



Nature Study

Each Friday morning, you will go through two of our nature cards. They are labeled in the upper right corner with the corresponding week. These are short, factual cards with images to help your child become familiar with objects in the natural world.

As you progress through our sessions, you may find it handy to keep your past nature cards in a binder for easy reference when your children come across a familiar object. These seeds you are planting will grow into a wonderful garden of knowledge for your children in years to come.

As you explore nature outside your home, watch and listen for newly discovered delights. Most of all, remember...

"Point to some lovely flower or gracious tree, not only as a beautiful work, but as a beautiful thought of God."

~ Charlotte Mason

Nature Study

1

Cattle *Bos taurus*

- Cattle would find themselves blind at times due to the amount of dust in the air.
- Their lungs would also fail due to the dust being constantly inhaled.
- Cattle were also widely purchased by the government to feed those in need.
- Many cattle starved throughout this period, with farmers unable to afford to care for their livestock.
- Healthy cattle continued to be used for field work as much as possible, but it was rare.



1

Trees

- The government planted 220 million trees throughout this period to stop the soil from blowing all over and creating these dust storms.
- The planting of these trees began in 1935 in a small town of Oklahoma.
- This method of planting became known as groups of "shelterbelts." Shelterbelts are still used today in certain areas because it proved to be effective in preventing the soil from blowing.
- Though these trees successfully worked as part of the force to end the dust bowl, they now pose a threat to farmers and the need for more land to plant crops.



2

Chicken *Gallus gallus domesticus*

- Chickens were very useful during the Depression and were used for their meat and eggs.
- Chickens died quite frequently due to all the dust in the air and their small physiques.
- Chickens' sleep schedules were off. They slept in the middle of the day because all of the dust in the air made it appear to be nighttime.
- Chickens lived a mostly normal life during this period, with many families continuing to care for their flocks.
- In some counties, almost 90% of chickens died due to the great amounts of dust in the air.



2

Drought

- Droughts caused the Dust Bowl. Not enough rain was falling and the topsoil began to blow away because of the dry air.
- There are four main types of droughts; agricultural, socioeconomic, meteorological, and hydrological.
- Droughts sometimes result in wildfires because of how dry the land becomes and its raised levels of susceptibility to catching on fire.
- Human activity can also be a cause of drought with activities like excessive irrigation or deforestation creating areas for the land to become susceptible to dry conditions.



3

Horse *Equus caballus*



- Horses died in the same way that many cattle did, from suffocation and accidents due to blindness from the dust.
- Horses were mostly used for field work throughout this period.
- Many people protected their horses more than the rest of their livestock, limiting the amount that died because of the dust.
- Horses were heavily used for transportation. Many families used them to move away from wagons.
- Many horses were abandoned because they lacked resources to sufficiently feed and care for them.

3

Soil



- Soil has six different layers, known as "horizons."
- Soil is at the bottom of the food chain.
- Soil contains 45% minerals, 25% water, 25% air, and 3-5% organic matter depending on what the soil is used for.
- It takes 500 years to produce just an inch of topsoil.
- There are 70,000 different types of soil in just the United States.

4

Jackrabbit *Lepus*



- Jackrabbits were plentiful during the Dust Bowl, with plagues of them populating counties.
- Jackrabbits were able to survive the harsh dusty conditions because of the fur on their feet and their ability to get water from plants.
- People of the period, especially farmers, loathed the jackrabbits because of the way they'd eat the crops that were already hard to grow because of the dust.
- Many people would get together to go on "jackrabbit drives," where they would hunt jackrabbits.
- These migratory animals could produce 3-8 young every 32 days.

4

Black Sunday



- This famous Dust Bowl storm occurred on April 14th, 1935.
- This was one of the worst storms of the period, covering cities in deep black clouds of dust that blocked sight for many even just a few feet ahead of themselves.
- This cloud only lasted an afternoon, but its 1000-mile length and winds that blew up to 100 miles per hour struck many ill.
- It is said that almost 300 million tons of topsoil was displaced on this afternoon.

5

Dust Bowl Quick Facts



- Years of intense farming and no rain left the soil to be susceptible to the blowing winds, creating great dust storms.
- Thousands of people died from breathing in the dust. People referred to this as “dust pneumonia.”
- Over 250,000 people fled their homes in the plains to look for work due to the losses they suffered. These people were known as “Dust Bowl refugees.”
- This disaster led Americans to begin crop rotation and reforestation to protect their topsoil from then on.
- This environmental hardship rocked the economy, causing widespread financial hardship.

5

Migration



- In just one year, over 86,000 migrants moved to California.
- The Dust Bowl caused the largest migration in American history in such a short amount of time. About 3.5 million people moved away from the Plains between 1932-1940.
- Migration means traveling from one part of an area to another. This movement is usually motivated by the search for work or improved living conditions.
- While many migrants moved across the country, some could not make that long of a move and simply settled in the next town over or a county close by.

6

Farming Techniques Against Dust Bowls



- Shelterbelts were groups of trees planted in order to stop topsoil from blowing across the flat plains.
- Crop rotation is when different types of crops are grown in the same area in different seasons. This not only reduces soil erosion but helps with soil fertility.
- Terracing occurs when a piece of sloped land is cut into the shape of stairs so that different crops can be planted at each level while maintaining protection from winds and soil erosion.
- Contour plowing is a practice where plowing across a sloped area creates an area of water to rest and settle into the crops, avoiding soil erosion.

6

The Great Plains



- The “Great Plains” is the flat area of grasslands and prairies located west of the Mississippi River and east of the Rocky Mountains.
- This area used to be home to thousands of bison herds until they suffered great losses and were almost upon extinction in the mid-19th century.
- The Plains are split up into four parts; the Northern Great Plains, the Intermediate Great Plains, the Central Great Plains, and the Southern Great Plains.
- The Dust Bowl of the 1930s mostly affected these Great Plains areas, with the center located in the Oklahoma Panhandle.