

STUFF HAPPENS: IN THE BACKYARD

1. Complete a "What I Think I Know Right Now" BCR by addressing the following question.
What goes on in our backyards that can be harmful to the environment? In your response, be sure to include...
 - things that would contribute to air pollution
 - things that would contribute to water pollution
 - things that would contribute to "The Greenhouse Effect" or global warming

Answers will vary.

2. **True or False:**

Everyone who owns a home has had a healthy, green, manicured lawn since the 1600's.

FALSE Explain: Up until the mid 1800's, a person who had a lawn was most likely wealthy.

3. Today, home gardening is a \$ 17 billion dollar-a-year business!
4. Predict: Which common gardening tool does more harm to the environment in 30 minutes than a car does in 2 months? *Predictions may vary*

Wait about one minute for the right answer.... Which gardening tool was it? A leaf blower

5. A study in California showed that running a 2-stroke gas-powered leaf blower for 30 minutes produced the same amount of pollution as driving a car 2,200 miles.
6. Leaf blowers make winds of 150 miles/hour.

7. High winds tear gardens up and dry lawns out. What else does a leaf blower move around besides leaves?

- dust
- mold
- pesticides
- pet waste



Note: You may need to replay the last 5 – 10 seconds to ensure students got their answers.

8. If people used pool covers, they could reduce water and heat evaporation by up to 95%...this alone can save an average of 1,000 gallons of water a month.

9. We pour loads and loads of herbicides on weeds!

10. What is the connection between herbicides and hermaphrodite frogs (*frogs that are both genders*)?

Herbicides get into the ponds and waterways within which the frogs live.
The pollution causes the defect.



Please pause the video to give students about 2 minutes to answer this question.

11. Which herbicide is thought to cause this frog problem? Atrazine

12. What “green” methods can be used to rid our backyards of weeds?

- Vinegar
- Boiling water
- Dig them up with a shovel!

13. Charcoal is a good cooking tool, but it creates about 11 pounds of CO₂ (carbon dioxide) per hour!
Explain: Why is that a bad thing?

CO₂ gases trap heat in Earth’s atmosphere. This is known as “the greenhouse effect”. When heat is trapped, the Earth’s surface temperature gets warmer, causing glaciers to melt, sea levels to rise, strong storms, more rain and floods, and disease carrying insects to flourish.



Please pause the video to give students about 3 minutes to answer this question.

14. Charcoal is the primary household fuel for 2 billion people. Nearly a third of the world’s population.

15. What is going on with the protected land in the Democratic Republic of Congo?

Charcoal traders go into protected forests in the DRC and illegally cut down trees. The problem is that the protected land is inhabited by native mountain gorillas who rely on the forest and trees for shelter and food. There are only about 700 of these animals left on the planet. The traders are killing the gorillas and the people that protect the forests because they figure “less gorillas; less protected forest is needed” ..all so they can make charcoal!



Please pause the video to give students about 3 minutes to answer this question.

16. Peat moss is a great natural absorber. It soaks up carbon dioxide like a sponge.

17. Peat is made up of partially decomposed marshland vegetation like:

- Trees
- Grasses
- Fungi
- Dead insects and animals

18. The bogs that peat forms in are highly acidic...virtually oxygen-free environments. These are perfect places to preserve ancient artifacts.

19. Farmers drain peat bogs so that they can take dried up peat moss for potting soil. As the bogs die, they release carbon dioxide that they've stored into the atmosphere.

20. Peat bogs hold even more carbon dioxide than rainforests.

21. Dichlorodiphenyl Trichloroethane, or better known as DDT is found in pesticides and bug repellents.

22. What is the connection between global warming and disease carrying mosquitoes?

As the Earth's temperature increases, dangerous insect species (like mosquitoes) are able to survive and thrive in much greater numbers and for much longer periods of time. As their populations continue to grow, the amount of humans and other animals they can pass disease along to also increases.



Please pause the video to give students about 3 minutes to answer this question.

23. When we burn trees, what goes back into the air? Carbon dioxide

(are you starting to notice a theme here?) 😊

24. A "green" solution to using pesticide-ridden bug repellents is mixing:

- Apple cider
- Witch hazel (*produced from the leaves and bark of the North American Witch-hazel shrub*)
- A few drops of eucalyptus oil

25. What else can YOU do to prevent backyard pollutants?

Answers will vary...

Some possible answers are:

- Use rakes and other non-gas powered lawn tools to manicure your lawn
- Cover pools with solar covers which will naturally heat the pool
- Do not cut down trees unless they are dead
- Create or buy "green"/eco-friendly bug repellents and household cleaners
- Raise awareness by sharing this information with your friends and neighbors