WILD

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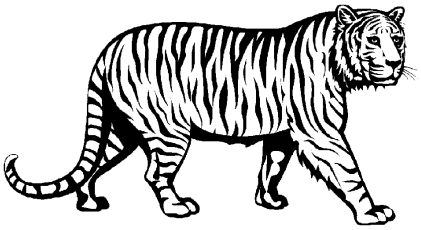


#tinytiger

Created By: Felicita Wight

<u>Sticky Stakeholder Situation</u>

Objective:

Designing a landscape for elephants and humans from various stakeholder's perspective.

Method:

Students will work in groups to construct the best management plan for elephants and humans. They will determine the best locations for homes, farms, and elephants with the respect to the environment.

Grade level: 5-8

Subject Areas: Social Studies, Language Arts

Duration: 20-25 minutes

Setting: classroom

Materials:

- ✓ Stakeholder Cards
- ✓ Blank Landscape Template
- ✓ Land Use Cut Outs
- ✓ Tape

Key terms: keystone species, poaching

Background:

Elephants are **keystone species** which are species that play essential roles in maintaining biological diversity of the ecological community. It is estimated that at least a third of West African tree species rely on elephants for seed dispersal and germination (Saving the Elephants, n.d.). Elephants directly influence forest composition and density which helps to maintain an environment that is favorable for a large assortment of browsing and grazing animals. These species are essential in shaping the landscape, selectively browsing on certain grass species.

As they eat, elephants end up making pathways for other species as well as leave room for other vegetation. This promotes a diverse mosaic of edible plants. If elephants are removed from the landscape, grasslands will overgrow and affect the overall biodiversity of a region (Saving the Elephants, n.d.). African elephants are migratory and inhabit a diverse array of habitats. As the human population density changes, so does the land. Direct habitat loss due to farming such as goat or cattle farming or commercial enterprises such as agricultural or gaming ranches alters the landscape and the elephant's ability to move through the areas. The illegal ivory trade is a driving force behind the dramatic increase in African elephant poaching, threatening the very existence of this species.

Poaching is the unlawful harvest of and trade in live animals and plants or parts and products derived from them ("Illegal Wildlife Trade", n.d). This can be the illegal hunting, killing or capturing of wild animals, as well as the killing or trapping of endangered, rare, or protected species. This activity often results in the death of an animal but also includes illegal trapping of live animals that are later sold or traded for profit (Collard, 2013). Poaching tends to thrive in places where corruption is rife; government enforcement is weak, and there are few alternative economic opportunities (Ratchford et al., 2003).

Wildlife offenders can bring in significant revenue. Some observers say small-scale hunters and traders have few alternatives for generating subsistence-level incomes (Wyler & Sheikh, 2008). Poaching and trading are often vital to sustaining the livelihoods of impoverished

hunters and traders. Trade in one region may be legal but illegal in another. The decisions regarding what species will be able to be traded and in what amounts are subject to a great deal of political influence from powerful countries like the US and Japan (Collard, 2013). Sustainable use of wildlife can be an incentive to conserve natural ecosystems. The problem arises in finding a solution where locals can make an income without illegal poaching and without depleting natural wildlife populations

National Geographic

Procedure:

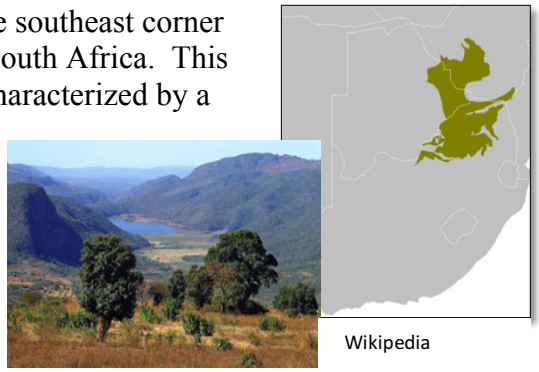
Before the Activity:

1. Cut out the 4 different Stakeholder cards
2. Make 4 copies Landscape cards- use legal size paper or make 8 copies 2 per group
3. Make 4 copies of Land-Use Sheets
4. Print and Cut out a copy to use as an example

Intro- Scenario:

Weak governance, poor law enforcement and demand for ivory are all linked to the increase in elephant poaching levels. The 'tragedy of the commons' dilemma occurs when individuals work independently of one another and therefore overuse a common-property resource for short-term benefits while decimating the resource for long-term use (Hardin, 1968).

The Southern African Bushveld covers the southeast corner of Botswana, southern Zimbabwe, and northern South Africa. This area is part of the vast savanna biome of Africa characterized by a cool, dry season and a hot, wet season. There is a grassy ground layer and a distinct upper layer of woody plants. The landscape ranges in elevation; the Highveld plateau to the south forms a ridge running east to west. In this region, mountain ranges where the climate is moister, and soils are less infertile where as the low-lying areas contain well-grassed plains (Spriggs, n.d.)



Wikipedia

Activity:

1. Divide students into 4 groups (for larger groups can add more stakeholder cards, small groups can be two stakeholders)
2. Present the following question:

"What if the Southern African Bushveld was managed as one country rather than divided into multiple countries? How would the land best be managed? In a developing area, officials must figure how to best use the resources to create a prosperous country.

Different stakeholders or parties with specific interests would have different agendas when viewing an undeveloped landscape. Your group will be assigned a **stakeholder** card which will represent a group of people with specific interest in the land. As a group, you will figure out the best way to manage land considering specific concerns."

3. Supply students with 1-2 Blank Landscape. Use 2 Landscape sheets side by side to accommodate all the items on the Land-Use sheet if needed.
4. Supply students with Land Use Cut out Sheets and students to cut out and use the items on the cutout sheet. Use as directed but items but cannot overlap each other.
5. Have students review their Stakeholder card
6. Give students 5-10 minutes to subdivide the landscape as best suits the need of their stakeholder
7. Then have each group present their plan and explain why they designed the landscape

8. Next, discuss 1) what would work and what would not work for multiple stakeholders, and 2) what new information was learned
9. Then, give students 3-5 minutes to alternate their landscape considering the new information shared
10. Have each group present their plan and explain how they redesigned the landscape
11. Discuss what changes the groups made

12. As one group, develop one management plan for the landscape. Map out on white board/ bulletin board with example (cut out before the activity)
13. Discuss the best management strategy for elephants

Conclusion Statement

Even with the best intentions, it is hard to meet the needs of every stakeholder. Resources like fertile land and water are resources that multiple stakeholders need to live. Elephants can be seen as a nuisance, consequently poaching and hunting enterprises can provide a good source of jobs and income. If we are to save iconic species, such as the elephant, a balance must be created between the needs of both humans and wildlife.

Questions:

1. What would your ideal scenario be? Could it be realistic?
2. What choices lead to your decision for the land use on your landscape?
3. Did you change your mind listening to the different group's perspective?

Extensions:

- Create different stakeholder cards
- Use another of African Big 5 game animals
- Use a local species

Government

⇒ For a government official they must consider how to run the country best for the people in it.; including protecting the boarders and how to develop economic resources.

⇒ Home to about 250, 000 people– which need job, land to live, water and food
⇒ Only access to 10,000 trained soldiers, any government run facility would need protection

⇒ To the north there are two countries which are at war. To the south is large population of elephants. However, they migrate north to the mountains to the south of low-laying grasslands.

⇒ A river flows through the area from north to south. The low lands on the east and west have fertile soil and the mountains on the west are dense with mineral deposits such as precious metals.

Ecotourism– Conservation

⇒ Elephants might be seen as great, intelligent animals to be preserved at all costs. Ecotourism provided sources of income through tourism and does not impact wildlife population. However, these operations need to provide for those tourists including lodging, roadways, and protection from poachers.

⇒ A river flows through the area from north to south. The largest of population of elephants live in the south. However, they migrate north to the mountains to the south of low-laying grasslands.

⇒ To the north here are two countries which are at war. To the south is large population of elephants.
⇒ Wildlife corridors allow opens areas of land to connect.

⇒ Farmers occupy most of the lands in the east of the country

Sticky Stakeholder Situation- Stakeholder Cards

Game Reserves

⇒ People travel all over the world to hunt Africa's big game which include elephants, rhinos, and buffalos. Game reserves allow for controlled hunts and wildlife lives safely. A game reserve could account for significant income to the country creating a need for hospitality services, transportations and market places.

⇒ To the north here are two countries which are at war. To the south is large population of elephants. However, they migrate north to the mountains to the south of low-laying grasslands.

⇒ A river flows through the area from north to south. The low lands on the east and west have fertile soil and the mountains on the west are dense with mineral deposits such as precious metals.

⇒ Farmers occupy most of the lands in the east of the country because the western border.
⇒ These areas are private therefore the government would not offer protection against poachers.

Local– Farmer

⇒ As the population increase, land availability is scared. Farming is both profitable and beneficial. The farmers is able support his family but also provide crops to villagers and towns,

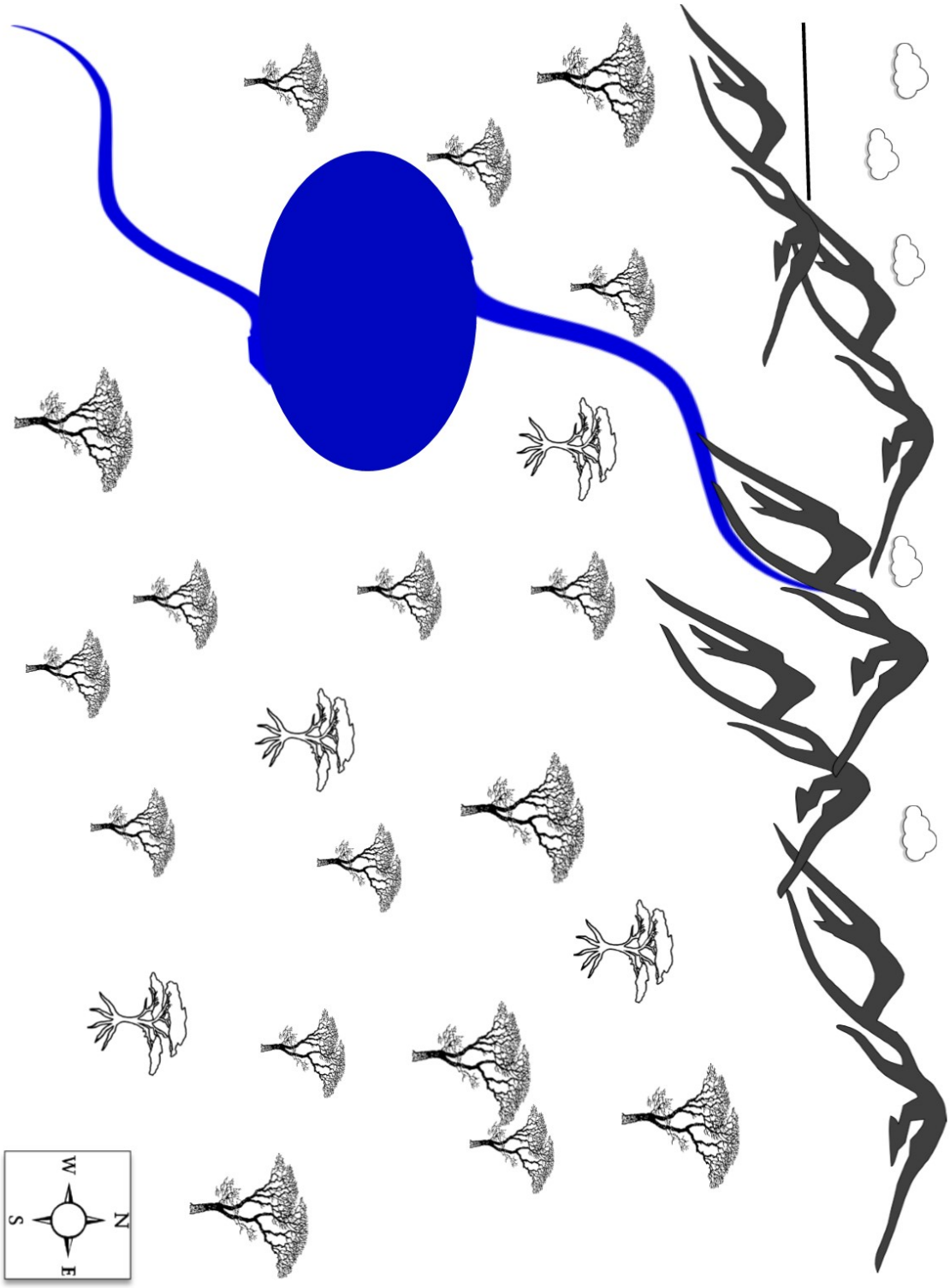
⇒ To the north here are two countries which are at war. To the south is large population of elephants which migrate north to the mountains and south to the low-laying grass plains.

⇒ A river flows through the area from north to south. The low lands on the east and west have fertile soil and the mountains on the west are dense with mineral deposits such as precious metals.

⇒ Each farmer would need plenty of space for other farms .

⇒ They also need water would need to reroute water to those crops.

Sticky Stakeholder Situation- Blank Landscape Template

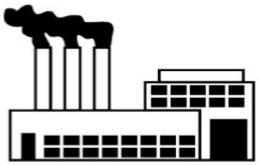


Sticky Stakeholder Situation- Land Use Cut Outs

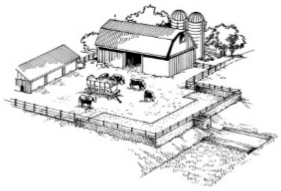
Use if directive

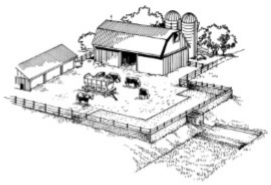
If not it is optional

City



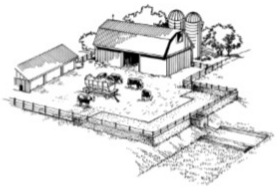
Factory

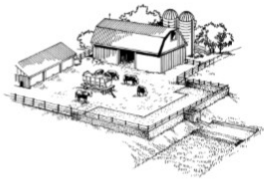




Farms

USE ALL





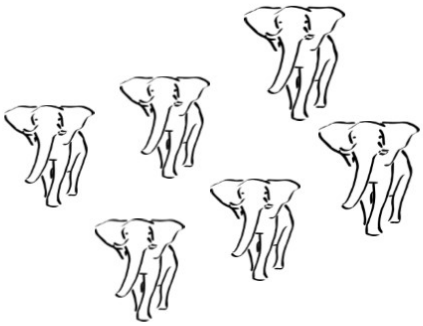
Houses

Use All

Sticky Stakeholder Situation- Land Use Cut Outs

Elephants—move in herds

Cut as one unit



Use if directive

If not it is optional

Park

Run by government

Game Reserves

Private owners

Road

Use