

Using Images in Math Class - Washington Monument



Tier One:

1. Identify the shapes in the picture.
2. What is the biggest thing in the picture? The smallest? The most things?
3. Estimate and then measure the shapes in the picture.
4. What was the difference between your estimated measurements and the real ones?
5. Guess a time frame for the picture. Why? What is the difference between your guess and the actual date of the picture?

Tier Two:

1. Is the real monument similar to the monument on this page? Is there symmetry?
2. Measure and find the area and perimeter of the monument in the picture.
3. Measure and classify the triangle on the top.
4. Measure the man in front of the car. What is the height of the monument in terms of the man's height?
5. What percent of the picture area is taken up by the monument?

Tier Three

1. Is the real monument similar to the monument on this page?
2. Measure and find the area of the monument in the picture.
3. Assuming the other sides are identical, find the surface area of the monument in the picture.
4. The scale factor of this picture to the actual monument is $1 : 1502$. Find the surface area of the actual monument.
5. The base of the actual monument is 55 feet $1 \frac{1}{2}$ inches (16.80 meters). Find the volume of the actual monument.

What could you do with this data?

Interior Number of memorial stones in stairwell: 198.

Elevator ascent/descent time: 60 seconds/60 seconds.

Sway of monument in 30-mile-per-hour wind: 0.125 inches

Total height of monument: 555 feet, $5 \frac{1}{8}$ inches (169.29 meters).

Number of steps in stairwell: 896

Total number of blocks in monument: 36,491

Total weight of the monument: 90,854 tons

How could using images motivate your students?

You have options with images...would any of these images work better for certain topics, subjects or students?



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Where can I find more images like this one?

From www.loc.gov, go to “Resources for Teachers”

Under “Resources” (on the right) choose “[Prints & Photographs Online Catalog](#)”

Click on the blue “Search the Catalog” box. Type in words to search for and click “Search”.

Click the “Preview Images” button for thumbnails to browse.

**** Note** – be careful to save the true URL for any items that you find online. This must be done through viewing the source code, **NOT** by copying the URL address from your browser window. You will find the permanent URL on the last lines of the source code.