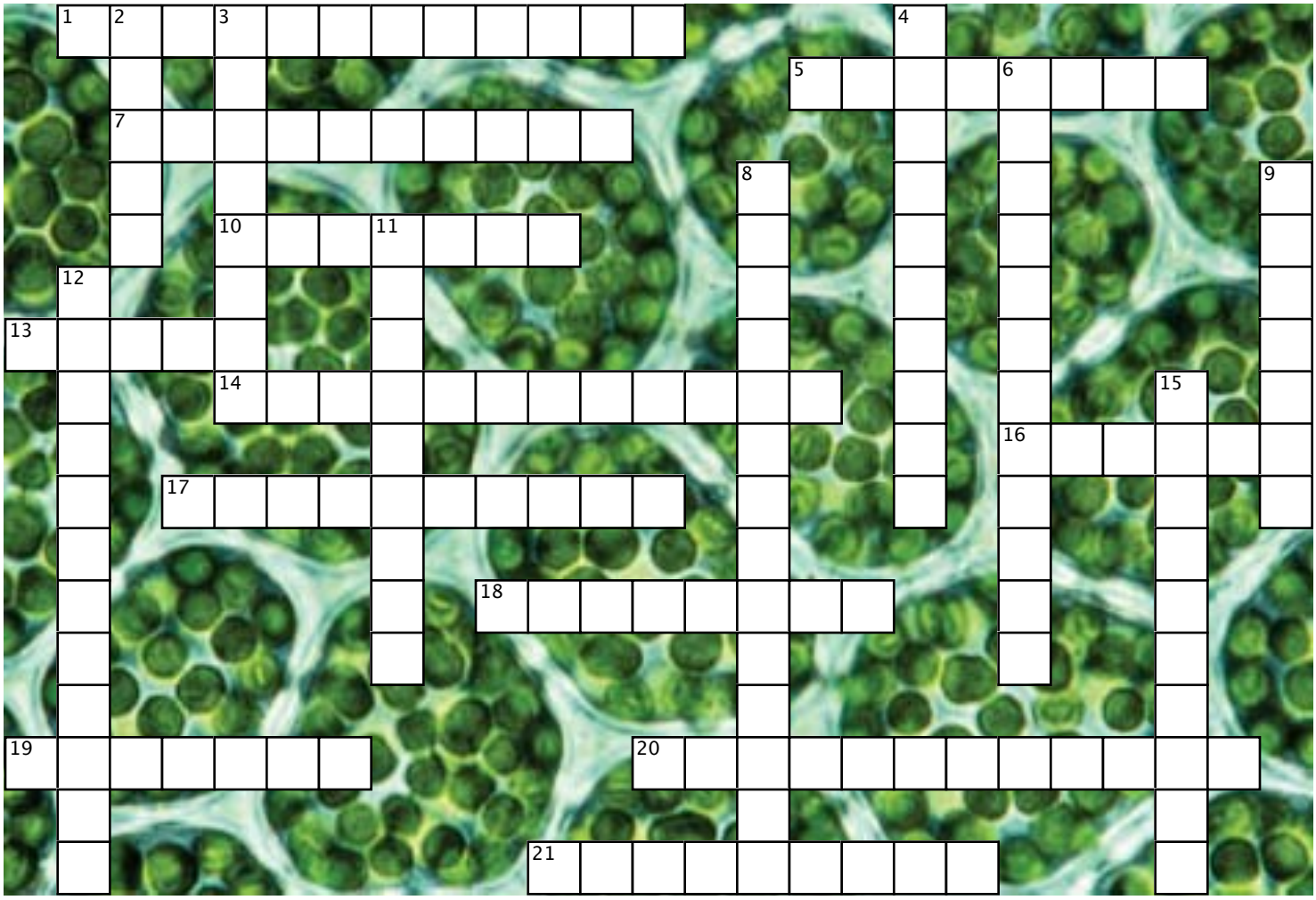
1.1 Plant and Animal Cells



Across

1. A piece of moss, as seen through a microscope shown here, shows many cells filled with _____, which are organelles involved in photosynthesis.
5. The _____ microscope can produce images that are 1000 times more detailed than the light microscope.
7. _____ have special functions that maintain all the life processes of the cell.
10. The _____ controls all the activities in a cell, including growth and reproduction.
13. Our bodies are made up of between 10 trillion and 100 trillion _____.
14. _____ are the powerhouses of the cell.
16. Scientists use _____ to improve the contrast between a cell's structures and the background and to produce better images.

Down

2. Robert _____ was the first to describe cells in 1663.
3. Every living _____ is made of cells.
4. Regardless of the magnification, being able to see clear detail in an image depends on the _____, or resolving power, of the microscope.
6. The _____ electron microscope (TEM) is capable of magnifications of up to 1 500 000x.
8. The _____ _____ modifies, sorts and packages proteins from the endoplasmic reticulum for delivery throughout the cell or outside of the cell.
9. When equilibrium is reached, substances _____ across a cell membrane in both directions.

Across

17. To produce a _____, as shown here in this background image, either a camera is attached to a microscope in place of the eyepiece or a special microscope that has a camera and an eyepiece is used.
18. Only plant cells, bacteria, fungi and some algae have a _____ _____.
19. In plant cells, the central _____ stores water for the cell.
20. All cells have an internal network of fibres, called the _____, which helps maintain the cell's shape.
21. _____ are small, dense-looking organelles that may be attached to the rough endoplasmic reticulum or free in the cytoplasm, and are the sites where proteins are assembled.

Down

11. _____ break down and digest invading bacteria and damaged cell organelles.
12. Every cell has a _____ _____ that forms a protective barrier around the cell.
15. A compound light _____ uses light focussed through different lenses to form a magnified image of a specimen or object.