

# Find Your Voice

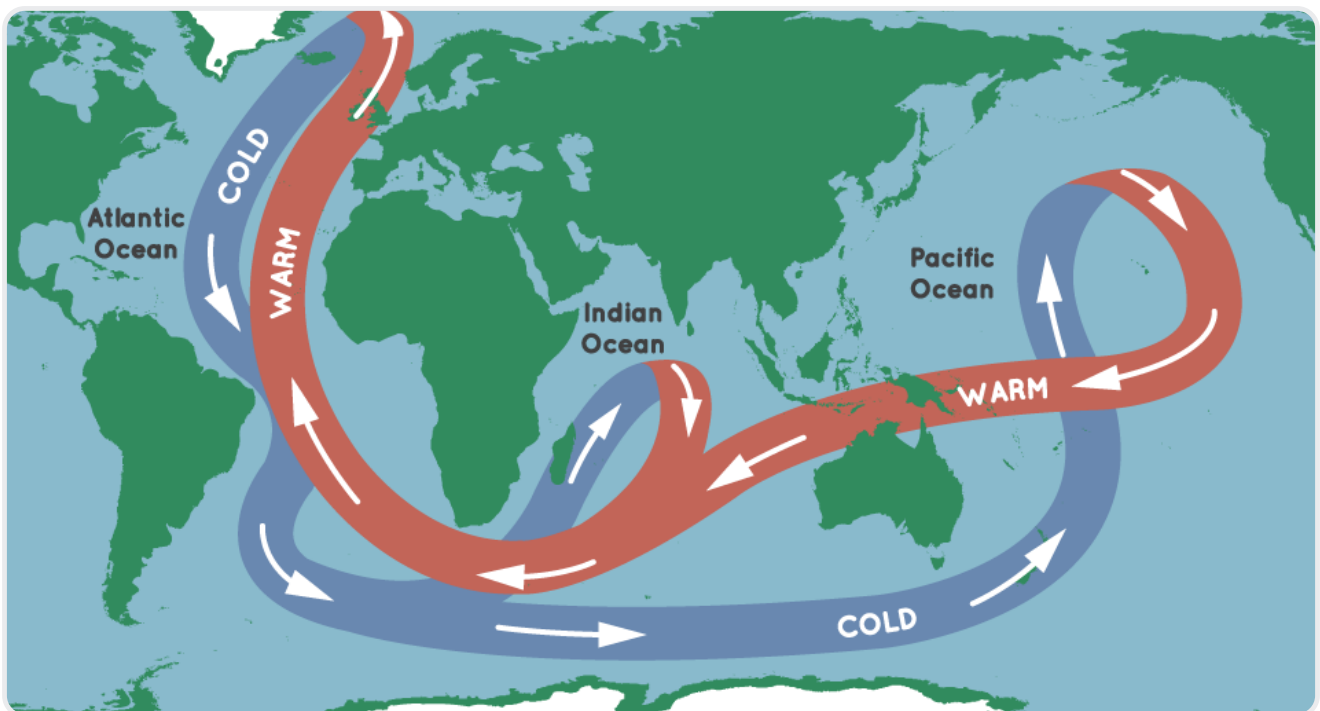
Age 11-18  
printable resource

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## Ocean



### Changing ocean patterns and chemistry of seawater

Ocean currents play a major role in maintaining Earth's climate and are being altered by climate change. The burning of fossil fuels which increases green house gas levels in the atmosphere, is altering the chemical composition of seawater by making it more acidic. This harms marine life.

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## Production of Plastics

Factories that make plastics produce a lot of toxic fumes and carbon emissions which contribute to climate change. Plastics are used in all sorts of objects and clothes.



## Micro plastics

Plastic breaks down into tiny pieces in the sea and some animals might accidentally swallow it. This plastic enters to food chain which is not good for us or other animals.

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## Plastic Waste

Plastic does not biodegrade. This means they won't break down naturally and unless we tidy them up, they will be around forever. Plastic litter is very harmful to wildlife and can harm or even kill birds, fish and other marine life. Sometimes plastics are burnt to get rid of them, this is very dangerous and releases more carbon into the atmosphere.

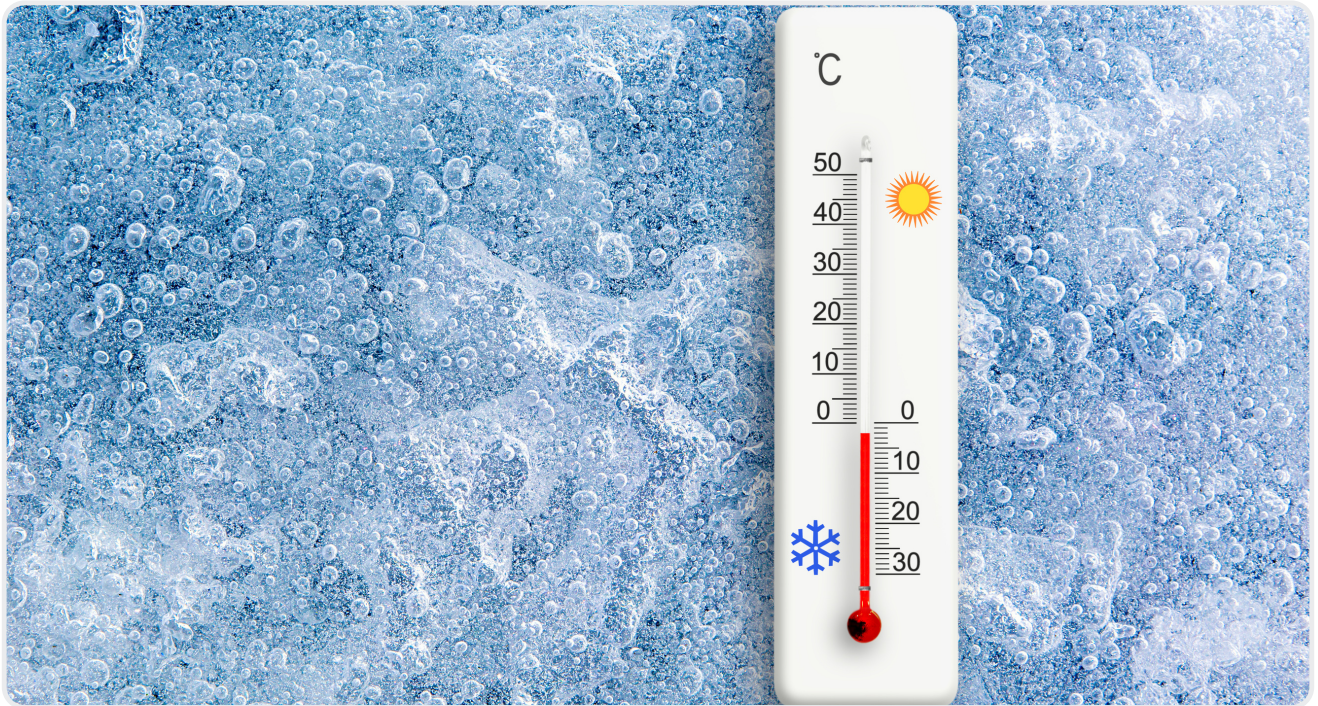


## Rising Sea Levels

When land-based polar ice melts, it finds its way to the sea. When water warms, it expands to take up more space causing sea levels to rise. Rising sea levels affects critical coastal habitats.

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## Rising Sea Temperature

Warmer waters cause coral bleaching, which in turn impacts coral reef ecosystems that are home to a dizzying array of marine biodiversity. Changes in water temperatures can directly affect the development and growth of most marine life.



## Forests

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## Rainfall, water and soil quality

Forests have a big influence on rainfall patterns, water and soil quality and flood prevention too. As they begin to degrade the quality of water and soil and the amount of rainfall will be impacted.



## More frequent forest droughts and fires

Climate change is creating warmer temperatures, deeper droughts and drier vegetation. These conditions lead to an increase in the extent, intensity and frequency of wildfires.

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### More forest pests

The warmer temperatures and drier conditions will likely increase insect survival and the growth of forest pests like the bark beetle that harm trees.



### More CO<sub>2</sub>

One of the most important things forests provide is absorbing carbon dioxide from the atmosphere and storing it in roots, soil, above-ground tree growth, and the forest floor. If forests are lost more carbon will be released into the atmosphere.

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## Loss of wildlife

Forests are vital for the health of our planet. They provide food and shelter for so much of life on Earth – from fungi and insects to tigers and elephants. More than half the world's land-based plants and animals, and three-quarters of all birds, live in and around forests. So if forests are lost so all the living things within them.



## Over-farming

Humans have been chopping down billions of trees to provide wood and to clear land for farming. The majority of the deforestation is linked to meat, soya and palm oil.

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## Mountain & Polar

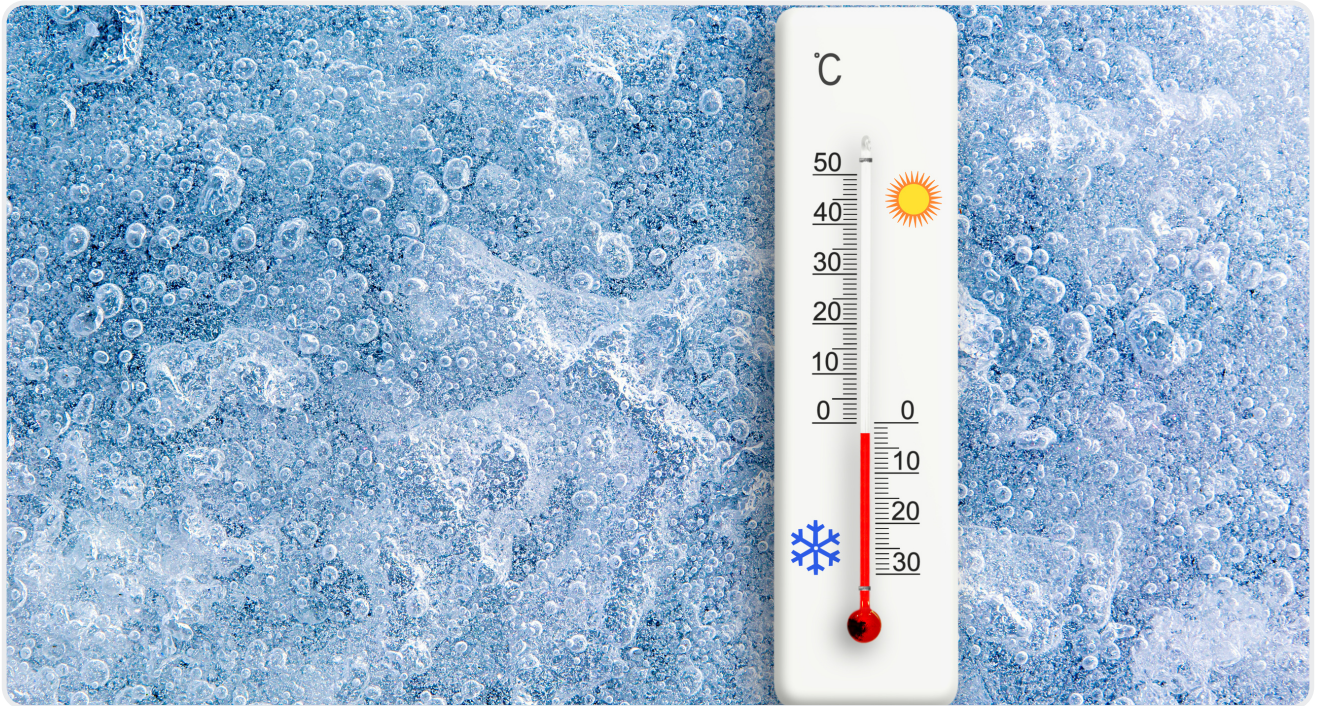


### Rising Sea Levels

When land-based polar ice melts, it finds its way to the sea. When water warms, it expands to take up more space causing sea levels to rise. Rising sea levels affects critical coastal habitats.

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## Rising Sea Temperature

Declining sea ice means ocean water around the world is getting warmer. Changes in water temperatures can directly affect the development and growth of most marine life.



## Changing chemistry of seawater

The burning of fossil fuels is making Arctic waters more acidic and harms marine life and other animals who rely on marine life for food.

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## Lower levels of sea ice

Sea ice extent is shrinking. The decrease in volume and extent of sea ice has serious implications for marine mammals that depend on the ice for their survival, such as seals and polar bears. In addition to having effects on wildlife, declining sea ice accelerates the rate of ocean warming.



## Drilling for Oil & Gas

Much of the world's untapped oil reserves lie offshore, beneath waters in polar regions. Oil spills and noise pollution can kill birds, fish and marine mammals. The burning of oil is a major contributor to climate change.

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## Increase in wildfires

Climate change has been identified as the major culprit behind the wildfires we are witnessing in the Arctic, notably in Alaska and Siberia. The fires threaten valuable habitats for species like caribou and salmon and affect global food security.



## Grasslands

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## Over-farming

Humans have been clearing grasslands for farming. Almost half of all temperate grasslands and 16 per cent of tropical grasslands have been converted to agricultural or industrial uses.



## Loss of wildlife

Grasslands such as the Serengeti National Park in Tanzania are home to the largest animal populations on Earth. As the temperature increases and grasslands are lost so are the animals that live or migrate there.

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## Balance of Grass and Trees

Grasslands are a fine balance of the amount of grass and tree coverage within them. Excess CO<sub>2</sub> and rainfall can alter this fine balance and impact the ecosystem.



## More pests

The changing climate will likely increase insect survival and the growth of pests like locusts that harm grasslands.

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## **Desertification**

Climate Change is impacting the amount of rainfall and soil quality in grasslands. Leading some areas to become deserts.



## **More frequent droughts and fires**

Climate change is creating warmer temperatures, deeper droughts and drier vegetation. These conditions lead to an increase in the extent, intensity and frequency of wildfires.

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## Desert



### More frequent droughts

Deserts don't have much water, to begin with, and climate change can make them even drier. This means there's even less water available for plants and animals, making it challenging for them to survive.

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## Desertification is spreading

Climate Change is impacting the amount of rainfall and soil quality in grasslands. Leading some areas to become deserts.



## Increased Temperatures

Some deserts are already very hot, and climate change can make them even hotter. This can be tough for plants and animals that are used to the extreme desert heat.

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## Changing Rain Patterns

Climate change can make the rain in deserts more unpredictable. Sometimes, there can be heavy rains, which might sound good, but they can cause flooding and damage to the desert ecosystem. Other times, there might be less rain, making it even harder for plants and animals to find water.



## Loss of wildlife

Some plants and animals in the desert are adapted to specific conditions. When the climate changes, their habitats can be affected. Some may struggle to survive in these new conditions, and this can lead to a loss of biodiversity.

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## **Loss of unique geological features**

Deserts are known for their unique geological features, such as sand dunes, canyons, and rock formations. Climate change and extreme weather can lead to changes in these features, impacting the natural beauty and geology of deserts.

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# Find Your Voice

## Climate Action Inspiration Cards

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Use fewer single-use plastics

**How can YOU stop plastic getting into the ocean?**

Go to a litter pick, beach or river clean

Recycle at home

Switch to a reusable bottle or keep refilling the same one

Buy secondhand clothes instead of new, or have a wardrobe swap with your mates

**Ways to use less plastic at home**

Use bars of soap and shampoo rather than products in bottles

Try growing your own herbs instead of buying them from the supermarket

Freeze food you won't use in time

Plan ahead so you know what you'll do with leftovers

**Ways to prevent food waste**

Share spare food via a local Community Fridge or an app like Olio

Try not to overbuy in the first place

Repair when you can

Spot wash stains to save water

**How to max out your clothes**

Air-dry your clothes

Keep your washing cool

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Buy second-hand



Rewear everything at least once



## How to get the most out of your clothes

Attend a local clothes swap



Rediscover your wardrobe



Enjoy your local green spaces



Pick up your litter



## How to be young, wild and (litter) free

Feed the birds with oats and seeds



Build a bug BnB



Use a bowl for washing up

Turn off the tap when you brush your teeth

Wait for a full load before washing clothes

Collect rainwater and use a watering can

Take showers instead of baths

## Ways to be water wise

1 Meet people where they are at



2 Ask questions



3 Focus on the positives



## How to engage your friends and family

4 Share your Journey



5 Focus on solutions



6 Listen, learn, repeat



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# Find Your Voice

Pillars of SciComm

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# Four Pillars of Science Communication

Use this sheet to map each of these four considerations which will help you focus your project.

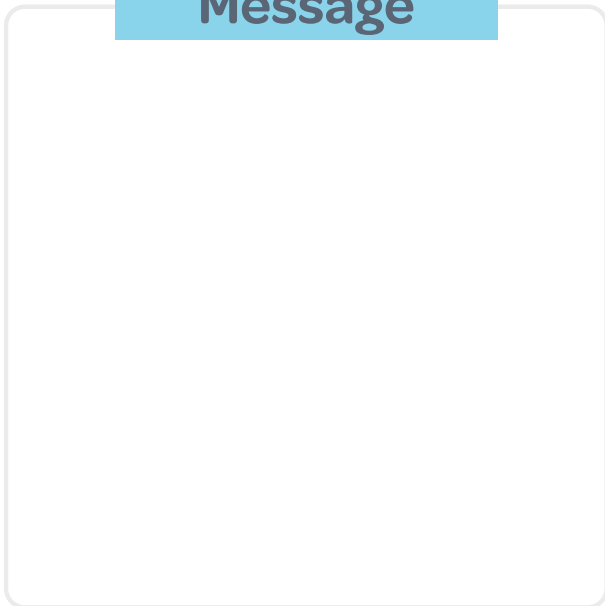
**Purpose**

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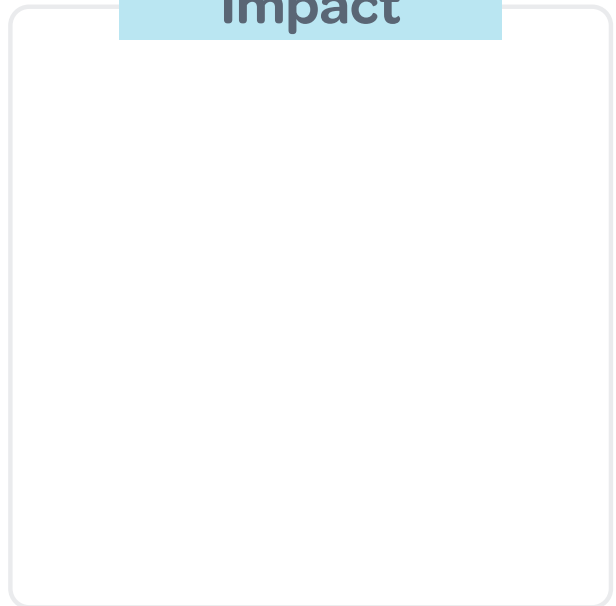
**Audience**

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**Message**

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**Impact**

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**Notes:**



# Find Your Voice

Storytelling in SciComm

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# Storytelling in Science Communication

Use this sheet to map each of these four factors which will help you focus your project.

**Compelling  
Characters**



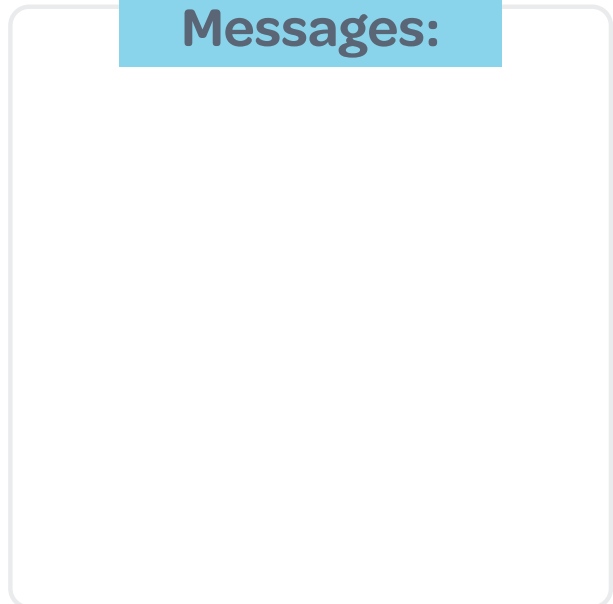
**Engaging  
Plot**



**Emotional  
Impact**



**Themes and  
Messages:**



**Notes:**

# Find Your Voice

Storytelling Careers

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# ENVIRONMENTAL SCIENTIST

## Key Features:

- Mathematical, field or written focused
- Research intensive
- Solve environmental and health problems
- Develop strategies for environmental problems

**Salary: £26k +**



# JOURNALIST



## Key Features:

- Investigate, collect and present information as news
- Use specific mediums to convey news for eg, media, internet etc.
- Conduct interviews and research to form objective news

**Salary: £26k +**

# PHOTOGRAPHER

## Key Features:

- Work to a specific brief to create visual images that support a range of purposes
- Seek out appropriate photographic subjects and opportunities
- Research and prepare for shoots
- Process and edit images

**Salary: £18k +**



# ECOLOGIST

## Key Features:

- Collect biological information about organisms
- Classify, sample and assess organisms
- Analyse and interpret data
- Write reports and recommendations

**Salary: £22k +**



# AGRICULTURAL ENGINEER

## Key Features:

- Carry out site visits and field work
- Design, test and develop agricultural and construction tools, equipment and vehicles
- Advise, plan and supervise environmental work
- Prepare and present reports and outcomes

**Salary: £25k +**





# AGRONOMIST

## Key Features:

- Advise farmers on land management and crop yield improvements
- Study soil and water and record information on environmental conditions

**Salary: £20k +**



# EDITOR

## Key Features:

- Use creative and technical skills to assemble recorded raw material into finished products
- Use sound, stills, camera forage and sequence to a specific brief
- Reorder and fine tune content

**Salary: £18k +**



# CLIMATOLOGIST

## Key Features:

- Study weather patterns and what causes them
- Create predictions on weather changes in both short and long-term
- Research and analyse data

**Salary: £20k +**

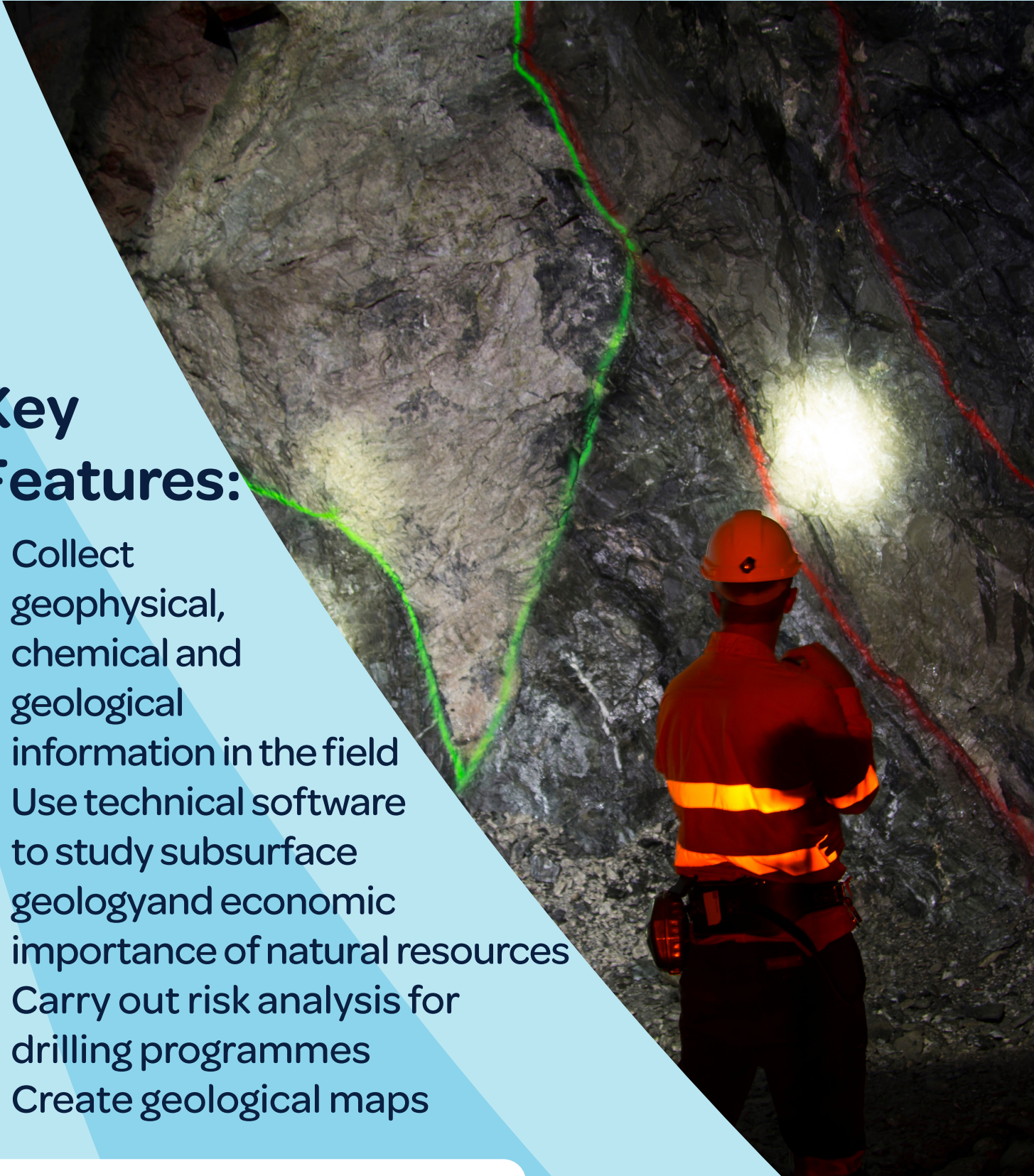


# GEOSCIENTIST

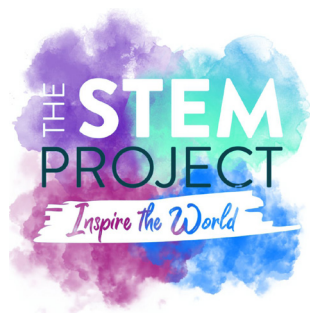
## Key Features:

- Collect geophysical, chemical and geological information in the field
- Use technical software to study subsurface geology and economic importance of natural resources
- Carry out risk analysis for drilling programmes
- Create geological maps

**Salary: £28k +**



With thanks to the STEM Project



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