



# LAND FOR LIFE

HELPING PEOPLE AND  
WILDLIFE THRIVE

TEACHER RESOURCE

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WORLD



# INTRODUCTION

The Maasai people have lived alongside wildlife in southern Kenya and northern Tanzania for many centuries. But the landscape around them is changing due to privatisation of land and habitat loss. Conflict with wildlife and the illegal wildlife trade are threatening people's livelihoods, culture and nature in this unique landscape.

Through the **Land for Life project**, WWF is collaborating with communities in southern Kenya and northern Tanzania to keep landscapes healthy and develop solutions for people and wildlife to coexist and thrive in a changing world.

This teacher guide and accompanying lesson presentation gives students the opportunity to explore the **geography** and **ecosystems** of southern Kenya and northern Tanzania. They will discover the **interdependence of natural systems** and recognise the consequences that occur when connections are altered or damaged by humans. Students will be able to research ideas on how to address **human-wildlife conflicts** and discover how WWF's Land for Life project is providing **real-world conservation** solutions in this landscape.

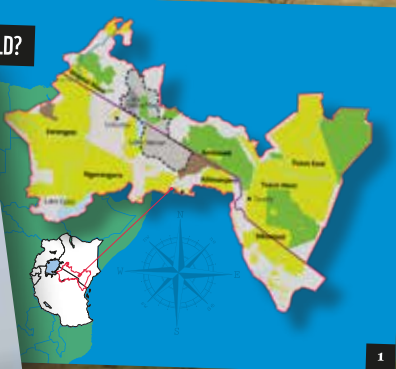
## RESOURCES

**Lesson:** Land for Life (PowerPoint presentation)  
– geography, ecosystems, threats and conservation solutions in southern Kenya and northern Tanzania

**Activity 1:** Living Connections

**Activity 2:** Conservation Solutions

WHERE IN THE WORLD?



# CURRICULUM LINKS

<p><b>ENGLAND</b></p> <p>Key Stage 2</p> <p>Key Stage 3</p>	<p><b>Science:</b> Living things and their habitats; Animals including humans</p> <p><b>Geography:</b> Human and Physical Geography; Geographical skills and fieldwork</p> <p><b>English:</b> Spoken language</p> <p><b>Science:</b> Biology: Relationships in an ecosystem</p> <p><b>Geography:</b> Locational knowledge; Place knowledge; Human and physical geography; Geographical skills and fieldwork</p> <p><b>English:</b> Spoken language</p>	<p><b>SCOTLAND</b></p> <p>Second Level</p> <p>Third Level</p>	<p><b>Sciences:</b> Planet Earth; Biodiversity and interdependence; Topical Science</p> <p><b>Social studies:</b> People, place and environment</p> <p><b>English and literacy:</b> Listening and talking</p> <p><b>Social studies:</b> People, place and environment</p> <p><b>English and literacy:</b> Listening and talking</p>
<p><b>NORTHERN IRELAND</b></p> <p>Key Stage 2</p> <p>Key Stage 3</p>	<p><b>The World Around Us:</b> Interdependence; Place; Change over time</p> <p><b>Communication:</b> Talking and Listening</p> <p><b>Environment and Society:</b> Geography: Knowledge, Understanding and Skills; Contributors to society; Contributors to the economy and the environment</p> <p><b>Science and Technology:</b> Organisms and Health; Contributors to the economy and the environment</p> <p><b>Communication:</b> Talking and Listening</p>	<p><b>WALES</b></p> <p>Key Stage 2</p> <p>Key Stage 3</p>	<p><b>Geography:</b> Locating places, environments and patterns; Understanding places, environments and processes; Range; Communicating; Ask and answer the questions</p> <p><b>Science:</b> Communication; Interdependence of organisms</p> <p><b>English:</b> Oracy, Reading</p> <p><b>Geography:</b> Locating places, environments and patterns; Understanding places, environments and processes; Range; Communicating; Ask and answer the questions</p> <p><b>Science:</b> Communication; Interdependence of organisms</p> <p><b>English:</b> Oracy</p>

Find more detailed curriculum links on p 8-11

# SUSTAINABLE DEVELOPMENT GOALS



## GOAL 15: Life on Land

Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss



Providing conservation solutions also contributes to other SDG goals, including the following: **GOAL 1:** No Poverty, **GOAL 2:** Zero Hunger, **GOAL 5:** Gender Equality, **GOAL 11:** Sustainable Cities and Communities **GOAL 17:** Partnerships

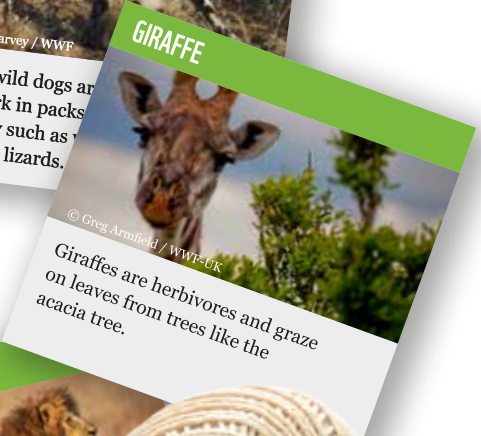
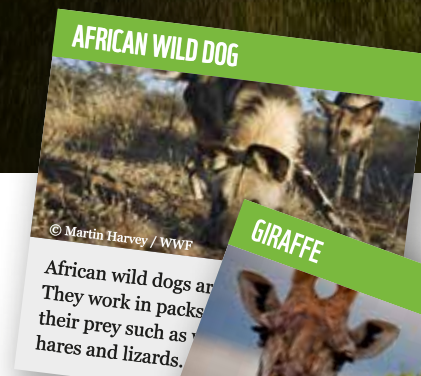


## ACTIVITY 1:

# LIVING CONNECTIONS

This fun activity shows how everything in an ecosystem is **interdependent**, and that the loss of one connection has knock-on effects.

1. Explain that an **ecosystem** is an interconnected web of living and non-living things.
2. Get students into groups of 10-12 and ask them to form a circle. Allocate one animal or resource to each student (from worksheet on p 6).
3. Take a ball of string and ask a student to hold the end and announce what part of the ecosystem they represent (e.g. soil, elephants, water). Ask the group to put their hands up if they think they have any connection with that species or resource and ask them to explain. If the group agree that there is a connection, the string is let out to them. Students should keep their strings taut.
4. You can go back to the first student in order to then connect others with the same element of the ecosystem, or always go on from the student who has just been connected to the web.
5. When you run out of connections – or string – you can see and discuss the complexity of the web of connections within the ecosystem.
6. Next, consider human impacts on the ecosystem (e.g. human-wildlife conflict, deforestation, climate change) and ask students to put their hands up if they think their animal or resource would be negatively affected. Decide which would be most affected and ask them to leave the circle, letting go of all the strings they hold.
7. As each student leaves, the web deteriorates further, and it becomes clear how many other parts of the ecosystem would be affected by the loss.



## YOU WILL NEED:

- Printed out 'Living Connections' sheet (p 6) OR white boards/scrap paper for students to write name of animal or resource
- Ball of string

A photograph of a herd of elephants in a savanna landscape. In the foreground, a large elephant is partially visible on the right, looking towards the camera. Behind it, a smaller elephant is standing. To the left, another elephant is partially visible. The background shows a vast, open landscape under a cloudy sky.

## ACTIVITY 2:

# CONSERVATION SOLUTIONS

This activity asks students to conduct their own research and present their ideas on how to prevent elephant-human conflict in southern Kenya.

## BACKGROUND

Elephants are the largest land animal on Earth with an appetite to match! They require up to 150kg food every single day. As human communities and areas for farming in southern Kenya and northern Tanzania expand, elephants' natural habitats are reduced in area. This means that elephants come into closer contact with communities. They can trample and eat precious crops and pose a real danger to human life and property.

## CASE STUDY:

A community living near Amboseli National Park in Southern Kenya has been experiencing more and more elephants coming into farmland areas and eating precious crops. Elephants have been coming into school grounds and damaging water storage facilities and school buildings. Elephants can also pose a danger to people in the community as they can occasionally cause injury and even loss of life. This is disastrous for the community. Many people already live in poverty and rely on farmland crops for food and as a vital income. Water is also a scarce and valuable resource. The community wants to find **sustainable** conservation solutions to address this problem of human-elephant conflict.

1. Read out the above case study.
2. Explain to students that nature conservation means to protect the world's wildlife species and their habitats.
3. Using computers or tablets, in pairs students should research current conservation solutions to human-elephant conflict that could be used in the example community (research prompts: planting chilli pepper plants around crops, using bees to deter elephants, putting up solar-powered electric fences).

4. Students should decide on what they think would be the best conservation solution for the community and create a presentation with four slides: *What is the problem? What is the solution? What are the advantages and disadvantages to the solution? Why should the class choose their idea?*
5. If time allows, students can pitch their solutions to the rest of the class. Class can vote on their overall favourite solution.

### Things students should consider:

- What is the cost?
- How long would it take to put the solution in place? How long will the solution last?
- Who in the community, and outside of the community, would need to be involved?
- Can you find any **statistics** to support the idea?
- Are there any additional benefits to the solution (e.g. income for community, increased biodiversity)?
- How are these solutions **sustainable**?

## FURTHER RESOURCES

Our Planet teaching resources link: [www.wwf.org.uk/get-involved/schools/our-planet](http://www.wwf.org.uk/get-involved/schools/our-planet)

Illegal Wildlife Trade teaching resources link: [www.wwf.org.uk/get-involved/schools/illegal-wildlife-trade](http://www.wwf.org.uk/get-involved/schools/illegal-wildlife-trade)













Seek app by iNaturalist - discover nature on your doorstep link: [www.wwf.org.uk/discover-nature-seek-app](http://www.wwf.org.uk/discover-nature-seek-app)

Fascinating Animal Facts link: [www.wwf.org.uk/learn/fascinating-facts](http://www.wwf.org.uk/learn/fascinating-facts)



# ACTIVITY 1 WORKSHEET:

## LIVING CONNECTIONS

<b>ELEPHANT</b>  <p>© naturepl.com / Anup Shah / WWF</p> <p>Elephants are herbivores and eat plants like grasses, tree bark, roots, leaves and fruit.</p>	<b>LION</b>  <p>© Martin Harvey / WWF</p> <p>Lions are carnivores, they prey on lots of different animals including wildebeest, impala, aardvark and giraffe.</p>	<b>WILDEBEEST</b>  <p>© Martin Harvey / WWF</p> <p>Wildebeest are herbivores and graze on grasses.</p>
<b>IMPALA</b>  <p>© WWF / US James Morgan</p> <p>Impala are a type of antelope. They are herbivores and eat grasses and shrubs.</p>	<b>AARDVARK</b>  <p>© WWF / Max Oudgenoeg</p> <p>Aardvarks break open termite mounds and trap the insects with their long sticky tongues. Aardvarks live in burrows they dig in the soil.</p>	<b>GIRAFFE</b>  <p>© Greg Armfield / WWF-UK</p> <p>Giraffes are herbivores and graze on leaves from trees like the acacia tree.</p>
<b>ACACIA TREE</b>  <p>© Martin Harvey / WWF</p> <p>Acacia trees grow in warm climates. They have very long roots to reach deep into the soil for water.</p>	<b>SOIL</b>  <p>© WWF / Simon Rawles</p> <p>Soil provides nutrients for plants to grow. Soil also provides a habitat for many animals.</p>	<b>AFRICAN WILD DOG</b>  <p>© Martin Harvey / WWF</p> <p>African wild dogs are carnivores. They work in packs to hunt down their prey such as wildebeest, impala, hares and lizards.</p>
<b>WATER</b>  <p>© Richard Barrett / WWF-UK</p> <p>The entire Serengeti ecosystem depends on water from the Mara River. Wildlife need water to survive. People use the water for farming and drinking water.</p>	<b>GRASSES</b>  <p>© WWF / Simon Rawles</p> <p>Grasses produce their own energy from sunlight. Grasses need water and nutrients from the soil to grow.</p>	<b>TERMITES</b>  <p>© Ola Jennersten / WWF-Sweden</p> <p>Termites are insects. They eat dead wood and grasses. Termites can build huge mounds made from soil.</p>

# LAND FOR LIFE: HELPING PEOPLE AND WILDLIFE THRIVE



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We need to act urgently to avoid losing critical wildlife habitats and precious natural resources across southern Kenya and northern Tanzania, which would have devastating consequences for local communities and wildlife.

## HOW CAN YOUR SCHOOL HELP?

By fundraising for our **Land for Life** project today, your school can support community-led solutions to help people and wildlife coexist and thrive. Your support will help to:

- Support sustainable community enterprises to improve livelihoods and reduce poverty
- Maintain and develop healthy landscapes for people and wildlife to thrive
- Support communities to protect wildlife such as elephants and lions
- Reduce conflict between people and wildlife to achieve a safe home for all

## SCHOOL FUNDRAISING IDEAS



Adopt an **elephant** or **lion** – [support.wwf.org.uk/adoptions](https://support.wwf.org.uk/adoptions)



Hold a wildlife themed bake sale, raffle or swap shop



Have a wildlife dress up day



Hold a school event like a film screening, end of term party or wildlife craft workshop with small entry fee



Take part in our **Big Winter Wander** – [www.wwf.org.uk/events/winter-wander](https://www.wwf.org.uk/events/winter-wander)

# X2

## DOUBLE YOUR IMPACT

**Give before 2 February 2021** and the UK government will match all public donations to support our Land for Life appeal, up to £2 million.



## PAY IN YOUR FUNDRAISING

Pay in your donation at [www.wwf.org.uk/schools-L4L](https://www.wwf.org.uk/schools-L4L)

Or send a cheque to:

WWF Land for Life Appeal, Living Planet Centre,  
Brewery Road, Woking, Surrey GU21 4LL

# APPENDIX I:

## CURRICULUM LINKS

### ENGLAND

#### Key Stage 2

##### Science:

##### Living things and their habitats;

- recognise that environments can change and that this can sometimes pose dangers to living things

##### Animals including humans;

- construct and interpret a variety of food chains, identifying producers, predators and prey

##### Geography:

##### Human and physical geography;

- physical geography, including: biomes
- human geography, including: types of settlement and land use, distribution of natural resources including energy, food, minerals and water

##### Geographical skills and fieldwork

- use maps... to locate countries and describe features studied
- use the 8 points of a compass... symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world

##### English:

##### Spoken language;

- participate in discussions, presentations, performances, role play, improvisations and debates

#### Key Stage 3

##### Science: Biology

##### Relationships in an ecosystem;

- the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops
- how organisms affect, and are affected by, their environment

##### Geography:

##### Locational knowledge;

- extend their locational knowledge and deepen their spatial awareness of the world's countries, using maps of the world to focus on Africa... focusing on their environmental regions, key physical and human characteristics

##### Place knowledge;

- understand geographical similarities, differences and links between places through the study of the human and physical geography of a region in Africa and a region in Asia

##### Human and physical geography;

- understand how human and physical processes interact to influence and change landscapes, environments and the climate; and how human activity relies on the effective functioning of natural systems

##### Geographical skills and fieldwork;

- build on their knowledge of globes, maps and atlases, and apply and develop this knowledge routinely in the classroom and in the field

##### English:

##### Spoken language;

- giving short speeches and presentations, expressing their own ideas and keeping to the point



## Key Stage 2

### The World Around Us

#### Interdependence;

- how living things rely on each other within the natural world;
- interdependence of people and the environment and how this has been accelerated over time by advances in transport and communications; the effect of people on the natural and built environment over time.

#### Place;

- how place influences the nature of life;
- ways in which people, plants and animals depend on the features and materials in places and how they adapt to their environment;
- features of, and variations in places, including physical, human, climatic, vegetation and animal life
- positive and negative effects of natural and human events upon a place over time.

#### Change over time;

- how change is a feature of the human and natural world and may have consequences for our lives and the world around us;
- ways in which change occurs over both short and long periods of time in the physical and natural world;
- The effects of positive and negative changes globally and how we contribute to some of these changes.

#### Communication:

#### Talking and Listening;

- listen to and take part in discussions, explanations, role-plays and presentations

## Key Stage 3

### Environment and Society

#### Knowledge, Understanding and Skills;

- develop geographical skills to interpret spatial patterns including atlas and map-work skills;

#### develop a sense of place through the study of:

- contrasting physical and human environments;
- the interrelationships between physical and human environments;
- the dynamic nature of physical and human environments;
- the ways in which places are interdependent;
- the need for social, economic and environmental change to be sustainable.

#### Contributors to society;

- Develop an understanding of how people in different places interact with their environment,

#### Contributors to the economy and the environment;

- Investigate the impact of conflict between social, economic and environmental needs, both locally and globally
- Explore how we can exercise environmental stewardship and help promote a better quality of life for present and future generations, both locally and globally

#### Science and Technology

#### Organisms and Health;

- Interdependence of plants and animals

#### Contributors to the economy and the environment ;

- Investigate the effects of specific measures to improve and protect the environment
- Explore the importance of biodiversity, how it impacts on our lives and how it is affected by human activity.
- Investigate what can be done to conserve and promote biodiversity

#### Communication:

#### Talking and Listening;

listen to and take part in discussions, explanations, role-plays and presentations

## Second Level

### Sciences:

#### Planet Earth: Biodiversity and interdependence;

- I can use my knowledge of the interactions and energy flow between plants and animals in ecosystems, food chains and webs SCN 2-02a

#### Topical Science;

- Through research and discussion I have an appreciation of the contribution that individuals are making to scientific discovery and invention and the impact this has made on society. SCN 2-20a

### Social studies:

#### People, place and environment;

- I can discuss the environmental impact of human activity and suggest ways in which we can live in a more environmentally responsible way. SOC 2-08a
- I can consider the advantages and disadvantages of a proposed land use development and discuss the impact this may have on the community. SOC 2-08b
- I can explain how the physical environment influences the ways in which people use land by comparing my local area with a contrasting area. SOC 2-13a
- To extend my mental map and sense of place, I can interpret information from different types of maps and am beginning to locate key features within Scotland, UK, Europe or the wider world. SOC 2-14a

### English and literacy

#### Listening and talking

- I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience. LIT 2-06a

## Third Level

### Social studies:

#### People, place and environment:

- I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact. SOC 3-08a
- I can investigate the climate, physical features and living things of a natural environment different from my own and explain their interrelationship. SOC 3-10a
- I can use a range of maps and geographical information systems to gather, interpret and present conclusions and can locate a range of features within Scotland, UK, Europe and the wider world. SOC 3-14a

### English and literacy

#### Listening and talking

- I can independently select ideas and relevant information for different purposes, organise essential information or ideas and any supporting detail in a logical order, and use suitable vocabulary to communicate effectively with my audience. LIT 3-06a / LIT 4-06a



## Key Stage 2

### Geography

#### Locating places, environments and patterns

- identify and locate places and environments using globes, atlases, and maps

#### Understanding places, environments and processes

- describe the causes and consequences of how places and environments change

#### Range

- living in my world: caring for places and environments and the importance of being a global citizen

#### Communicating

- express their own opinions and be aware that people have different points of view about places, environments and geographical issues

#### Ask and answer the questions

- how are places and environments linked/connected to other places and environments?
- how have people affected this place/ environment? How can I and other people look after this environment?
- how do people's views differ about this geographical issue and what do I think?

### Science

#### Communication

- search for, access and select relevant scientific information, from a range of sources, including ICT
- communicate clearly by speech, writing, drawings, diagrams, charts, tables, bar charts, line graphs, videos, and ICT packages, using relevant scientific vocabulary

#### Interdependence of organisms

- the interdependence of living organisms ... and their representation as food chains

### English

#### Oracy

- contribute purposefully to group discussion to achieve agreed outcomes
- express issues and ideas clearly, using specialist vocabulary and examples

#### Reading

use internet searches carefully, deciding which sources to read and believe

## Key Stage 3

### Geography

#### Locating places, environments and patterns

- locate places and environments using globes, atlases, maps and plans

#### Understanding places, environments and processes

- explain the causes and effects of physical and human processes and how the processes interrelate
- explain how and why places and environments change and identify trends and future implications

#### Range

- threatened environments: characteristics of, and possibilities for, their sustainable development

#### Communicating

- develop opinions and understand that people have different values, attitudes and points of view on geographical issues

#### Ask and answer the questions

- how and why is this place/environment changing? What might happen next, in the short/long term and why?
- how and why is this place/environment/ feature connected to and interdependent with other places/ environment/features?
- how do environments and people interact?
- how can changes be sustainable and why is it important for this place/environment?
- what are the geographical issues for people living in this location?
- How and why do people's views on issues differ and what do I think?

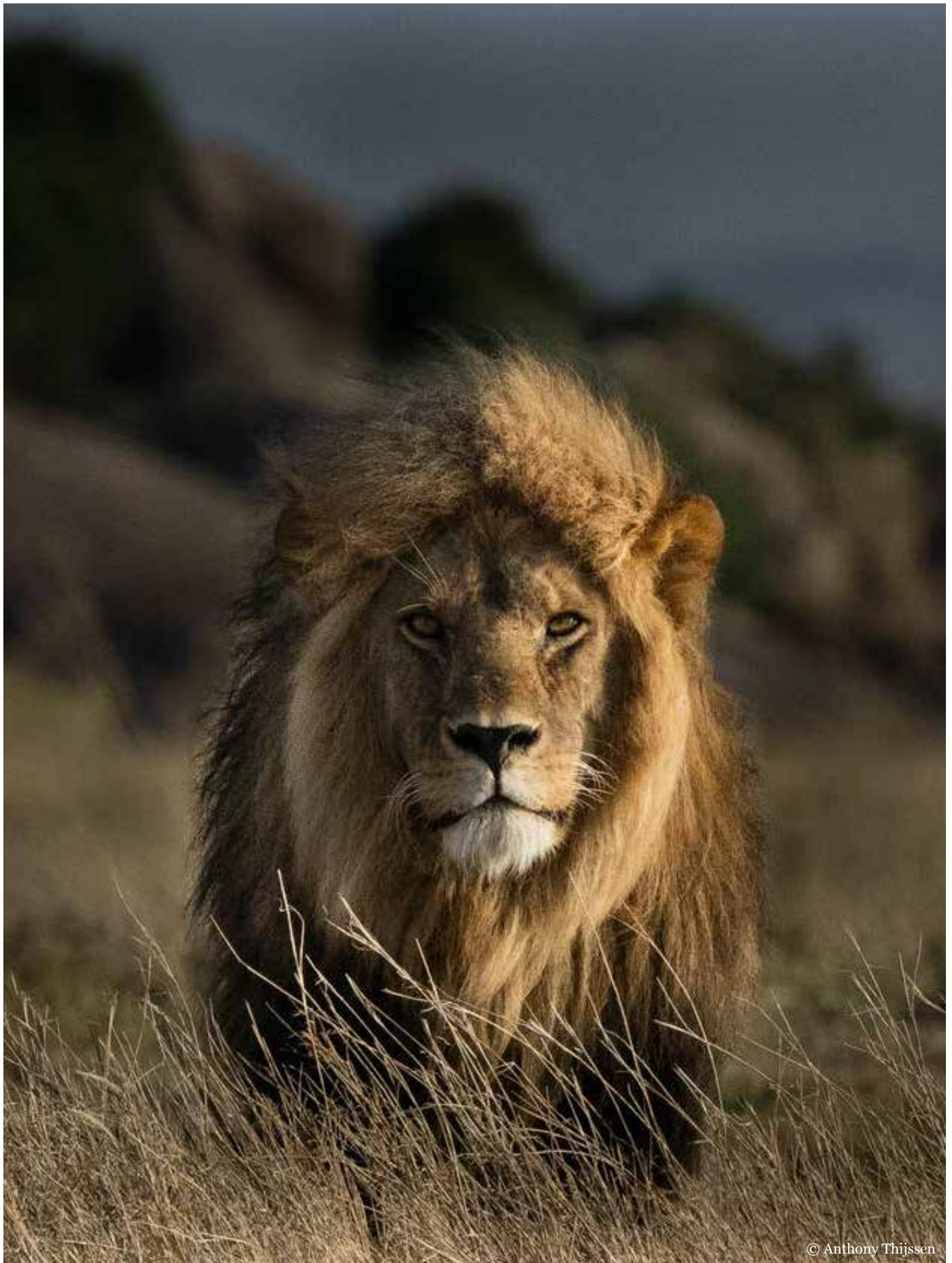
### Science

#### Communication

- search systematically for, process and analyse information for a specific purpose, including ICT as appropriate
- communicate logically by speech... ICT packages using a wide range of scientific vocabulary, terms, symbols and conventions

#### Interdependence of organisms

- the interdependence of organisms and their representation as food webs, pyramids of numbers and simple energy-flow diagrams
- how and why food webs are affected by environmental factors
- how human activity affects the global environment and the measures taken to minimise any negative effects and monitor them



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