

# Sand Dune Ecology

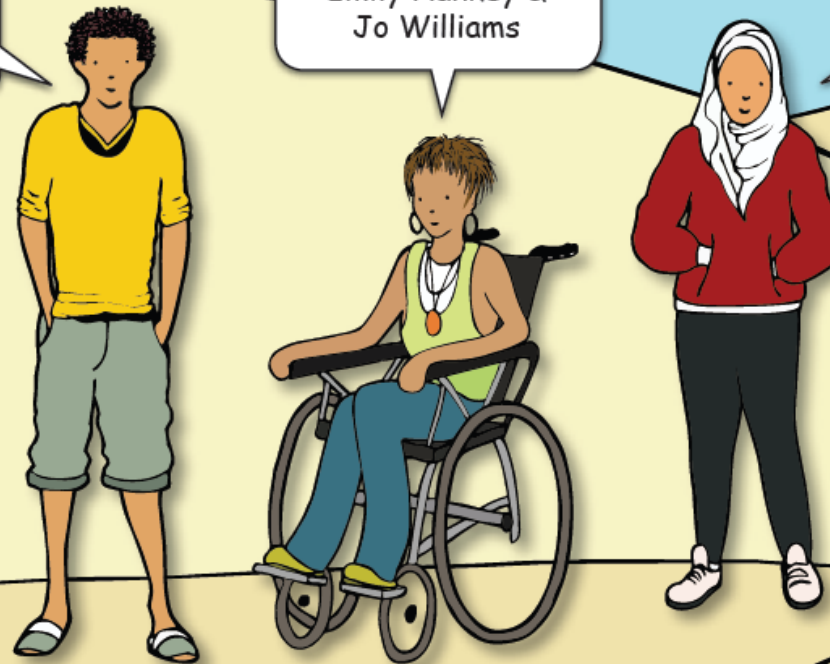
## Concept Cartoons®

A science-focused resource for ages 8-14

By Brenda Keogh,  
Stuart Naylor

Emily Hankey &  
Jo Williams

Illustrations by  
Ged Mitchell



# Index

Click titles below:

- |  |   |  |
|--|---|--|
| <a href="#">▶ 1. Sand</a>              | <a href="#">▶ 11. Useful dunes</a>          | <a href="#">▶ 21. Where marram grass grows</a> |
| <a href="#">▶ 2. Sandy dunes</a>       | <a href="#">▶ 12. Safety</a>                | <a href="#">▶ 22. Impact of marram grass</a>   |
| <a href="#">▶ 3. Forming dunes</a>     | <a href="#">▶ 13. Shells</a>                | <a href="#">▶ 23. Leaves</a>                   |
| <a href="#">▶ 4. New sand dunes</a>    | <a href="#">▶ 14. Salty sand</a>            | <a href="#">▶ 24. Roots</a>                    |
| <a href="#">▶ 5. Marching dunes</a>    | <a href="#">▶ 15. Behind the dunes</a>      | <a href="#">▶ 25. Euphorbia</a>                |
| <a href="#">▶ 6. Moving sand dunes</a> | <a href="#">▶ 16. Puddles</a>               | <a href="#">▶ 26. Tortula moss</a>             |
| <a href="#">▶ 7. Old dunes</a>         | <a href="#">▶ 17. Rubbish</a>               | <a href="#">▶ 27. Rabbits</a>                  |
| <a href="#">▶ 8. Changing dunes</a>    | <a href="#">▶ 18. Sand and soil</a>         | <a href="#">▶ 28. Miner bees</a>               |
| <a href="#">▶ 9. Erosion</a>           | <a href="#">▶ 19. Trees</a>                 | <a href="#">▶ 29. Snails</a>                   |
| <a href="#">▶ 10. Damaged dunes</a>    | <a href="#">▶ 20. Marram grass survival</a> | <a href="#">▶ 30. Gulls</a>                    |

Safety & references

## 17. Rubbish

If the sea washes the rubbish onto the beach, why doesn't it get washed out again?

The rubbish does get washed out to sea, but it comes back on the next tide

The beach gradually gets bigger so the tide can't reach the rubbish

The sea doesn't have as much energy going out as coming in

?

**What do YOU think?**

## Notes

When waves flow onto the beach they stop at the high water mark, and then the water starts to recede. There is a transition point at the high water mark where the water isn't flowing in either direction. Any rubbish that is floating or in suspension tends to settle on the beach at the high water mark. The energy of the receding water is less than the wave breaking on the beach, so settled rubbish is less likely to be disturbed and carried out to sea. Bigger waves may lift the deposited rubbish and take it out to sea again, but rubbish deposited by the biggest waves won't be reached by any smaller waves and will stay on the beach. So although some rubbish that is washed onto the beach does get washed out to sea again, most of it stays where it is.