**The Response of Bison to Fire**

**Slideshow Presentation**

**Script**

**Slide 1 -** *Use the* ***(Click)*** *prompts to assist with coordinating presentation images and slides with the speaker notes/script.*

In this activity, you will develop a map that reflects the **spatial** and **temporal** responses of **bison** to fires that have occurred on [The Nature Conservancy's Tallgrass Prairie Preserve](https://www.nature.org/en-us/get-involved/how-to-help/places-we-protect/tallgrass-prairie-preserve/). **Global positioning system [GPS]** data from bison along with maps delineating boundaries of and within the Tallgrass Prairie Preserve will be used to produce your map. **(Click)**

| ***Slide 2*** *of the slideshow available to students has been removed from the teacher download. The removed slide demonstrates how to access the presentation’s speaker notes (used for this script).* |
| --- |

**Slide 2 -** This activity uses data from research conducted at The Nature Conservancy’s Joseph H. Williams Tallgrass Prairie Preserve in **(Click)** northeastern Oklahoma. **(Click)** This 39,650-acre (16,046-hectare) preserve located within the Osage Nation north of Pawhuska, Oklahoma is the largest expanse of protected **tallgrass prairie** on earth. **(Click)** Around 2,500 bison are allowed to roam and **graze** freely over most of the 62-square mile (160-square kilometer) preserve so that it can function more naturally. **(Click)**

**Slide 3 -** Even though the majority of the **Flint Hills ecoregion** is found in Kansas, it does extend into Oklahoma. **(Click) (Click)** This is where the Tallgrass Prairie Preserve is found. **(Click)** This ecoregion is considered to be the western edge of the tallgrass prairie in Oklahoma. **(Click)** Since the shallow, stony soils typical of the region are unsuitable for farming, the landscape is dominated by **rangelands** used for grazing **livestock**. The tallgrass vegetation in the Flint Hills is unlike that found in the mixed grass prairie of the **(Click)** **Central Great Plains** and in the **oak savanna** of the **(Click) Cross Timbers**. **(Click)** Even though the plant communities in these ecoregions differ somewhat, they are all impacted by the disturbance of…. **(Click)**

**Slide 4 -** FIRE! Fire is a natural disturbance that produces a variety of **habitat** types which increases **biodiversity**. Fire on the prairie helps restrict the distribution of **species** that are not typically dominant in grassland systems, such as trees. **(Click) Prescribed fires** are those intentionally ignited by trained personnel in accordance with applicable laws, policies, and regulations to meet specific objectives. **(Click)** The preserve’s ranch managers attempt to replicate **fire frequencies** typical of this ecoregion by using prescribed fire. Where and when to burn on the preserve is determined randomly. **(Click)** This results in some parts of the preserve being disturbed more often than others which develops a more natural mosaic of plant **associations**. **(Click)**

**Slide 5 -** It is thought that the movement of the preserve’s free range bison is influenced by the fire disturbance occurring on the preserve. To study their movement, in 2009, many bison were fitted with global positioning system [GPS] collars. The data collected from the collars provides both temporal and spatial information. Some of the resulting GPS data will be used to develop your map which will contribute to a better understanding of the response of bison to fire. **(Click)**

**Slide 6 -** It’s time to go through the process of making your map. Go to “Step 3” of the activity.