4.2 Forces that Can Act on Structures

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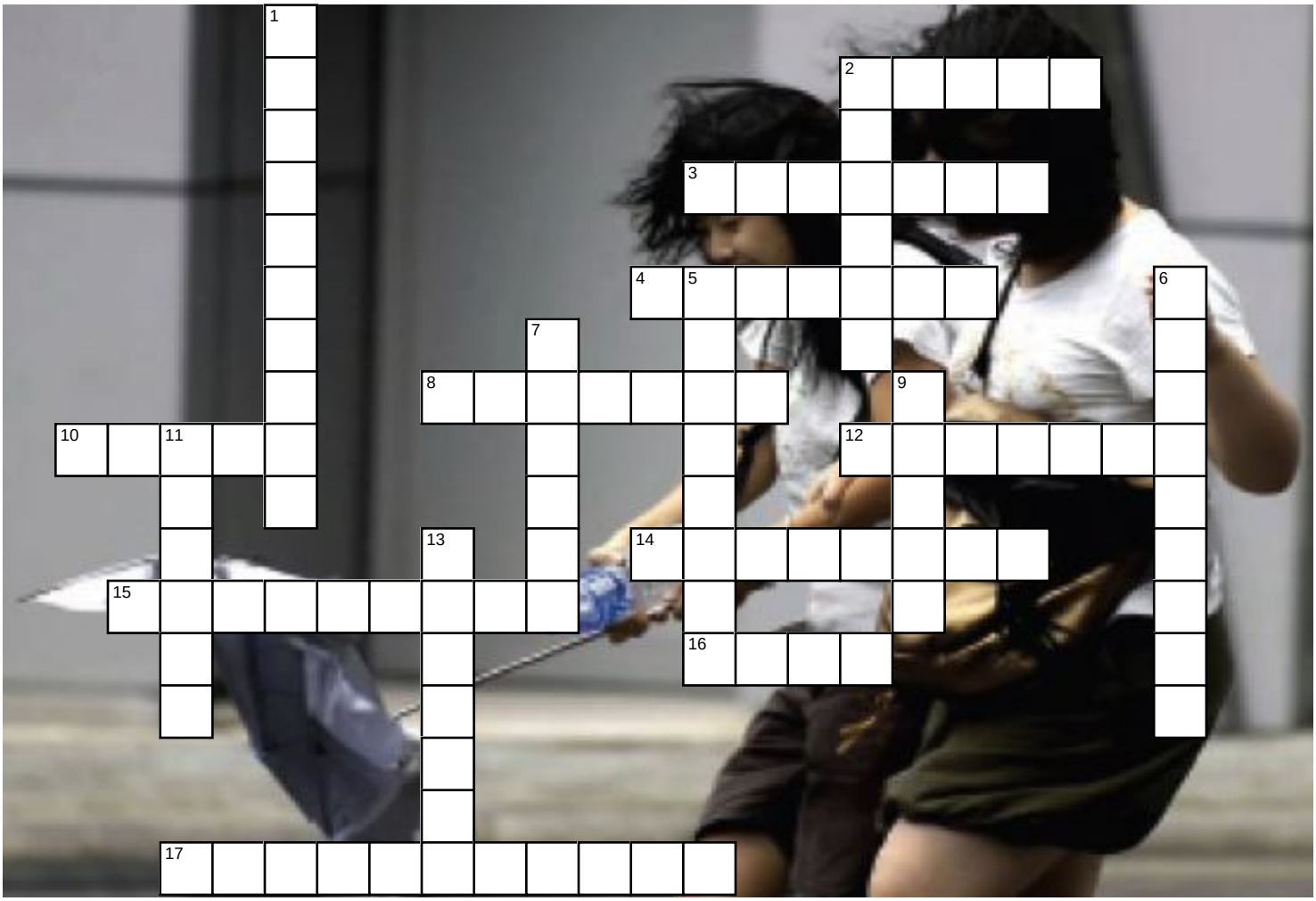

Across

2. _____ is a force that pushes in opposite directions.
3. The _____ load on a structure is made up of the forces that move or change while acting on that structure.
4. A stretched elastic band is an example of this type of internal force.
8. _____ is an external force that acts on all structures all the time. It constantly pulls structures toward the Earth's centre.
10. A _____ is any push or pull.
12. _____ is a twisting force.
14. A force that is caused by one part of a structure acting on other parts of that structure is called an _____ force.
15. Whether the structure is small or large, it must be designed and built to _____ the forces it will face.
16. Every structure needs to support a _____. It is the sum of the static and dynamic forces.
17. The weight of a roof pressing down on the walls of a building is an example of this type of internal force.

Down

1. Forces act on _____.
2. The _____ load on a structure is the effect of gravity on the structure itself.
5. When you pull out a drawer you are exerting an _____ force on the drawer.
6. When you are asking, "How big is the force compared with the size and weight of the object?" you asking about the _____ of that force.
7. If a structure is too strong time and resources might be _____.
9. When you ask, "Where does the force meet the structure?" you are asking about the _____ and plane of application of that force.
11. A buckled road, homes destroyed by tornados, or the collapse of an old building are the result of forces that acted on a structure which could not _____ the force.
13. If a structure is not strong enough it may experience structural _____.