

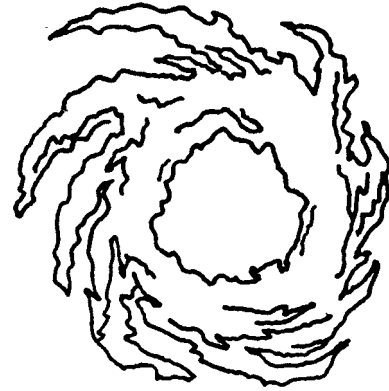
Tracking a Hurricane

Class Project

Overview: *Students will track a hurricane to simulate what meteorologists do.*

Materials

- seven copies and a transparency of page 43
- overhead projector
- small red self-adhesive dots
- transparency copy of hurricane shape on right
- copy of the pages 44 and 45



Lesson Preparation

Cut out the transparency of the hurricane shape. Mark a copy of the Hurricane Map with the locations of the complete data to create an answer sheet.

Activity

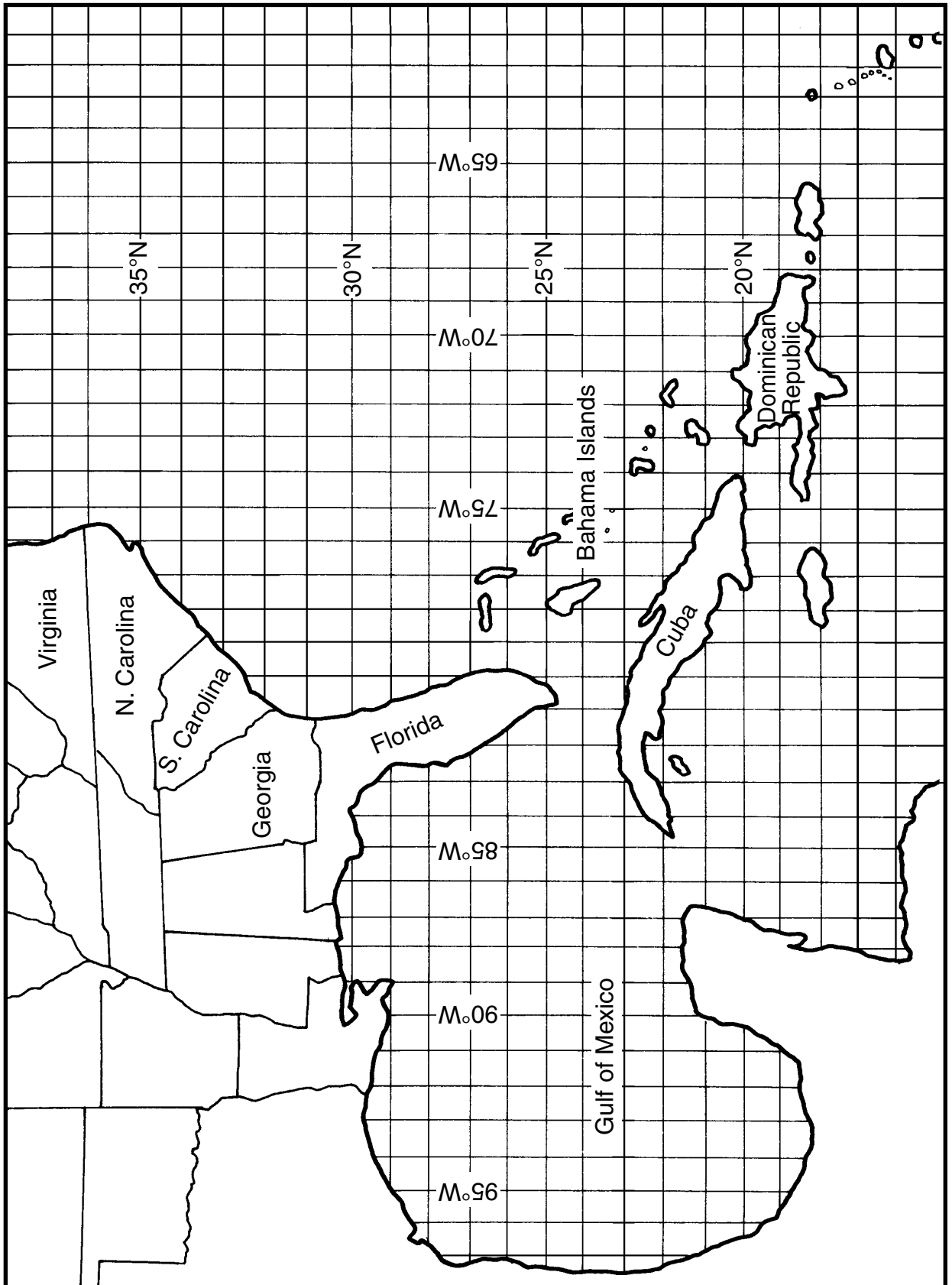
1. Tell the students that it is September 3 at 6:00 A.M. and information about a hurricane in the Atlantic Ocean near the Bahamas has just been received. The hurricane has been named Sam. Place the map transparency on the overhead. Find the coordinates for Hurricane Sam (20° N 64° W) and then, stick a dot on this location. Show the students how to find the coordinates as you do so. Put the transparency of the hurricane shape over the dot so that its center is over the dot. Let the students know that at this point, it has been decided that a hurricane warning and evacuation order will be sent to both the Bahamas and Dominican Republic. Show where these are located on the map.
2. Explain to the students that they are going to be meteorologists working at a hurricane center and following the progress of Hurricane Sam. Divide the students into six groups and provide each group a copy of the map, data pages, and six adhesive dots. Have them read the data and see that it is updated every 12 hours. Tell them to use the technique you showed them and plot the progress of the hurricane on their maps. Tell them to mark each new data on the map in pencil first and then, place the dot over it. Monitor the groups at first to be sure they understand what to do and are sharing the responsibilities.
3. Because students mark the new location each time, they should decide what action they will take such as, order evacuations or give only warnings. Discuss with them the consequences of giving evacuation orders as opposed to warnings.

Closure

- As the students work, plot the seven hurricane locations on the transparency, using the answer map prepared earlier. Discuss their answers for the warnings they gave as the hurricane progressed. These will vary with the groups. Lead the students in a final analysis of the hurricane warnings they gave. Help them understand how difficult this is in real life situations.

Tracking a Hurricane (cont.)

Map of Hurricane Site



Tracking a Hurricane *(cont.)*

Hurricane Sam Data		
Time, Date, and Information	Location	Action
<p>6:00 P.M. September 3</p> <p>Hurricane Sam is picking up speed and power. It is headed straight for the Bahamas. The hurricane warning for the Bahamas was correct since it swept over the island.</p>	<p>22°N and 70°W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>6:00 A.M. September 4</p> <p>Hurricane Sam is advancing rapidly northward. Speeds near the eye have been reported to be close to 150 mph (241 km/h).</p>	<p>24°N and 75°W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>6:00 P.M. September 4</p> <p>The eye of the hurricane sits just off the coast of Florida. Mass destruction is occurring along the coastal areas. Forecasters are not sure of the direction the hurricane will take from here since hurricanes become unstable when they approach land.</p>	<p>27°N and 79°W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

Tracking a Hurricane *(cont.)*

Hurricane Sam Data <i>(cont.)</i>		
Time, Date, and Information	Location	Action
<p>6:00 A.M. September 5</p> <p>Hurricane Sam has taken an abrupt turn northward and has avoided central Florida. It is still over the ocean and its eye is centered near the border between Florida and Georgia. Forecasters are fairly certain the hurricane will continue in its northerly path, as it is beginning to die down.</p>	<p>31° N and 81° W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>6:00 P.M. September 5</p> <p>North Carolina is feeling Hurricane Sam. It looks as though the forecasters were right; the hurricane is continuing up the coast, but the land is slowing it down rapidly. Winds still beat against the coastline.</p>	<p>34° N and 77° W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
<p>6:00 A.M. September 6</p> <p>Hurricane Sam is dying down off the coast of Virginia this morning. Rains are striking the coastline, but the fierce winds which struck the Bahamas and Florida are now gone. Forecasters have downgraded the hurricane to a tropical depression. The worst is over!</p>	<p>37° N and 75° W</p>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>