

Recycling and Composting

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RECYCLING WITH COMPOSTING

Cleaning up Our Waste

Grades 1-7

Students will set up composting sites that will allow food scraps and paper to be recycled by nature.

FAITH INTEGRATION: students are introduced to the aspect of recycling with composting: it is God's world (Psalm 89:11, Psalm 19:1) and we can clean our area

Students see how God recycles "we have become new creatures" as the worms change garbage into something that brings beauty to the earth so God takes the garbage from us and makes us beautiful.

Curriculum Benchmarks:

isteNETS < http://cnets.iste.org/students/s_profile-68.html >

Technology Productivity Tools

Students use technology to enhance learning, promote creativity and discover new resources.

Technology Research tool:

- students use technology to locate, evaluate and collect information from a variety of sources
 - select and use appropriate tools and technology resources to accomplish a variety of tasks and solve problems

Curriculum Standards for NB

- make predictions, classification, do measurement
- use oral and written language to discuss procedures
- do Power Point presentation to share with others what we are doing

Materials/ Hardware/ Software

Worms Eat My Garbage by Mary Appelhof with illustrations by Mary Frances Fenton, Copyright 1982, Flower Press Kalamazoo, Michigan. USA

Digital Camera

Activities

Assessment Rubic

Hotlist <http://www.kn.att.com/wired/fil/pages/listcompostipe.html>

Teacher Preparation

Prepare Hotlist

Discuss Assessment Rubic

Activity sheets, measurement-volume

- weight of garbage

Have- bins ready for worms

-worms

Purchase peat moss

Find supply of newspaper

Digital camera

Student Preparation

Word knowledge to save written report

Internet- use Hotlist

- previous practice with Power Point
- save pictures for Power Point Information

Procedures

Students will access Hotlist sites to discuss varying ways of composting

Worksheet on compost site for box/bin

Worksheet from composting site on Hotlist

Management Plan

Older student working with younger student walking each other through the process, 4 computers to 6 students. Space students out so that each group is not interfering with another

Assign students to access the Internet

Assign students to access 2 Hotlist sights

Ethics Documenting Electronics Resources

Students will be reminded of the ethics in the use of materials written by others

documentation will include: Author/ designer's name. Title /name of book/article or page, date of above/ access site.

Assessment/Evaluation

<http://rubistar.4teachers.org/index.php>

Follow Up Activities

Presentation to School and Church Board
Sale of worms or finished product.

Work Sheet for Weighing Compost

Composting chart					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					
Name	Monday	Tuesday	Wednesday	Thursday	TOTAL
Weight					

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Worksheet on Composting

Step 1: Measure the length of your container: _____ cm

Step 2: Measure the width of your container: _____ cm

Step 3: Measure the depth of your container: _____ cm

Using your calculator multiply your answers and find the volume for your container and then follow the formula* you found for how much paper and peat moss you need to put in your container.

For the flower box you will need to pick your corner, measure it and prepare it for the worms.

Formula 1: water: bedding 3:1

Worm: garbage 2:1

Formula 2: _____

Math - Problem Solving : Composting

Teacher Name: **J Alleyne**

Student Name: _____

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Use of Manipulatives	Student always listens and follows directions and only uses manipulatives as instructed.	Student typically listens and follows directions and uses manipulatives as instructed most of the time.	Student sometimes listens and follows directions and uses manipulatives appropriately when reminded.	Student rarely listens and often "plays" with the manipulatives instead of using them as instructed.
Neatness and Organization	The work is presented in a neat, clear, organized fashion that is easy to read.	The work is presented in a neat and organized fashion that is usually easy to read.	The work is presented in an organized fashion but may be hard to read at times.	The work appears sloppy and unorganized. It is hard to know what information goes together.
Completion	All problems are completed.	All but 1 of the problems are completed.	All but 2 of the problems are completed.	Several of the problems are not completed.
Strategy/Procedures	Typically, uses an efficient and effective strategy to solve the problem(s).	Typically, uses an effective strategy to solve the problem(s).	Sometimes uses an effective strategy to solve problems, but does not do it consistently.	Rarely uses an effective strategy to solve problems.

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Collaborative Work Skills : Composting

Teacher Name: **J Alleyne**

Student Name: _____

CATEGORY	4	3	2	1
Focus on the task	Consistently stays focused on the task and what needs to be done. Very self-directed.	Focuses on the task and what needs to be done most of the time. Other group members can count on this person.	Focuses on the task and what needs to be done some of the time. Other group members must sometimes nag, prod, and remind to keep this person on-task.	Rarely focuses on the task and what needs to be done. Lets others do the work.
Time-management	Routinely uses time well throughout the project to ensure things get done on time. Group does not have to adjust deadlines or work responsibilities because of this person's procrastination.	Usually uses time well throughout the project, but may have procrastinated on one thing. Group does not have to adjust deadlines or work responsibilities because of this person's procrastination.	Tends to procrastinate, but always gets things done by the deadlines. Group does not have to adjust deadlines or work responsibilities because of this person's procrastination.	Rarely gets things done by the deadlines AND group has to adjust deadlines or work responsibilities because of this person's inadequate time management.
Problem-solving	Actively looks for and suggests solutions to problems.	Refines solutions suggested by others.	Does not suggest or refine solutions, but is willing to try out solutions suggested by others.	Does not try to solve problems or help others solve problems. Lets others do the work.
Working with Others	Almost always listens to, shares with, and supports the efforts of others. Tries to keep people working well together.	Usually listens to, shares, with, and supports the efforts of others. Does not cause "waves" in the group.	Often listens to, shares with, and supports the efforts of others, but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others. Often is not a good team player.
Preparedness	Brings needed materials to class and is always ready to work.	Almost always brings needed materials to class and is ready to work.	Almost always brings needed materials but sometimes needs to settle down and get to work	Often forgets needed materials or is rarely ready to get to work.
Contributions	Routinely provides useful ideas when participating in the group and in classroom discussion. A definite leader who contributes a lot of effort.	Usually provides useful ideas when participating in the group and in classroom discussion. A strong group member who tries hard!	Sometimes provides useful ideas when participating in the group and in classroom discussion. A satisfactory group member who does what is required.	Rarely provides useful ideas when participating in the group and in classroom discussion. May refuse to participate.

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