

Edexcel (B) Biology A-level

4.1 - Surface area to volume ratio

Flashcards

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How does an organism's size relate to their surface area to volume ratio?



How does an organism's size relate to their surface area to volume ratio?

The larger the organism, the lower the surface area to volume ratio.



How does surface area to volume ratio affect transport of molecules?



How does surface area to volume ratio affect transport of molecules?

The lower the surface area to volume ratio, the further distance molecules need to travel to reach all parts of the organism, so diffusion alone is not sufficient.



Why do larger organisms require mass transport and specialised gas exchange surfaces?



Why do larger organisms require mass transport and specialised gas exchange surfaces?

Their small surface area to volume ratio means substances cannot easily enter the cells as in smaller organisms. Mass transport and exchange surfaces facilitate exchange of substances.

