

WHAT IT FEELS LIKE TO BE A BUILDING, PART I

Overview:

Many forces act on buildings that directly impact its design and structure. In this activity, learners are introduced to the concepts of “dead” and “live” loads by first thinking of how their own bodies are similar to buildings. Then, learners observe different environments throughout the school building to find other examples of “dead” and “live” loads.

What You Need:

- “Dead Load, Live Load” worksheet, one piece per learner
- Clipboards

Teaching Strategy:

- Ask learners to brainstorm ways in which our bodies are like structures: How are we held together? Are there certain materials that make us stronger? Are there any forces or stresses that act on our bodies? What items add to the weight of our bodies every day? What about when you have to add extra weight? How do you feel, for example, when you have a lot of homework and you have to carry a heavy backpack home?
- Explain to learners that a building experiences similar stresses. A weight that is part of the permanent structure is called *dead load*. On humans the *dead load* would include things like clothing

and eyeglasses. The name of a structure’s temporary weight is *live load*. For humans we could compare backpacks, purses and heavy grocery bags to this.

- Draw learners’ attention to a desk or table. Ask them what the live load is of the desk or table. (The materials used to make it.) Ask learners what the live load is of each object on the desk or table. (The books, pencils, papers, etc. that are on it.)
- Explain to learners that they will explore the building to find examples of dead and live loads.

What to Do:

- Pass out the worksheets and clipboards.
- Assign learners to different parts of the building. Try to assign no more than two learners per area. Make sure that you request permission from other teachers for your students to observe in their classrooms.
- Review the worksheets with the learners. They are to list structures and objects in other areas of the building and list the dead and live loads of each.
- Allow learners about 15–20 minutes for this activity and instruct them to return to the classroom when the time is up.
- Once learners are finished share responses.

Name: _____

DEAD LOAD, LIVE LOAD

What area of the building did you analyze? _____

	List structures and objects in this area	Live Load?	Dead Load?
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			