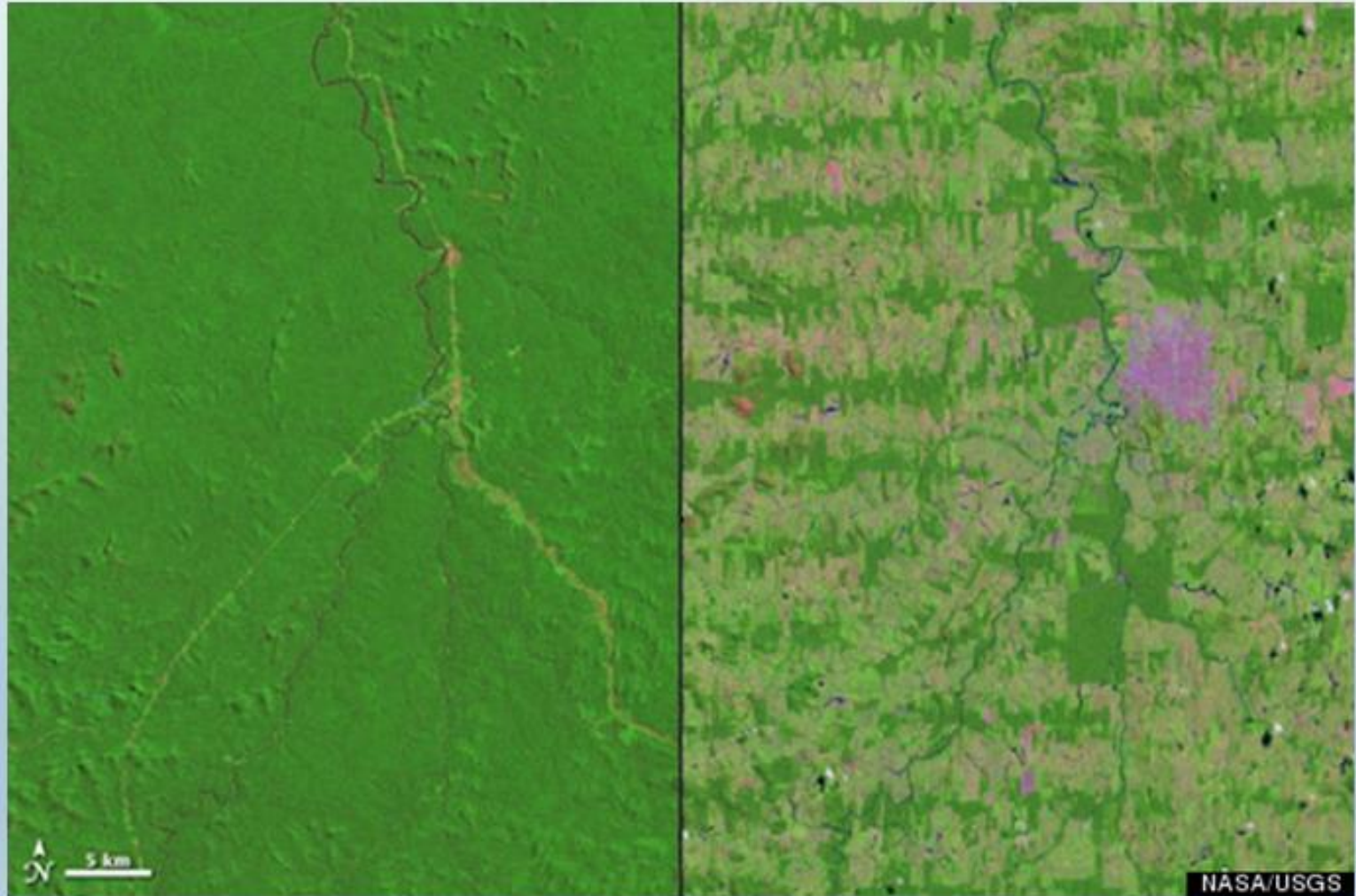


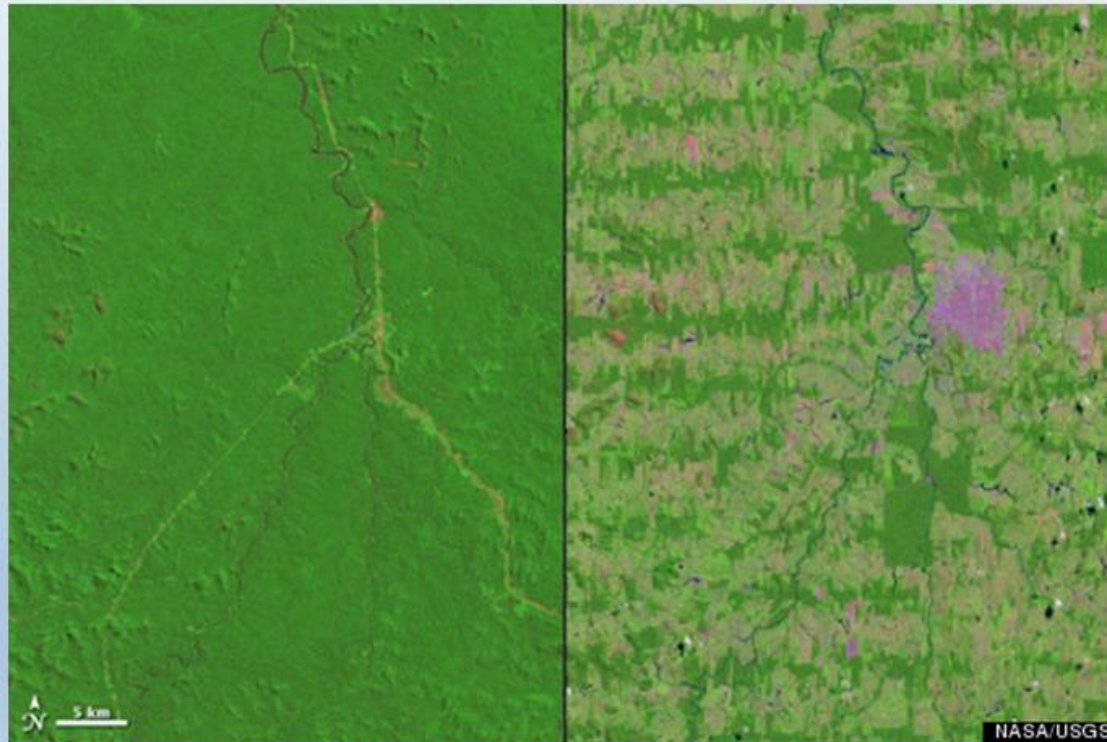
Year 5 Geography -Lo: to find out about the impact of deforestation
30.6.2020/3.7.2020

What do these pictures show?



- Where do you think these photos were taken?
- Why might they be different?

What do these pictures show?



They are two photos taken from space of the same place in the Amazon Rainforest, but 30 years apart.

The 2nd photo shows the destruction of the forest.

Watch the following clip to see what is happening:

<https://earthengine.google.com/timelapse/?location=rondonia>

Imagine you live with one of the tribes in the Amazon.

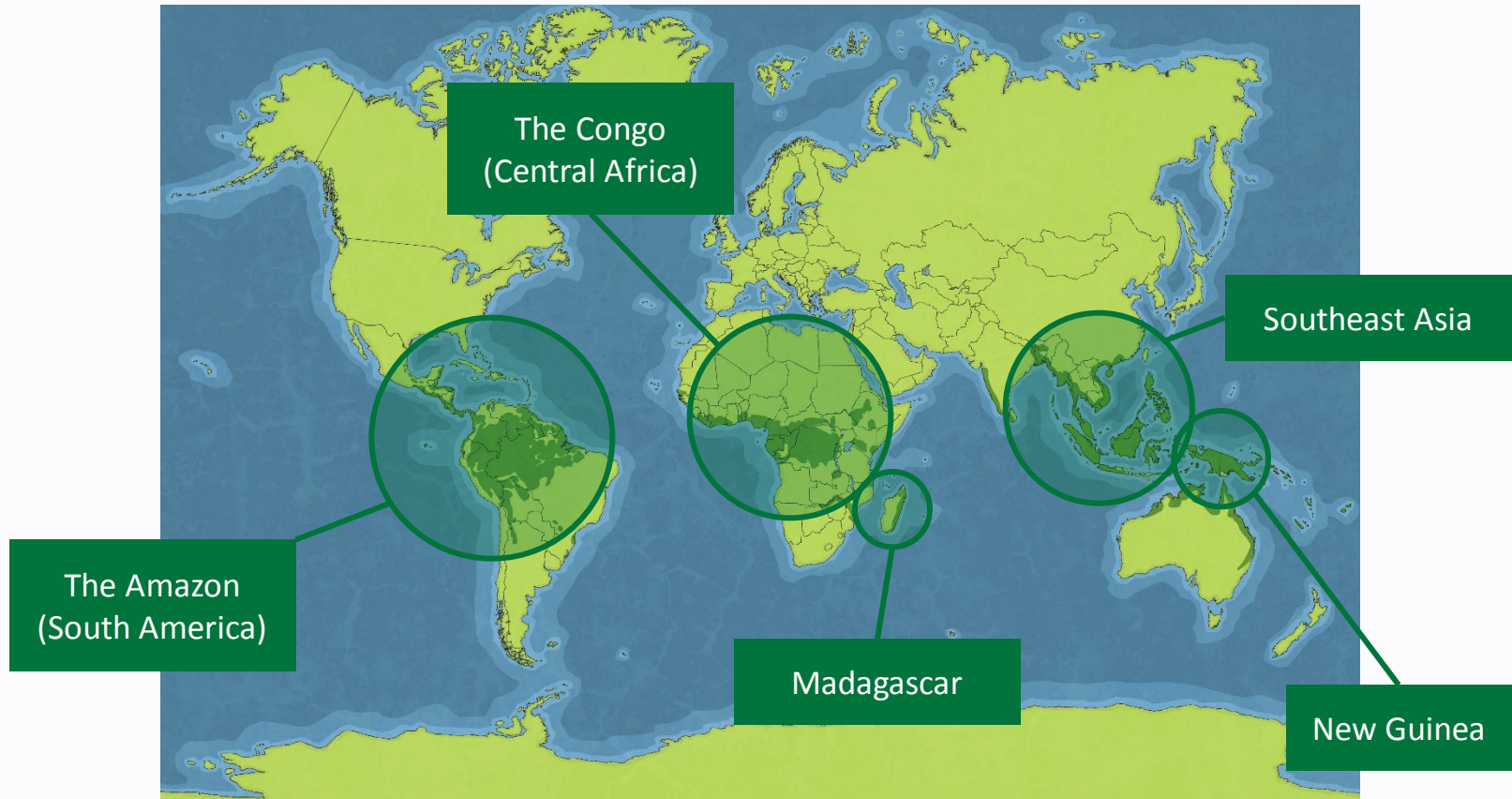
How would you feel about these photos?

Would you be worried about what this would mean to you, your family and your home?

Year 5 Geography -Lo: to find out about the impact of deforestation
30.6.2020/3.7.2020

Forest Fact

Around 30% of the Earth is covered by trees.



Why Are Rainforests so Important?

Rainforests cover only 6% of the Earth but they are home to 50 % of all plant and animal species. In just four square miles you might find:



1,500 flowering plants



400 species of birds



750 species of trees



150 species of butterflies

And much more!



Forest Fact

The rainforests are disappearing.



What Is Deforestation?

Deforestation occurs when trees are cut down across a wide area which is then permanently cleared for another use.



Did You Know...?

Every 20 minutes, an area of rainforest the size of 20 football pitches is cut down. If this rate continues, there will be no rainforests in 100 years.

Why Are the Rainforests Cut Down?



Trees are useful and valuable. Among other things, they are used for paper, building and firewood.

Do you know what we use trees for?



The rainforest is home to a unique variety of tree species. Hardwoods such as teak or mahogany are strong and so are perfect for building and for making furniture. However, these trees are slow growing and are not easy to replace.





There are over 7 billion people on the planet.
This number keeps growing.
By 2100, there could be 11.2 billion people!



All of these people need food so land is
cleared for farming.



Subsistence Farming

Known as slash and burn, families cut down small parts of the forest and burn it to improve the soil and make room for cattle.

It is small scale and the forest can regenerate. But with more people taking more land, this chance of recovery is slower. Up to 48% of all deforestation is caused by subsistence farming.



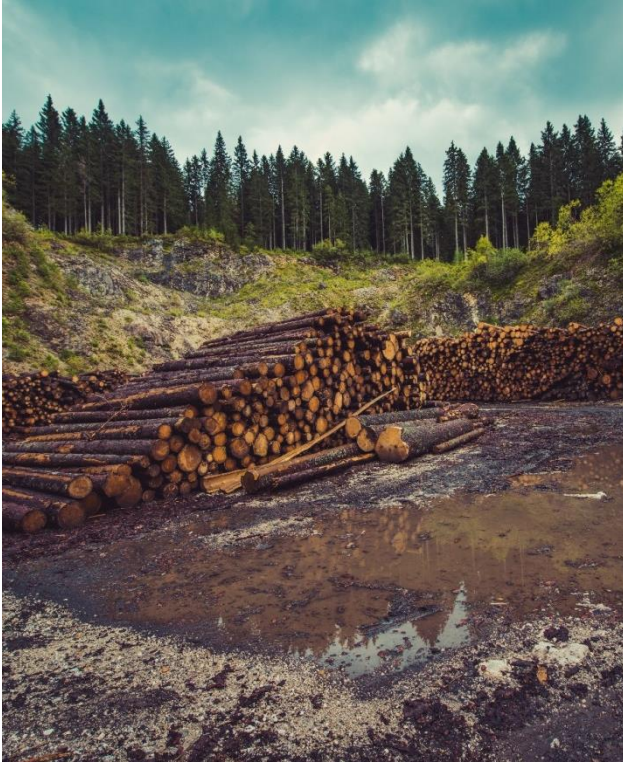
Commercial Farming

This is farming that happens on a large scale. It is led by companies who need to produce on a much bigger scale to provide food and products for the wider world.

Forest is cleared permanently for:

- **Cattle grazing:** this provides meat for restaurant chains and supermarkets.
- **Crops:** such as sugar cane and palm oil.

What Are the Effects of Deforestation?



Soil erosion: Tree roots help hold the soil and prevent it being washed away. Without trees, the soil is washed into rivers and streams, blocking them, causing flooding and contaminated drinking water.

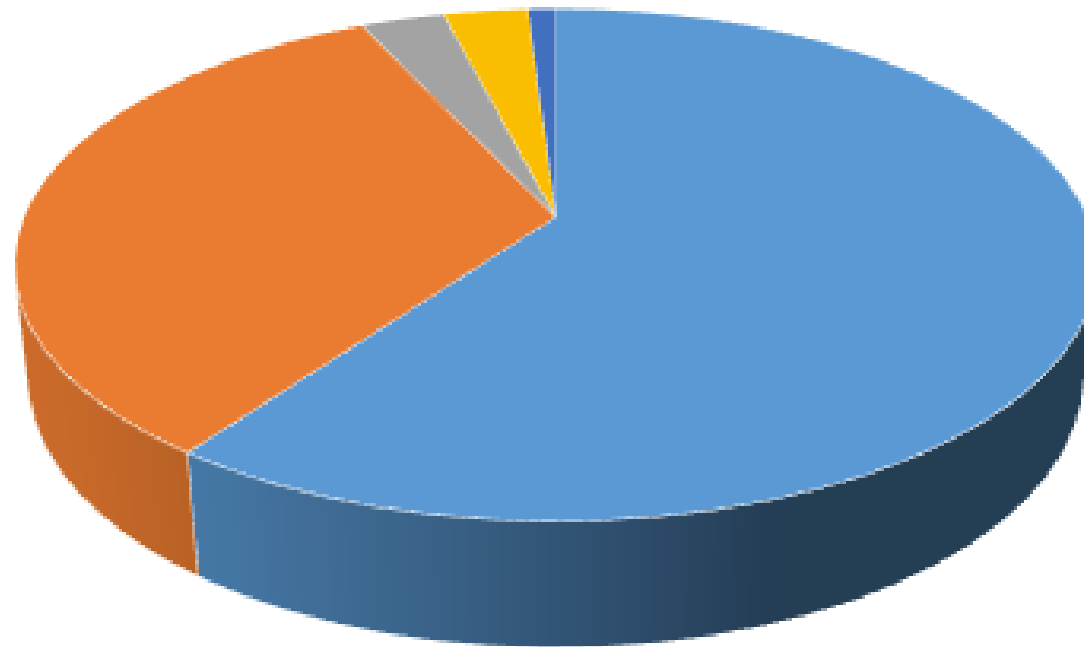
Lack of biodiversity: The number of different species becomes smaller.

Climate change: Scientists believe deforestation has a worldwide effect on climate. Trees store carbon dioxide. When they are cut down, carbon dioxide builds up in the atmosphere and is known as a greenhouse gas which causes global warming.

Droughts: Trees are an important part of the water cycle. Without them, there will be a lack of rain.

Habitat loss: Animals and plants lose their home so some may become endangered or extinct.

Causes of deforestation in the Amazon, 2005-2005



- Cattle ranches 60%
- Small-scale, subsistence agriculture 33%
- Fires, mining, urbanisation, road construction, dams 3%
- Logging, legal and illegal 3%
- Large-scale commercial agriculture, including soybeans 1%

The following slides include more information about why the rainforest is being cut down.

Farming

Brazil is a very poor country with a rapidly growing population. The government offered land in the Amazon to poor people living in the cities. Millions of people migrated to the Amazon in search of a better life.

They were given small plots of rainforest. These were cleared and turned into farmland. The land is poor and quickly became useless for farming. Many of the farms have now been abandoned. The people either move back to the cities or clear new areas of rainforest, repeating the destruction every few years. The land never recovers.

Ranching

Cattle ranching is the leading cause of deforestation in the Brazilian Amazon. This has been the case since at least the 1970s: government figures said that 38% of deforestation from 1966-1975 was due to large scale cattle ranching.

Large areas of forest are burnt down. The ash provides fertiliser which gives good grass for a couple of years. Cattle are raised to provide meat.

Unfortunately the heavy rains in Amazonia quickly wash away any nutrients in the soil. The land quickly becomes too poor to raise cattle on. There is also lots of soil erosion because there are no tree roots to hold the soil together.

The ranchers simply burn down more forest to provide more land every few years.

Forestry and Logging

One of the greatest dangers to the Amazon rainforest is destructive logging. Fuelled by the demand for cheap supplies of mahogany and other tropical woods both at home and abroad, the legal and illegal timber trade in Brazil is a major cause of forest destruction. The Brazilian government itself estimates that 80 percent of all timber produced in the Amazon is illegal in some way. Of all timber logged, as much as 70 percent is wasted in the mills. But logging is only the beginning.

By building roads into the Amazon Rainforest , the logging industry opens the door to further

destruction through clearing for agriculture, hunting, fuel wood gathering and mining.

When forest is cleared (As in the photo) the soil is quickly eroded by the heavy tropical rains. The forest can never grow back.



Mining

Though the soils underneath the Amazon are very poor, they do contain lots of valuable metals such as tin, aluminium, gold and lead. In order to get to the metals the rainforest has to be cleared first.

Most of the metals are sold to rich countries such as the USA, Japan and the UK. Mines also often cause water pollution, because water pumped from the mines contain lots of dangerous chemicals such as mercury and cyanide.

The land in the picture below used to be rainforest - it will never recover.



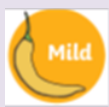
30.6.2020/3.7.2020

Hydro Electric Power (HEP)

Brazil has a need for cheap electricity to help its industry. One way to get it is to build huge dams on the rivers of the Amazon rainforest. The water stored by the dams is used to create electricity. The reservoirs (lakes) created by the dams have destroyed huge areas of rainforest.

Many indigenous (native) people have been moved off their land to make way for the dams. Also the still water in dams provides the perfect breeding conditions for the mosquitoes that carry malaria.





Cut out the arguments about deforestation. Sort the cards into two piles. One pile should be reasons for deforestation and the other should be reasons against deforestation.

Deforestation provides us with essential products, such as some of our paper and toilet paper.

twinkl.com

If deforestation continues at its current rate, there will be no rainforests on the planet in 100 years.

twinkl.com

In 2050, it is estimated that there will be 10 billion people on the planet. We need more space to live in and deforestation will give us that.

twinkl.com

There will be a negative impact on the environment because trees filter carbon dioxide out of the air that we breathe. If there are fewer trees, less oxygen will be produced.

twinkl.com

Deforestation makes room for more crops to be grown which can then be used to feed more people.

twinkl.com

Trees and plants absorb water from the ground and prevent the soil from becoming over-saturated. Therefore, deforestation will increase flooding.

twinkl.com

It provides job opportunities for those who work in a forest clearing.

twinkl.com

Indigenous people who live in the rainforests will lose their homes.

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New roads can be built which makes it easier for people to travel and to work. This will help to boost the economy of certain countries.

twinkl.com

Deforestation will make thousands of species of animals and plants that live in rainforests extinct.

twinkl.com

Deforestation makes more room for grazing animals which can then be used for food purposes and other useful products.

twinkl.com

Trees are a limited resource. If new trees are not planted, the products that they are used to make will one day run out.

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Activity Sheet - Rainforest in trouble



Using the nine statements about the impact of deforestation below, fill out the diamond grid on the next page.

Local people's
way of life is
destroyed

There are fewer
species of animals
and plants

The animals'
habitat is
destroyed

The soil becomes
dry and crops
cannot grow

There is more carbon
dioxide released into
the atmosphere

Plants
cannot grow
anymore

People have to move
from the rainforest to
the city

New medicines might
not be discovered
from plants

Trees can't store
carbon in their trunks,
branches and roots

Which statement do you think was most important and why?

Activity Sheet - Rainforest in trouble

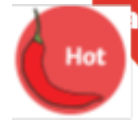
Put the statement that you think is the most important in the top box and the least important in the bottom box.

Most important

Least important

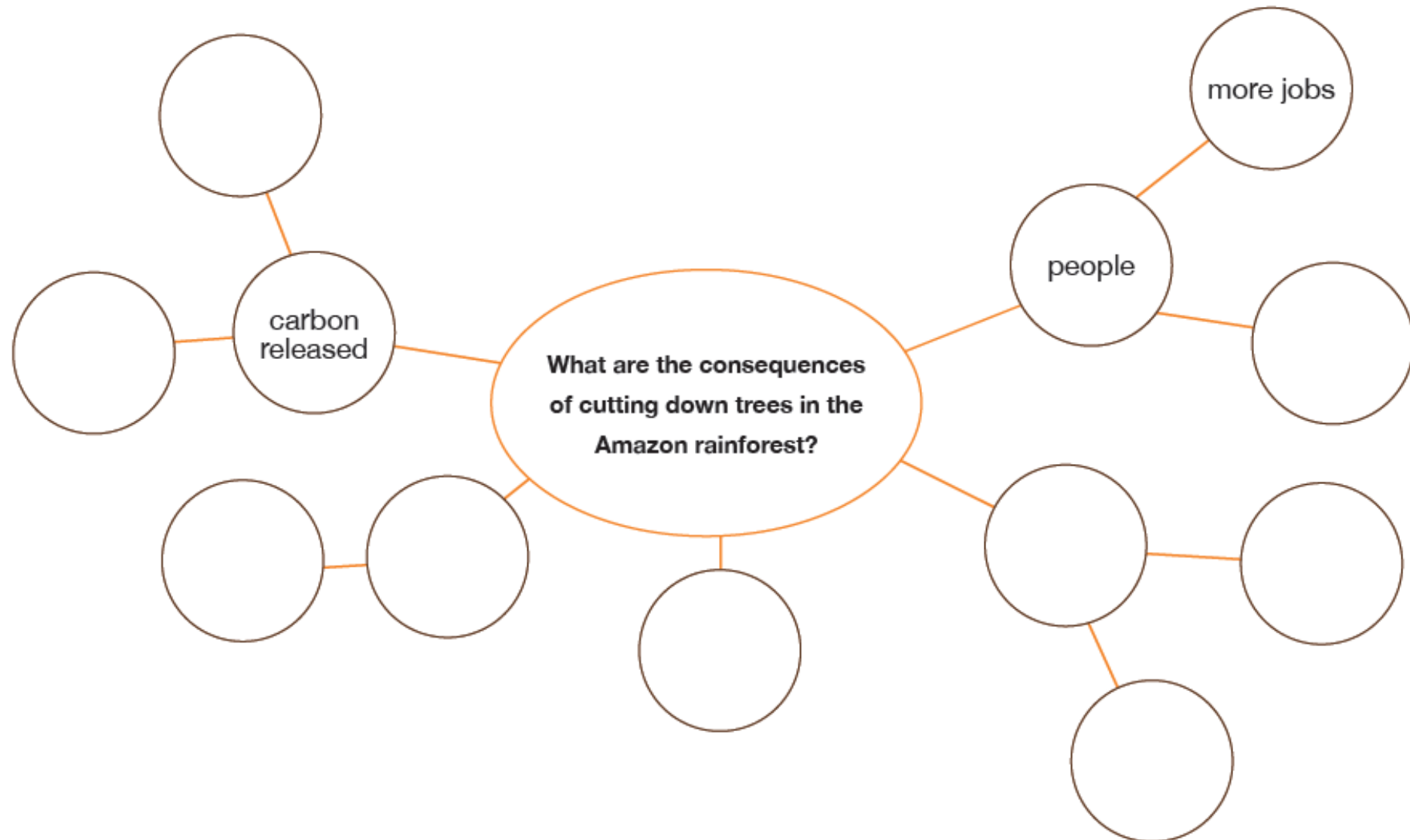
Activity Sheet - What's happening in the rainforest?

How might cutting down trees and clearing land in the Amazon rainforest affect people, places or the climate? Use the photographs and deforestation factsheet to do some detective work. Now fill in the circles and draw more if you need to. Remember the consequences could be positive or negative.



Change lives. For good.

act:onaid



Use the information you have already read and the next slide to help you.

Deforestation in the Amazon rainforest

Deforestation: The destruction of trees or forests on a massive scale.

Methods of clearing the rainforest:

- **Slash and burn** - trees are cleared and vegetation is burnt
- **Clear cutting** - complete removal of all trees in an area
- **Selective logging** - targeting specific valuable trees but leaving the rainforest intact



Carbon emissions - trees store carbon in their trunks, branches and roots which is released when they are cut down.

Water cycle - trees help return water vapour to the atmosphere which then falls as rain.

Indigenous people - the rainforest was once home to one million indigenous people. Now only 200,000 remain.

Climate change - deforestation contributes to global warming because trees are releasing carbon instead of storing it.

Soil erosion - without trees to protect it, soil in the rainforest is easily eroded. The soil loses its nutrients especially when it rains heavily.

Loss of habitat for millions of species like insects, birds, snakes, frogs and lizards.

Medicine - scientists have discovered that rainforest plants are sources for medicines to treat diseases like diabetes.

