

Wormforce - Composting Activities

These activities can be implemented into classroom programs with the idea of specifically addressing areas of the Curriculum Framework and Progress Maps.

Learning Area	Progress Map Elaborations	Activities
<p>SCIENCE</p>	<p>Natural and Processed Materials</p> <p>Level 1</p> <ul style="list-style-type: none"> • Students recognise different materials in their daily life and are aware that they are used for making different things • Students describe properties of materials using their senses. • They identify materials that can be poured, such as water and milk. • They can also identify the properties of objects found in the outside environment. • Students become aware that materials can change and describe these changes. <p>Level 2</p> <ul style="list-style-type: none"> • Students recognise that objects can be made up of different types of materials • Students also recognise that the structure of materials can be used to explain their properties • Students make connections between the properties of familiar materials. • They recognise that metal and concrete are hard materials and so can be used for building things, that foam is spongy and can be used for pillows and that air 	<p>Level 1</p> <ul style="list-style-type: none"> • Create a list of all the different components of compost and where they originally came from. • Describe the parts of compost using their senses. What does it feel, smell, look like? • Classify the different materials in compost into things that pour, things that are hard, soft, porous etc. • List the properties of several parts of compost. Grass, sticks, food scraps, animal hair etc. • Write a diary of how the compost has changed over several weeks. Include what they have done to it to make it change. <p>Level 2</p> <ul style="list-style-type: none"> • Write a list of all the components of compost and where they have all come from. • Create a table of each part of compost which includes its structure and an explanation of how its structure is related to its properties. • Create a classification chart of familiar materials included in compost that connects several using common attributes.

	<p>is a gas and can be used to fill up balloons and tyres.</p> <ul style="list-style-type: none"> • Students understand that most materials have multiple properties that enable them to be used in different ways • Students distinguish between materials by describing what causes different changes to occur • They can also describe permanent changes to materials • Students observe, describe and compare ways that different materials change. <p>Level 3</p> <ul style="list-style-type: none"> • Students relate the different properties and structures of materials to their uses. • They explore the properties of materials • Students group materials according to observable properties and specify appropriate uses for them • Students describe changes in materials, make generalisations about the changes and identify patterns, they recognise that some interactions can be reversed, and they recognise that some interactions cannot be reversed. • Students recognise that the properties of materials can change when they interact and this change can affect their uses 	<ul style="list-style-type: none"> • Write an explanation why the bricks and concrete have been used to build the compost bays. • Why is green grass included in compost? Why do we include hard sticks in compost? • List all the different properties of paper and then explain all the different uses of paper. • Describe how turning green waste into compost is a permanent change. • Create a visual diary over weeks to explain the process of making compost, include the changes that have occurred and illustrations/photographs of the progress. <p>Level 3</p> <ul style="list-style-type: none"> • Write an explanation why we include specific green waste in compost. • Write a report on the properties of the compost components and their uses. • Classify the components of compost into groups of specific attributes, photograph. • Create an informational pamphlet on green waste and specify positive uses for specific components in the home. • Observe the process of composting over weeks, measuring temperature and recording how the green waste changes in terms of smell, touch and sight. Write a report/description of the process. • Experiment with amounts of specific components of compost and how this
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	<p>Investigating Scientifically</p> <ul style="list-style-type: none"> This is a series of investigation ideas specifically geared for the topic of composting. 	<p>affects the overall recipe in terms of temperature, durability and effectiveness.</p> <p>Investigating Scientifically</p> <ul style="list-style-type: none"> How hot does compost get? Why? Conduct over several weeks. How fast do different components of compost break down? Create different compost mixes and see how it progresses. It will have different smells, texture and colour. What can compost be used for? What nutrients/chemicals are in compost and what are their benefits? What fruits and vegetables can be placed in compost? What fruit and vegetables can't be placed in compost? Why? Aerobic or anaerobic compost. Do you turn compost or not? Place compost in green roller and same type in compost bay. Survey different bugs that live in compost? Why might they be present?
<p>TECHNOLOGY AND ENTERPRISE</p>	<p>Materials Level 1</p> <ul style="list-style-type: none"> Students handle and identify common materials and relate them to their everyday uses. When examining a common object, such as a toy, they identify that different parts of the object can be made from various materials, with different strengths, colours, surfaces and shapes. 	<p>Materials Level 1</p> <ul style="list-style-type: none"> Examine all the tools they will be using for composting. What are they made of? What else can these tools be used for? Describe the attributes and materials of the tools they will be using. Class discussion - Are there any other things that we could use to do the same

	<ul style="list-style-type: none"> • Students develop ideas for using different materials to create particular effects. • They use information from various sources, such as personal experience, their own imagination, stories and illustrations from books, film, television and magazines. • They begin to understand that the choice of a material depends not only on how it meets requirements, but also on individual personal preferences and past experiences. • Students display initiative by modifying their original designs when they find more suitable materials. • They use simple mathematical concepts to classify or group common materials into types and to explore patterns when using materials to create products. • They are aware of the need to use materials and equipment safely and correctly, to store them appropriately and to demonstrate cooperative behaviour by sharing materials that are in limited supply. • They perform simple equipment maintenance, such as cleaning after use, thereby beginning to understand the need to care for equipment so that it works properly. • When working with materials, students talk about the best ways of approaching a task. On completing the task, they talk about their result. 	<p>work?</p> <ul style="list-style-type: none"> • Group the tools and the green waste materials into groups the students have designed. • Brainstorm safety rules for using the tools from the wormforce shed. • Take care of the tools they have used by cleaning and storing appropriately. • Class discussion - Describe what they have to do for creating compost. Discuss the best way to complete this task. Review in a recount when the compost has been set up - How did it work well? Should we have done anything differently?
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	<p>Level 2</p> <ul style="list-style-type: none"> • Students understand the properties of materials, such as hardness and smoothness, and are aware of reasons for using certain materials for particular purposes. • They can distinguish between natural and made materials. • They consider problems related to the disposal of non-biodegradable materials and determine how resources can be recycled. • When using equipment, they select and apply proven techniques and appropriate safety procedures suited to the material being used and the environment in which they are working. • They apply their understanding of the need to maintain equipment by carrying out simple tasks, such as cleaning, refilling and oiling. • Students identify the positive qualities of work when they appraise their results and those of their peers, suggesting ideas for improvement. <p>Level 3</p> <ul style="list-style-type: none"> • Students recognise the need to relate the properties of materials to the requirements of their designs and to their intended use: for example, they identify natural, made and composite materials used to manufacture familiar products. • When selecting and using materials, students explore ways of limiting 	<p>Level 2</p> <ul style="list-style-type: none"> • Create a descriptive table listing all the tools and green waste that are being used and outline the particular properties of each. • Classify all the waste and tools used into a Venn diagram - Natural, synthetic, components of both. • List all the waste that can be recycled and how it can be recycled or reused. Plan what to do with materials that can not be recycled conventionally. • Create safety rules when working with the compost. Masks, gloves and shovels. • Care for tools they are using by cleaning and maintaining and storing appropriately. • Review their work and self evaluate using a PMI. <p>Level 3</p> <ul style="list-style-type: none"> • Describe all the waste and tools being used in the composting process. Include whether they are natural, synthetic or made of both. Outline what materials are the best to use in regards to the composting requirements. • Research tools that are made from materials that can be recycled or reused.
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	<p>damage to the environment.</p> <ul style="list-style-type: none"> • They recognise that different materials respond in different ways to different treatments and that this affects their use. • Students research and describe the processes and techniques used to manipulate materials. They use a variety of methods to convey how they intend to use materials. • Working individually or in groups, they share ideas, equipment and materials when constructing models and products. • They operate equipment safely and efficiently according to their design and purpose. • They understand the need to care for the working environment, such as ensuring that work surroundings are not damaged. • Throughout the development of products, students assess the effectiveness of their choice of materials and the processes used in meeting the requirements of their designs. 	<ul style="list-style-type: none"> • Describe how different waste materials react in different compost mixes. Are all these compost mixes viable? • Research varieties of compost mixes and the materials and amounts required. • Work in small groups to make the compost, paying special attention to group work behaviour, safety and equipment sharing. • Students create rosters for maintenance of equipment and carry through. • Review their compost making process using a PMI.
<p>English</p>	<p>Listening and Speaking Level 1</p> <ul style="list-style-type: none"> • Students respond to questions, instructions, statements and narratives. • They correctly use expressions of routine social interaction. • They can recount personal experiences and convey key information or ideas on a familiar topic. 	<p>Listening and Speaking Level 1</p> <ul style="list-style-type: none"> • Students can follow verbal instructions for making compost. • When working in groups making the compost they use appropriate language for sharing equipment and social interactions. • Orally recount work they have done in

	<ul style="list-style-type: none"> • Students show emerging awareness of school purposes and expectations for using and interpreting spoken language • They understand the purpose of, and their roles in, routine classroom activities involving listening and speaking by using language and behaviours appropriate to a range of familiar classroom situations. • They rely on simple sentence or uses simple connectives to link ideas. • Students interpret and respond to simple statements, instructions, commands, questions and non-verbal cues in ways appropriate to their culture. • They attempt to adopt an appropriate tone of voice and intonation to convey meaning. • Students ask questions and contribute comments generally related to the topic. • They use knowledge of ritual talk in the classroom, such as rhymes and jingles. • They imitate language forms such as news telling and retelling. <p>Level 2</p> <ul style="list-style-type: none"> • Students identify the main ideas in, and locate and obtain simple discrete information from clearly-articulated informational and expressive texts. • In the context of class events, students explain familiar procedures, describe or recount events in a logical sequence and sustain conversations on a familiar topic. 	<p>Site A.</p> <ul style="list-style-type: none"> • Answer questions verbally related to work they have done in the compost process. • Present a poem related to compost to the class using appropriate speaking behaviour. • Present their recount they have written about their work to the class. • Participate in a jigsaw activity and explain to their group the facts about composting they have learnt. • Retell what they did in making compost in the form of news - who, what, where, when and why. • Create their own rhymes and jingles for compost making and present to the class. <p>Level 2</p> <ul style="list-style-type: none"> • View visual texts and respond to questions verbally. BTN or documentaries, informational picture books and posters. • Explain composting procedures to other classes. • Recount the composting process to other classes.
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	<ul style="list-style-type: none"> • They listen to others and comment appropriately. • Students show awareness of how speaking is adjusted in different situations, observe conventions relating to taking turns and interrupting and make some use of non-verbal cues and differences in tone and pace of text delivery. • They acknowledge situations in which they change such elements as volume, vocabulary and social conventions for different purposes and audiences. • Students identify the conventions of a small range of spoken texts in the context of classroom activities • They also use common idioms and play with rhymes to create a humorous effect. • They rely on teacher scaffolds to plan recounts, descriptions and reports of essential information. <p>Level 3</p> <ul style="list-style-type: none"> • Students obtain closely-connected or related information from informational and expressive spoken texts. • They follow peer discourse in group discussions and obtain key information from texts with accessible topics. • Students interact to express opinions and perceptions. • They participate in problem-solving discussions with peers, where they recognise problems and suggest solutions, express opinions, share ideas 	<ul style="list-style-type: none"> • Present an informational report on compost and its uses to the class in a PowerPoint. • Create a composting package to sell to the community. Include an amount of compost, informational pamphlets on how to use and how to make your own. Present it to an adult audience as a speech. • Write their own poems and rap songs that have a message about composting and waste wise use. Present to class. <p>Level 3</p> <ul style="list-style-type: none"> • Write a report using information gained about composting and its benefits from multimedia sources, interviews and documentaries. • In groups they chose an aspect of composting to research, they report back to their group on their specific aspect they researched. Eg Uses, benefits, problems and different recipes. • Conduct an experiment with different amounts of compost, discuss with their group problems that may arise from
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	<p>and predict outcomes.</p> <ul style="list-style-type: none">• They also give brief reports and summarise information.• Students recognise and use forms of spoken text associated with particular contexts and purposes• They also recognise that different spoken texts are used and adapted to meet different educational situations and purposes• They modify elements such as volume, pace, tone, stress and body language for different purposes and audiences	<p>their experiment.</p> <ul style="list-style-type: none">• Create a marketing system to sell compost and present to the class as an oral report.• Write a news report on the work they have been doing in Site A and present it to the class as a news item.• Write poems/raps or songs related to the waste wise message and present to other classes.
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Wormforce - Composting Assessment

FAIR: Assessment should be demonstrably fair to all students and not discriminate on grounds that are irrelevant to the achievement of the outcome.

Learning Area	Progress Map Elaborations	Assessment Types
<p>Science</p>	<p>Natural and Processed Materials</p> <p>Level 1</p> <ul style="list-style-type: none"> • Students recognise different materials in their daily life and are aware that they are used for making different things • Students describe properties of materials using their senses. • They identify materials that can be poured, such as water and milk. • They can also identify the properties of objects found in the outside environment. • Students become aware that materials can change and describe these changes. <p>Level 2</p> <ul style="list-style-type: none"> • Students recognise that objects can be made up of different types of materials • Students also recognise that the structure of materials can be used to explain their properties • Students make connections between the properties of familiar materials. • They recognise that metal and concrete are hard materials and so can be used for building things, that foam is spongy and can be used for pillows and that air is a gas and can be used to fill up balloons and tyres. • Students understand that most materials have multiple properties that enable them 	<p>Level 1</p> <ul style="list-style-type: none"> • List of all the different components of compost and where they originally came from. • Description of the parts of compost using their senses. • Classification of the different materials in compost into things that pour, things that are hard, soft, porous etc. • List of all the properties of several parts of compost. Grass, sticks, food scraps, animal hair etc. • Written diary of how the compost has changed over several weeks. Include what they have done to it to make it change. <p>Level 2</p> <ul style="list-style-type: none"> • List of all the components of compost and where they have all come from. • Table of each part of compost which includes its structure and an explanation of how its structure is related to its properties. • Classification chart of familiar materials included in compost that connects several using common attributes. • Explanation of why the bricks and concrete have been used to build the compost bays. • Investigations of why green grass included in compost and why we include hard sticks in compost?

	<p>to be used in different ways</p> <ul style="list-style-type: none"> • Students distinguish between materials by describing what causes different changes to occur • They can also describe permanent changes to materials • Students observe, describe and compare ways that different materials change. <p>Level 3</p> <ul style="list-style-type: none"> • Students relate the different properties and structures of materials to their uses. • They explore the properties of materials • Students group materials according to observable properties and specify appropriate uses for them • Students describe changes in materials, make generalisations about the changes and identify patterns, they recognise that some interactions can be reversed, and they recognise that some interactions cannot be reversed. • Students recognise that the properties of materials can change when they interact and this change can affect their uses <p>Investigating Scientifically</p> <ul style="list-style-type: none"> • This is a series of investigation ideas specifically geared for the topic of composting. 	<ul style="list-style-type: none"> • List of all the different properties of paper and then explain all the different uses of paper. • Description of how turning green waste into compost is a permanent change. • Visual diary over weeks to explain the process of making compost, include the changes that have occurred and illustrations/ photographs of the progress. <p>Level 3</p> <ul style="list-style-type: none"> • Explanation of why we include specific green waste in compost. • Report on the properties of the compost components and their uses. • Classification of the components of compost into groups of specific attributes, photograph. • Informational pamphlet on green waste that includes positive uses for specific components in the home. • Observations of the process of composting over weeks, measuring temperature and recording how the green waste changes in terms of smell, touch and sight. • Report or description of the process. • Experiment with amounts of specific components of compost and how this affects the overall recipe in terms of temperature, durability and effectiveness. <p>Investigating Scientifically</p> <ul style="list-style-type: none"> • How hot does compost get? Why? Conduct over several weeks. • How fast do different components of compost break down?
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		<ul style="list-style-type: none"> • Create different compost mixes and see how it progresses. It will have different smells, texture and colour. • What can compost be used for? • What nutrients/chemicals are in compost and what are their benefits? • What fruits and vegetables can be placed in compost? What fruit and vegetables can't be placed in compost? Why? • Aerobic or anaerobic compost. Do you turn compost or not? Place compost in green roller and same type in compost bay. • Survey different bugs that live in compost? Why might they be present?
Technology and Enterprise	<p>Materials Level 1</p> <ul style="list-style-type: none"> • Students handle and identify common materials and relate them to their everyday uses. • When examining a common object, such as a toy, they identify that different parts of the object can be made from various materials, with different strengths, colours, surfaces and shapes. • Students develop ideas for using different materials to create particular effects. • They use information from various sources, such as personal experience, their own imagination, stories and illustrations from books, film, television and magazines. • They begin to understand that the choice of a material depends not only on how it meets requirements, but also on individual personal preferences and past experiences. • Students display initiative by modifying their original 	<p>Materials Level 1</p> <ul style="list-style-type: none"> • Examination of all the tools they will be using for composting. What are they made of? What else can these tools be used for? • Description of the attributes and materials of the tools they will be using. • Class discussion - Are there any other things that we could use to do the same work? • Grouping of the tools and the green waste materials into groups the students have designed. • Brainstorm of safety rules for using the tools from the wormforce shed. • Taking care of the tools they have used by cleaning and storing appropriately. • Class discussion - Description of what they have to do for creating compost. Discussion on the best way to complete this task. • Recount review when the

	<p>designs when they find more suitable materials.</p> <ul style="list-style-type: none"> • They use simple mathematical concepts to classify or group common materials into types and to explore patterns when using materials to create products. • They are aware of the need to use materials and equipment safely and correctly, to store them appropriately and to demonstrate cooperative behaviour by sharing materials that are in limited supply. • They perform simple equipment maintenance, such as cleaning after use, thereby beginning to understand the need to care for equipment so that it works properly. • When working with materials, students talk about the best ways of approaching a task. On completing the task, they talk about their result. <p>Level 2</p> <ul style="list-style-type: none"> • Students understand the properties of materials, such as hardness and smoothness, and are aware of reasons for using certain materials for particular purposes. • They can distinguish between natural and made materials. • They consider problems related to the disposal of non-biodegradable materials and determine how resources can be recycled. • When using equipment, they select and apply proven techniques and appropriate safety procedures suited to the material being used and the environment in which 	<p>compost has been set up - How did it work well? Should we have done anything differently?</p> <p>Level 2</p> <ul style="list-style-type: none"> • Descriptive table listing all the tools and green waste that are being used and outline the particular properties of each. • Classification of all the waste and tools used into a Venn diagram - Natural, synthetic, components of both. • List of all the waste that can be recycled and how it can be recycled or reused. Plan of what to do with materials that can not be recycled conventionally. • Creation of safety rules when working with the compost. Masks, gloves and shovels.
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	<p>they are working.</p> <ul style="list-style-type: none"> • They apply their understanding of the need to maintain equipment by carrying out simple tasks, such as cleaning, refilling and oiling. • Students identify the positive qualities of work when they appraise their results and those of their peers, suggesting ideas for improvement. <p>Level 3</p> <ul style="list-style-type: none"> • Students recognise the need to relate the properties of materials to the requirements of their designs and to their intended use: for example, they identify natural, made and composite materials used to manufacture familiar products. • When selecting and using materials, students explore ways of limiting damage to the environment. • They recognise that different materials respond in different ways to different treatments and that this affects their use. • Students research and describe the processes and techniques used to manipulate materials. They use a variety of methods to convey how they intend to use materials. • Working individually or in groups, they share ideas, equipment and materials when constructing models and products. • They operate equipment safely and efficiently according to their design and purpose. • They understand the need to care for the working environment, such as ensuring that work 	<ul style="list-style-type: none"> • Care for tools they are using by cleaning and maintaining and storing appropriately. • Review of their work and self evaluation using a PMI. <p>Level 3</p> <ul style="list-style-type: none"> • Description of all the waste and tools being used in the composting process. Include whether they are natural, synthetic or made of both. Outline of what materials are the best to use in regards to the composting requirements. • Research of the tools that are made from materials that can be recycled or reused. • Description of how different waste materials react in different compost mixes. • Research report on varieties of compost mixes and the materials and amounts required. • Group work behaviour, safety and equipment sharing observations. • Creation of rosters for maintenance of equipment. • Review of their compost making process using a PMI.
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	<p>surroundings are not damaged.</p> <ul style="list-style-type: none"> • Throughout the development of products, students assess the effectiveness of their choice of materials and the processes used in meeting the requirements of their designs. 	
<p>English</p>	<p>Listening and Speaking Level 1</p> <ul style="list-style-type: none"> • Students respond to questions, instructions, statements and narratives. • They correctly use expressions of routine social interaction. • They can recount personal experiences and convey key information or ideas on a familiar topic. • Students show emerging awareness of school purposes and expectations for using and interpreting spoken language • They understand the purpose of, and their roles in, routine classroom activities involving listening and speaking by using language and behaviours appropriate to a range of familiar classroom situations. • They rely on simple sentence or uses simple connectives to link ideas. • Students interpret and respond to simple statements, instructions, commands, questions and non-verbal cues in ways appropriate to their culture. • They attempt to adopt an appropriate tone of voice and intonation to convey meaning. • Students ask questions and contribute comments generally related to the topic. • They use knowledge of ritual talk in the classroom, such as 	<p>Listening and Speaking Level 1</p> <ul style="list-style-type: none"> • Observations of following verbal instructions for making compost. • Appropriate language for sharing equipment and social interactions. • Oral recount of work they have done in Site A. • Answered questions verbally related to work they have done in the compost process. • Presented a poem related to compost to the class using appropriate speaking behaviour. • Presented their recount to the class. • Participated in a jigsaw activity and explained to their group the facts about composting they have learnt. • Retold what they did in making compost in the form of news - who, what, where, when and why. • Created their own rhymes and jingles for compost making and presented to the class.

	<p>rhymes and jingles.</p> <ul style="list-style-type: none"> • They imitate language forms such as news telling and retelling. <p>Level 2</p> <ul style="list-style-type: none"> • Students identify the main ideas in, and locate and obtain simple discrete information from clearly-articulated informational and expressive texts. • In the context of class events, students explain familiar procedures, describe or recount events in a logical sequence and sustain conversations on a familiar topic. • They listen to others and comment appropriately. • Students show awareness of how speaking is adjusted in different situations, observe conventions relating to taking turns and interrupting and make some use of non-verbal cues and differences in tone and pace of text delivery. • They acknowledge situations in which they change such elements as volume, vocabulary and social conventions for different purposes and audiences. • Students identify the conventions of a small range of spoken texts in the context of classroom activities • They also use common idioms and play with rhymes to create a humorous effect. • They rely on teacher scaffolds to plan recounts, descriptions and reports of essential information. <p>Level 3</p> <ul style="list-style-type: none"> • Students obtain closely-connected or related information from 	<p>Level 2</p> <ul style="list-style-type: none"> • Viewing of visual texts and responded to questions verbally. • Explained composting procedures to other classes. • Recounted the composting process to other classes. • Presented an informational report on compost and its uses to the class in a PowerPoint. • Created a composting package to sell to the community. Included an amount of compost, informational pamphlets on how to use and how to make your own. Presented it to an adult audience as a speech. • Wrote their own poems and rap songs that have a message about composting and waste wise use. Presented to class. <p>Level 3</p> <ul style="list-style-type: none"> • Report using information gained about composting and its benefits from multimedia
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	<p>informational and expressive spoken texts.</p> <ul style="list-style-type: none"> • They follow peer discourse in group discussions and obtain key information from texts with accessible topics. • Students interact to express opinions and perceptions. • They participate in problem-solving discussions with peers, where they recognise problems and suggest solutions, express opinions, share ideas and predict outcomes. • They also give brief reports and summarise information. • Students recognise and use forms of spoken text associated with particular contexts and purposes • They also recognise that different spoken texts are used and adapted to meet different educational situations and purposes • They modify elements such as volume, pace, tone, stress and body language for different purposes and audiences 	<p>sources, interviews and documentaries.</p> <ul style="list-style-type: none"> • Participated in a jigsaw using attributes about composts. • Conducted an experiment with different amounts of compost, discussed with their group problems that may arise from their experiment. • Created a marketing system to sell compost and present to the class as an oral report. • Wrote a news report on the work they have been doing in Site A and presented it to the class as a news item. • Wrote poems/raps or songs related to the waste wise message and presented to other classes.
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