

# Did you know they used Geometry to Build Your School?

Many times in school students sit and think about doing other things and always think; what do I need to learn this for I will never use it? How wrong, for example did you know that they used geometry to build your school? The person who designed your school, the people who constructed it, and the people who decorated your school used geometry in almost every phase.

Just take a look around your school and see what geometric shapes you can see in the school building. The windows are rectangular, squares, and even in some cases round. Look at the ceiling and check out the ceiling tile in your classroom. So you think those ceiling tiles were just put up there by some worker. Not really, a geometric pattern was developed based on the design of your classroom, starting from the center of the room and moving to the walls.

The same thing goes for the tiles on the floor. A geometric pattern was developed for the floor in your classroom, which started in the center of the room and worked its way to the walls. Every room in the school used the same process of geometric designs to ceiling tiles, floor tiles, and any furniture that is attached to the walls or floor. Everything has to fit exact geometric patterns so everything can fit in the classroom, including you and your classmates.

If you were to remove the ceiling tiles you would see a network of wood or steel framing used to hold the roof up. What geometric shapes do you suppose this framing is using to hold up the roof? If you said triangles, then you are correct. Because triangles are the strongest geometric shapes for holding weight and they can also use lighter materials to hold the roof up, compared to other shapes.

If you look at where the wall and floor intersect, what is that called? If you said right angle, then you are correct. Does this still apply where the wall intersects the ceiling? It all depends on the shape of your classroom. If the ceiling is flat, then the answer is yes.

What else can you say about where the wall intersects the floor? If you said perpendicular, then you are correct. What is the geometric relationship between the ceiling and floor? If you said parallel, then you are correct if your ceiling is flat. This can be said for every room in your school, except the auditorium, which generally has a sloping floor. What shape would you name the auditorium is? If you said trapezoid, then you are correct.

See geometry is every where in your school. When the construction workers built your school, they used ladders to get up down for completing various tasks. A free standing ladder in the middle of the room, no one has to hold it up, is in what geometric shape? If you said triangular, you are correct. Again triangles are the strongest shape that can support the most weight.

In your school you have probably seen a ramp or two in hall ways. What shape are they? Think about the floor they angle up from and the wall they connect to. If you said a triangle, then you are correct. What about the tables you use in science class, what shape are they? Are they parallel to the floor or perpendicular? If you said the tops of the desks are rectangles, the table is both parallel and perpendicular to the floor then you are correct.

All of the walls, furniture, ceilings, the roof, tables, and other objects around your school have specific geometric shapes and have geometric shapes compared to other objects in your school. How do you think this happened? These were built and designed by students who were sitting in their classrooms saying to themselves, what do I need to learn this for I will never use it?