Recycling Activities – Middle School

JUNK MAIL TRACKER

- Have students track the number and type of junk mail pieces they receive at their home for one week (For example: 10 catalogs, 15 letters, 5 postcards, etc.). Be sure to emphasize that they do not count mail that is not junk (bills, magazines subscriptions, etc.).
- Provide estimates of weights for each type (weigh a sample), and have them calculate the pounds of junk mail their family receives in one week (Use worksheet on the next page).
- Have them estimate how much that is in one year.
- Use the listed equivalents to help them visualize how much that is.
- Determine a class average.
- Emphasize that junk mail is recyclable – including catalogs, postcards, and even envelopes with plastic windows. It is recyclable even if it has a name and address on it.
- Show that recycling 1 ton of paper saves 17 trees. How many trees are saved if the whole class recycled all that junk mail for the year?
- Discuss ways to lessen the amount of junk mail received (For example, visiting https://www.dmachoice.org/ to take your name off lists; calling 888-567-8688 to stop the three major credit unions (Experian, Equifax, and TransUnion) from selling your name and address to banks and credit card companies; and visiting www.obviously.com/junkmail for detailed instructions on how to get off specific mailing lists (such as AOL, Publisher's Clearinghouse Sweepstakes, and more)).

Name: _____ Date: _____

JUNK MAIL TRACKER WORKSHEET

How Many Pieces of Junk Did Your Family Receive Each Day?

Junk Mail	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Letters						
Catalogs						
Postcards						
Newspapers						
Other						

Sample Weights

Letter: 0.5 ounces Catalog: 4 ounces

Postcard: 0.2 ounces Newspaper: 2.5 ounces

Other: Use your best guess based on the above weights

Your Junk Mail Weights:

Number of Letters		Number of Catalogs	
Weight of 1 Letter		Weight of 1 Catalog	
Total Weight (Number of Letters x Weight of 1 Letter)		**Total Weight (Number of Catalogs x Weight of 1 Catalog)**	

Number of Postcards		Number of Newspapers	
Weight of 1 Postcard		Weight of 1 Newspaper	
Total Weight (Number of Postcards x Weight of 1 Postcard)		**Total Weight (Number of Newspapers x Weight of 1 Newspaper)**	

Optional:

Number of “Other”		Number of “Other”	
Weight of “Other”		Weight of “Other”	
Total Weight (Number of “Other” x Weight of 1 “Other”)		**Total Weight (Number of “Other” x Weight of 1 “Other”)**	

Use additional scrap pages, if you need more space

Calculate Total Weights on Other Side →

Total Weight = Total Letters + Total Catalogs + Total Postcards + Total Newspapers

Total Weight = _____ounces

1 Pound = 16 ounces

Total Weight in pounds = Total weight in ounces ÷ 16

Total Weight = _____pounds of junk mail in one week

Multiply Total Weight by 52 = _____pounds of junk mail in one year

<u>Weight Equivalents:</u>

25 pounds = Average weight of a CAR TIRE

50 pounds = Weight of 7 GALLONS OF WATER

100 pounds = Typical weight of a SNOW LEOPARD

500 pounds = Typical weight of a GRIZZLY BEAR

WASTE REDUCTION IN YOUR SCHOOL

- Have students brainstorm ways to help reduce waste in your school. Some ideas:
    - Double-side copies to cut down on paper usage (saves paper and money)
    - Use routing slips for memos OR use email instead of paper memos
    - Purchase office / classroom supplies in bulk (saves money and resources for packaging)
    - Use refillable pens and pencils in the classrooms
    - Reuse old cardboard boxes for storage or to mail shipments
    - Reuse envelopes for internal memos or for scrap paper
    - Save and use scrap paper in offices / classrooms for notes or memos
    - Organize a reuse / donation / recycling program during locker and desk cleanout
- Pick one or two ideas (hold a classroom vote)
- Charge students with designing and implementing a campaign to bring the ideas to other classes in the same grade, a portion of the school, or even the whole school
- Use free materials from OCRRA, if needed: http://www.ocrra.org/order/

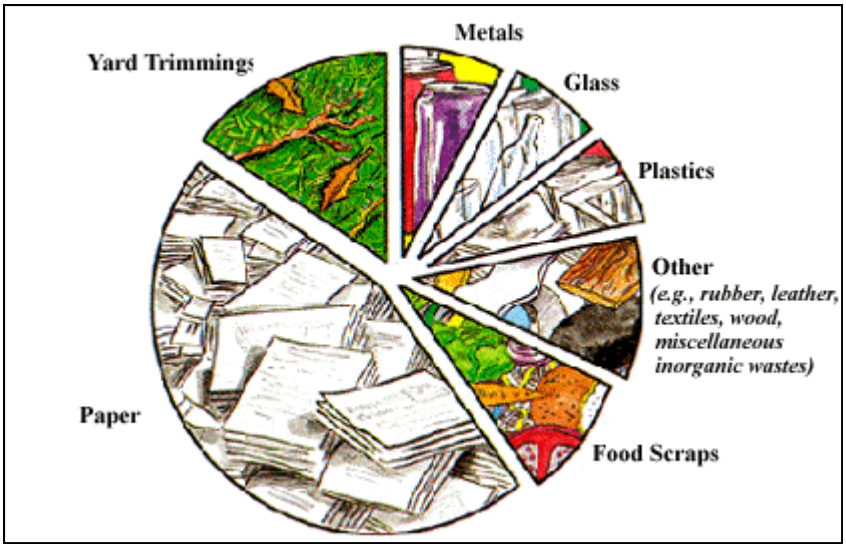
RECYCLING INTERVIEW

- Have students interview their parents, grandparents, siblings, and / or other adults about recycling. They should try to find out:
    - If recycling was important when they were a kid (to them, to their parents, to their neighborhood). Or, if any other environmental issues were important.
    - When they learned about recycling
    - If they recycle today and if they think it is important
- Students should write up their findings and share with the class
- Have them answer some basic analysis questions, such as:
    - What are the differences between recycling today and recycling when the interviewees were young? What are the similarities?
    - How have things changed in since the interviewees were young?

WHAT'S IN THE TRASH?

Name: _____ Date: _____

Trash in the United States



Source: US Environmental Protection Agency: http://www.epa.gov/osw/wycd/catbook/what.htm

Take a look at the chart above. It categorizes what US trash is comprised of and shows how much there is of each category.

1. What makes up the biggest portion of people's trash?

2. What are some ways to reduce the amount of this material that ends up in the trash?

3. What is the 2nd biggest portion of the trash?

4. What are some ways to reduce the amount of this material that ends up in the trash?

5. What do you think is the biggest portion of trash (not recyclables) in your home? In your classroom?

6. Can you or others do a better job at keeping some of that out of the trash? How?

Teacher answer key: WHAT'S IN THE TRASH?

1. Paper
2. -Use less of it. Examples: Double-siding printouts, using scrap paper for notes, not printing things out at all (reading them on the computer screen).
   -Recycle it. Instead of throwing paper in the trash, make sure it goes in the recycling bin.
3. Yard Trimmings
4. Compost it at home, or take it to a composting site.
5. Answers will vary
6. Answers will vary

COMPOSTING WITH WORMS
Build a worm composting bin to observe and learn how composting works and to create useful, nutrient-rich soil for gardens at the school or for people to take home.

To get started, follow the steps here: http://www.ocrra.org/yardwaste_indoor.asp. Remember, you need to use **Red Wiggler worms** - you can get them for free from OCRRA, however our supply is limited. To purchase online, check out sites such as: http://www.planetnatural.com/; http://www.localharvest.org/; http://www.downtoearthwormfarmvt.com/; or simply Google "red wiggler worms".

Composting is relatively easy, and if done right, should produce no odor. It can be a great learning tool for science classes.

If you have questions or need to trouble-shoot, feel free to call OCRRA at 453-2866. Our worm experts are standing by!

Optional Activity:
DOES COMPOSTING WORK?
Compare the growth of plants in soil with and without compost added.

- Obtain a supply of compost. Either use end-product from your classroom compost bin, or get it at a garden supply store.
- Get at least two plants (of the same species, preferably obtained at the same time, from the same place)
- Plant one plant in regular soil
- Plant the other in regular soil mixed with compost
- Keep them watered equally and keep them in the same spot in the classroom (so both pots are at the same temperature and have equal access to sunlight)
- Monitor their growth over time
- Record data such as plant height; plant fullness (are there a lot of leaves, or are they sparse), flowering time (if they flower)
- Based on the data, discuss whether the compost made any difference in growth
- It would be even better to plant multiple plants of each group (compost and no compost) to have multiple sets of data

OTHER GREAT RECYCLING ACTIVITIES:

Find other activities for Middle School-age students at http://www.paperrecycles.org/school_recycling/index.html. There they have lessons about paper recycling, plus worksheets that incorporate reading comprehension, math, and writing into recycling exercises.