

**Time: 20 minutes and then 5 minutes per day for a week.**

# Kansas Weather

**Chart the weather.**

## OBJECTIVES

Students will:

- Ī exhibit an understanding of what weather is
- Ī observe and recognize various types of weather
- Ī chart six weather conditions

## MATERIALS FROM TRUNK

Object

sunbonnet

Worksheet

#12 - Weather Chart

#13 - Note to Parents

## OTHER MATERIALS

- ' Pencils, colors or markers.
- ' Other materials may be needed depending on how the weather chart is made. (See Teacher Preparation below.)

## TEACHER PREPARATION

- ' Photocopy worksheet #13, Note to Parents, and send it home with the students.
- ' Have some examples of your own (see the note to parents) ready in case not enough come with class members. Make sure the following are represented: hot and cold (ex. straw hat and winter hat), rain or snow (ex. umbrella and snow boots), wind (ex. scarf that ties onto your head).
- ' Review the lesson and decide between using one large graph or worksheet #12. To use the worksheet make one copy for each student. To create your own large graph use the worksheet for as a guide.
- ' Decide whether symbols or colors will be used on the weather chart. Examples for colors are: yellow = sunny, grey = cloudy, blue = rain, white = snow, black = stormy, green = windy.



## HISTORICAL BACKGROUND

"The Kansas climate has fostered a number of popular images of the state. 'If you don't like Kansas weather,' so one saying goes, 'just wait a minute and it will change.' Writing to his wife in March of 1856, Topeka founder Cyrus K. Holliday observed that 'when I commenced this letter I said there was a thunder storm raging. It is *now raining, hailing, snowing, blowing, thundering & lightning* all at the same time. A great Country.'

The image of Kansas weather as variable, unpredictable, and rapidly changing is further characterized by tornadoes, wind storms, and drought. The state's association with tornadic activity has been particularly persistent. As early as 1885 the U.S. secretary of war published a report indicating 'there is perhaps no part of the world where they [tornadoes] prevail more than in this region, and especially in that part of the middle latitudes west of the Mississippi River embracing Kansas and Missouri.'

In defense of their state and its climate, Kansans have from time to time taken issue with this negative perception. In 'Why Kansas Is Loved,' published in 1901, Foster Coburn denied the image. 'Kansas has been called the cyclone state. That is a misnomer. There is occasionally a wind storm that blows off a few tree limbs, but there has not been a real cyclone in Kansas for more than 20 years. More damage has been done by a single cyclone in some other states than was ever done in all of Kansas since it became a state.'

The image of Kansas as a tornado-swept prairie is hard to shake, however. L. Frank Baum's *The Wizard of Oz* accounts in part for this persistence, but in addition the image does, in fact, have some basis in reality. Over the years many communities throughout the state have been struck by the awesome fury of a Kansas twister. On June 8, 1966, Topeka suffered one of the most destructive tornadoes ever to strike an American city. Dramatic coverage in the national press and media served to validate the image of Kansas as a tornado-torn countryside."

Source

Nottage, James H. and Floyd R. Thomas, Jr. "'There's No Place Like Home': Symbols and Images of Kansas." *Kansas History: A Journal of the Central Plains* (Autumn 1985): 138-61.

## VOCABULARY

Precipitation	Water falling in the form of rain, snow, hail, or sleet.
Temperature	How hot or cold the air around us is.
Weather	The condition of the air at a particular time and place.
Wind	The natural movement of air.



## ACTIVITY

- 1) Ask the class the following questions:
  - ± Is it hot outside? Cold?
  - ± Is it rainy, snowy, or dry?
  - ± Is it sunny or cloudy?
  - ± Is it windy or calm?

After they have answered these questions ask them what they just described.

® *The weather outside. Temperature, precipitation, and wind are all part of weather.*

- 2) Put the sunbonnet on one student. Explain that sunbonnets were very important pieces of clothing at one time. Ask the class why the sunbonnet would be important.
  - ® *It kept the sun off of the head, face, and neck of the person who wore it.*

Ask what people wear today to keep the sun off their heads.

® *Hats - baseball caps, straw hats, visors, etc.*

Explain that weather is a very important part of our lives. It often controls what we do and how we dress. Ask the class if they would plan a picnic on a cold winter day or go sledding on a hot summer day. Why?

® *It would be too cold to have an outdoor picnic and there is no snow in the summer on which to sled.*

Have the class share the items they brought that are associated with the weather. **Make sure the items cover the areas of hot and cold, rain and/or snow, and wind. Share your items if the class did not bring enough.**

- 3) Review with the class what has just been discussed: hot and cold (temperature), rain and snow (precipitation), and wind. Explain that these things together make up weather.
  - ® *Temperature is how hot or cold the air around us is.*
  - ® *Precipitation is water falling in the form of rain, snow, hail, or sleet.*
  - ® *Wind is the natural movement of air.*
- 4) Ask the class what the difference is between the weather in the winter and the summer.
  - ® *The winter is cold and snowy. The summer is hot and dry.*



Now explain that weather changes and that these changes can happen much faster than the change from winter to summer. Ask for examples.


® *Examples might include a rain storm the does not last long, arriving at school in the warm sunshine and leaving in a thunderstorm, or waking up to find snow on the ground where there was none the night before.*


Tell the class that Kansas is known for having weather that changes. In fact some people say that if you don't like the weather just wait a few minutes and it will change. Weather does not always make extreme changes but it does change. Ask if it is important to Kansas farmers for the weather to change.

® *Yes. Kansas is an agricultural state. If it rained everyday the crops would not grow. If it were always wintertime and cold, farmers could not plant their crops. If it were always hot and sunny with no rain the crops would dry up instead of growing. If it were always cloudy with no sun the plants wouldn't grow because they need the sun. Changing weather is very important in Kansas.*


- 5) Tell the class that they are going to keep track of the weather for a week. Everyday for one week they will keep track of whether it is sunny, cloudy, stormy, rainy, snowy, or windy.


Show the class the weather chart. Explain what symbols or colors they can use to represent various types of weather


Sunny = yellow or 

Cloudy = grey or 

Stormy = black or 

Rainy = blue or 

Snowy = white or 

Windy = green or 

Take the class to a window or door where they can look outside and talk with them about what they are looking at. Tell them to remember what they think the weather is like outside so they can record it on their chart.

Hand out worksheet #12, Weather Chart or direct their attention to the large chart made in advance. Have the class fill in the chart for that day. After everyone has finished ask them to guess what the weather will be tomorrow. Make a temporary note as a reminder.



- 6) At the end of the week have the class total the symbols they've recorded in each column and write the total number at the bottom of that column. For example, if they drew suns for four days they will write four at the bottom of the column.

### **EXTENDED ACTIVITIES**

- 1) Forecasting is the science of predicting the weather. Have the class record the weather on their charts. After they've completed this for the day compare it with the forecast that was made the day before. You may also want to compare your observations with advance forecasts that were made the previous week.
- 2) Use the thermometer on worksheet #14 to record the weather for the day. You may want to mark the temperature on it each day, and at the end of the week use these markings to see how much variation there was over a week's time.
- 3) Talk about how irrigation has made Kansas weather more tolerable and conducive to growing crops.
- 4) Use the tornado tube to talk about tornados, their impact on Kansas, warning signals, and safety precautions. To use the tornado tube fill one plastic jug (a soda bottle works well) about one-third full of colored water. Attach the tornado tube to the neck of this bottle and another empty bottle. Holding the bottles in a vertical position with the liquid on top, rotate the bottles in spiral motion. When the liquid begins spinning and forms a tornado shape stop rotating the bottles.
- 5) Use a weather map to talk about the weather and weather forecasting. These are often available through the Federal Aviation Administration or check for weather information and/or radar maps on the Internet or in your local newspaper.

