

# Hurricanes Answer Sheet

## LEVEL 1

None

## LEVEL 2

### Answers to *Hurricane Tracking Vocabulary*

1. Latitude
2. Hemisphere
3. Longitude
4. Meteorologist
5. Hurricane
6. Tracking

## LEVEL 3

### Answers to *A Weighty Problem*

1. The ruler will balance, assuming the balloons are tied equidistant from the center of the ruler.
2. The inflated balloon weighs more because air has been added. It will tip the end of the ruler down.
3. The air inside and outside the inflated balloon is the same.
4. As the air inside the balloon is released, the air outside the balloon pushes against the balloon, causing it to shrink and collapse.

### Answers to *Hurricane Basics*

- What are the main ingredients it takes to create a hurricane?  
Warm, moist tropical air; a low-pressure system that begins a wind pattern near the ocean's surface and spirals air inward; and a build-up of moisture.
- What is the structure of a hurricane?  
The hurricane's structure includes the eye, the eye wall and the rain bands.
- What are the major causes of hurricane damage?  
High winds, storm surges, torrential rains and flooding, and tornadoes spawned by the hurricane.
- What kinds of damage can a hurricane inflict on a home?  
Wind and water damage and fire damage caused by impaired electrical and gas systems.
- What are the major hazards of hurricanes to humans? To animals? To the environment?  
Hurricanes most often cause death to humans or animals by a storm surge or flooding; wind-blown objects and falling trees can harm humans and animals; vegetation can be destroyed by winds and flooding; and sands and land shift in the winds and the storm surge.
- Do hurricane winds blow toward the center of the storm or away from the center of the storm?  
At the bottom of the hurricane, warm, moist air from a warm ocean flows in and whirls upward in a counterclockwise direction. Cooler air at the top of the hurricane descends into

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the eye, creating a small center of calm weather. The eye wall surrounds the eye and is composed of dense clouds that contain the highest winds in the storm. The storm's outer rain bands—often with winds of hurricane or tropical-storm force—are made up of dense bands of thunderstorms that extend as little as 50 miles from the storm in small hurricanes to as much as 400 miles in large ones.

- How might a hurricane change someone's life?  
Answers will vary.

## Answers to *Hurricane Problems*

1. Mean: 14.2 feet; median: 13 feet; range: 10 feet
2. 32,355 gallons
3. Circumference = 942 miles; area = 70,650 square miles
4. Area around eye: 707 square miles
5. Average rainfall is 2.18 inches