



RECOGNIZING RESILIENCE

HELPING STUDENTS UNDERSTAND THE AMAZING TEEN BRAIN

OUTCOMES

In this activity, students will:

- Recognize ways to build healthy responses to stress and challenges
- Analyze their behavior in order to identify behavioral patterns or “neural pathways”
- Create a classroom compact outlining concrete, actionable strategies for how students can support one another

TIME:

- 45–60 minutes

OVERVIEW

We experience many changes as we grow from infants to adults, but none are as profound as the changes that take place in our brains. By the time we are in first grade, our brains are nearly adult-sized, but development and remodeling continues throughout our lives. Significant brain growth and development takes place during adolescence, which is why it is so important to support and guide preteens and young teens through this learning period.

Consider the changes that take place in a young teen’s brain, as described by The Raising Children Network, with the Centre for Adolescent Health:

*“The main change is that unused connections in the thinking and processing part of your child’s brain (called the grey matter) are **‘pruned’ away**. At the same time, other connections are strengthened. This is the brain’s way of becoming more efficient, based on the ‘use it or lose it’ principle.*

*This pruning process begins in the back of the brain. The front part of the brain, the **prefrontal cortex**, is remodeled last. The prefrontal cortex is the decision-making part of the brain, responsible for your child’s ability to plan and think about the consequences of actions, solve problems and control impulses. Changes in this part continue into early adulthood.*

*Because the prefrontal cortex is still developing, teenagers might rely on a part of the brain called the **amygdala** to make decisions and solve problems more than adults do. The amygdala is associated with emotions, impulses, aggression and instinctive behavior.”*

Source: [Brain Development: Teenagers](#)

As an educator (or parent), you may have observed the challenges many teenagers face with decision-making, weighing and understanding consequences, problem solving, and managing impulses. Recognizing the changes going on in the teenage brain can help us understand their behaviors and support and guide their development into adults who can make decisions, weigh consequences, solve problems, and manage impulses.

But there's more! Each of us has a brain that is molded by a variety of factors outside our control—our genes, our environments, and the challenges we face. There are lots of things in life that we cannot control, and that is especially true when we are young. But, every time you ask a question or try something new, you shape and re-shape your own brain. The teen brain is in an amazing phase, forming new neural pathways every day.

In this activity, students take an in-depth look at their brains as they are now, in early adolescence. It will help students better understand how to build resilience and hopefully reduce stress. Finally, students take what they have learned about neural development and use it to create a **“Classroom Compact”** that commits all learners to building a classroom and school culture of compassion, understanding, and support.

MATERIALS

- A computer with access to the internet
- Projector or interactive whiteboard
- **Recognizing Resilience** capture sheets (one per student)
- Chalkboard/whiteboard
- Sticky notes
- Large-format paper and markers

PRE-ACTIVITY

Ignite students' curiosity by asking the following questions. You may also choose to have students discuss in small groups:

- How do you think your brain changes as you grow?
- Can we exercise and change our brains as we would a muscle? What might we achieve?
- How are our bodies and our brains connected? Why do our bodies and brains sometimes feel as though they are out of our control?
- Could the challenges and setbacks we face help us grow?

PROCEDURE

1. Play the [Emotions and the Brain](#) video and the [Changing Minds](#) brief video on neural plasticity.

NOTE: The Changing Minds video may be a trigger for some students who have experienced trauma. Please review and use your best judgement prior to showing in your classroom.

2. Once the video(s) have finished, have a discussion with students on the following questions:

- How do our brains help us respond emotionally to different situations?
- What does it mean to regulate emotions?
- What are the effects of trauma on young brains?
- What does the word plastic mean when we are talking about brain growth?
- What are the things in our lives that can help “rewire” our brains, help us build resilience, and support our efforts to overcome trauma?

3. Can you think of a relationship with a friend, mentor or caring adult who supports you? What is helpful/good about that relationship? (Or, what is the best part about that relationship?)

4. Emphasize that researchers are learning more and more about the development of the human brain. In particular, they are learning that the brains of children and young adults are very resilient.

- Ask a student to define resilience (the ability to withstand and overcome adversity).
- Ask students: What do you do to calm yourself down if you are nervous or afraid? What do you do to get yourself ready right before you take part in an athletic event, take a test, or make a presentation? What do you do to prepare yourself for a difficult conversation? Give students 2–3 minutes to discuss with a partner.

Explain that these kinds of actions can build neural pathways to help us respond to challenges in healthy ways and lower our stress and fears.

5. Let’s think of some healthy habits. As students provide responses, write them on the board. Answers could include slow/deep breathing when stressed, practicing gratitude, removing yourself to take a quiet moment alone, spending time with friends or a supportive adult, recognizing what you like about yourself and the things you’re good at, talking about others positively, staying hydrated, exercising, eating healthy, getting enough sleep, meditating, etc.

6. Once you have written a good number of responses on the board, ask students if they think these habits are good for their bodies, their brains, or both.

Explain that our bodies and brains are connected through something called the autonomic nervous system. This means that actions we take affect our brains without us even realizing it. That is why we yawn when we see someone else yawn. It is also why we start to sweat when we get nervous. The body prompts reactions in the brain, but the brain also prompts reactions in the body. Because of these links, positive actions like meditating are good for our bodies AND good for our brains, too.

7. Ask students to think back to the videos they watched at the beginning of class—review the five everyday gestures listed in the video (**Comfort, Listen, Inspire, Collaborate, and Celebrate**). Ask students to think about how they have felt in the past when someone in their lives has used one of the five everyday gestures with them. Explain that the warm, good feeling that comes from receiving these gestures is another link between the brain and the body. When someone compliments our efforts in school, it might make us feel happy. It also works the other way—when we make a kind gesture to someone else, it gets the positive chemicals in our brains flowing. We feel good when we do good!

8. **Recognizing Resilience: Reflective Exercise.** Give students 2–3 minutes to individually use the capture sheet and record their own answers. When students have finished writing, ask for a couple of students to share.
9. Inform students they are going to work as a team to build a classroom and school culture of compassion, understanding, and support. They are going to do this by creating a **Classroom Compact** that outlines actions students can take to help one another grow positive neural pathways. Give each student 4–5 sticky notes and ask them to write a **positive or supportive action** on each. When students have written an action on each of their five notes, ask students to post them up on a wall in the classroom grouped into categories. For instance, if one note reads “give a compliment” and another reads “congratulate a classmate,” group those notes together.
10. Once each student has posted their notes and groups have formed, review the overarching themes and see how they align with the five everyday gestures. Write down the themes on a piece of large-format paper marked “Classroom Compact.”
11. When all of the themes have been recorded, ask students to pledge to uphold their Classroom Compact and commit to building an environment of support within their classroom and school. Post the Classroom Compact agreements in a highly visible place in the classroom.
12. Inform students that the process they took to whittle down the sticky notes into categories and themes is very much like how our brains grow and develop—we get better and better as we build a habit. As such, supporting one another through the Classroom Compact will get easier and easier as it becomes a habit!

OPTIONAL EXTENSION

In the coming weeks and months, revisit this activity and have students reflect on whether or not they have experienced changes in their ability to practice and experience resilience and how they have helped others. Ask students to share any other strategies they have tried to “build their brains” in a positive way. Continue to reflect throughout the year and encourage students to be mindful about how they are using the Everyday Gestures each day.

ADDITIONAL RESOURCES

For more information on using the Everyday gestures with students, please visit:

- [Changing Minds Module](#) - Discover promising practices that help children impacted by trauma to heal and thrive.
- [Changing Minds Educator Activity](#) - Oxygen Mask: Creating a Plan to Take Care of Yourself
- [Changing Minds Educator Activity](#) - Building Resilience: Putting Everyday Gestures to Work in Your Classroom

STANDARDS

Next Generation Science Standards (NGSS)

MS-ETS1-4 Engineering Design

Develop a model to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved

MS-LS1-8 From Molecules to Organisms: Structures and Processes

Gather and synthesize information that sensory receptors respond to stimuli by sending messages to the brain for immediate behavior or storage as memories.

HS-LS2-8 From Ecosystems: Interactions, Energy, and Dynamics

Evaluate evidence for the role of group behavior on individual and species' chances to survive and reproduce.

RECOGNIZING RESILIENCE

1. Think about adults or friends you could or do rely on.
2. What are some of the ways they make you feel supported?
3. What are some things that YOU do in your daily life to help make others feel supported?
4. When we're overwhelmed or in a challenging situation our emotions tend to take over. List three things that you think you can do to better manage your emotions in challenging situations.
 - A.
 - B.
 - C.
5. Describe an example how someone used each of these gestures with you, or a way you could use them with others. What did/would that look like or how was/is it expressed?
 - **Comfort**—a time when someone eased your pain or concerns or helped you relax when you were stressed or worked up
 - **Listen**—a time when someone showed interest and listened to what you had to say
 - **Inspire**—a time when someone encouraged you to dream big or you admired someone as a role model
 - **Collaborate**—a time you worked together with your fellow students to solve a problem
 - **Celebrate**—a time someone acknowledged your achievements or hard work