



Supported using public funding by
**ARTS COUNCIL
ENGLAND**

MAST
Mayflower Studios

Pound Arts

STORIES IN THE DUST

by **Anna Harriott & Iona Johnson**

**A funny, heartfelt and hopeful post apocalyptic family
show with live music and puppetry for ages 5+**

Show pack

**Written by Ian Williams, Anna Harriott and Iona Johnson
Illustrated by Toby Roberts**

www.storiesinthedust.co.uk

MAST
Mayflower Studios

STORIES IN THE DUST

by **Anna Harriott & Iona Johnson**



Two travellers journey across the barren and dusty world. They make up songs and tell stories, inspired by treasures from a time gone by.

With live music, puppetry and clowning Stories In The Dust is a funny, heartfelt and hopeful post apocalyptic family show that takes you to another world.

A world where an ancient book guides your way, a drop of rain changes everything and a mighty lion holds its secrets in an old clay pot.

Join two intrepid explorers who are full of stories and full of hope
(but dangerously low on baked beans).



Stories in the Dust was originally created with support from MAST Mayflower Studios and shared at their Emergency Festival.

It was developed thanks to public funding from National Lottery through Arts Council England in partnership with Pound Arts.

We worked with Longford Primary School to create Stories in the Dust.

We gathered the young people's thoughts, feelings and questions about climate change then wove them into the show and into this pack.

Stories in the Dust has been developed with support from Ian Williams, Professor of Applied Environmental Science at Southampton University.

That's a long title, isn't it? So we just call him **Prof Ian.**

Prof Ian knows LOADS of stuff and we're always learning from him. That's why he's helped us to write this pack.

This pack is full of facts, we haven't made any of it up.

Unlike the show, some things in that are definitely made up!

Pack Contents

Climate Emergency Explained

What causes climate change?

How does climate change affect animals?

What is decomposition?

How long do things take to decompose?

Why do somethings never decompose?

What is plastic?

Why does it rain?

What are droughts?

What can I do to help?

Renewable Energy

Questions & Things to try



In this pack, you'll sometimes you'll see a question mark like this one



If you do, we're asking you a question about the show. There's no right or wrong answer because we're asking for your own opinions, not facts.

You might have heard phrases like these...

CLIMATE CHANGE

GLOBAL WARMING

CLIMATE EMERGENCY

**We asked some children what they thought these phrases mean
and this is what they said.**

**I think climate change
is when the world gets
over heated.**

**The gases released from the
factories and the cars
breathing melting the ice
caps.**

**Climate change
makes me feel bad
and I want to stop it!!**

**Global warming is
something about
science.**

So what exactly does it all mean?
(You know who we need to ask...)

Prof Ian says...

Climate change describes the shifts happening to the Earth's temperature and weather patterns over many years.

As a result of climate change, the average temperature of the Earth is increasing. This is known as **global warming.**

It might sound nice to have warmer temperatures on Earth but for those living in some parts of the world, its effects can be terrible.

This is why we use the term **climate emergency.**



Question!

**Why do you think the two
travellers in the story are alone?**

Climate Emergency Explained

1 The word emergency means that something requires urgent and immediate action.

3 As the temperature of the Earth increases, the weather patterns become more unusual.

5 Droughts and wildfires have become more frequent too, particularly in warmer parts of the world.

2 The term climate emergency suggests that we need to act now to stop the worst effects of climate change.

4 This unusual weather has been causing chaos and destruction across the world.



Question!
Did you see any effects of climate change in the show?

Floods

Mudslides

Earthquakes

Tornadoes



**The young people who we worked with to make the show,
and to create this pack had lots of questions for Prof Ian.
Let's answer a few of them.**

**What causes
climate change?**

Prof Ian says...

Scientists agree that human intervention is the reason for the rapid rate at which the planet's temperature is increasing.

Starting in the year 1760, something called the Industrial Revolution took place. During the Industrial Revolution, people started to make items using machines rather than by hand.

The new manufacturing processes involved burning fossil fuels, like coal, oil and gas to provide power for machines.

Burning these fossil fuels turned out to be super effective and everyone across the whole world started doing it. Humans have been burning them ever since! They power things like trains, cars, ships and aeroplanes. It's what heats our homes.

This all seemed fine until scientists realised that this may be the reason why the Earth's temperature is rising. As a result the Earth has been getting warmer and that's global warming.

This is not the only cause of climate change. Here are some others...

Cutting down too many trees, which is also called Deforestation.

The growth of the agricultural industry due to increasing demand of food.

The use of fertilisers containing nitrogen.

**Fluorinated gases used in fridges, air con, heat pumps,
fire extinguishers and aerosol cans.**

Other types of human Intervention.



**How does
climate change
affect animals?**

Prof Ian says...

Climate change negatively impacts our planet's wildlife. Lots of species of wildlife are currently endangered, and some have already gone extinct.

The effects of climate change are felt more seriously in different parts of the world. This means certain species of animals are suffering more than others, depending on where they live.

Polar bears live in the ice-covered waters of the Arctic, which is an environment that is rapidly changing due to the increasing temperature of the planet.

As the ice is melting in the Arctic, polar bears are being left without a habitat and, as a result, are at risk of extinction.

Another terrible effect of climate change is the rising sea level. When ice gets hot, it melts. The Earth's ice caps are melting because of the increasing temperature, causing the sea level to rise



This may seem very sad and worrying but there is hope. If we act now, scientists believe that we can slow down the effects of climate change.

This will not be easy, though, and will require everyone to do their part.

What is decomposition?

The word decomposition means:

To
break
down
into
smaller
parts

Prof Ian says...

In science, it means when a substance starts to break down and decay. Decomposition is also known as rotting.

It is what happens to living things when they die. It also happens to organic (carbon-based) material of any kind, such as foods.

The reason it happens is that organic molecules are stores of building blocks and energy. Whatever breaks down organic material uses the energy and building blocks to reproduce itself.

A large part of decomposition is done by very small micro-organisms, especially bacteria.

Some things take longer to decompose than others, which is why it's vital to reduce, reuse and recycle.

? **Question!**

**What things had the characters collected?
What were the puppets made out of?**





Computers,
tablets and
phones



Tyres

How long do you think
these things take to
decompose?

Answers on
the next page!



Fruit and vegetables



Crisp packets



Plastic coated
cartons



Plastic
bags



How long do things take to decompose? Here are the answers!

Fruit and vegetables
5 days - 1 month

Tyres
2,000 years

Computers, tablets & phones
up to 1 million years
(and they leak nasty stuff into the ground)

Crisp packets
10-20 years

Plastic bags
500 years - forever

Plastic coated cartons
20 - 30 years

Why do some
things never
decompose?

Prof Ian says...

Some things will not decompose because they are made of materials that do not degrade or only degrade very, very slowly.

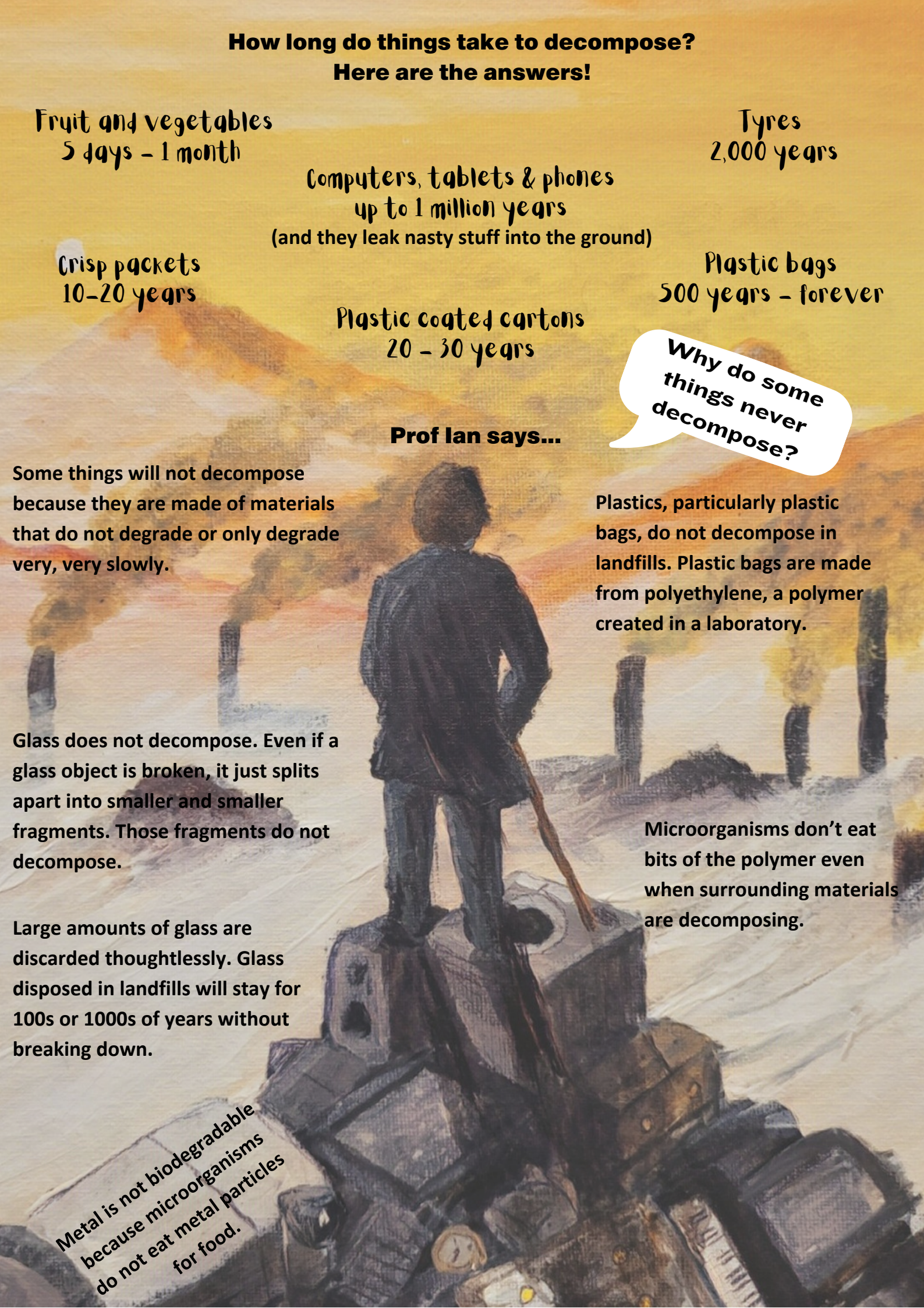
Plastics, particularly plastic bags, do not decompose in landfills. Plastic bags are made from polyethylene, a polymer created in a laboratory.

Glass does not decompose. Even if a glass object is broken, it just splits apart into smaller and smaller fragments. Those fragments do not decompose.

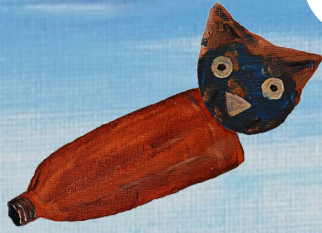
Microorganisms don't eat bits of the polymer even when surrounding materials are decomposing.

Large amounts of glass are discarded thoughtlessly. Glass disposed in landfills will stay for 100s or 1000s of years without breaking down.

Metal is not biodegradable because microorganisms do not eat metal particles for food.



Looks like Captain Ralph has got a question.



**What am I made of,
what is plastic?**

Prof Ian says...

Plastics are made from fossil fuels. After World War 2, plastic production increased significantly.

Plastics allowed us to develop more efficient machinery, advanced medical practices, advanced travel and helped to provide clean drinking water to people without taps and wells.

However, there are many problems with plastic. A big problem is that it does not degrade easily. Some plastics can take up to 1,000 years to biodegrade. Single-use plastics are a big problem. Single-use plastics are meant to be used once and then disposed. Bottles, straws, and shopping bags are all single-use plastics.

Today, plastic pollution badly affects the marine environment. Marine life can become entangled with plastic. This is a deadly threat to wildlife such as fish, whales and dolphins.

Animals can also mistake plastic for food,
which is a deadly threat to seabirds.



Why does
it rain?

Rain fills...

l a k e s

p o n d s

r i v e r s

**&
s t r e a m s**

Prof Ian says...

It provides the fresh water needed by humans, animals, and plants. If too much rain falls, however, dangerous flooding may happen.

Rain is a part of Earth's water cycle. At the beginning of the cycle, sunlight heats up water on Earth's surface. The heat causes the water to evaporate, or to turn into water vapor. This water vapor rises into the air. As the water vapor cools, it turns back into water, in the form of droplets. The droplets form around dust and other particles through a process called condensation.

Clouds form from large numbers of these droplets. In a cloud, droplets come together with other droplets to form larger drops of water. Eventually, the drops become too heavy to stay in the cloud. They fall to Earth as rain. Then the water cycle begins again.

Hang on, Yali's got a question now



What are droughts?

Prof Ian says...

Droughts happen when there is not enough rain for a long period of time.

It's not like a dry spell - there is so little precipitation (rain, snow or any kind of moisture) that a whole region starts to dry out.

Sometimes a drought takes many years to develop and they are very difficult to predict.

Climate change, ocean temperatures, changes in the jet stream, and changes in the local landscape all make a difference when it comes to droughts.

Too much rain (flooding) and not enough rain (droughts) are the serious and life threatening effects of climate change.

Questions!

In the show, what was the weather like?

What were the characters searching for?

What happened when it eventually rained?



**What can I
do to help?**

Plant some trees

Walk more, drive less

Reduce, reuse, recycle

Cut down on meat and dairy

Reduce use of plastics

Don't litter

Prof Ian says...

World leaders meet every year at a summit to discuss how big changes can be put in place to protect the environment. At this summit, agreements can be made to help us to find more sustainable ways to live. There are things that people can do on an individual level too. These can be as simple as recycling more, reducing the amount of food you waste, reducing the amount of electricity you use and walking rather than driving.

**Did you know that
Stories in the Dust was made
from 90% reused materials**





What is renewable energy?

Prof Ian says...

Renewable energy comes from sources within the environment that cannot run out (which is so much better than fossil fuels!).

Examples of renewable energy sources include sunlight, wind, and sea waves.

Renewable energy is increasingly being used as a sustainable alternative to fossil fuel.

What are the benefits of renewable energy?

Prof Ian says...

- They produce energy that produces no greenhouse gas emissions.
- These energy resources cannot be used up. This means that we won't run out of them as we will with coal and oil.
- They will create sustainable jobs in manufacturing, installation, and more.
- Once built, renewable energy stations are cheaper to run and maintain than non-renewable plants.

? Questions!

- Which part of the show did you enjoy the most?
- Why did the characters fight?
- Do you think the characters found what they were looking for? Can you draw it or write about it?
- What happened when they arrived?

💡 Things to try!

- Write a review of the show, to let others know what to expect.
- Write or draw your own ending. This could be in the form of a story, a comic or a playscript.
- Make your own puppet out of recycling.





STORIES IN THE DUST

by **Anna Harriott & Iona Johnson**

This accompanying show pack was created alongside young people at Longford Primary school.

It has been written by and developed with support from Ian Williams, Professor of Applied Environmental Science at Southampton University.

It was illustrated by Toby Roberts, a PHD Student at Southampton University.

www.storiesinthedust.co.uk

Stories in the Dust was originally created with support from MAST Mayflower Studios and shared at their Emergency Festival.

It was developed thanks to public funding from National Lottery through Arts Council England in partnership with Pound Arts.

www.storiesinthedust.co.uk