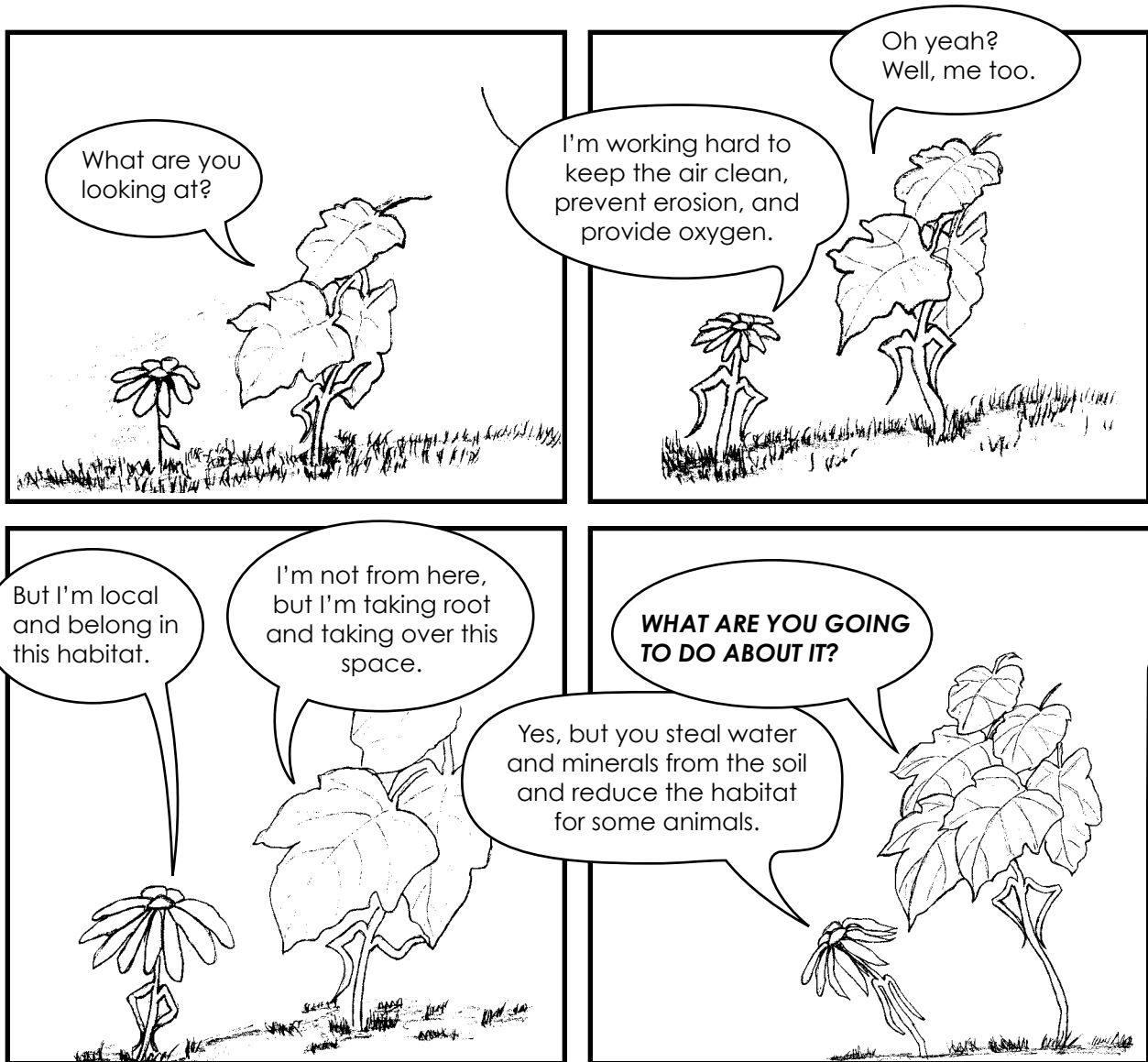


g _____



h _____

NATIVE FLORA SURVIVES AN EXOTIC PLANT ATTACK



AN EYE FOR INVASIVES

WANTED! Invasive plants for attacking Austin land. Reward for spotting.



Bamboo



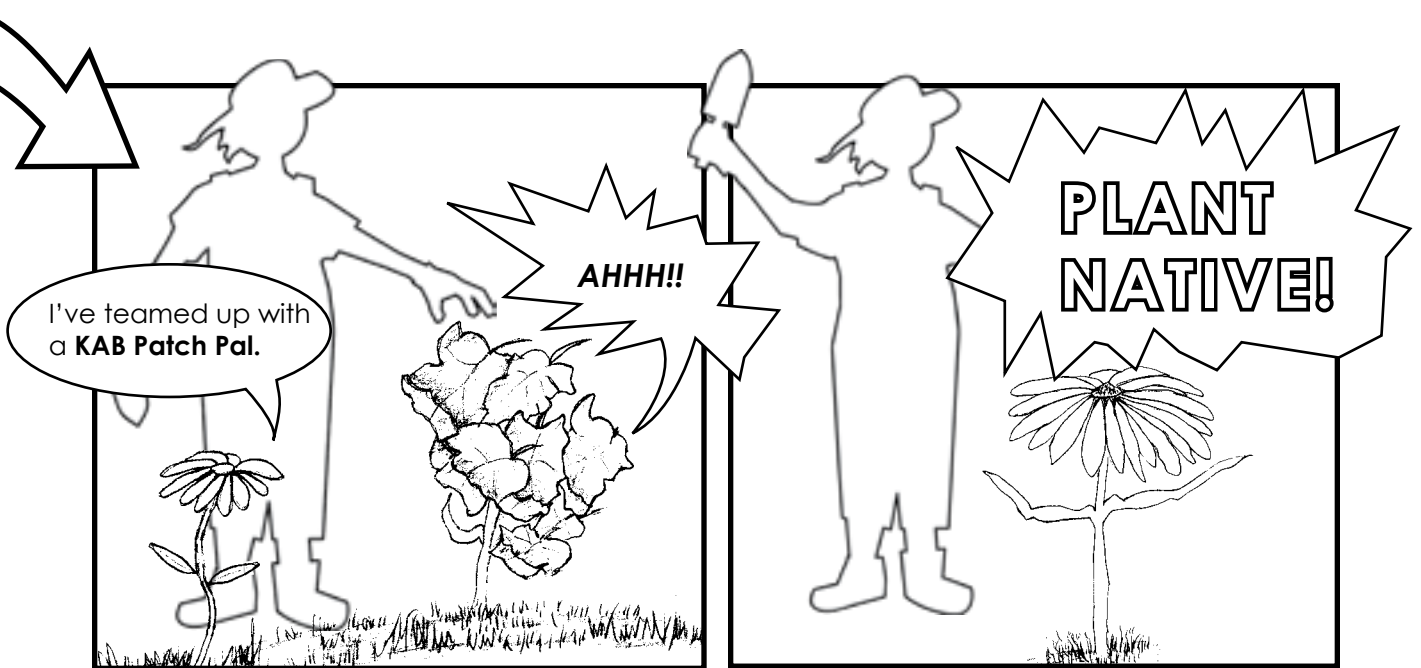
English Ivy



Chinese Tallow



Draw a Wanted poster for one of the invasive plants above.



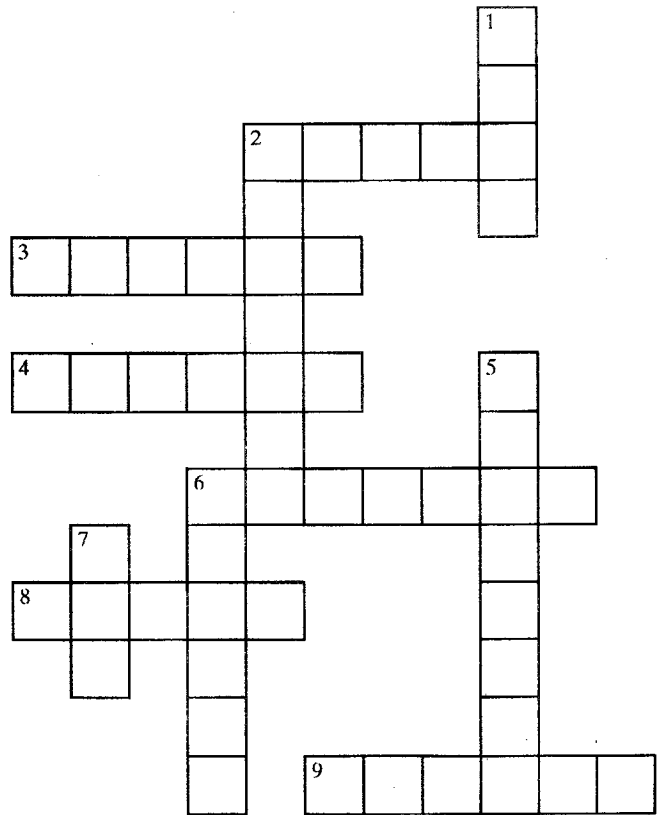
TREES MATTER

Complete the crossword puzzle to discover the importance of trees.



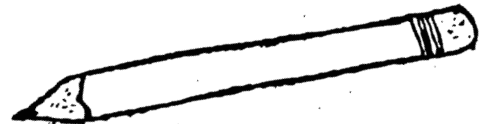
WORD BANK

Energy	Tree	Shade
Flooding	Shelter	Lumber
Plants	Oxygen	Erosion
Paper	Sap	



ACROSS

- 2 Protection from the sun.
- 3 Wood used to build homes.
- 4 Trees are the largest and tallest _____ in the world.
- 6 Trees protect against _____, which is the wearing away of topsoil due to wind, water, and storms.
- 8 A writing material made from trees.
- 9 Trees release this gas and that people breathe.



DOWN

- 1 A plant with leaves, roots, and a single, woody trunk.
- 2 Shielding for humans and animals against wind, rain, and other types of weather.
- 5 Trees prevent _____ during heavy rainfall.
- 6 Wood can be used as a source of _____ to heat homes.
- 7 Maple syrup comes from _____ in a tree trunk.



TREE BEAT

Write a story in the space below describing a world without trees.



Mulch around a tree. Shredded wood known as mulch helps hold moisture and protect plants.



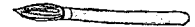
MAKING YOUR MARK

Murals can transform Graffiti into Art.

DRAW YOUR MURAL

GRAFFITI IS:

- a. costly to remove
- b. ugly
- c. illegal
- d. all of the above



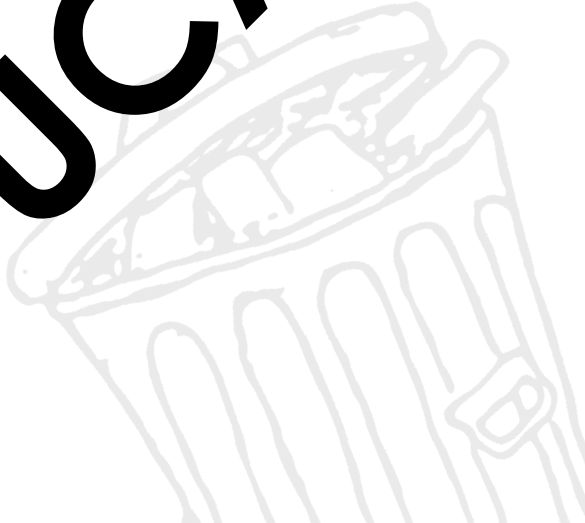
Where would your mural go? _____

Who would you invite to paint your mural? _____

What story does your mural tell? _____



EDUCATE



FUELING THE FUTURE

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

Solar Power
 Pollution
 Wind Energy
 Electricity
 Smog

Ozone Layer
 Water
 Air
 Conserve



SAVE ENERGY. Turn off lights when you leave a room.

RECYCLE RIGHT

Want to reduce pollution and trash while protecting the earth? Recycle!

Fast facts:

Making cans out of recycled aluminum produces 95% less pollution than making them from scratch.

Save an acre of forest by recycling your newspaper for a year and a half.

Glass never wears out — it can be recycled forever.

WHAT GOES WHERE?

Draw a line from each item to its proper container

Plastic bags

Wet paper

Newspaper

Catalogs

Soda cans

Tin cans

Glass bottles

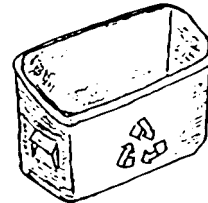
#1 Plastic bottles*

#2 Plastic bottles*

Cardboard

Loose-leaf paper

Lids



RECYCLE BIN



TRASH CAN

*Look for a triangle with a number on the bottom of plastic bottles to determine if the plastic can be recycled



RECYCLE RIGHT! Visit <http://austinrecycles.com> to print Austin recycling guidelines and post them near your recycling bin.

TRASH ADDS UP

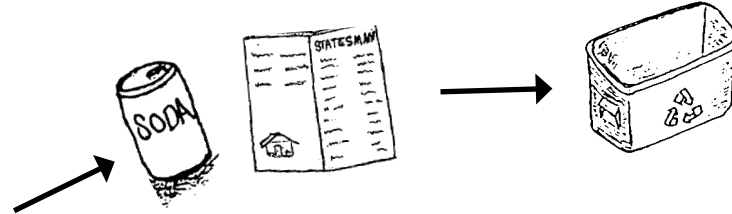
The average American throws away **3.5 POUNDS OF TRASH A DAY**. Every year we fill enough garbage trucks to form a line that would stretch from the earth, **HALFWAY TO THE MOON**. That's a lot of trash!

WHAT HAPPENS TO TRASH?

Map its path



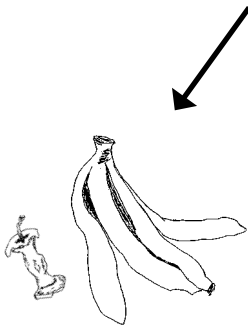
Draw Your House



How many bags of trash does your house produce in a week?



Trash Pickup Day.



Where Does Our Trash Go?

27% of trash is recycled and composted.

16% of trash is burned.

_____ % of trash is buried in landfills?

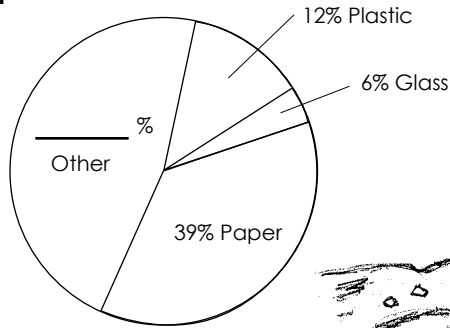
Did you know that food such as banana peels and coffee grounds can also be recycled?

This is called **COMPOSTING**.

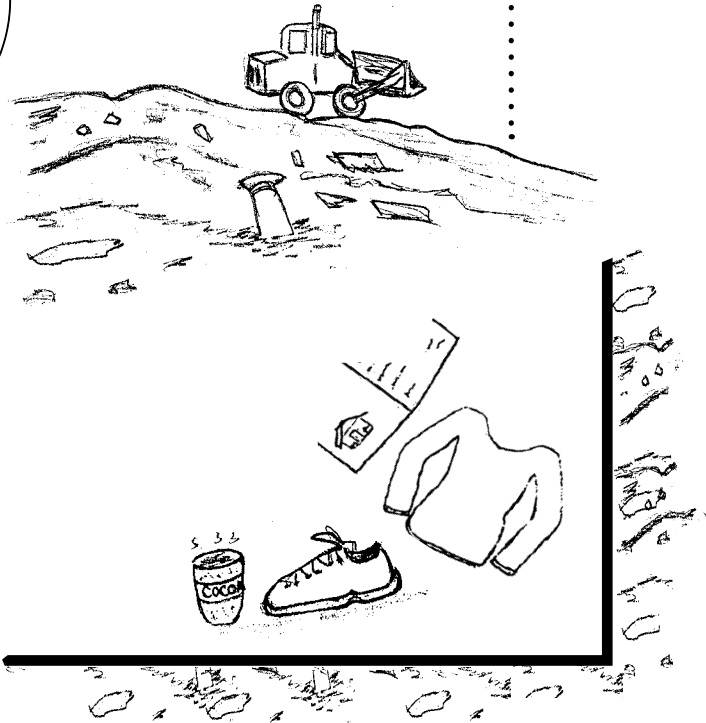
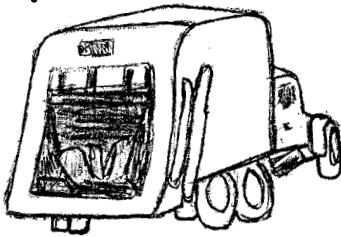
COMPOST is a gardening soil made from decomposed plant material.

THAT'S STINKY! – Trash is taken to landfills.

Trash is a made up of:



Landfills are covered with soil every day to keep bad smells and animals away and keep litter from blowing away.



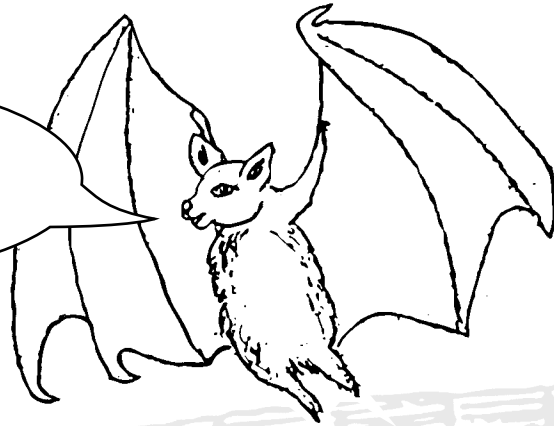
Landfills have underground liners that protect groundwater from being contaminated.



Track how much trash you make in a day and try to cut it in half for a week.

BATS WHAT IT'S ALL ABOUT

Hi Kids! I'm a bat, and I'm here to clear up a few myths about me and my bat friends.



MYTH: Bats are dirty and carry rabies.

NO! Very few people die from rabies from bats each year. We are very clean and groom ourselves, but remember, we are wild animals, so give us our space.

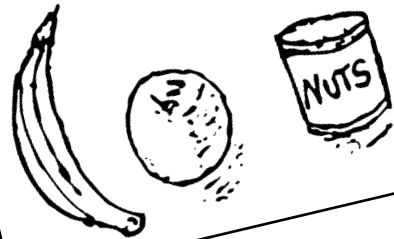
How many insects could I catch and eat in an hour?

MYTH: Bats are worthless animals.

NO! We help control the number of flying insects. A little brown bat like me can catch and eat up to 300 bugs in fifteen minutes. Do you like fruits? You can thank me because I pollinate plants that provide food for you.

It was nice getting to know you. Stop by and see me one night under the Congress Avenue Bridge.

Make a bat pollinated fruit salad. Mix together bananas, mangoes, and cashews. Yum!

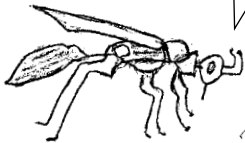


Do you love bats and want to find out more about them? visit www.batcon.org to Adopt-a-Bat!

THE BUZZ ON BENEFICIAL BUGS

NOT ALL BUGS ARE BAD! Good bugs are nature's way of getting rid of garden pests.

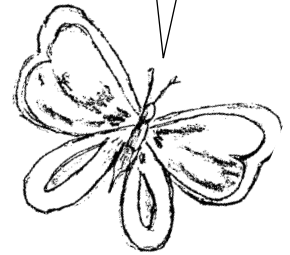
WASP: Even though my sting is painful, I eat caterpillars and other harmful bugs. Farmers and gardeners like me too.



HONEY BEE: Ain't life sweet? I pollinate plants and provide you with a sweet, sticky food and wax to make candles.



BUTTERFLY: I have colorful wings and pollinating powers. Oh, and did I mention that I started out as a furry caterpillar?



SPIDER: W-w-watch out for my webs! These silky traps catch bugs, which are delicious for me to wrap up and eat.

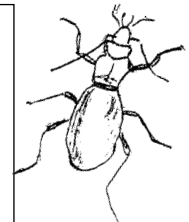


GROUND BEETLE: Psst! I'm here under this rock because I don't like to go out into the sun. I do like to gobble up slugs and snails, and I have a hard, black shell.

LADY BUG: Hi, I like to eat soft-bodied insects, and I help keep pests away for farmers and gardeners. Also, I am a bright color with dark spots.



GREEN LACEWING: Some people call me the "garbage disposal" bug because of my huge appetite. My favorite food is aphids, but I also eat other mealy bugs and larvae. Mm, I'm hungry already!



PATCH PALS APPLICATION



Have you or your troop completed a **CLEAN, BEAUTIFY, and EDUCATE** activity to earn an "I Keep Austin Beautiful" patch?

If so, complete the form below and mail to: Keep Austin Beautiful, Attn: Patch Pals, 105 West Riverside, Suite 230, Austin, Texas, 78704.

Organization/Troop _____

Contact/Leader's Printed Name _____

Contact's Phone Number _____

Contact's Email _____

Mailing Address (where patches will be sent) _____

Leader's Signature _____

PARTICIPANTS' NAMES AND AGES:

- | | |
|----------|-----------|
| 1. _____ | 8. _____ |
| 2. _____ | 9. _____ |
| 3. _____ | 10. _____ |
| 4. _____ | 11. _____ |
| 5. _____ | 12. _____ |
| 6. _____ | 13. _____ |
| 7. _____ | 14. _____ |

What did you do to Clean, Beautify, and Educate Austin?

CLEAN: _____

BEAUTIFY: _____



EDUCATE: _____

Thank you for helping Keep Austin Beautiful.

Patch Pals Activity Booklet Made Possible By:



Waste Management has a variety of resources to help you earn your KAB Patch:

-  Tour the Waste Management landfill
-  Plan a work-day at Waste Management's Wildlife Habitat Park
-  Collect and recycle E-waste at Waste Management

To schedule a tour, contact 512.272.6254 or find out more about the above resources by visiting: <http://austincommunitylandfill.wm.com/>



Illustrations by: M.Webb, www.mwebbartist.tripod.com
Additional illustrations and design by: Jon Chonko
Written by: Monica Lopez Magee and Francis Lee



Printed on recycled paper with soy-based inks

clean

beautify

educate

kab
KEEP AUSTIN BEAUTIFUL



ANSWERS

Word search grid with highlighted words: SOLAR, POWER, ZONE, LAYER, JEROME, BEYONCE, ZOO, ALEX, HOBBS, KERRY, CHERRY, HOLE, HOBBLE, POLYMER, BATTERY, LUMBER, PLANTS, PAPER, EROSION, OXYGEN, TRASH, BATS.

Crossword puzzle answers:
LUMBER
PLANTS
PAPER
EROSION
OXYGEN
TRASH
BATS

LITER LIFELINE P. 4: a. 3-6, b. 5, c. 10-12, d. 10-20, e. 200-500, f. never decomposes.

WATER DA WORDS? P. 6: 1. water, 2. hydro-cycle, 3. drinking, ground, 4. fresh, 5. flush, 6. shower, 7. conserve, 8. Colorado River.

POLLUTION SOLUTIONS P. 7: 1. d, 2. a, 3. e, 4. b, 5. c.

WHICH WILDFLOWER? P. 11: 1. e, 2. c, 3. b, 4. a, 5. f, 6. d, 7. h, 8. g.

RECYCLE RIGHT P. 19: recycle bin = newspaper, catalogs, soda cans, tin cans, glass bottles, #1 plastic bottles, #2 plastic bottles, cardboard, loose-leaf paper, trash can = plastic bags, wet paper, lids.

TRASH ADDS UP P. 20: 57% is buried in landfills; 43% other.

BATS WHAT IT'S ALL ABOUT P. 22: 1200.

