

LEARN TO LOVE NATURE

GRASSLANDS EDUCATOR GUIDE

INSTRUCTIONS

1. Direct students to watch the [Our Planet Grasslands episode](#) on YouTube.
OR discuss the Earth's grasslands habitats on a class call, and show the [Grasslands biome tour](#) on ourplanet.com to fuel a class discussion on the characteristics and importance of grassland ecosystems to people, the wildlife and the planet. Tips for using videos to prompt constructive discussions can be found in the [Our Planet Their Future Educator's Guide \(PDF\)](#).
2. Direct students to watch '[How to Save Our Grasslands](#)', on ourplanet.com, narrated by Sir David Attenborough.
3. Direct students to spend some time visiting the Grasslands biome on our [explorable globe](#). Students should then use the information in the video above and collected from the interactive globe to complete the questions and tasks below. Suggested answers are included in this version.

Use the explorable globe to help you find the answers to the following questions.

1. Why do grasslands need grazers to survive?

Grasslands and grazers need each other to survive. Without grazers, grasslands lose their biodiversity. The herds devour new grass growth almost as soon as it arrives but, without space, they can't move on to fresh pastures meaning the grasses can't grow back and the ecosystem collapses.

2. a) What do grasslands require?

b) How is this under threat from human impact?

- a) Grasslands require space.
- b) This is under threat because agriculture uses half the world's habitable areas to grow soy, wheat, barley, and other cereals as well as livestock.

3. For each of the grassland habitats below, list some of the species that can be found there and how the grasslands are preserved.

Maasai Mara/Serengeti

- Wildebeest, zebra, gazelles
- New initiatives help the Maasai tribe to benefit from ecotourism, in return the Maasai control their livestock grazing so that wild herds

India's Grasslands

- Home of "big grazers" such as elephants and their predators e.g. tigers.
- India maintains its grasslands despite a huge population (1/6 of

<p>still have space to graze.</p> <ul style="list-style-type: none"> The Maasai tribespeople do not eat meat, so less land is needed for pastoral farming. 	<p>global) as it has the lowest meat consumption per person in the world. Therefore, less land is needed for meat production and more can be left to grasslands and their grazers.</p>
<p>4. Fill in the blanks to demonstrate human impact on wild spaces and how this could be reduced:</p>	
<ul style="list-style-type: none"> Over half of the world’s habitable areas are dedicated to agriculture, this is over 4,873,000,000 hectares. The mass of all the wild mammals left on Earth only accounts for 4% of the total mammals, with the rest (96%) consisting of humans and livestock. We can decrease this by reducing our consumption and demand of meat, as production of this takes up much more of the Earth’s resources than plants. 	
<p>5. List three ways in which we can rethink what we eat and manage our meat consumption:</p>	
<ul style="list-style-type: none"> Lab grown meat: growing meat from cells without needing to raise an animal. Meat grown this way uses only a fraction of the land, water and energy needed for conventional meat production. Wild roaming beef: giving cattle more open space to roam, and grazed lands more time to grow can help maintain ecosystems and increase diversity. Making mock meat: creating plant-based products that look, feel and taste the same as meat. 	
<p><i>Use the How to Save Our Grasslands video to help you find the answers to the following questions.</i></p>	
<p>6. Most of the areas wild grasslands once covered is now farmland. Where grasslands do remain, they are often fenced in. Thinking about what you have learnt so far, why is this a problem?</p>	
<p>If grasslands are fenced in then grazing herds don’t have access to roam freely, they require space to travel from one grassland to the next.</p>	
<p>7. Rising human populations are increasing the demand on agriculture and land space. What two things are predicted to help us provide more food from less land? Give examples of how this will help.</p>	
<ul style="list-style-type: none"> Reducing our consumption of meat Smarter farming 	
<p>8. Can you think of two reasons why meat grown from animals grazed off natural grassland can help us to save our grasslands?</p>	
<ul style="list-style-type: none"> These won’t be fed feed crops, which require further space to grow Naturally manage grassland succession 	
<p>9. Name 5 smart farming methods can we use to save space?</p>	

- Choosing more suitable crops for the season and location
- Controlled environments
- Vertical farms
- Ocean crops
- Cellular agriculture
- Plant selection
- Urban farming

10. What is the key principle of smart farming?

To produce more food from less land.

11. What are the other benefits of reducing meat consumption and adopting smart farming methods?

- Fewer greenhouse gases
- Significantly reduce our demand on fresh water
- Eating less meat may improve our health (20% less heart attacks)
- Reduce the strain on health services, save \$1 trillion in healthcare worldwide
- Extra land could be returned to natural grasslands

SUSTAINABLE DEVELOPMENT GOAL LINKS



Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

<https://www.un.org/sustainabledevelopment/biodiversity/>

Ensuring a healthy and productive future for our grasslands also contributes to other SDG goals, including the following:

GOAL 2: Zero Hunger

GOAL 12: Responsible Consumption and Production

GOAL 13: Climate Action

GUIDED DISCUSSION PROMPTS

Use these prompts to generate a class or small group discussion based on the Our Grasslands briefing, or videos on www.ourplanet.com.

What is grassland like? What would it be like to spend time there and what might you see?

Through this discussion, children will be identifying the characteristics of grasslands which can be found on every continent except Antarctica.

How do humans use grassland landscapes and what effect could these activities have on wildlife?

Safaris, hunting, farming, building homes. Space taken up by human farms and developments means less space for wildlife and cuts off their routes for migration, hunting or foraging. Noise, light and pollution could disrupt natural wildlife behaviour. Hunting could drive species to extinction and have a knock-on effect on other species.

Producing 1kg of beef needs 70 times as much land as producing 1kg of vegetables. What will happen if we keep turning grasslands into farmland? Why do you think meat production needs so much land? What might happen to the species that live on grasslands?

They will have less space and less food, so will become stressed and start to die out. If grassland soil is converted to farm or grazing land, and not cared for properly, then the nutrients in the soil are lost and nothing grows.

What could we do to help?

- Eat less/no meat
- Grow our own food locally
- Farm in different ways (vertical, underground, rooftop, floating farms etc)
- Protect grassland habitats as nature reserves

EXTENSION ACTIVITY IDEAS

KS2-4

Activity Idea	Subjects
Keep a log of the foods you eat in one day. Determine how much of your diet came from grains, either directly from breads and cereals, or indirectly from livestock raised on grain products. How many different countries does your food come from? What does this mean for grasslands and the wildlife that live there?	Geography
Make a list of all grassland landscapes around the world and the wildlife that live there. Which are the strangest grassland creatures and which grasslands were in places you did not expect?	Geography
In small groups imagine an area of grassland (or bring up a satellite image on Google Earth) and consider how many of each animal or plant it could support. Consider the way they are interconnected, and what things could affect their numbers for better or worse. Consider seasons, rainfall, connectivity and space.	Geography
Make puppets of grasslands animals – glove or shadow puppets work well. Then create a performance for others with an environmental message.	Art Literacy Geography Citizenship
Design a farm that produces food using as little space as possible. Where would it be? What resources would it need to work?	Art Science Geography
Write a short story or diary about the day in the life of a ranger working in a grassland national park to prevent poaching.	Literacy
Design a farm that produces food using as little space as possible. Where would it be? What resources would it need to work? Use a pencil and ruler if you are drawing on paper and remember to label your design in detail.	Design Technology Science Geography