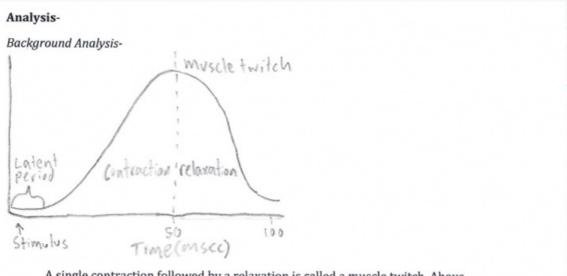
Student work sample: Muscle

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Another student project examines how fast-twitch muscles respond to an increase in sprinting speed. These middle-school assignments illustrate the result of consistent instruction using informational texts: Students who are able to use advanced content-specific vocabulary, demonstrate critical thinking and analysis, and apply academic concepts to real-world problems.



A single contraction followed by a relaxation is called a muscle twitch. Above is a muscle fiber contraction showing tension generated at the time required to reach maximum tension and relaxation. The small amount of time before the contraction begins in a muscle twitch is that Latent period and exists because of three factors-

- 1) It takes time for the action potential to travel into the T tubules.
- There is time needed for calcium to diffuse out of the sarcoplasmic reticulum and to bind to the troponin.
- 3) The time required for filaments to begin sliding.

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