**Movement Breaks**

\*This is an informal (and minimally organized) document with references and links to the information that guided the recommended frequency of “brain breaks” used in our study. The results of this study were presented at the 2017 AOTA Conference and our paper was recently submitted for publication in the International Journal of Special Education. This is being shared now per request. A more formal document will available in the near future.

<http://new.ocde.us/HealthySchools/Documents/ClassroomPA-Breaksgonoodle-white-paper.pdf?Mobile=1&Source=%2FHealthySchools%2F%5Flayouts%2Fmobile%2Fview%2Easpx%3FList%3D25fc57ff%252D3ba1%252D4e1f%252Dab0c%252D61ec27e2bfb1%26View%3De39fca25%252Df66f%252D495f%252Db15e%252D922291dc225d%26CurrentPage%3D1>

White paper by GoNoodle on the effects of brain breaks.

<https://www.sciencedirect.com/science/article/pii/S0091743515002583?via%3Dihub>

Summary of 2015 research showing activity breaks increase students’ classroom behavior.

<http://thoughtmedicine.com/2010/05/spark-the-revolutionary-new-science-of-exercise-and-the-brain-by-john-j-ratey-md-book-review/>

Article about brain and exercise. Recommends a total of 45-60 minutes per day at 55-65% of maximum heart rate.

<https://www.edutopia.org/article/research-tested-benefits-breaks>

Overview article on the benefits of brain breaks.

[https://www.sciencedirect.com/science/article/pii/S0959475216300275#](https://www.sciencedirect.com/science/article/pii/S0959475216300275)!

Shows on-task behavior declined as instructional duration increased from 10 to 30 min.

<https://www.sciencedirect.com/science/article/abs/pii/S1755296614000295>

10 minutes of classroom exercise breaks improved on-task behavior in 4th and 5th grade students.

<https://www.fatherly.com/health-science/elementary-school-distractions-attention-spans/>

Article about 2016 research on off-task behavior in elementary school children. Shows decline after 10 minutes. Also mentions a study showing heavily decorated classrooms hinder learning.

<http://www.laurenqhill.com/understanding-the-of-attention-spans-of-elementary-aged-students/>

Article about attention span of elementary students with nice graphic showing expected length of focus by age.

<http://www.speechtherapycentres.com/children-and-age-appropriate-attention-spans/>

Article describing child’s attention span from ages 3 to 5.

<https://www.psychologytoday.com/us/blog/the-athletes-way/201506/increasing-physical-movement-reduces-symptoms-adhd>

Article about physical movement reducing symptoms of ADHD. Shows kids with ADHD learn better while moving.

<https://www.opencolleges.edu.au/informed/features/30-tricks-for-capturing-students-attention/>

Research-based article about the science of attention.

<https://www.greatschools.org/gk/articles/first-grader-brain-development/>

Article about the 1st grade brain and mentions attention span of 6-20 minutes.

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<https://www.edweek.org/tm/articles/2017/08/08/learning-in-motion-bring-movement-back-to.html>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5858437/>

<https://www.washingtonpost.com/news/answer-sheet/wp/2015/01/19/letting-kids-move-in-class-isnt-a-break-from-learning-it-is-learning/?noredirect=on&utm_term=.414a673dbcc3>

<http://literacyandlanguagecenter.com/the-benefits-of-movement-in-the-classroom/>

<https://commons.nmu.edu/cgi/viewcontent.cgi?article=1031&context=theses>