

the WORM

An underground adventure!



The Worm
An Underground Adventure
Evaluation
Climate Challenge Fund
2012-2015

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★★★★★ BROADWAY BABY

"...manages to keep its audience of tinies enthralled simply through some excellent storytelling...a sweet little piece which will give younger children a gentle introduction to ecology but, more importantly, keep them engaged and amused for the whole 60 minutes..."



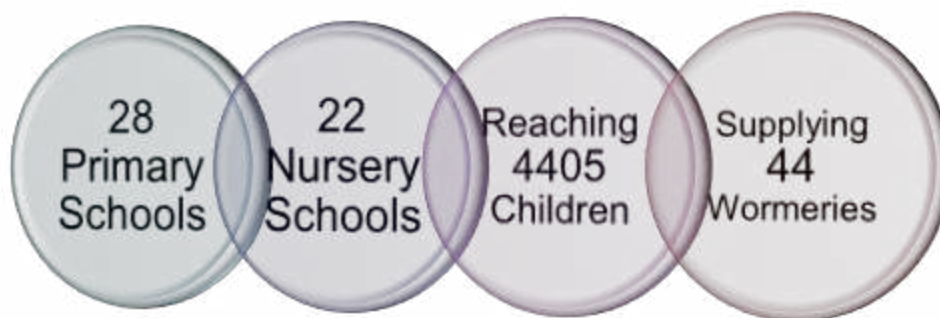
1. THE WORM OVERVIEW

The Worm-An Underground Adventure is an enchanting, musical tale celebrating the wonder of life beneath our feet, specially devised for 3-7 year olds. After the performance, the audiences are invited to see some real worms in a specially designed wormery. For more information and trailer see below link:

<http://www.ecodrama.co.uk/productions/the-worm-an-underground-adventure/>

Throughout 2013 & 2014 Eco Drama delivered *The Worm* theatre show to schools, nurseries and theatre venues across the central belt of Scotland.

From **January to September 2014** *The Worm* reached:



The Worm also visited the [Edinburgh Fringe Festival 2014](#), [The West End Festival](#), [Green 2014 at the Lighthouse](#), [Catch Festival in South Lanarkshire](#), [Eastwood Park Theatre](#), [East Renfrewshire's Early Years Festival](#), as well as [Paisley Arts Centre](#), [Paisley Museum](#), [Harbour Arts Centre](#) and [Whale Arts Centre](#).

1.1 EDUCATION LINKS

Education is at the heart of Eco Drama's work and *The Worm* has strong links with Eco Schools Topics and with the current Scottish Schools education framework the *Curriculum for Excellence*.



1.2 MONITORING AND EVALUATION

Monitoring and Evaluating

Evaluation is fundamental to supporting Eco Drama's education initiatives. It enables us to ensure that we are delivering relevant and useful learning experiences for pupils and teachers in the schools which we visit.

For *The Worm*, evaluation forms were distributed to pupils and teachers to complete after they had seen the show. These forms were designed to allow pupils and teachers to offer their opinions on the experience, and allow Eco Drama to monitor the response to the show to ensure that the best possible learning experience is being provided.

Presentation of Data

Included in the feedback forms are questions which allow us to obtain quantitative data on the responses. Pie charts have been used to present data for these types of questions. Approx 76% of participating schools returned evaluations for us to work with.

Questions were also designed to provide qualitative feedback from comments which describe levels of enjoyment and what pupils have learned from the show. Comments from pupils and teachers have been included throughout the evaluation document.

In supporting this aspect, we have found a framework for measuring learning outcomes from active engagement in arts projects. This is further explained on page 8.

1.3 ADDITIONAL RESOURCES

Each school that booked *The Worm* was provided with a **Classroom Activity Pack** full of useful pre and post show activities for the whole class.

All participants were invited to see a **real live wormery** after the show. **44** schools and nurseries were provided with their own school wormeries. Puppet bobble hats were also made available to participating schools to be played with in class.



2. PUPIL FEEDBACK

"I liked when they showed us what the worms do underground!"

Pupil Chirnyside Primary

"We liked the wee worms. They made us happy"

Kayla, Bellrock Nursery

"I was a little scared about worms at first but now I love them!"

Zoe

"I loved all of it!"

Pupil, St Michael's Primary School

"All the children and staff were raving about the show. There was nothing they didn't like!"

Woodacre Nursery

"I liked looking at the worms. I can't wait to make our wormery in school!"

Pupil, St Josephs

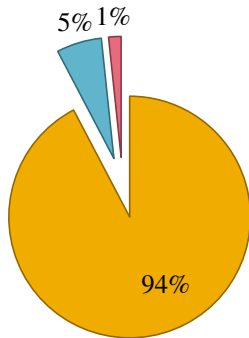
"It was a really funny show. It was like magic!"

Pupil, Rosshall Nursery

2.1 PRESENTATION OF DATA

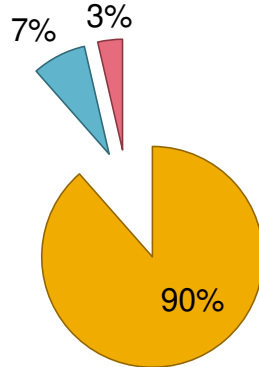
It was lots of fun

Yes Maybe No



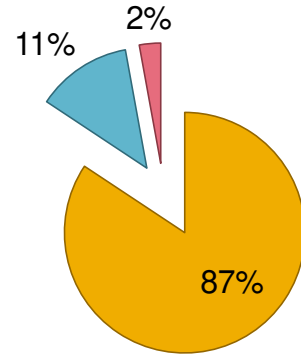
It was exciting

Yes Maybe No



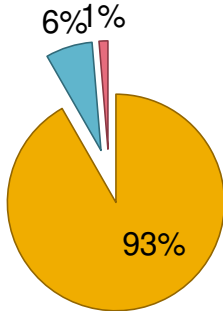
I learned a lot of new things

Yes Maybe No



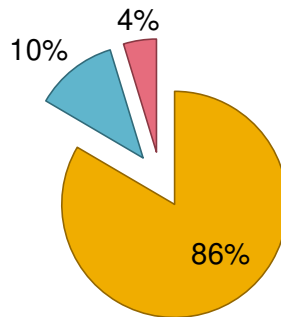
I thought the show was v.good

Yes Maybe No



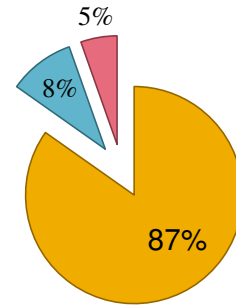
I understand that I can reuse my food scraps

Yes Maybe No



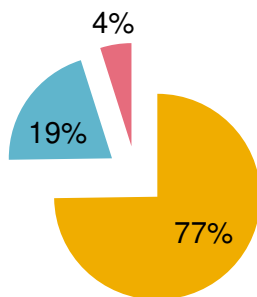
I understand why worms are good

Yes Maybe No



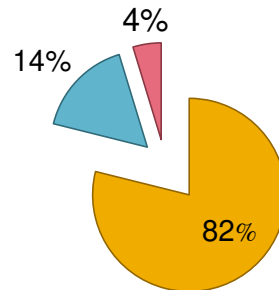
I understand what compost is

Yes Maybe No



I understand that doing this helps care for our environment

Yes Maybe No



“The performance was simply spot on and the children thoroughly engaged and delighted. It is days like today that makes me glad to be a teacher.”

Mrs McDermott, St Mungo’s Primary



2.3 GENERAL LEARNING OUTCOMES

The 'Inspiring Learning' initiative from the Museums, Libraries and Archives Council suggests a framework for classifying qualitative data into learning outcomes. We have attempted to apply this to both pupil and teacher qualitative feedback for *The Worm* to identify the key **learning aspects** which have occurred as a result of Eco Drama's work.

As the pupils were of a younger age group, we have included some teacher's feedback as well as pupil's, as they often articulated on behalf of the much younger children.

INSPIRING LEARNING FRAMEWORK (2008 – Museums, Libraries and Archives Council)

The framework identifies **five general learning outcomes (GLOs)** and recommends that these be used as a way of measuring outcomes and demonstrating the impact that a project has had on the participants.

Figure 1 -
General
Learning
Outcomes

(Museums,
Libraries and
Archives Council,
2008, retrieved
from
<http://www.inspiringlearningforall.gov.uk/learning/>)



From the qualitative feedback gathered we can see clear progression through each of the learning outcomes and are able to see the interconnectivity of each outcome mirrored in the Eco Drama experience:

Knowledge and Understanding

“Back in the class the pupils could tell me about the worm, composting and why worms are good for soil and growing things.”

Teacher St Josephs

“We have a school garden and so the idea of the importance of good soil in order to help grow was really relevant.” Teacher, Corpus Christi

“I learned that worms can help make carrots and tomatoes.” Pupil, Aultmore Park Primary

“Worms have 5 hearts... They poo and help the flowers to grow.” Pupils, Levhall Nursery

“It was interesting. I learned about composting.” Pupil, St Joseph’s

Skills

“All the children gained something positive from this experience and have continued to recall back at nursery – eg through drawings, stories talking and putting left-over snacks in the compost bin. They have each made a comment in The Wee Wilma book as a *thank you*.”

Teacher, Levenhall Nursery

“We liked looking for worms in the wormery and finding bits of food.” Pupil, Antonine Primary

“I liked looking at the worms. I can’t wait to make our wormery in school.” Pupil, St Josephs

“Lots of opportunities to link the theme in this workshop with our outdoor classroom. Also our school will soon have access to a wormery which will be useful when discussing worms with the class!” Teacher, Corpus Christi

Attitudes and Values

“Worms are very good because they help protect the future.” Pupil, Highpark Primary

“It was fascinating!”
Pupil, St Josephs

“I was a little scared about worms at first but now I love them!”
“Pupil, Corpus Christie

“I thought worms were icky, but now I love them”... Pupil, Corpus Christi

“I really like worms now!”
Pupil, Corpus Christi

Enjoyment, Inspiration and Creativity

“The children have really engaged with the whole idea. They have invented a ‘worm dance’ which we do when it’s raining and they count the worms.”
Royston Primary

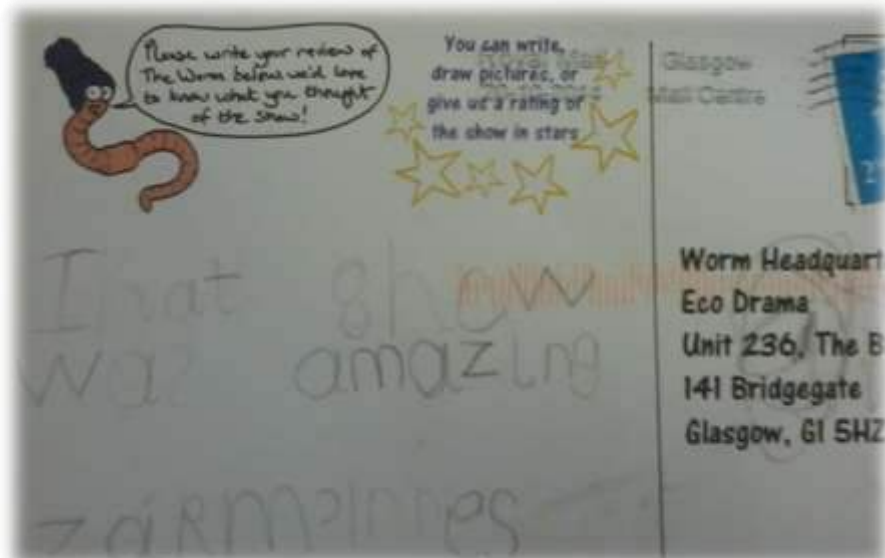
“It was a great show! It was fantastic! It was really funny!” Pupils
St Josephs

“We liked seeing the worms in the wormery. We thought Wilma and William were very funny.”
Pupil, Corpus Christie

“I liked the music, the different voices for the worms and the magic microphone.” Pupil
Aultmore Primary

“We had lots of fun and it was good seeing the both of you.”
Pupil, St Michael’s

“It was a really funny show. It was like magic!” Pupil,
Rosshall Nursery



Activity, Behavior and Progression

“We’ve managed to develop their understanding of the importance of worms in the whole ‘eco’ idea and they no longer run away screaming when they see one on the ground. This is a huge step in the right direction.” Teacher, Royston Primary

“The children found out lots about worms and started a school wormery. Since then, many classes have made their own wormeries, showing that their motivation and interest has not diminished.” Teacher, Aultmore Park

“Primary 1 gave an assembly on all the learning we’ve done around the worms – we used them in measure and art and have embraced our responsibility to our wiggly friends.” Teacher, Chirnside Primary

“We’ve set the wormery up in an open area of the infant department and we’ve really enjoyed the whole experience. We regularly go outside and collect worm food to keep it topped up.” Teacher, Chirnside

“...a smashing wee show that just maybe planted the seeds from which a new generation of eco-warriors will grow.”

Edinburgh Guide

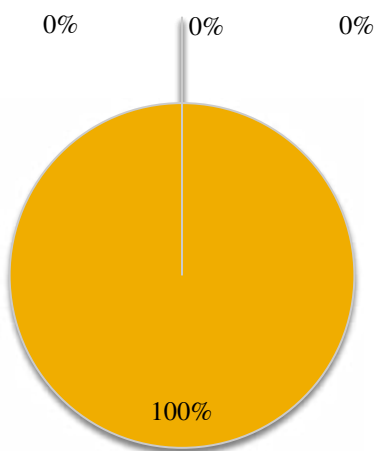


3. TEACHER FEEDBACK

Class teachers were asked the following questions in order for us to calculate qualitative data to assess the relevancy of the show for their pupils:

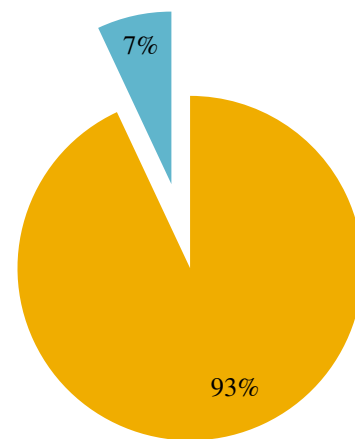
What did you think about the suitability of this show in relation to your pupils age and class level?

■ Excellent ■ Good ■ Ok ■ Not Relevant



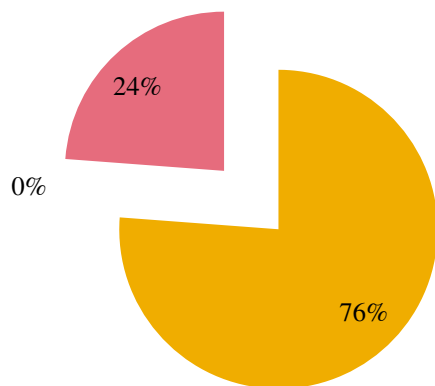
How well did the themes in this workshop link with the curriculum and your eco schools programme?

■ Excellent ■ Good ■ Ok ■ Not Relevant



Was the Classroom Activity Pack useful?

■ Useful ■ Not Useful ■ Not used yet



What did you think of the show?

“Fantastic. Children were captivated from the onset. Discussion afterwards highlighted their obvious enjoyment. I felt the need to compliment the 2 performers after the show and tell them that this was one of the best shows I had ever seen in a school.” Teacher, Aultmore Park Primary

“The performances of *The Worm* were terrific. I managed to get along to see one – wow. The set, the actors, the musical instruments – everything was fantastic. We have managed to set up our wormery and should be putting the first bit of food waste into it next week! Very exciting.”

Tommy Hynes, Corpus Christi Primary



“The show was fantastic... so educational for the children and they were engaged the whole time with the drama. The actors and script were fabulous and the music so inventive.” Teacher, St Vincent’s Primary

“Amazing! A must see!!”
The Jimmy Dunnachie Family Learning Centre

How well did the themes in this show link with the curriculum and you eco schools program?

“Very well. We are due to receive a wormery in the near future which children are very excited about.”
Teacher, Corpus Christi Primary

“We’re going for Eco-Schools Green Flag so having a wormery and getting such a good introduction to it really helps. It is also helpful in delivering science lessons based on the worms.” Teacher, Highpark Primary



“Tied in very much – and we are going to use this as an introduction to our next curriculum plan for march on mini-beasts.” Teacher, Springburn Nursery School.

“The way the show was presented was fantastic, highlighting composting, the rain and why worms come up to the surface – the whole life cycle of the worm.”
Teacher, Whiteinch Nursery

What did you think of the suitability of this show in relation to your pupil’s age and class level? Why is this?

“The position of the pupils on the grass so close to the stage really kept their focus. There was a good balance of entertainment and informative content.” Teacher, Aultmore Park Primary



“The characters Wilma and William were fantastic. They were able to hold the children’s attention throughout the whole performance due to their enthusiasm, how animated they were and great interaction with the children. The music and singing which children could also join in was great too.” Woodacre Nursery School



Was the classroom activity pack useful?

“I thought it was fabulous! Fun, entertaining and brought together several areas of the curriculum.” Teacher, St Clare’s Primary

“Fantastic ideas for using with children – excellent for staff links to CfE.” Teacher, Springburn Nursery



Any more comments?



“Brilliant! More please! The staff also learned lots of new things.” Teacher,
Levenhall Nursery

“Thank you for your lovely response to our evaluations of your wonderful production! As you would see it was an especially positive experience for the children, and they (and the staff!!), thoroughly enjoyed it... PS We're looking forward to the next Eco Drama production suitable for early years.”
Teacher, Levenhall Nursery



4. FOOD WASTE CALCULATIONS



Throughout 2014, *The Worm-An Underground Adventure* and its sister production *The Worm Inspectors*, reached 7,659 children and young people aged 3-11 years, across 50 educational establishments (28 Primary Schools and 22 Nurseries).

Of these schools, 44 wormeries, kitchen caddy's and support materials were provided; ensuring 6,639 of these children and young people had the means to begin recycling their food waste after the performances.



Each school received the following as part of our Climate Challenge Funded project:

- ✓ **Performances** of *The Worm-An Underground Adventure* for P1-3 classes and *The Worm Inspectors* for P4-7 classes.
- ✓ **Wormery**, inc. set-up support and wormery aftercare information.
- ✓ **Kitchen Caddy & Info Sticker** (Yes Please & No Thank You Foods)
- ✓ **Classroom Activity Pack** (inc. pack of bobble hats for follow up learning)
- ✓ **Food Waste Measurement Sheet**

MEASURING FOOD WASTE REDUCTIONS

We measured the carbon reductions made over **12 months** from February 2014 - February 2015, which equates to 200 school days of the partner schools composting food waste in their Kitchen Caddies. All schools previously did not do this.

Annual Saving from Food Waste Related Work

370 tonnes CO₂e

“I was a little scared about worms at first but now I love them!” Zoe



“We liked the wee worms. They made us happy” Kayla, Bellrock Nursery School



Eco Drama will continue to support these schools with their food waste reduction journeys and ensure the wormery’s ongoing use and lasting legacy.

5. SUMMARY

The feedback indicates that *The Worm – An Underground Adventure* has an effect on all key learning areas – **Enjoyment, Inspiration, Creativity; Knowledge and Understanding; Attitudes and Values; Skills; and Activity, Behaviour and Progression**. In addition it connected well with the **Curriculum for Excellence** and **Eco School Links**.

Children were encouraged to develop new creative skills to engage with the production and also to feedback to Eco Drama on their learning experience. **Through this we can see that Eco Drama's theatre production has impacted on the thoughts and attitudes of children**. There is evidence of thoughts and opinions being considered about many of the topics raised in the show (primarily the important role of the worm in relation to Food & the Environment, Bio Diversity and School Grounds) **and how this can positively change their relationship with our natural world**.

Of the total responding pupils...

- Over 94% found it lots of fun
- Over 90% found it exciting
- Over 87% learned new things
- Over 93% found the show very good
- Over 87% understand why worms are good
- Over 86% understand they can reuse their food scraps
- Over 77% understand what composting is
- Over 82% understand that doing this helps care for the environment

Of the total responding teachers...

- 100% of responding teachers found the production suitable to the classes' level with 100% stating **EXCELLENT!**
- 100% found the theme worked well with the curriculum and their own Eco School program. **93% found it EXCELLENT whilst 7% found it GOOD.**
- Finding the Classroom Activity Pack useful - **76% YES** and 24% not used yet

The production, wormery and supporting resources can be a springboard from which teachers continue further learning in class. This aspect is further visible in Teacher Feedback, in which the production and classroom activity pack are shown to provide the basis for further learning and development and where the value of *The Worm-An Underground Adventure* production is evident.

The provision of a school wormery and caddy was also seen to have a positive lasting effect, with teachers reporting that **pupils are thoroughly enjoying engaging with the school wormery and using it to dispose of food waste and collect compost.** Some classes have even made their own!

Feedback from the venues and festivals that we visited have displayed high praise for the production's ability to enthrall, engage and amuse its young audience with creative storytelling and music, and how this further inspires and instills wonder for the life of the worm and its vital role in our living planet.



It is days like today that makes me glad to be a teacher...

A smashing wee show...

Amazing! A must see...

One of the best shows I have ever seen in a school...



www.ecodrama.co.uk