

From Clear to Overcast: How Sky Cover Is Measured

Name: _____

Date: _____

Class: _____

Read the lesson at myweatherrock.com/journal/explainers/sky-cover (or the printed copy), then answer below.

Remember

Sky cover is measured in oktas: eighths of the dome above you covered by cloud. Zero to one okta is clear or sunny, one to two is mostly clear, three to five is partly cloudy, six to seven is mostly cloudy, and eight is overcast. The words are bands over a number, which is why two forecasts can describe one sky differently at the edges.

Questions

1. What is an okta?

- ☐ A. A cloud eight miles up
- ☐ B. One eighth of the sky dome, used to grade cloud cover
- ☐ C. A unit of sunlight intensity

2. The sky is six oktas covered. The official word is:

- ☐ A. Partly cloudy
- ☐ B. Mostly cloudy
- ☐ C. Overcast

3. Two apps call the same afternoon partly cloudy and mostly cloudy. The likely reason?

- ☐ A. One app is broken
- ☐ B. The sky sits near a band edge and they rounded or sampled differently
- ☐ C. Clouds moved between their updates only

4. Coverage wise, partly sunny compared to partly cloudy is:

- ☐ A. One okta clearer
- ☐ B. The same three to five okta band, daytime phrasing
- ☐ C. Officially undefined

5. At an airport with no human observer, cloud cover is measured by:

- ☐ A. Pilots radioing estimates
- ☐ B. A ceilometer firing laser pulses upward
- ☐ C. The control tower's cameras

In your own words

The forecast says partly cloudy but your friend says it looks mostly cloudy. Use oktas to explain how you could settle the argument.

Answer key (for the teacher)

1. What is an okta?

B. One eighth of the sky dome, used to grade cloud cover — Sky cover is counted in eighths of the visible dome, zero through eight.

2. The sky is six oktas covered. The official word is:

B. Mostly cloudy — Six to seven oktas is mostly cloudy. Overcast is reserved for the full eight.

3. Two apps call the same afternoon partly cloudy and mostly cloudy. The likely reason?

B. The sky sits near a band edge and they rounded or sampled differently — Border skies translate to different words depending on rounding, timing, and model blend. The number is close either way.

4. Coverage wise, partly sunny compared to partly cloudy is:

B. The same three to five okta band, daytime phrasing — Same band, different mood. Partly sunny simply requires a sun to be partly.

5. At an airport with no human observer, cloud cover is measured by:

B. A ceilometer firing laser pulses upward — Ceilometers time laser reflections off cloud bases, and satellites fill in the view from above.