

Above the Mine

Contents

1. Presentation
2. Instructions for teachers p19
3. Handout 1 p25
4. Handout 2 p26
5. Handout 3 Images p27 and 28
6. Handout 3 Text – p29 and 30
7. Handout 4 p31
8. Handout 5 p32
9. Image of the mine p33

These workshop materials were produced by
Kerima Mohideen for London Mining Network

October 2019

Contact: education@londonmininnetwork.org



This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-sa/4.0/>.



**london
mining
network**

Life above the coal

Kerima Mohideen
Education Co-ordinator
London Mining Network




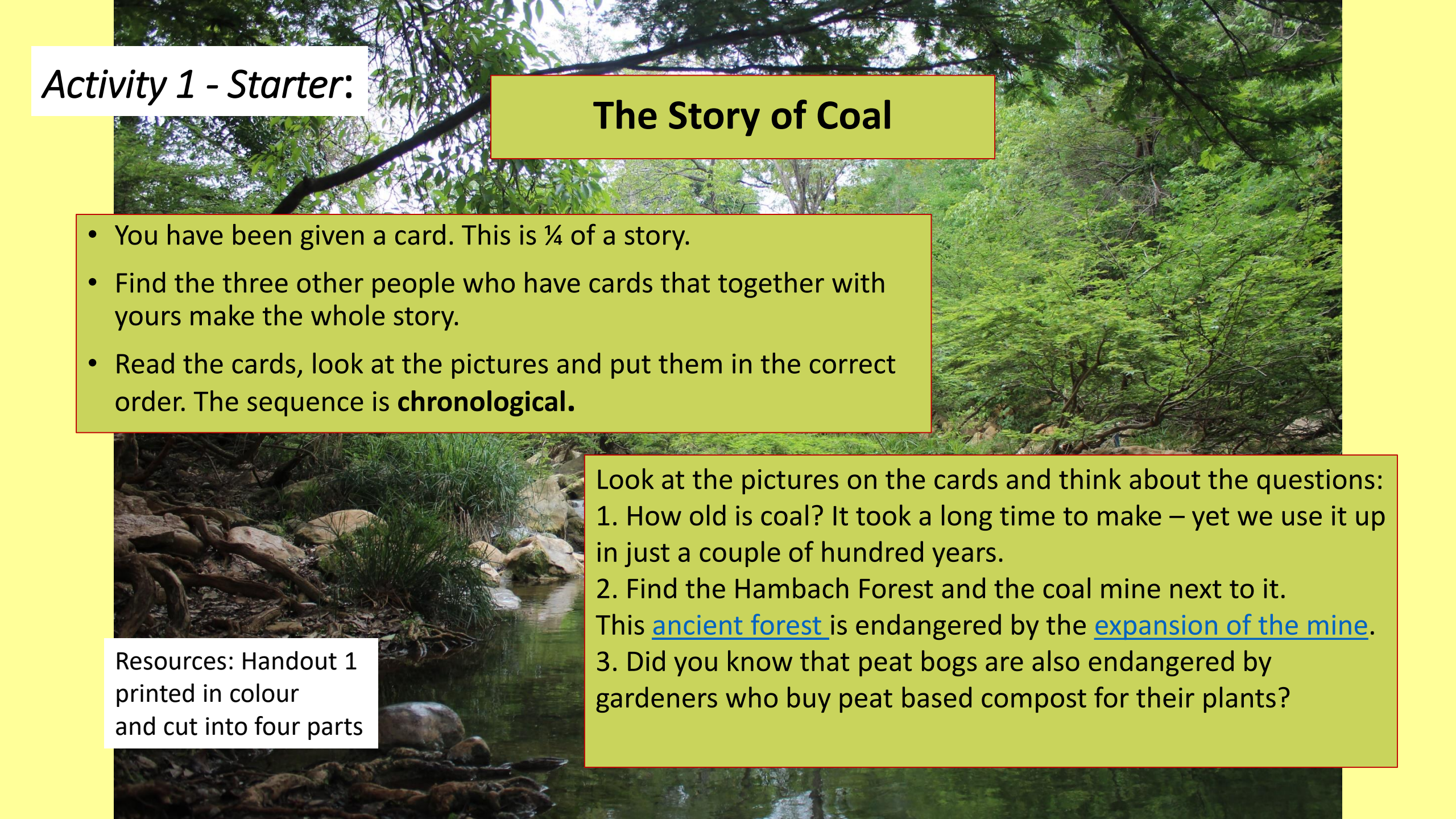
Note to teachers:

This workshop is based on the true story of two frontline communities in Colombia who have been resisting the impacts of a massive open cast mine on their lands and livelihoods for over thirty years.

Frontline communities are already being severely impacted by the effects of climate change and may have limited access to the resources that could help them mitigate those effects. Many have, for decades, been directly and adversely affected by the mining and drilling carried out on their land including by those companies most responsible for carbon emissions. We in the UK have benefitted from this. The coalmine in this story provides coal for UK power stations. Since 2000 it has been part-owned by BHP, one of the top [20 fossil fuel firms behind one third of carbon emissions since 1965.](#)

In order to keep this accessible for schools, some of the story has been omitted, most importantly the story of the struggles of the workers at the mine for better wages and conditions. It should be noted that their union, Sintra Carbon, supports the communities who have been evicted or face eviction and who are opposed to the relocation of the river as the mine expands. These communities in turn have supported the miners' strikes. There is solidarity between people with seemingly opposing interests.





Activity 1 - Starter:

The Story of Coal

- You have been given a card. This is $\frac{1}{4}$ of a story.
- Find the three other people who have cards that together with yours make the whole story.
- Read the cards, look at the pictures and put them in the correct order. The sequence is **chronological**.

Resources: Handout 1
printed in colour
and cut into four parts

Look at the pictures on the cards and think about the questions:

1. How old is coal? It took a long time to make – yet we use it up in just a couple of hundred years.
2. Find the Hambach Forest and the coal mine next to it. This [ancient forest](#) is endangered by the [expansion of the mine](#).
3. Did you know that peat bogs are also endangered by gardeners who buy peat based compost for their plants?



Activity 2:

Completing the Picture – Part 1

Look at Handout 2

This diagram is an idealised cross section of the earth beneath our feet.

Point out

- the water table (the saturated zone below the surface) and the river
- the layer of coal between layers of sedimentary rock

Important information: The water table rises and falls depending on how much rainfall there is and how much water people take out of the ground

Resources:

Handout 2

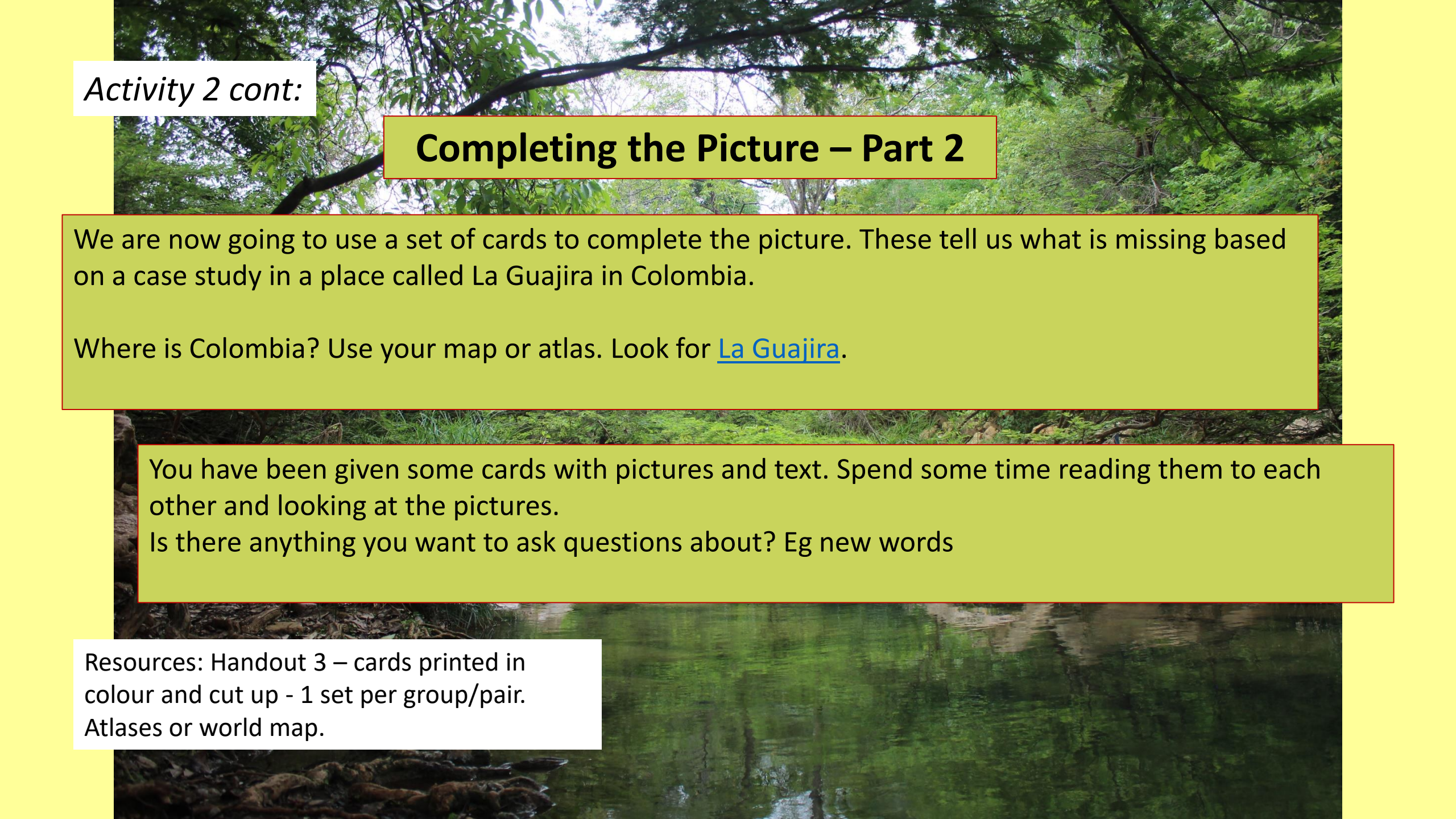
Print A3 size in colour
1 copy between 2 or 3
people

Discussion: This picture in Handout 2 is not complete.

What do you think is missing?

Talk to your partner

Share your ideas with the rest of the group.



Activity 2 cont:

Completing the Picture – Part 2

We are now going to use a set of cards to complete the picture. These tell us what is missing based on a case study in a place called La Guajira in Colombia.

Where is Colombia? Use your map or atlas. Look for [La Guajira](#).

You have been given some cards with pictures and text. Spend some time reading them to each other and looking at the pictures.

Is there anything you want to ask questions about? Eg new words

Resources: Handout 3 – cards printed in colour and cut up - 1 set per group/pair.
Atlases or world map.



Activity 2 cont:

Completing the Picture – Part 3

What is missing from the diagram is a picture of life above the ground. We are going to add this to the diagram.


Use the information from the cards to draw this in.

You can do this as artistically as time allows in whatever style you wish – nothing needs to be to scale. You can also add labels and text.

However, please do not add information to the picture that is not on the cards.

We are trying to re-create the story of real people in a real place in this activity.

It would be disrespectful to them to start adding in fantasy elements that we do not know to be part of those people`s cultures.



Here is a picture for some inspiration.

With your teacher's permission, walk round the room and have a look at what other people are doing.

If you are allowed to listen to music:

This is a film of traditional [Wayuu drumming](#).

And here are Afro-Colombian musicians [Ghetto Kumbé](#) with [Soy Selva](#) – music to honour the Earth, the Wayuu spirits and the African ancestors. (Warning – video contains flashing lights)





For discussion:

What do you notice about the lives of the people that you have added to the diagram?

- Sustainable
- Water is precious
- They are connected to the land – they see themselves as belonging to the land
- Two communities share the land

Anything else that strikes you as interesting or surprising? Even trivial details are important to mention.





Activity 3:

The mining company arrives

A mining company wants to get the coal from under the ground. It is planning to build an opencast mine.

The teacher will cut out the part that will be mined on her diagram and replace it with Handout 4.

Lay Handout 4 over your own picture to see what the mine will look like.

How do you feel about what you see?



Group brainstorm: What problems will this large opencast mine cause?
What questions would you ask the mining company?





Here are some possible problems and questions

- Digging up the coal will generate a huge pile of waste. What will be done with this?
- There are people living at the top. What will happen to them?
- People grow food for themselves and for others too. How will they do this when the mine comes?
- People bury their dead and there are land rituals associated with birth too. People feel very connected to the land and having to move is very traumatic
- Indigenous* people like the Wayuu, as recognised by the United Nations, have the right to say no to mining on their land. What could happen when they do say “No”? However, Free, Prior and Informed Consent (FPIC) was only adopted by the United Nations in 2007. Cerrejon mine started operating long before this.
- The area is ecologically important. It is [fragile, dry tropical forest](#), easily endangered by drought and water loss and has many rare species of plants and animals.
- The water table, aquifers and rivers will be damaged/lost/moved – these are precious and cannot be easily replaced – this will affect other communities nearby
- Mining will generate noise and dust which will affect other communities nearby
- When the coal is burnt in power stations masses of CO₂ is released into the atmosphere.

*Indigenous/indigenous –As a proper name for a people, or any aspect of their culture, the term is capitalized(e.g., Indigenous medicines); otherwise, it is lowercase.

- This is the Cerrejon mine, one of the biggest coalmines in the world, owned since 2000 by BHP, Anglo-American and Glencore. These three companies are listed on the London Stock Exchange.*
- The UK imports coal from this mine.
- The mine is more than 30 miles long and five miles wide.
- At least 17 Wayuu and Afro-Colombian communities were displaced to create it as well as forests and rivers.

*More information here

<https://www.londonstockexchange.com › private-investors › stock-markets>





Activity 4:

What does the mining company have to say?

For the sake of balance, many teachers and journalists like us to hear the mining company's point of view. But you should always be ready to question this idea of "balance". Mining companies are very powerful compared with the communities whose land is threatened by them.

Handout 4 is a letter from an imaginary mining company answering some of the questions that you raised in the last activity.

Read through the letter with your partner. Your teacher will give you a paragraph to look at more closely so you don't have to read the whole letter in detail.

Imagine that you are members of the community you described in your drawing. How would you feel about what the mining company has to say? Talk to other people who have read the other paragraphs. What do they think?

Resources: Handout 4 – one between two people



Activity 4 cont

The community who live above the coal would have to do exactly what you have just done; read and listen to the mining company's answers and then evaluate what they are saying.

People in the community may not be able to read well and may not have much education. They may not be able to pay experts to help them.

However, they do often have a really good understanding of their environment, look after it well and may be suspicious of what the mining company is offering.

Were you suspicious of what was being offered?

What do you think will happen if people say NO to the mine?

Some villages are bulldozed. The communities are forcibly removed, like the Afro-Colombian community of Tabaco.

Other people are displaced as their farm lands and drinking water become contaminated by the mine.

But they continue to fight back.





Activity 5:

Time to meet the people

<https://intercontinentalcry.org/kicked-coal/>

A good short introduction to all the issues at the Cerrejon mine in Colombia plus the women who are organising the resistance.

<https://intercontinentalcry.org/la-buena-vida-good-life/>

This is the trailer for a full length feature film – well worth watching but has to be paid for – streaming or DVD.

<https://londonminingnetwork.org/2019/10/video-stop-uk-companys-expansion-of-mine-into-bruno-river/>

In this short film, the community leader of El Rocio village, La Guajira, talks about the struggle against Carbones del Cerrejón and its illegal and unethical expansion of Cerrejón mine into the Bruno river – the largest opencast coal mine in Latin America.



Background reading:

These articles are useful background reading

<https://www.aljazeera.com/indepth/features/2016/02/life-latin-america-largest-open-pit-coal-160201114829811.html>

<https://news.mongabay.com/2018/11/colombia-dying-of-thirst-wayuu-blame-mine-dam-drought-for-water-woes/>

<https://www.desmog.co.uk/2019/07/17/comment-colombian-communities-battling-uk-coal-giants-save-la-guajira>

<https://www.globaljustice.org.uk/blog/2016/jul/18/cerrejon-coal-colombia-rehabilitating-land-removing-humans>

And of course – there are many good articles about the Cerrejon mine on London Mining Network`s website

<https://londonminingnetwork.org/?s=Cerrejon>





London Mining Network works in solidarity with communities around the world who are resisting the impacts of mining on their land and their livelihoods.

Find out more here: <https://londonminingnetwork.org/>

London Mining Network and others have been working with the communities mentioned in this workshop for a number of years.

In this film, you will see how we worked together to amplify the message of the communities that big mining projects must not violently displace communities and take their water to shareholders and the public outside the BHP AGM. Community representatives spoke at this event before going into the AGM as dissident shareholders to put their demands to the mining company.

<https://londonminingnetwork.org/2017/11/media-coverage-of-the-bhp-billiton-agm/?highlight=BHP%20AGM>





For discussion:

What are the alternatives? What is the way out of the apparent impasse of the promise of jobs and electricity on the one hand and land rights and environment (and climate) on the other? Are there models of development that are not based on extractivism?

This is beyond the scope of this particular workshop. But these links to articles, reports and case studies on the Gaia Foundation's website exploring the post-extractivist possibilities are a good place to start.

<https://www.gaiafoundation.org/what-we-do/beyond-extractivism/>

<https://www.gaiafoundation.org/resist-revive-restore-ynm/>

The Arroyo Bruno or Bruno River

Instructions for workshop - Above the Coal

Note to teachers:

This workshop is based on the true story of frontline communities who have been resisting the impacts of a massive open cast mine on their lands and livelihoods for over thirty years.

Frontline communities are already being severely impacted by the effects of climate change and may have limited access to the resources that could help them mitigate those effects. Many have, for decades, been directly and adversely affected by the mining and drilling carried out on their land including by those companies most responsible for carbon emissions. We in the UK have benefitted from this. The coalmine in this story provides coal for UK power stations. Since 2000 it has been part- owned by BHP, one of the top [20 fossil fuel firms behind one third of carbon emissions since 1965](#).

In order to keep this accessible for schools, some of the story has been omitted, most importantly the story of the struggles of the workers at the mine for better wages and conditions. It should be noted that their union, Sintra Carbon, supports the communities who have been evicted or face eviction and who are opposed to the relocation of the river as the mine expands. These communities in turn have supported the miners' strikes. There is solidarity between people with seemingly opposing interests.

Resources:

1. Instructions
2. Powerpoint presentation - saved as PDF
3. Handouts 1-5 - 1, 2, 3 and 4 should be printed in colour. 2 and 4 should be A4 size
4. Photo of Cerrejon mine - use this if Handout 4 does not print clearly enough

Part 1 – Lesson Starter

Materials

Handout 1 - The Story of Coal sequencing cards. Print in colour if possible and cut into four cards

Activity

The story of coal. Give out one of the Story of Coal cards to each of the students. Tell them that they each have just one quarter of the story. They have to find three other people

and together work out what order the cards go in to work out the story of the origins of coal.

Draw students` attention to the pictures noting in particular

- The Hambach Forest (Germany) in card 3 which is threatened by the expansion of the mine – show the videos – links in text.
- Peat bogs in card 2 which are threatened by those gardeners who buy peat based compost for their plants
- Take a moment to reflect on the very deep history of coal – it took more than 300 million years for the earth to make it.

Above the coal

Part 2

Completing the picture

Students will work in pairs or small groups up to 3

Materials:

Handout 2 – The Coal Deposit - print A3 copies in colour. - 1 per group/pair of students

Handout 3 (text and images) - 1 set of Cerrejon cards -1 per group/pair of students

Handout 4 – The mine - Print A3 copies in colour if possible - 1 per group/pair of students

Activity Guide

Building up a picture of life above the coal

1. Give out Handout 2 – The Coal Deposit.
Explain the diagram noting
The coal between layers of sedimentary rock (refer back to story of coal)
The water table which is continuous and can rise and fall according to rainfall, drought, abstraction of water etc and its relationship to the river which it feeds.
2. Ask what is missing from the picture. Students make suggestions - accept without judgment
3. Explain that the students are going to add the missing things to the diagram using the information cards.

Hand out Cerrejon cards (Handout 3) and allow students time to read them and look at the pictures (very important). Allow time for questions and explain vocabulary if necessary.

4. The students recreate the content of the cards on their diagram above the cross section of through drawing and writing – the forest, the animals, the trees, the people, their homes etc. stress that this is an art activity and that there is no correct way of doing it.

However please do not encourage students to add information to the picture that is not on the cards. The aim is to re-create the story of real people in a real place in this activity. It would be disrespectful to these people to start adding in fantasy elements that we do not know to be part of their cultures because the story will become about us rather than them.

5. When they have finished – some or all students can present their work to the whole group. Explain that they have just recreated what was missing from the original diagram. Ask what they notice about the lives of the people and how it is similar and different to ours.

What will mining do to this picture of life above the coal?

1. Explain to the students that a mining company wants to get the coal out of the ground. It will be an opencast mine.

2. Use Handout 4 to demonstrate what will be cut away in the process of mining. Give this out to the students to lay over their own pictures. If the teacher has their own version of Handout 2 – they should cut out the part that will be mined and replace it with Handout 4. This can have quite an emotional impact.

3. Ask the students to make a list of the problems the mining could cause - brainstorm their ideas and make a list on the board. The discussion should include the following:

Digging up the coal will generate a huge pile of waste – what will be done with this?

There are people living at the top – what will happen to them?

People grow food – for themselves and for others too

People bury their dead and there are land rituals associated with birth too – this connects them to these places and having to move is potentially very traumatic

Indigenous* people like the Wayuu as recognised by the United Nations have the right to say no to mining on their land. However, Free, Prior and Informed Consent (FPIC) was only adopted by the United Nations in 2007. Cerrejon mine started operating long before this.

The area is ecologically important – fragile, dry tropical forest (Colombia), easily endangered by drought and water loss with many rare species of plants and animals This is a useful short intro to dry tropical forests

<https://www.youtube.com/watch?v=TLUrsBQM5hY>

The water table, aquifers and rivers will be damaged/lost/moved – these are precious and cannot be easily replaced – this will affect many other communities nearby

Mining will generate noise and dust which will affect other communities nearby

All that carbon is released into the atmosphere once the coal is burnt in power stations (this is also true of oil and gas). Mining as an industry also has a high carbon and eco-footprint

*Indigenous/indigenous –As a proper name for a people, or any aspect of their culture, the term is capitalized(e.g., Indigenous medicines); otherwise, it is lowercase.

Above the coal

Part 3 – What the mining company says

Materials: Handout 5 – Letter from the CEO

Give a copy of this to each group.

They should read it aloud to each other – of course it is invented and lightly satirical but it is based on real experience. The following points are worth mentioning:

- Mining companies do often relocate people and rehouse them but often this is far from satisfactory and inadequate to their needs. Relocation and money cannot replace a life that was outside of the money economy and in which people had everything they needed – fresh air, clean water, land to grow food ...
- Mining companies do bring work but not for everyone. Opencast mining is not labour intensive and not everyone has the skills and training that is required e.g. to operate machinery. Such work as is available for local people is not always well paid and the conditions may be poor e.g. long hours and dangerous work. Mining also destroys lots of traditional self-employed work in agriculture and sometimes in other occupations such as fishing

- Mining depletes the water table and pollutes the water as it releases toxic minerals and heavy metals. Rivers are moved but this can affect a community's access to water for farming, fishing, drinking and bathing. Many areas where mining takes place are vulnerable to the impacts of climate change and mining can make this worse.
- Mining companies do make much of how they spend money on rehabilitating and protecting wilderness areas away from the mine (bio-offsetting). This makes them look green and sustainable. The people who were displaced from the mining company are generally not included in these projects and what the company is actually doing can be very difficult to investigate.

Above the Coal Part 4 The Fightback

Time to watch some films and meet the people

1. <https://intercontinentalcry.org/kicked-coal/>

A good short introduction to all the issues at the Cerrejon mine in Colombia plus the women who are organising the resistance.

2. <https://intercontinentalcry.org/la-buena-vida-good-life/>

This is the trailer for a full length feature film – well worth watching but has to be paid for – streaming or DVD.

3. <https://londonminingnetwork.org/2019/10/video-stop-uk-companys-expansion-of-mine-into-bruno-river/>

In this short film, the community leader of El Rocio village, La Guajira, talks about the struggle against Carbones del Cerrejón (the mining company) and its illegal and unethical expansion of Cerrejón mine into the Bruno river – the largest opencast coal mine in Latin America.

These articles are useful background reading

<https://www.aljazeera.com/indepth/features/2016/02/life-latin-america-largest-open-pit-coal-160201114829811.html>

<https://news.mongabay.com/2018/11/colombia-dying-of-thirst-wayuu-blame-mine-dam-drought-for-water-woes/>

<https://www.desmog.co.uk/2019/07/17/comment-colombian-communities-battling-uk-coal-giants- save-la-guajira>

<https://www.globaljustice.org.uk/blog/2016/jul/18/cerrejon-coal-colombia-rehabilitating-land- removing-humans>

About London Mining Network

London Mining Network works in solidarity with communities around the world who are resisting the impacts of mining on their land and their livelihoods.

Find out more here: <https://londonminingnetwork.org/>

London Mining Network has been working with the communities mentioned in this workshop for a number of years. Other organisations and individuals have been working with them for much longer than that.

In this film, you will see how LMN worked with others to amplify the message to shareholders and the public outside the company`s annual AGM, that big mining cannot violently displace communities take their water. Community representatives spoke at this event before going into the AGM as dissident shareholders to put their demands to the mining company.

<https://londonminingnetwork.org/2017/11/media-coverage-of-the-bhp-billiton-agm/?highlight=BHP%20AGM>

For discussion:

What are the alternatives? What is the way out of the apparent impasse of the promise of jobs and electricity on the one hand and land rights and environment on the other? Are there other models of development that are not based on extractivism?

This is beyond the scope of this particular workshop. But these links to articles, reports and case studies on the Gaia Foundation`s website exploring the post-extractivist possibilities are a good place to start.

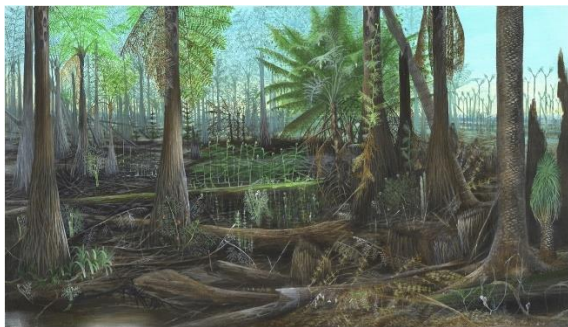
<https://www.gaiafoundation.org/what-we-do/beyond-extractivism/>

<https://www.gaiafoundation.org/resist-revive-restore-ynm/>

Handout 1 – The Story of Coal

About 300 million years ago, during a time known as the carboniferous period, the climate was warm and humid and the earth was covered in wide shallow seas and dense forests. The seas sometimes flooded over the forested areas. Plants died and got trapped at the bottom of swampy wetlands.

Artist's impression of a forest from the carboniferous era.



Over time, the plants were buried under overlying layers of mud and vegetation. No longer exposed to air, these plants decomposed very slowly, retaining much of their carbon content and eventually forming peat bogs which store large amounts of carbon underground.

A peat bog in Scotland



As the peat became more deeply buried, water and other substances were squeezed out of it and it formed a type of coal called lignite or brown coal. This very poor quality coal with a high moisture content contains other substances such as mercury and sulphur as well as carbon which are released when it is burnt.

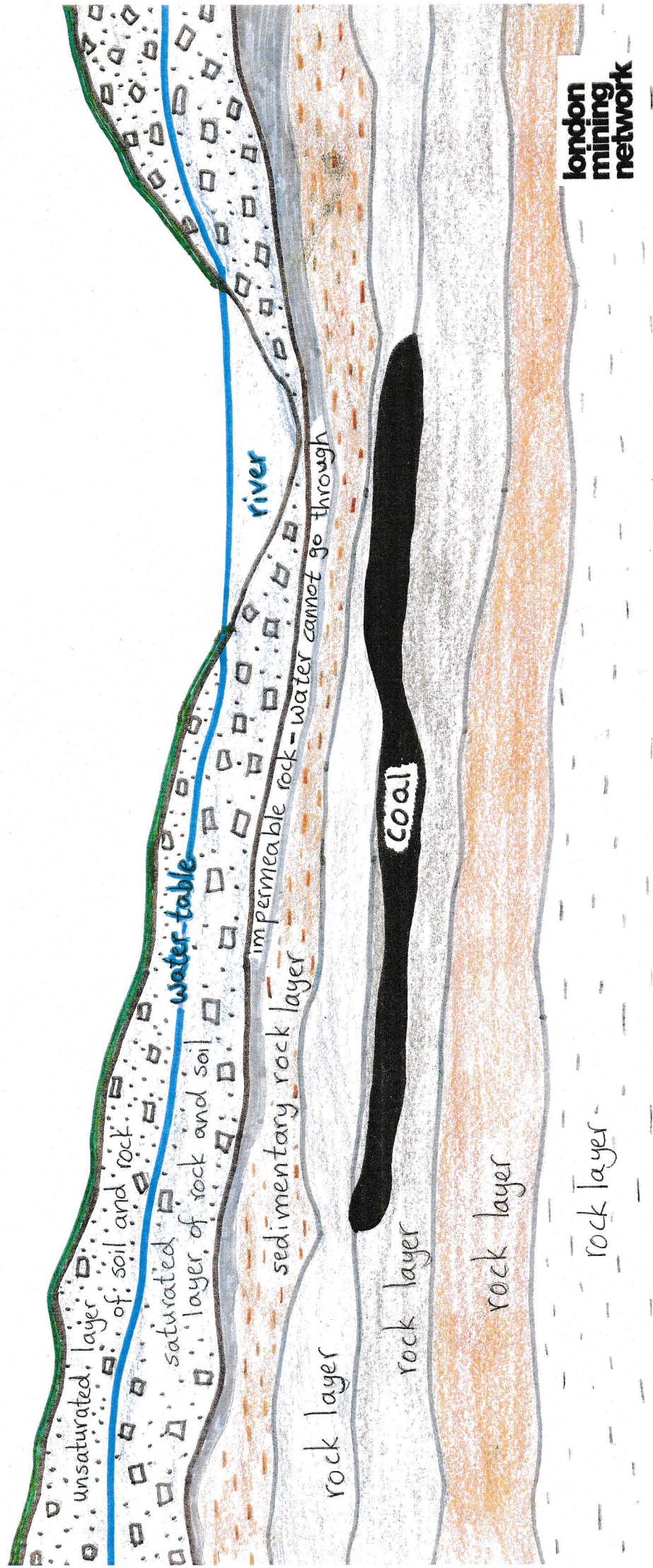
Lignite mine in Germany showing the Hambach Forest



More layers of sand and mud were laid down, increasing pressure and temperature, and causing lignite coal to be transformed into high quality black coal including anthracite. The amount of water and other compounds in the coal decreased and the coal became denser with a much higher carbon concentration. About three metres of vegetation is eventually transformed into about 30cm of coal

Mining anthracite in Russia





Wayuu dancers



Wayuu on horseback in 1928



Military Macaw



Jaguar – an animal strongly associated with water



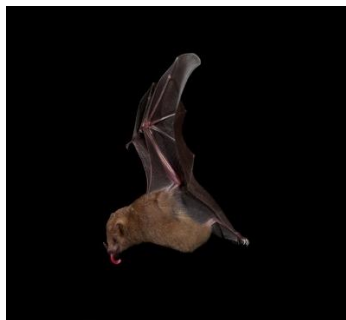
Scorpion mud turtle



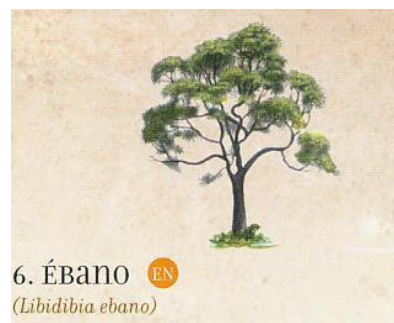
Northern naked tailed armadillo



Miller's long tongued bat – feeds on nectar from cactus flowers.



Ebony trees



Vera wood tree



Dagger Cactus provides building material, fencing and fruit



Pink peroba tree



Caracoli tree on the bank of the Rancheria river



The Rancheria River



Wayuu living area



Wayuu homes



Wayuu women weaving bags



<div> <p><i>Handout 3 – Cards about the communities and environment above the ground - text.</i></p> </div>	<p>The Rancheria River and the groundwater around it provides drinking water for about 55,000 people.</p>
<p>This area is a dry tropical forest biome. Dry tropical forest is very fragile and can easily become desert if there is insufficient water.</p>	<p>The Wayúu believe the spirits of the dead live with them in their communities. If they are relocated they fear the spirits will not find them in their new territory.</p>
<p>When a new baby is born, some Wayúu families dig a hole near their home and bury the umbilical cord. This ancestral ritual reminds them that they belong to the land.</p>	<p>The Wayuu people have lived in this area for hundreds of years. In the 18th century they successfully fought off the Spanish conquerors who tried to take the land.</p>
<p>People grow cassava, corn, beans, taro, maize, yucca, yam and potatoes in fields irrigated from deep wells and the river. They also dig ponds to conserve rainwater.</p>	<p>People keep goats, chickens and pigs and catch fish in the rivers</p> <p>They are self-sufficient, often grow enough produce to sell and cause minimal harm to the environment.</p>

<p>The Wayuu people live in small settlements of five or six houses called Rancherias. These settlements are spread far from each other. Each one is named after an animal or a plant.</p>	<p>Each Wayuu house was traditionally made of a cactus wood frame with mud and hay but now people also use concrete.</p> <p>They have an open sheltered area with hammocks nearby which is like a living room.</p>
<p>The Wayuu sleep in hammocks which they weave themselves. They are also famous for weaving bags in which, traditionally, they used to keep personal belongings.</p>	<p>The Wayuu often grow fences of living cacti around their gardens and paddocks.</p>
<p>Conserving and using water wisely is central to Wayuu life.</p> <p>Mareiwa, goddess of the rains and water and creator of life is very important to them.</p>	<p>Afro-Colombian communities share the land with the Wayuu. They are descendants of escaped slaves. They have lived here for over 200 years.</p>
<p>Tabaco village has a population of at least 700. It has a school, a health centre, a state telecommunications company office, running water, electricity, a park, a church, and a cemetery.</p>	<p>Tabaco is a municipal centre which serves the needs of the smaller villages of Tamaquito, Roche, Chancleta, and Patilla.</p>





The Big Mining Company

Achilles Way

London W1K 1AB

Dear People Who Live Above the Coal,

We understand that you have some concerns about our proposed mining operations. We would like to reassure you that you will have nothing to worry about. You live above a treasure that must be shared with other people around the world. It is needed to run power stations which make electricity. How else would people have lights to see by and power to charge their mobile phones and laptops? Unfortunately, this means we are going to have to destroy your homes and livelihoods and the beautiful forest that surrounds you. But we intend to make sure you are well compensated.

First of all, we will rehouse you in small concrete houses in the nearest towns. You will not have much land to grow food but there will be shops nearby where you can buy everything you need. You will have to find jobs to earn money and there will be some well paid jobs available at the mine. We suggest you apply. We also intend to make sure you are able to apply for compensation for the loss of your land.

Secondly, we understand your fears about the water table, the river and the waste rock and soil. We will use some of the water to wash the coal and then put it back. It will make the water look a bit cloudy but it will be fine. Where the river gets in the way we will move it. This should not affect those of you who remain in the area and are still growing food but of course there may be some droughts especially as climate change is affecting rainfall in the area. This is not a problem caused by us.

You are correct to say that the mining will create a huge pile of waste rock and soil. We will put this back into the hole we have created and grow trees and other plants on top. It will look better than it did before. However, you will not be allowed to come back onto this restored land as your farming will damage our restoration work.

Finally, our shareholders are very excited about the money they will make from this mining venture. However, we have managed to persuade them to put some of their profits towards creating a beautiful forest reserve some distance from the mine where there is no coal underground. This will give the tourist industry a great boost.

So you see, all will be well. Please do not hesitate to get back to us if you have any questions.

Yours sincerely,

Dan Dynamite

Chief Executive Officer

The Big Mining Company

