

NOT BORING MEDIA

THE CLOUD THAT WEIGHED A MILLION POUNDS

High-Interest Nonfiction Reading Passage

WHAT'S INCLUDED

- ✓ Reading Passage ✓ Comprehension Questions
- ✓ Answer Key ✓ Teacher Guide

GRADES 4-6 • LEXILE ~750L • DOK LEVELS 1-4

Reading they'll actually do.

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WHAT'S INCLUDED

- ✓ High-interest nonfiction reading passage (300-400 words)
- ✓ 6 comprehension questions spanning DOK levels 1-4
- ✓ Complete answer key with explanations
- ✓ Teacher guide with standards, pacing, and extensions

Questions or feedback? Leave a review or message us through TPT!

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THE CLOUD THAT WEIGHED A MILLION POUNDS

Clouds look light and fluffy, drifting effortlessly across the sky. But that's an illusion. A typical cumulus cloud—the puffy white kind you see on a summer day—weighs about 1.1 million pounds. That's roughly the weight of 100 elephants floating above your head.

How can something so heavy float? The answer involves some clever physics. While the total water in a cloud is massive, it's spread across billions of tiny droplets, each smaller than a human hair. These droplets are so small and spread so far apart that they fall very slowly—much slower than the rising air currents that keep pushing them up.

Think of it like confetti in the wind. A single piece of confetti falls slowly because it's light and has lots of surface area compared to its weight. Now imagine billions of confetti pieces spread across miles of sky, with wind constantly blowing upward. They'd seem to float forever.

Not all clouds weigh the same. A small, wispy cirrus cloud might contain only a few thousand pounds of ice crystals. But a massive thunderstorm cloud—called a cumulonimbus—can weigh several billion pounds. These giants can tower 40,000 feet high and contain enough water to fill thousands of swimming pools.

When clouds become too heavy with water, the droplets combine and grow until they're too big for air currents to support. That's when it rains. A single rainstorm can drop millions of pounds of water on a city in just a few hours.

Scientists use these calculations to study weather patterns and climate change. By understanding how much water clouds hold and how they form, researchers can better predict storms and understand how Earth's water cycle works.

The next time you watch clouds drift by, remember: you're watching millions of pounds of water perform an elegant balancing act in the sky.

Word Count: 304 | Lexile: ~750L | Grades 4-6 | Source: NOAA

COMPREHENSION QUESTIONS

Name: _____ Date: _____

1 How much does a typical cumulus cloud weigh?

- A) About 1,000 pounds
- B) About 100,000 pounds
- C) About 1.1 million pounds
- D) About 1 billion pounds

2 What makes cloud droplets fall very slowly?

- A) They're made of helium
- B) They're extremely small with lots of surface area
- C) Gravity doesn't affect them
- D) They're attached to each other

3 Why does the passage compare cloud droplets to confetti?

- A) Both are colorful
- B) Both are small, light objects that fall slowly due to their surface area
- C) Both are made of paper
- D) Both are found at parties

4 What causes rain to fall from clouds?

- A) Wind blows the droplets down
- B) Droplets combine and grow too big for air currents to support
- C) The sun melts the cloud
- D) Gravity suddenly increases

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Why is understanding cloud weight important for scientists?

- A) To make clouds lighter
- B) To predict weather and understand Earth's water cycle
- C) To weigh elephants more accurately
- D) To build airplanes

6

What does this passage reveal about how everyday observations can be deceiving?

- A) Nothing is what it seems
- B) Things that appear light or effortless may actually involve tremendous forces in balance
- C) Clouds are dangerous
- D) We should never look at clouds

ANSWER KEY

The Cloud That Weighed a Million Pounds

1. C) About 1.1 million pounds

DOK 1 — Recall. The passage states: 'A typical cumulus cloud weighs about 1.1 million pounds.'

2. B) They're extremely small with lots of surface area

DOK 1 — Recall. The passage explains droplets are 'so small and spread so far apart that they fall very slowly.'

3. B) Both are small, light objects that fall slowly due to their surface area

DOK 2 — Inference. The confetti analogy illustrates how small, light objects with lots of surface area fall slowly, explaining how tiny droplets 'float.'

4. B) Droplets combine and grow too big for air currents to support

DOK 2 — Inference. The passage states: 'droplets combine and grow until they're too big for air currents to support. That's when it rains.'

5. B) To predict weather and understand Earth's water cycle

DOK 3 — Analysis. The passage explains: 'researchers can better predict storms and understand how Earth's water cycle works.'

6. B) Things that appear light or effortless may actually involve tremendous forces in balance

DOK 4 — Extended Thinking. The passage challenges our assumption that floating clouds are light, revealing 'millions of pounds of water perform an elegant balancing act.'

TEACHER GUIDE

The Cloud That Weighed a Million Pounds

STANDARDS ALIGNMENT

- CCSS.ELA-LITERACY.RI.4.1 — Refer to details and examples in a text
- CCSS.ELA-LITERACY.RI.5.4 — Determine meaning of words and phrases
- CCSS.ELA-LITERACY.RI.5.8 — Explain how author uses evidence
- NGSS — Connections to scientific practices

PACING OPTIONS

- Quick Read (10-15 min): Passage + questions 1-4
- Standard (20-25 min): Full passage + all questions
- Deep Dive (35-40 min): Add discussion + extension

DISCUSSION QUESTIONS

- We assume clouds are light because they float. What other assumptions do we make about everyday things that might be wrong?
- The passage compares clouds to confetti in the wind. What other analogies could help explain how heavy things can 'float'?
- Thunderstorm clouds can weigh billions of pounds. Why doesn't this information make people more afraid of storms?

EXTENSION ACTIVITIES

- Estimate the weight of different cloud types and create a comparison chart (cirrus, cumulus, cumulonimbus, etc.).
- Set up an experiment demonstrating how small particles can float in rising air currents (using fans and confetti or other light materials).
- Research how meteorologists measure cloud water content and write a summary of the technology involved.

DIFFERENTIATION

- Struggling: Pre-teach vocabulary, partner reading
- Advanced: Add research, compare to related events
- ELL: Visual supports, pre-teach context

SOURCE

- NOAA / Scientific American