uBEATS Teacher's Guide:

Resiliency Training - Part 3

This teacher guide is a supplementary text to support the use of the uBEATS "Resiliency Training – Part 3" module for grades 6-12.

To help students develop the knowledge necessary for an incredible future in health care, we created UNMC Building Excellence in Academics Through STEM (uBEATS), an online health science resource for students.

UNMC uBEATS modules are short (15 minutes or less), interactive online health science modules to supplement curriculum taught in grades 6 – 12. These do not replace curriculum, but they are a supplement for teachers and students incorporating evidence-based information and UNMC expert guided material. Each module is chunked into sections with formative and summative assessments with immediate feedback provided.

Tips on how to utilize uBEATS modules:

- Internet access is required to view uBEATS modules.
    - For those who have access to one-to-one technology, modules can be used in or outside of the classroom as a topic introduction, extension, or review. For classrooms without individual student devices, modules can be used in whole group instruction. Formative assessment questions can use the teacher's preferred call-and-response method and summative assessment questions can be displayed on the board and answered individually by students or printed and distributed to students after viewing the module.

Objectives

1. Differentiate between coping and relaxation skills.
2. Describe the impact of these skills on building resilience in the body.
3. Identify four skills from coping/relaxation techniques that you could utilize in your life.

Introduction

Welcome to the final module in our Resiliency Training series - "Effective Coping and Relaxation Techniques." In the previous two modules, we delved into the physiology of stress, understanding how our bodies respond to various stressors. In this module, we shift our focus from stress itself to the tools we can use to navigate through it with resilience.

Resilience is not just about enduring challenges but thriving despite them. By developing effective coping and relaxation techniques, we can empower ourselves to bounce back stronger and wiser from life's inevitable ups and downs. This module isn't meant to be just a passive learning experience. Consider this your personal journey towards building resilience. Think about the skills in this module not just as theoretical concepts, but as tools you can integrate into your daily life.

Prior Knowledge

Before beginning this module, the teacher should understand the Next Generation Science Standards (NGSS) featuring Three-Dimensional Learning.

Dimension 3: Disciplinary Core Ideas—Life Sciences. A Framework for K-12 Science Education

Multicellular organisms have a hierarchical structural organization, in which any one system is made up of numerous parts and is itself a component of the next level. Feedback mechanisms maintain a living system’s internal conditions within certain limits and mediate behaviors, allowing it to remain alive and functional even as external conditions change within some range. Outside that range (e.g., at a too high or too low external temperature, with too little food or water available), the organism cannot survive. Feedback mechanisms can encourage (through positive feedback) or discourage (negative feedback) what is going on inside the living system.

National Academies of Sciences, Engineering, and Medicine. 2012. A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas. Washington, DC: The National Academies Press. https://doi.org/10.17226/13165.

Science and Engineering Practices NGSS

8. Obtaining, evaluating, and communicating information

Crosscutting Concepts NGSS

2. Cause and Effect

7. Stability and Change

Key Terms/Vocabulary

Stress, coping skills, relaxation skills, resilience, stressors, stabilizers, replenishment, Zones of Resilience, emotional, cognitive, behavioral, problem-solving, social support, positive reframing, time management, deep breathing exercises, progressive muscle relaxation (PMR), meditation, Tai Chi, yoga, aromatherapy, mindfulness, hobbies, guided imagery, visualization, relaxation response, autonomic nervous system, parasympathetic nervous system ("rest and digest"), sympathetic nervous system ("fight or flight or freeze"), hormones, cortisol, endorphins.

Science Standards

Nebraska's College and Career Ready Standards for Science 2017 Nebraska Science Standards

- SC.HSP.6.5. Gather, analyze, and communicate evidence of the relationship between the structures and physiological processes of the nervous system.

National Consortium for Health Science Education **NCHSE**

- Foundation Standard 1: Academic Foundation
  - 1.1.2.g. Identify basic structures and describe functions of the human nervous system.
  - 1.1.2.h. Identify basic structures and describe functions of the human endocrine system.
- Foundation Standard 9: Health Maintenance Practices
  - 9.1.1. Promote self-care behaviors of health and wellness
    - Stress management

Extensions of the lesson

To help students become more familiar with the Key Terms of this module, the teacher can use the vocabulary list for a classroom Word Wall, or integrate the vocabulary into review sessions.

Encourage students to check current events for the latest news involving stress management.

As student misconceptions become apparent, the teacher may need to reinforce these concepts:

- Resilience is not just about enduring challenges but thriving despite them.
- Resilience, at its peak, is like a fully charged battery. You feel invigorated, ready to take on whatever comes your way. This full charge represents a state of emotional balance, mental clarity, and a robust ability to adapt.
- Coping involves the conscious effort to deal with stressors and navigate through difficulties effectively.

- Relaxation techniques are specific methods to create calmness and reduce physiological and psychological stimulation.
- The relaxation response activates the parasympathetic nervous system, often referred to as the "rest and digest" system. This system opposes the sympathetic nervous system, responsible for the "fight or flight or freeze" response during stress.
- The relaxation response is also associated with changes in hormone levels, including a decrease in cortisol (a stress hormone) and an increase in endorphins (often referred to as "feel-good" hormones).
- The most effective relaxation strategies are ones that work for you personally.

Enrichment

The effectiveness of stress coping strategies can vary among individuals. It's often beneficial to explore and combine different techniques to build a personalized toolkit for managing stress effectively. Reflect on which of these coping strategies work well for you: Problem-solving, positive reframing, worry box, time management, physical exercise, social support, humor/laughter, artistic expression.

The effectiveness of relaxation techniques can vary from person to person. It's important to try different techniques to find what works best for you and consider incorporating a combination of strategies into your routine for comprehensive relaxation and stress management. Here are some relaxation strategies to try: Deep breathing (belly breathing), progressive muscle relaxation, mindfulness meditation, guided imagery, Tai Chi, yoga, aromatherapy, listening to music, hot bath/shower, nature walk/visualization.

Explore the website of the Mayo Clinic to learn more about managing stress. For example, see the article Stress management.

Enjoy humorous videos about stress management techniques, such as this 2.5-minute video from TEDx: Funny stress management.

View a WebMD slideshow: 10 Ways to Stop Stress Now.