



# BRAIN-BASED EDUCATION

An Overview of Research Supporting Clonlara's Educational Approach

## SUMMARY

Brain-based education is an approach that draws from the science of how the human brain learns naturally and aligns instructional strategies to support student learning at different stages of the brain's development.

In a traditional school, brain-based strategies can free-up educators to integrate movement, project-based learning, and other forms of personalization into the curriculum. At Clonlara, it affirms what we have been doing for 50 years, which is to put students at the center of the learning process and let their interests guide their educational experience.

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"It's truly astonishing that the dominant model for formal learning is still 'sit and git.' It's not just astonishing; it's embarrassing."

– Eric Jensen, *Teaching with the Brain in Mind*, 2nd Edition

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## CURIOSITY PRIMES THE BRAIN FOR LEARNING

*Studies in the field of neuroscience have shown that being curious about what we are learning activates the portions of the brain responsible for experiencing reward and pleasure, as well as creating memories. Thus, not only are curious students more apt to enjoy the learning process, which in turn drives them to take initiative and work harder along the way, they are also more likely to remember what they have learned about topics that spark their curiosity.*

At Clonlara, we believe learning begins with curiosity. From kindergarten through 12th grade, each student is encouraged to ask questions and discover answers about subjects that capture their attention, and our campus teachers and off-campus advisors support families in crafting an educational plan around their student's unique interests and goals.

## "THINKING ABOUT THINKING" ENABLES STUDENTS TO BECOME MORE INDEPENDENT LEARNERS

*Metacognition—thinking about one's thinking—enables students to adjust their learning process when necessary to overcome obstacles or to experience a deeper understanding of what they are learning. Research shows that students who use metacognitive strategies experience increased independence and learning success throughout their schooling.*

Metacognition is integral to Clonlara's research-supported **Full Circle Learning Method**, which lets students choose the topics that interest them, develop a plan for *what* and *how* they are going to learn, monitor progress toward reaching their goals, and reflect on their learning process.

## MOVEMENT BOOSTS LEARNING, MEMORY, AND MORE

*Studies have shown that physical activity brings about both chemical and structural changes within the brain, and as a result improves memory, increases attention, reduces stress, promotes a positive outlook, and boosts creativity.*

Whether on our campus or in a home-based/distance learning setting, Clonlara students are not confined to studying at a desk or even in a classroom. They are encouraged to freely engage in play and projects that connect to their academic

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“If we are going to move forward, we will have to admit that a one-size-fits-all model of education is doomed to fail the majority of students and teachers.”

– Louis Cozolino, *The Social Neuroscience of Education*

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interests, and they actively participate in decisions about when, where, and how they will achieve their learning goals—often incorporating field trips and other physical activity into their daily schedules.

## FEAR AND STRESS IMPACT THE BRAIN

*Brain-imaging shows that exposure to stress brings about structural and chemical changes in the brain that can have negative impacts on memory, attention, emotional regulation, and executive functioning; while prolonged exposure can lead to a constant state of “fight or flight” and limit access to the higher-level thinking skills that allow students to use logic, reason, and problem-solving skills.*

Clonlara’s individualized learning approach allows for sensitivity to the unique social-emotional needs of each student. For those who have experienced anxiety, bullying, peer pressure, and other stress that has impacted their learning, Clonlara’s programs offer safe, nonjudgmental support so they can be themselves and thrive.

## RELATIONSHIPS MATTER

*Social psychologists and neuroscientists agree that the brain is wired to respond to healthy and supportive relationships, making interpersonal connections and a sense of belonging key factors in physical and mental well-being.*

Clonlara’s programs nurture and value positive relationships and connectedness. Our teachers and advisors work closely with students and parents to craft an educational plan that balances academics with participation in social activities outside of the school and home, such as field trips, volunteer work, and local community projects.

## Further Reading

“Study: The Benefits of a Mental Break,” a research summary by Edutopia [Article]: [www.edutopia.org/resource/mental-break-research](http://www.edutopia.org/resource/mental-break-research)

“The Science of Effective Learning Spaces,” by Melina Uncapher [Article]: [www.edutopia.org/article/science-of-effective-learning-spaces-melina-uncapher](http://www.edutopia.org/article/science-of-effective-learning-spaces-melina-uncapher)

“‘The Boss of My Brain:’ Explicit Instruction in Metacognition Puts Students in Charge of Their Learning,” by Donna Wilson and Marcus Conyers [Article]: [www.ascd.org/publications/educational-leadership/oct14/vol72/num02/£The-Boss-of-My-Brain£.aspx](http://www.ascd.org/publications/educational-leadership/oct14/vol72/num02/£The-Boss-of-My-Brain£.aspx)

“Why Curiosity Enhances Learning,” by Marianne Stenger [Article]: [www.edutopia.org/blog/why-curiosity-enhances-learning-marianne-stenger](http://www.edutopia.org/blog/why-curiosity-enhances-learning-marianne-stenger)

“Strategies to Prevent the Neurotoxic Impact of School Stress,” by Judy Willis [Article]: [www.edutopia.org/blog/neurotoxic-impact-of-school-stress-judy-willis](http://www.edutopia.org/blog/neurotoxic-impact-of-school-stress-judy-willis)

“5 Things to Know About Childhood Trauma,” by Brittany Bartkowiak [Article]: <http://stateofopportunity.michiganradio.org/post/5-things-know-about-childhood-trauma>

“Nine Things Educators Need to Know About the Brain,” by Louis Cozolino [Article]: [http://greatergood.berkeley.edu/article/item/nine\\_things\\_educators\\_need\\_to\\_know\\_about\\_the\\_brain](http://greatergood.berkeley.edu/article/item/nine_things_educators_need_to_know_about_the_brain)

“Why We Are Wired to Connect,” by Gareth Cook [Article]: [www.scientificamerican.com/article/why-we-are-wired-to-connect/](http://www.scientificamerican.com/article/why-we-are-wired-to-connect/)

“How the Teen Brain Transforms Relationships,” by Daniel Siegel [Article]: [http://greatergood.berkeley.edu/article/item/how\\_the\\_teen\\_brain\\_transforms\\_relationships](http://greatergood.berkeley.edu/article/item/how_the_teen_brain_transforms_relationships)

*Six Tips for Brain-Based Learning*, a resource guide from Edutopia [PDF]: [www.edutopia.org/brain-based-learning-strategies-resource-guide](http://www.edutopia.org/brain-based-learning-strategies-resource-guide)