

**What traits do  
longhorns have that  
might help them  
survive in their  
environment?**



# Texas Longhorns – What traits do longhorn cattle have that help them survive in their environment?

Look at the poster picture. Discuss with a partner what you observe in the picture.

1. What physical traits and environmental conditions might help these longhorns survive in this habitat?

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2. Conduct research to complete the chart below. Include the sources where you found your information.

| Criteria           | Research Information | Information Source |
|--------------------|----------------------|--------------------|
| Physical Traits    |                      |                    |
| Food               |                      |                    |
| Reproduction       |                      |                    |
| Life Span          |                      |                    |
| Disease Resistance |                      |                    |
| Habitat            |                      |                    |
| Miscellaneous      |                      |                    |

# Texas Longhorns—Exploring nature’s interactions

**Image Information:** The poster image shows several longhorn cattle in a field of bluebonnet flowers. What traits do longhorns possess that allow them to survive and thrive in this habitat? Use observable details in the photo, along with researching additional information about the history of Texas longhorns to complete the student worksheet.

**Question:** What traits do longhorn cattle have that help them survive in their environment?

**Possible Student Answers:** Using observations from the poster image, students might suggest the following: **1. Horns:** the long, pointed horns might help protect them from predators (like wolves and cougars). **2. Size:** their large, rounded bodies make them look strong, difficult to take down by a predator; **3. Flowers/grasses:** the landscape includes ample food for them to eat; **4. Trees:** offer shade from the hot sun, place to hide, and protection from wind and weather; **5. Fields:** open spaces allow them areas to graze for food and roam around; **6. Coloration:** might allow them to blend into the trees and brush. **7. Calf:** looks like it can walk and move with its parents making it easier to escape from predators

| Criteria           | Research Information                                                                                                                                                                                                           | Information Source |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Physical Traits    | Tolerant of strong sun, high heat, and drought; both male and females have horns; coloration blends into habitat; thick, rounded bodies;                                                                                       |                    |
| Food               | Adaptable grazers – will eat a variety of grasses, weeds, and scrub plants.                                                                                                                                                    |                    |
| Reproduction       | High fertility rate (>99%) – Reproduce easily & often; young are most likely to survive to adulthood;                                                                                                                          |                    |
| Life Span          | Typical life span is 20–30 years; prime age is 10 years                                                                                                                                                                        |                    |
| Disease Resistance | Strong immune system; Resistant to disease like Texas cattle fever (tick borne illness); brucellosis                                                                                                                           |                    |
| Habitat            | Move in herds, adaptable to open range and scrub areas; eat variety of plants                                                                                                                                                  |                    |
| Miscellaneous      | Their beef is low in fat (lean), low cholesterol, and good flavor; high per calorie nutrition value; Guinness Book of Records in 2022 recorded longest horn length on a living longhorn was 323.7 cm on steer named Poncho Via |                    |

**Interesting Info:** Today’s Texas Longhorn cattle are a recognized American breed of beef cattle known mostly for their long horns and lean, low-fat beef. They evolved from cattle originally brought to America by the Spanish around 1500. Those Iberian cattle breeds from Spain and Portugal, which have also been genetically linked to a breed of ‘humped’ (indicine) cattle from the subcontinent of India and Africa, were heat and drought tolerant. Turned loose in the American southwest, these feral cattle produced herds that thrived in the hot, semi-arid climate, and adapted to the sparse vegetation. Have students research other traits that these cattle possessed that allowed them to successfully spread across Texas and the Great Plains. Use the student worksheet to help them organize their research.

Support the Phenomena:

**NGSS Science and Engineering Practice #8 – Obtaining, Evaluating and Communicating Information:** In K–2, students **use observations, texts, and prior experiences to communicate new information;** In 3–5, students **compare and combine information** across different texts **to explain phenomena;** In 6–8, students **integrate scientific/technical information to clarify claims,** and **describe how evidence supports the findings;** In 9–12, students, **compare, integrate, and evaluate information to address a scientific question.**

- In K–2, have students observe and record what they notice in the poster. Focus on collecting their described observations of the physical traits (e.g. horns, size, coloration, habitat; young) and record that as their evidence. Students should describe how they think the longhorns are surviving in their habitat (presence of young) based on their observations.
- In 3–5, have students research longhorn cattle and add more detailed descriptions to explain how factors like food, habitat, physical traits and/or conditions of weather (climate) contribute to longhorn survival in their habitat.
- In 6–8, students should research information on factors impacting longhorn survival (like disease resistance; reproduction rates; food availability; climate change). Students decide which factor is most critical to longhorn survival and describe the evidence they collected to support their claim.
- In 9–12, students research the nutritional benefits of the leaner longhorn beef and create a claim about longhorn beef. They should gather information on longhorn beef (like caloric values, fat levels, cost to produce); compare it to more traditional meat options like Angus beef, chicken, lamb, pork, etc); and use their evidence to support or refute their claim.

**More information:** To learn more about Texas Longhorns, visit either the **Texas State Historical Association** or **The Cattle Site**. Looking for fun information on a famous Longhorn, visit **The History of Bevo**, the mascot of the University of Texas!