

# Maps, graphs and charts

# CURRICULUM Visual Literacy



- Weather
- TV Movies
- Sports
- Stocks

# Maps, graphs and charts

The activities meet the English/Language Arts standard that deals with informational text and skill 3 in the social studies curriculum that says use map and globe reading skills and interpret graphs and charts.

**1** Informational graphics convey details and improve communication with newspaper readers. Maps appear each day in the weather section. Newspapers publish other maps to clarify and support news stories. Graphs and charts also accompany stories and appear each day in weather, sports, TV-movie sections and stock pages. Have students scan one or more newspapers for maps, charts and graphs and share what they find. They should note whether the graphic is a regular feature of the newspaper and whether it is a stand-alone, visual sidebar or a supplement to a news story. Provide the student worksheet, **MAPS, GRAPHS and CHARTS**.

Follow-up by having students evaluate the graphics. Ask questions such as: Does the graphic have an effective headline? Does the key make clear what the elements of the graph/chart represent? Is the graphic clean and uncluttered? Do the graphics make stories or the whole newspaper more readable? Do the graphics make the newspaper more appealing to the eye?

## WEATHER MAPS

**2** Have students use the weather report in their newspapers to fill in the student worksheet, **WEATHER CLOSE to HOME**. They should find all of the weather about their community.

**3** Have students use weather maps and reports to reinforce learning about the state's regions. Provide the student worksheets, **WEATHER in NORTH CAROLINA** and **TRAVEL NORTH CAROLINA**. Ask students to select cities and determine distances from their hometown and plan trips to the different cities.

**4** Many newspapers offer reports about major cities in the United States and around the world. Use the student worksheet titled **WEATHER FAR from HOME** to record high and low temperatures and ranges of temperature. Locate all of the cities on classroom maps of the United States and the world. Have students consider weather when determining whether they want to visit different cities and use airline and travel ads in the newspaper to plan their trips.

**5** Have students keep a journal of weather conditions over a 28 day or four-week period. They should record what they learn, particularly during times when weather is most threatening. Provide the student worksheet **WEATHER MAKES NEWS**.

**6** Ask students to collect all of the symbols used on weather pages. Provide the student worksheet titled **SYMBOLS in WEATHER** or display the symbols on bulletin boards. Have students discuss the emotions associated with weather and weather words and symbols and use weather words and symbols to create similes, metaphors and other figures of speech.

**7** Have students convert temperatures from Fahrenheit to Celsius and rewrite one section of the weather report. Celsius = (Fahrenheit - 32 degrees) X 5.

## OTHER MAPS

**8** Have students plan a shopping trip (or day of entertainment), using ads to make choices. Then ask them to draw a map to show their route. They should indicate where they will go first, second, third.

**9** Provide maps and have students follow their favorite teams as they travel or track hurricanes and storms. Encourage students to keep track of candidates for public officials as they campaign and world leaders as they travel to other nations.

**10** Collect maps from the newspaper, and locate those places on larger maps of the state, nation and world.

**11** Make use of classroom maps and your newspaper. Establish a time limit, such as three or five minutes. Have students locate and list as many places in the newspaper as they can find. Students should list each place only once and record the page number. Recognize the student who finds the most in the allotted time. Also, have students identify and list the state, country or continent where each place is found. Then have students find the places on classroom maps. Students should work in pairs and assist each other in finding less familiar places.

Note whether you want to limit their search to datelines. Datelines tell readers where the news originated, generally where the reporter was when he transmitted the story. Datelines most often appear on the first line of news stories that occur outside the local area.

Follow up by discussing which places appear in the news on a regular basis and why. Offer the student worksheet, **PLACES in the NEWS**.



# Maps, graphs and charts

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Display maps on bulletin boards. On the bulletin board, around the maps, have students attach stories that refer to places on the maps. They should connect the stories to the places with yarn or strips of paper.

Write or have students write comprehension questions based on maps found in newspapers.

Have students create maps to supplement stories that do not have maps.

## SPORTS

Have students read for facts about favorite teams, list their wins and losses and calculate differences. Provide the chart **SPORTS FACTS in FIVE** for students to record details about the variety of sports in one day's newspaper.

Ask students how teams score points (touchdowns, field goals, extra point and two-point conversions and safety for football AND two and three-point shots and free throws for basketball). Have students use the scoring to explain the results of games. Use worksheets, **BASKETBALL STATISTICS** and **FOOTBALL SCORES**.

Create and have students create similar questions based on data in newspapers about sports that they understand. Have them teach other students about their favorite sports, teams and players and explain the box scores.

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Have students use box scores to practice their reading and interpreting charts. Have them list from high to low the batting averages of baseball players on certain teams. Or ask them to list players with the ten highest batting averages or most homeruns or the teams scoring the most runs during the season or part of the season. Have students record at bats (AB) hits (H) and runs (R) and conclude whether and how often more at bats and hits result in more runs.

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Have students follow individual sports such as tennis, golf or car racing. They should keep win/loss records and rankings for favorite players, averages scores for golfers, games and matches won and lost for favorite tennis players and rankings and winnings for car racers.

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Basketball tournaments use brackets to show which teams play each other and which team wins and plays more games. Create brackets to show which teams win and lose in other sports.

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## TV-MOVIES

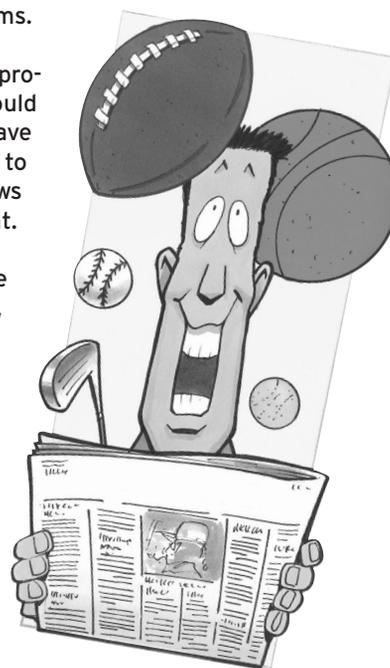
List several programs and have students find them in the TV schedule. Ask: What time do the programs start? When do they end? How long do they last? Where or on what channel do you turn to see them? Have students draw clocks on paper plates on to show times for the programs.

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Have students choose X number of TV shows or programs to view over a two-hour period. They should check to be sure the programs do not overlap. Have them indicate which show they prefer, if they had to choose one. Ask them to construct a graph that shows what percent of the day the programs represent.

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Ask students to classify movies advertised in the newspaper. Offer categories, such as comedy, tragedy, romance, action or adventure and science fiction, but encourage students to choose their own categories. Have students use a pie chart or other type of graph to show results. They should write a headline for their chart or graph. Provide the worksheet, **CHART MOVIES**.



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### STOCKS

Explain that newspapers no longer publish extensive stock reports. The Internet makes daily reports available. Ask students to determine if and when their newspaper publishes stock reports. Ask if the reports are limited to the companies with the most active stocks and/or companies of local interest.

To orient students to the stock listings, have them complete the student worksheet, **CHARTING STOCKS**. Adjust the assignment if your newspaper does not carry all of the information called for on the worksheet.

Follow up by giving students an imaginary amount of money to spend on stocks of their choice. Have them follow and graph the progress of the companies over several weeks. Ask if they lose or gain money. Encourage long-term investments.

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### CULMINATING ACTIVITIES

Survey, poll and/or allow students to vote on items and ideas in your newspaper and have them graph the results.

Design a product. Choose a simple product such as a tissue box or soft drink can. Or you may choose a book jacket or CD cover for music or movie. Or, design an electronic device, such as a cell phone, ipod or computer game. You may also choose to design the box that carries the product. Create words and pictures to help sell the product. Use your design and write the advertising copy for a newspaper ad for your chosen product. To be sure you include all elements for an effective ad, refer to activities 14 and 15 in the section on Advertisements in this curriculum.



# Maps, graphs and charts

## VISUAL LITERACY

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# MAPS, GRAPHS, CHARTS

Scan one or more newspapers for maps, charts and graphs. How many do you find? Is the graphic a regular feature of the newspaper? Does it stand alone as a visual sidebar or does it supplement a news story?



# Informational maps, graphs and charts

Handout, Rochester Post-Bulletin, 1999. Copyright 2006, NC Press Foundation. All Rights reserved.

How many?

Map, Graph or Chart Topic	Section / Page	Regular feature	Stand alone or Supplement to news story

## THINK more!

Evaluate several graphics. Does the graphic have an effective headline? Does the key make clear what the elements of the graph/chart represent? Is the graphic clean and uncluttered? Does the map or graphic convey significant details? Do the graphics make stories or the whole newspaper more readable? Do the graphics make the newspaper more appealing to the eye?

Find weather information in your newspaper:



weather close to **HOME**

1. Does the front page include weather information?  
What do learn about today's weather on the front page?
2. Where does the weather report and map appear in your newspaper?  
Does the weather appear in the same section and/or on the same page each day?
3. Does the newspaper include news stories about the weather and its impact on your community? What do you learn?

The weather in your town affects you most directly. Chart information from your newspaper's weather section and answer questions.

Your town

Today's prediction		Wind, rain, snow, etc.	Air quality	Precipitation level
Hi	Low			

1. What's the range of temperatures predicted for today?
2. How do those predictions compare with actual temperatures recorded yesterday?
3. What time does the sun rise and set today?
4. What is the phase of the moon? Draw or describe.
5. What other information do you find? Fronts? Air pollution levels? UV ratings? High pressure systems? Barometer reading? Why do you need to know this information?

**THINK**more!

How does the weather in your home town and county affect you and the choices you make? Does the weather affect the way you dress and the activities you choose? Does the weather affect your work?

# weather in **NORTH CAROLINA**

Select four cities in North Carolina that represent the different regions of the state (Mountains, Piedmont, Coastal Plains and Sandhills).



maps, graphs and charts

# Informational

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North Carolina cities	Region	Temperature		Other weather conditions
		Hi	Low	
1.				
2.				
3.				
4.				

Circle any city that is located in the same region as your town. If the weather in any city is similar to weather in your town, place a checkmark by the city. Place an "X" by the city with weather most different from your town's or county's weather.

## **THINK**more!

Why is the weather in some cities similar to weather in your town? How does location affect the weather? How do mountains and bodies of water affect weather? What else affects weather? Scan the other weather charts in your newspaper and identify cities outside the state that have weather similar to the weather in your town.

# TRAVEL North Carolina

Cut out the map of North Carolina on your weather page and paste it on the back or front of this sheet. Highlight your home county. Also, pinpoint four North Carolina cities. Count the counties between your county and each of the four cities. Estimate the distance.

	Cities	Number of counties	Estimated distance
1.			
2.			
3.			
4.			

## THINKmore!

Conduct research to figure out how far each city is from your hometown and list the actual distance. Estimate the time required to drive to each town. Use a road map to chart your course.



Before planning a trip to the city, what more do you need to know? How does each city attract visitors? What do you already know and what more do you want to know about attractions in the cities?



# weather FAR FROM HOME

Select five cities in the United States but outside North Carolina and five outside the United States. Chart high and low temperatures and other information you find in the weather report or in news stories. Locate each city on a classroom United States or world map.

**Informational** maps, graphs and charts

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Cities in United States	Temperatures High Low	Other
1.		
2.		
3.		
4.		
5.		
Where is the weather hottest? _____ coldest? _____		
Where is the range the smallest? _____ largest? _____		
Which type of weather do you prefer? _____		

Cities outside United States	Temperatures High Low	Other
1.		
2.		
3.		
4.		
5.		
Where is the weather hottest? _____ coldest? _____		
Where is the range the smallest? _____ largest? _____		
Which type of weather do you prefer? _____		

## THINK more!

If you were able to visit any city (cities) today, which one(s) would you choose? If you traveled in and out of three of the cities and had to pack for the weather in each location, what would you pack? Check newspaper ads for clothes to pack and transportation ads in your newspaper that aid in planning your trip.



# weather **MAKES NEWS**

Keep a journal based on weather reported in news stories over 28 days or four weeks, particularly during times of year, such as hurricane season, when weather seems threatening. Newspapers may not have weather-related stories each day.

Month \_\_\_\_\_ or 28-days starting \_\_\_\_\_

Sunday 1	Monday 2	Tuesday 3	Wed. 4	Thurs. 5	Fri 6	Sat. 7
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Sunday 1	Monday 2	Tuesday 3	Wed. 4	Thurs. 5	Fri 6	Sat. 7
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Sunday 1	Monday 2	Tuesday 3	Wed. 4	Thurs. 5	Fri 6	Sat. 7
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Sunday 1	Monday 2	Tuesday 3	Wed. 4	Thurs. 5	Fri 6	Sat. 7
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## **THINK**more!

Highlight important weather words and phrases in the news stories. Use context clues for definitions and explanations of the terms.

What threatening or damaging weather did the newspaper report? Were those reports about weather in your community, region, state, nation or world? How does damaging weather outside your community affect you?

Cut out paste symbols that your newspaper uses to represent each type of weather:

# SYMBOLS in weather

1. Sunny

2. Cloudy

3. Partly cloudy

4. Rain

5. Thunderstorm

6. Snow

Over time, cut out drawings that show phases of the moon and paste those below.

## THINK more!

What emotions do you associate with the different weather conditions and phases of the moon? Write similes and metaphors that refer to weather.  
Example: as sunny as my street in summer.

Locate and list all of the places you find mentioned in your newspaper.

List any place only once. Also provide page numbers.



## PLACES in the news

Places	Page numbers	State, Country, Continent

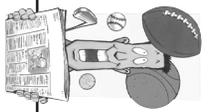
How many different places did you find? \_\_\_\_\_

After counting the different places, work with other students to name the states, countries and continents for each place or setting mentioned in your newspaper. Locate the places on classroom maps.

### THINK more!

Discuss which places appear in the news on a regular basis. What makes those places "hotspots"?

# Informational maps, graphs and charts



Draw facts from the sports section of today's newspaper. List the sports on the left and choose facts about the different sports to complete the chart.

## SPORTS facts in five

	SPORT	Losing Team	Winning Player	Won over 50%	Lost by small margin	Top ranked
1.						
2.						
3.						
4.						
5.						

**THINK**  
more!

Come up with other categories, create another chart and have a classmate complete your chart based on sports statistics.

Select five players and find the following information about them from reading your newspaper:

- MP** (minutes played),
- FG** (field goals),
- FT** (free throws),
- R** (rebounds),
- A** (assists),
- TP** (total points).

# BASKETBALL statistics



Player's name	MP	FG	FT	R	A	TP

## THINK more!

Answer the following questions and draw other conclusions based on the data:

1. What percentage of the game did each person play?
2. How many points did the players score per minute of playing time?
3. Whose statistics impress you most? Why?

# Informational maps, graphs and charts

Locate football scores in the newspaper. Find out the points scored for several games and how the points were scored (touchdown, extra point, two-point conversion, field goal, and/or safety). Fill in the chart below with the names of the teams, their points and final scores.

## FOOTBALL Scores

TEAM NAME	1	2 (two-point conversion)	2 (safety)	3	6	Total points
team 1						
team 2						
team 1						
team 2						
team 1						
team 2						
team 1						
team 2						
team 1						
team 2						

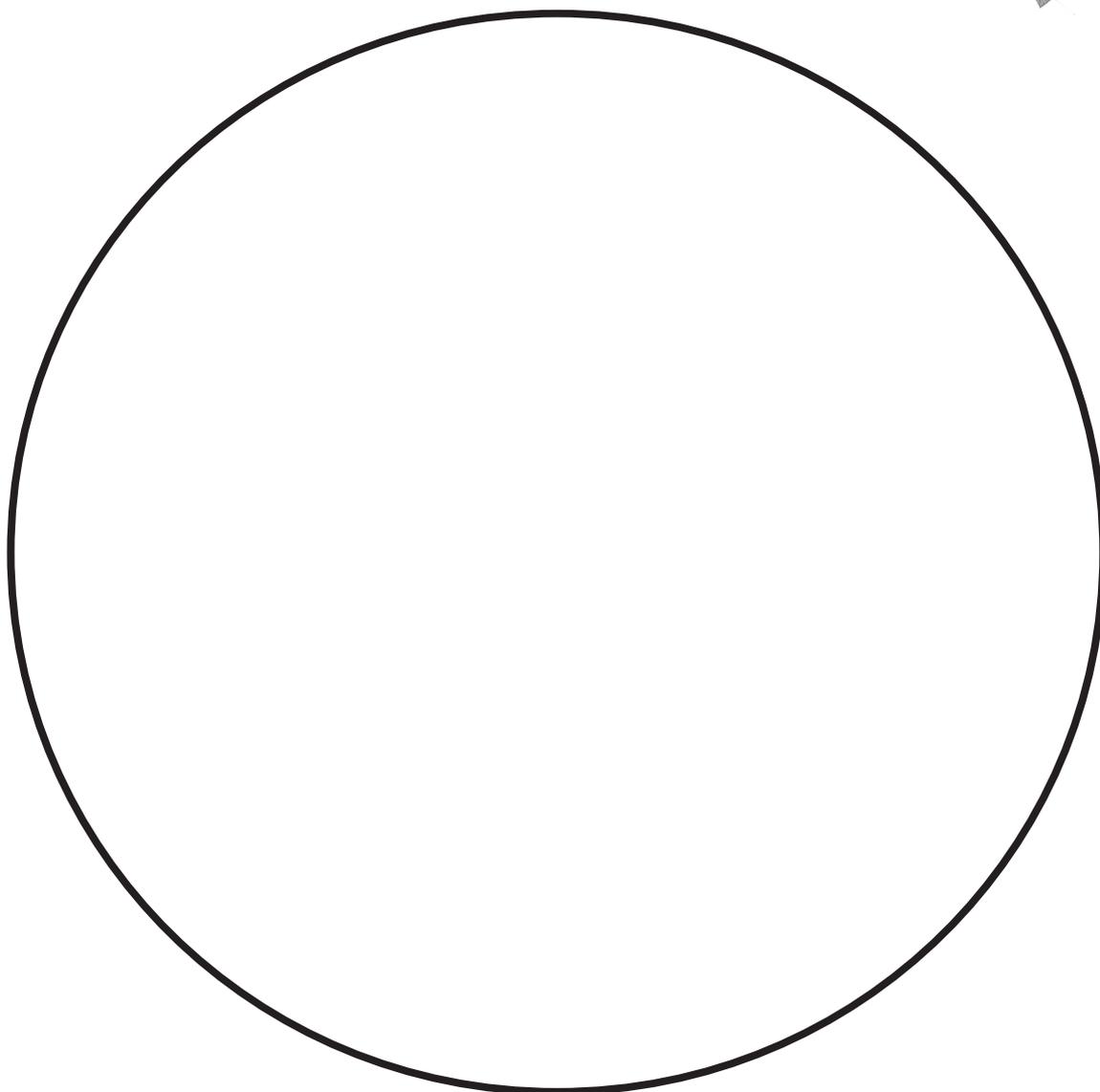
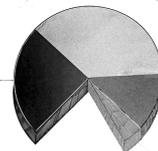
**THINK**  
more!

Express one of the scores as a linear equation: X=touchdowns, Y=extra point, Z=field goal, A=safety, B=two point conversation.

# CHART MOVIES



Classify movies advertised in the newspaper. Choose categories such as comedy, tragedy, mystery, action or adventure, science fiction and romance. Use the pie chart to show how many movies fall into the categories. Write a headline for your chart.



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**THINK**more!

What other type of graph or chart can you use to show the categories of movies?

# charting **STOCKS**

Select ten companies listed in the stock pages of the newspaper. Choose companies that interest you. Record the price at the close of the day and change that occurred over the day. Plus (+) indicates price went up, dash (-) indicates price went down and dots (...) indicate no change.

Subtract change from closing price to figure out opening price for stocks. If the newspaper lists high and low prices over the past year, determine where yesterday's price falls in the range.

Stock	Close	Net Change	Opening price	365	
				High	Low
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

## **THINK**more!

Track the performance of the stocks over several days or weeks. Then pretend you have money to invest in the stock market. Choose five of the companies and purchase 100 stocks. Graph the performance of your stocks.