

**LESSON**  
**6**

# Can we identify the best conditions for storms?

**STEP 1: Make predictions.**

Use your model for an isolated storm, and what you know about temperature and humidity, to predict the very best conditions that would lead to an isolated storm.

A strong storm would form if the temperature high in the atmosphere near the clouds was

much colder than     much warmer than     about the same as

the temperature near the ground because: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

A strong storm would form if humidity was     high     moderate     low

because: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



# Can we identify the best conditions for storms?

## STEP 2: Record and explain your observations.

Now you can test your predictions with the Make a Thunderstorm simulation ([scied.ucar.edu/make-thunderstorm](http://scied.ucar.edu/make-thunderstorm)). Follow your teacher's instructions for collecting data from the simulation. Record your observations of five trials in the table below. Then explain why a storm did or did not form.

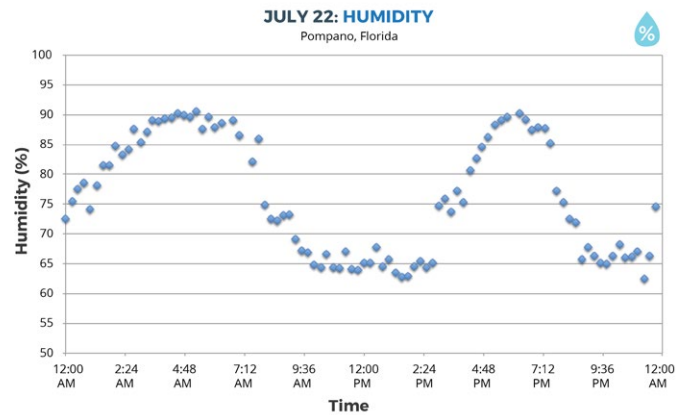
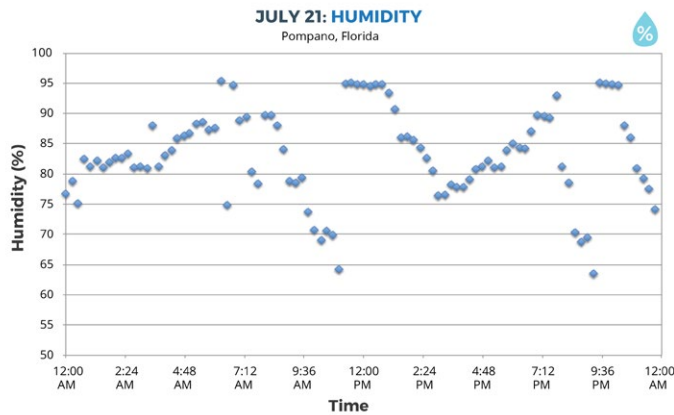
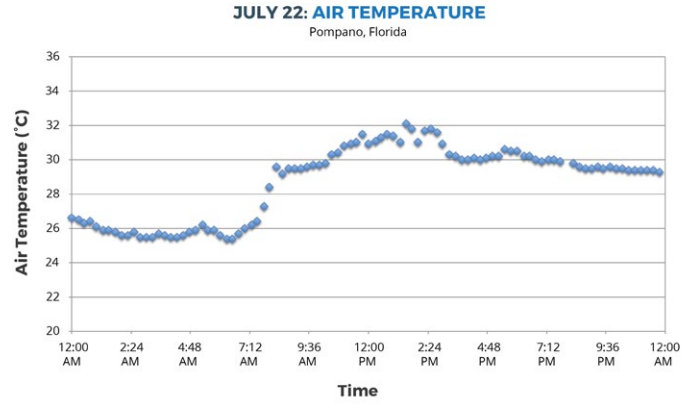
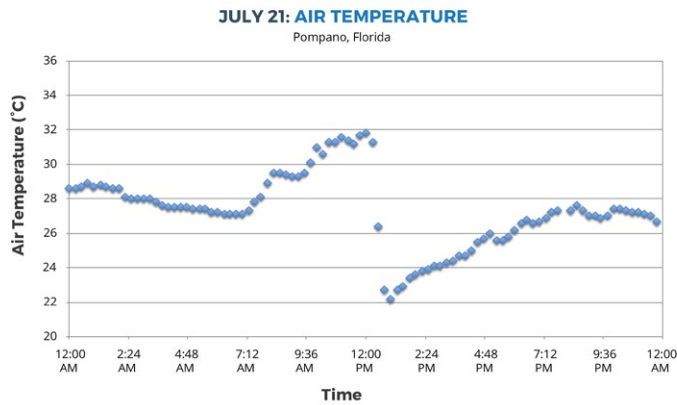
CONDITIONS	OUTCOME	WHY DID THIS HAPPEN? Explain what helped the storm or what was missing.
high-level temp <input type="text"/> humidity <input type="text"/> low-level temp <input type="text"/>	<input type="radio"/> no storm <input type="radio"/> small storm <input type="radio"/> medium storm <input type="radio"/> big storm	
high-level temp <input type="text"/> humidity <input type="text"/> low-level temp <input type="text"/>	<input type="radio"/> no storm <input type="radio"/> small storm <input type="radio"/> medium storm <input type="radio"/> big storm	
high-level temp <input type="text"/> humidity <input type="text"/> low-level temp <input type="text"/>	<input type="radio"/> no storm <input type="radio"/> small storm <input type="radio"/> medium storm <input type="radio"/> big storm	
high-level temp <input type="text"/> humidity <input type="text"/> low-level temp <input type="text"/>	<input type="radio"/> no storm <input type="radio"/> small storm <input type="radio"/> medium storm <input type="radio"/> big storm	
high-level temp <input type="text"/> humidity <input type="text"/> low-level temp <input type="text"/>	<input type="radio"/> no storm <input type="radio"/> small storm <input type="radio"/> medium storm <input type="radio"/> big storm	

# Can we identify the best conditions for storms?

## STEP 3: When did it rain?

The air temperature and humidity data below is from two days in Pompano, Florida. It rained on one of these days. Identify the most likely day and time it rained.

1. Circle on the graph when the rain happened.



2. Explain what conditions were likely leading up to this rain event, and why you think the rain happened at this time. Use evidence from previous investigations and your model to develop your explanation.