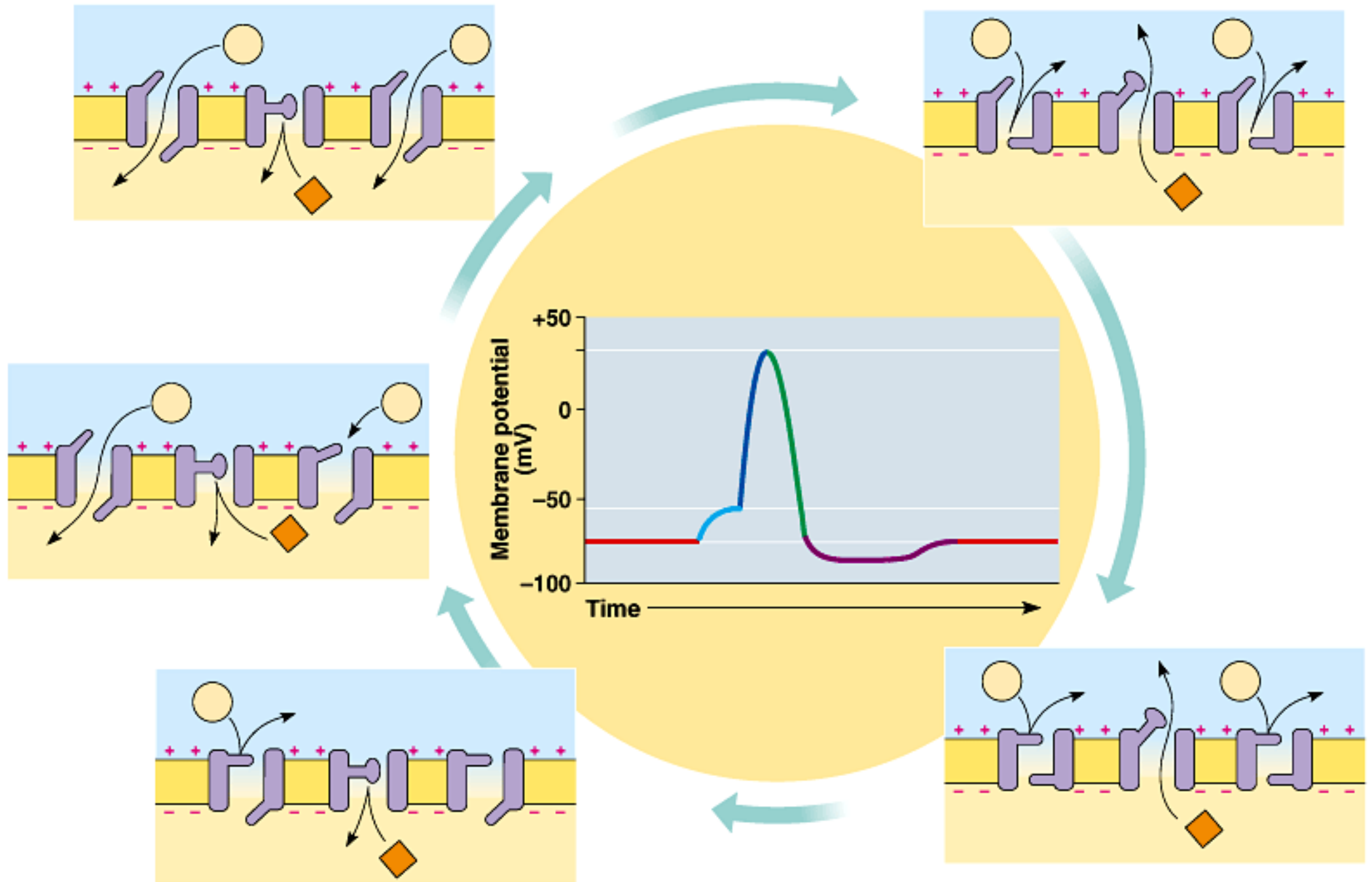
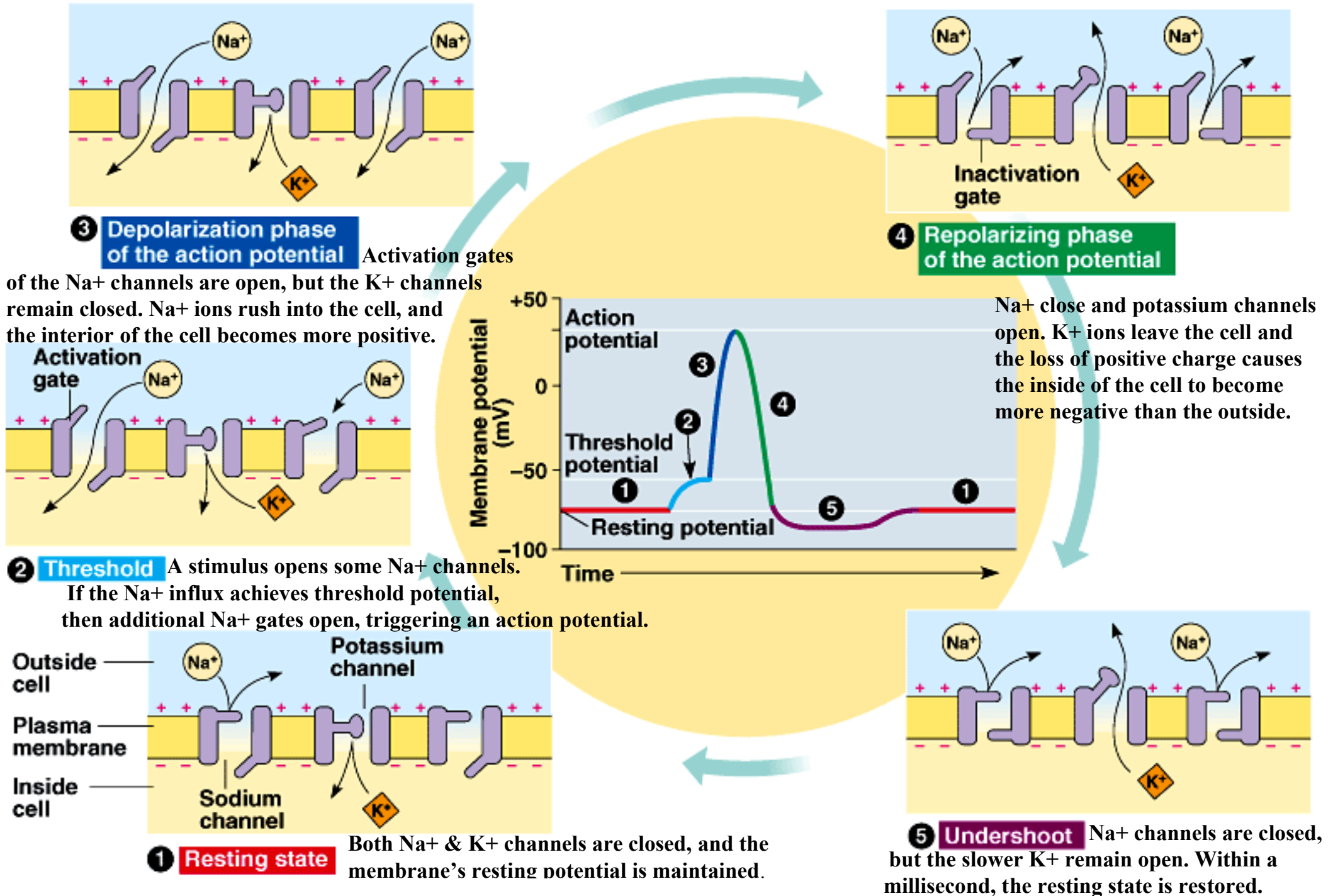


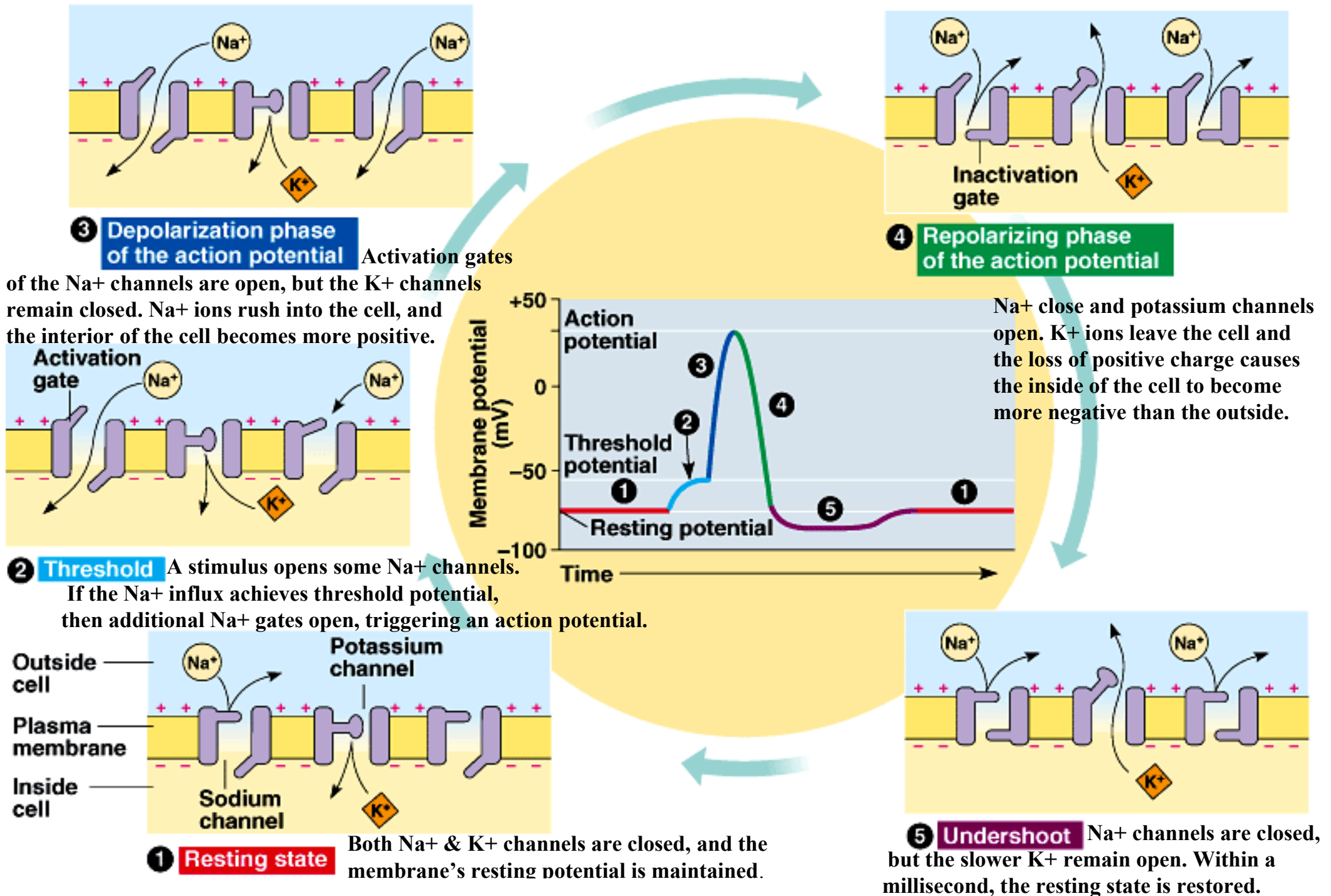
# The Action Potential



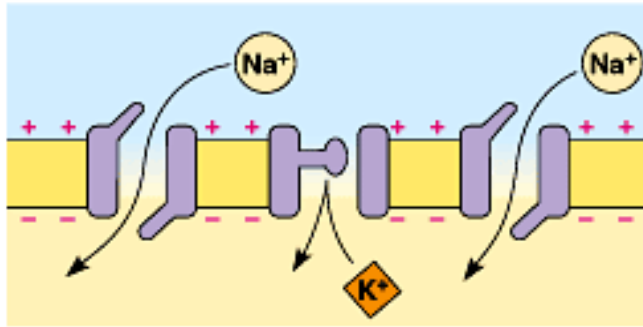
# The Action Potential



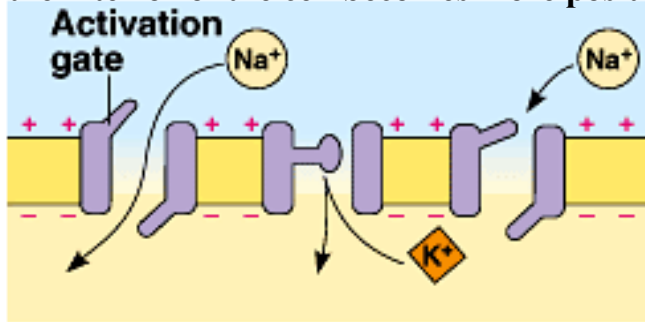
# The Action Potential



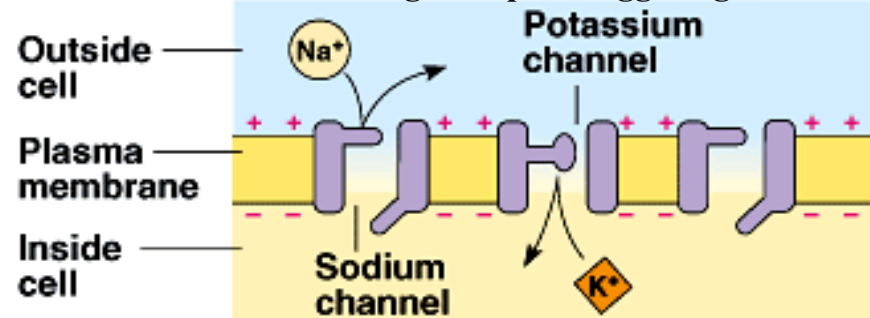
# The Action Potential



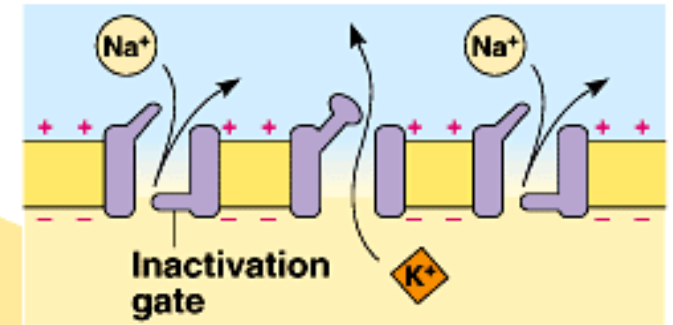
**3 Depolarization phase of the action potential** Activation gates of the Na<sup>+</sup> channels are open, but the K<sup>+</sup> channels remain closed. Na<sup>+</sup> ions rush into the cell, and the interior of the cell becomes more positive.



**2 Threshold** A stimulus opens some Na<sup>+</sup> channels. If the Na<sup>+</sup> influx achieves threshold potential, then additional Na<sup>+</sup> gates open, triggering an action potential.

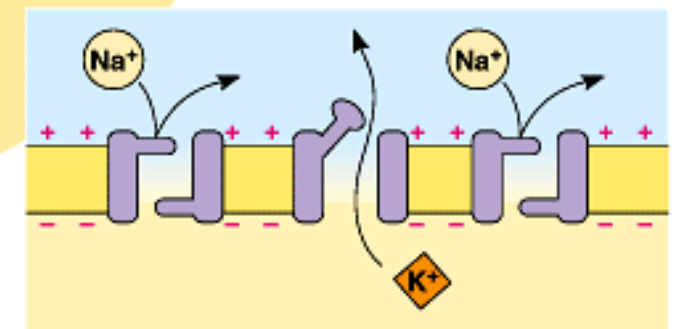
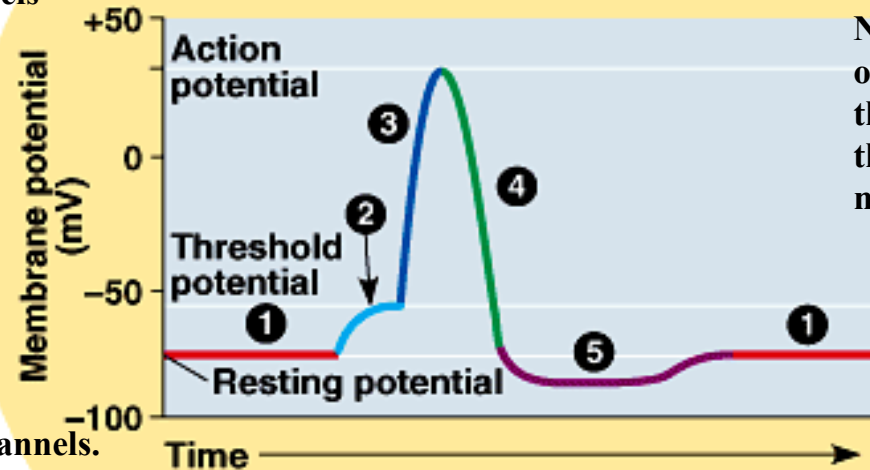


**1 Resting state** Both Na<sup>+</sup> & K<sup>+</sup> channels are closed, and the membrane's resting potential is maintained.



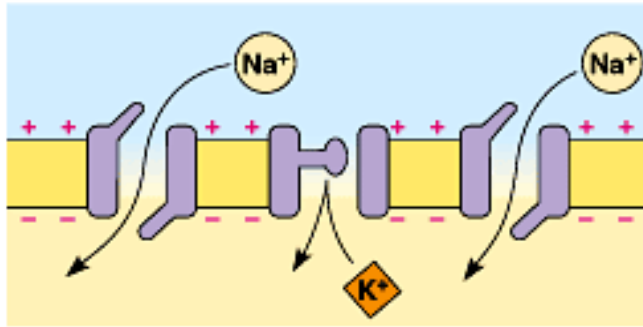
**4 Repolarizing phase of the action potential**

Na<sup>+</sup> close and potassium channels open. K<sup>+</sup> ions leave the cell and the loss of positive charge causes the inside of the cell to become more negative than the outside.

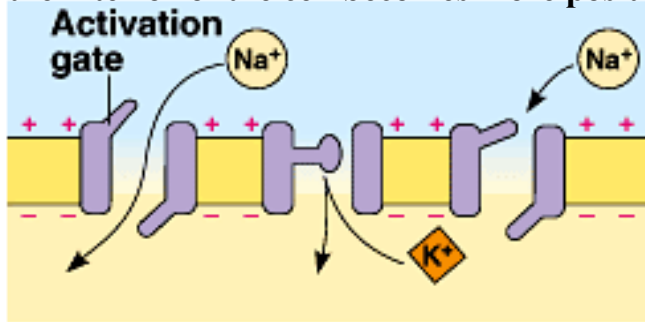


**5 Undershoot** Na<sup>+</sup> channels are closed, but the slower K<sup>+</sup> remain open. Within a millisecond, the resting state is restored.

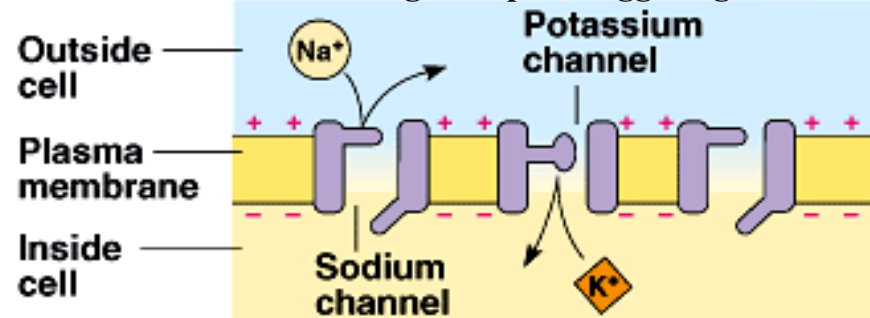
# The Action Potential



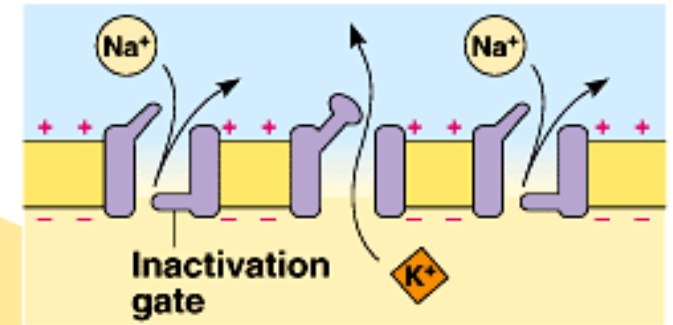
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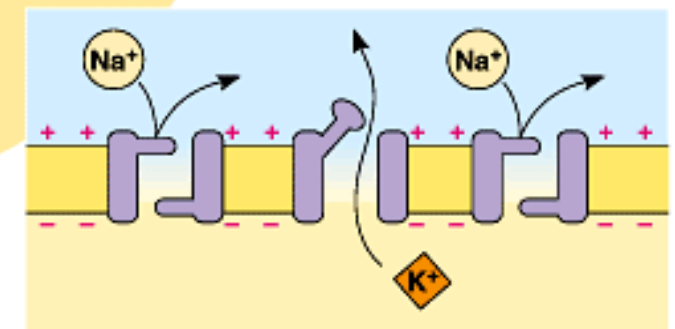
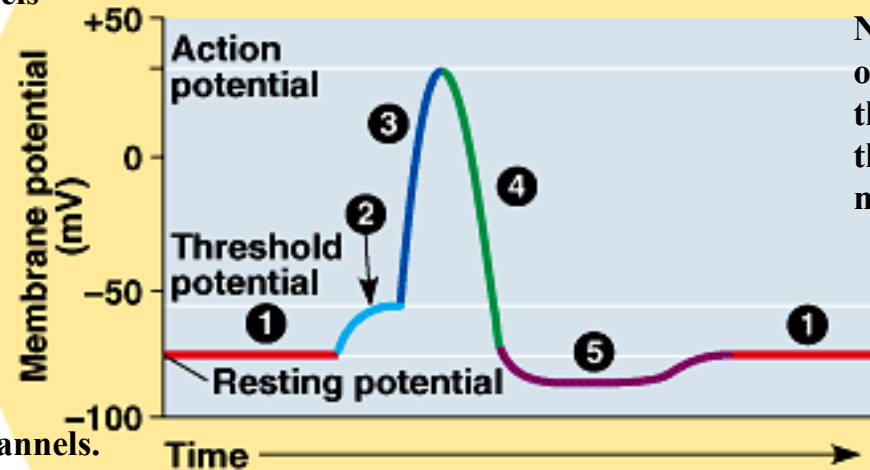


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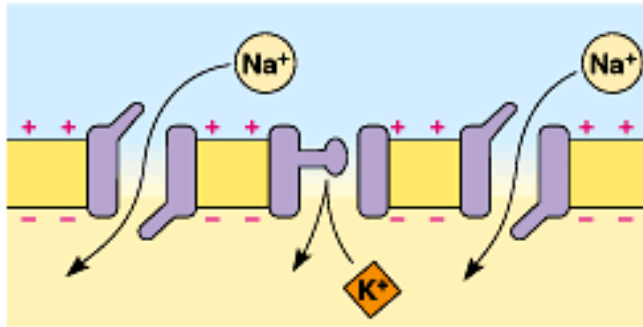
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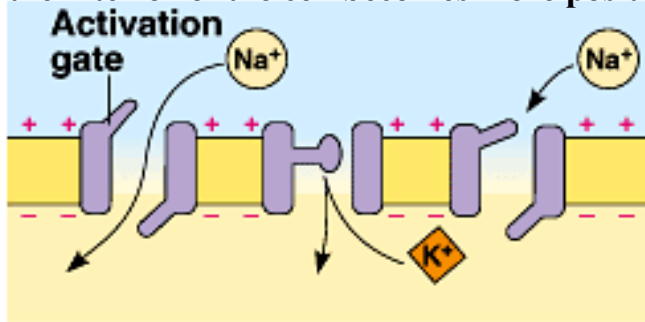


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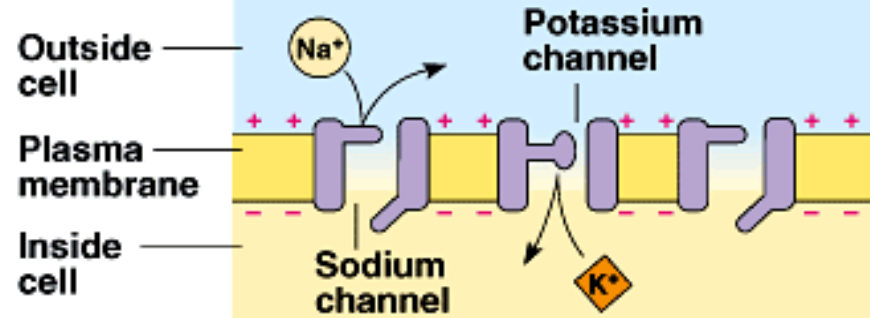
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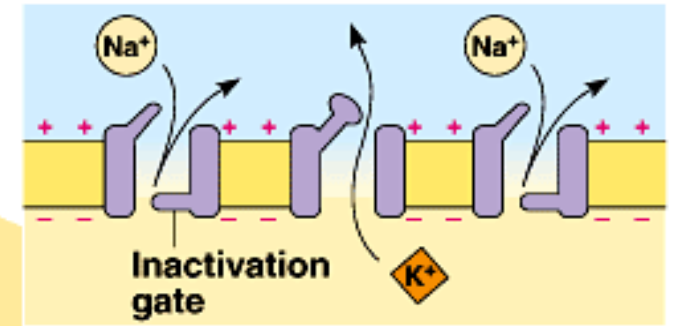
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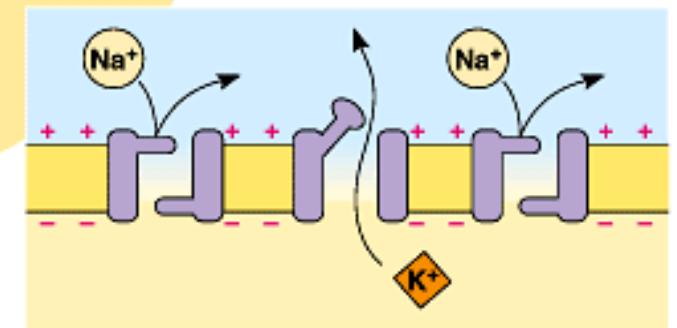
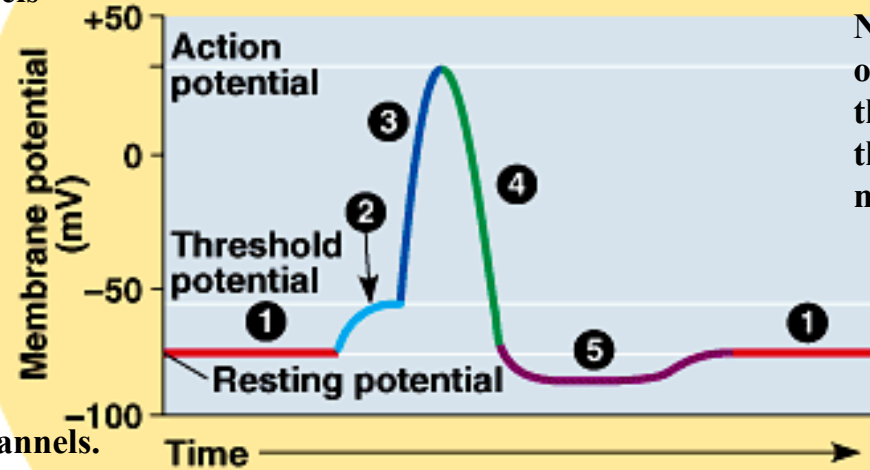


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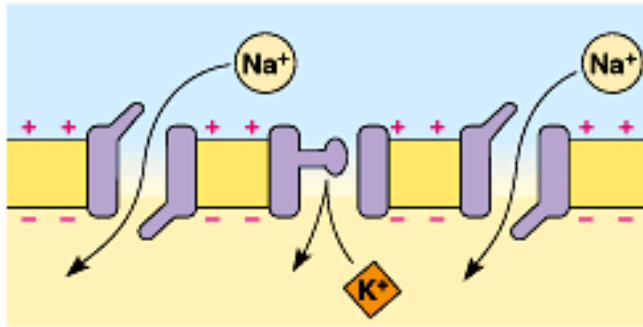
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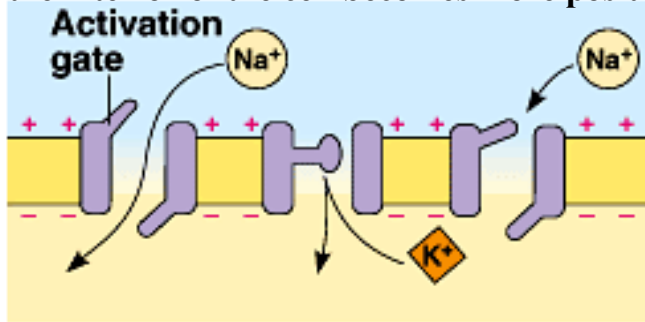


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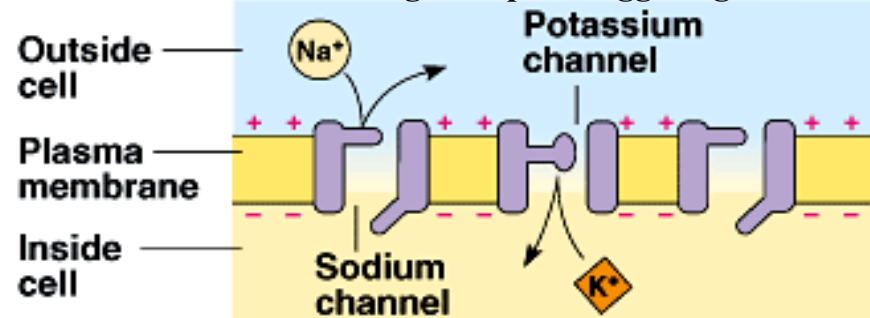
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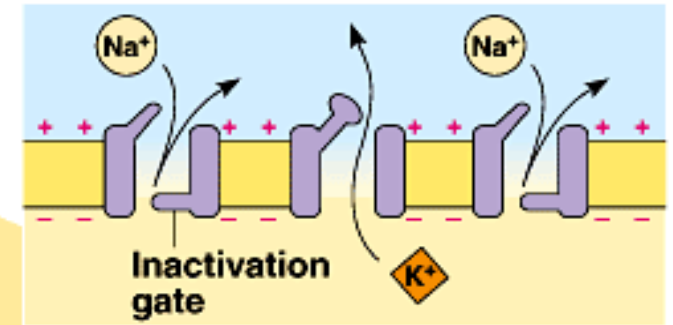
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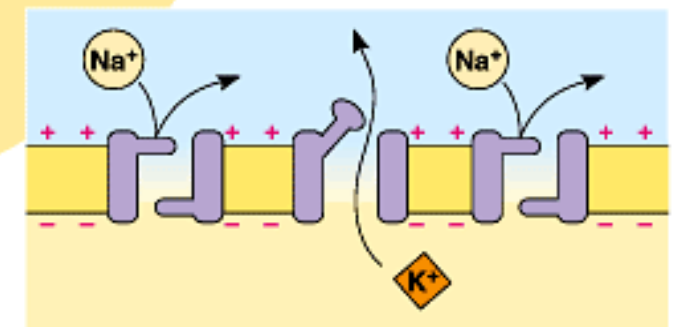
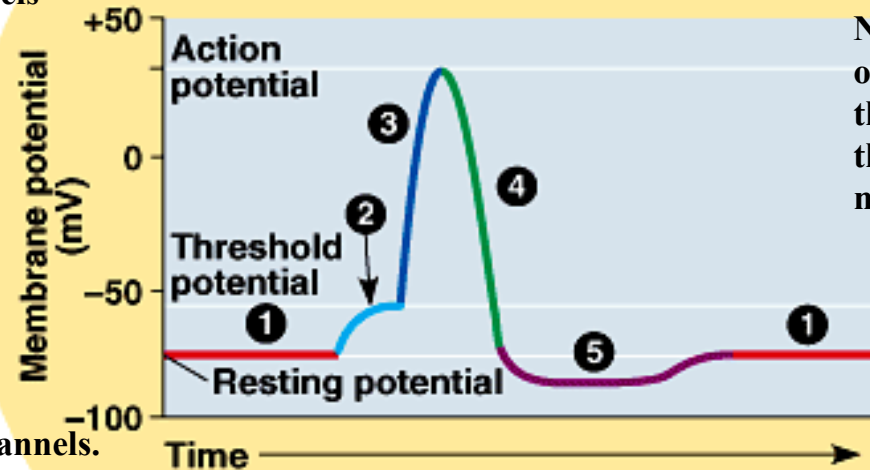


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