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LESSON PLAN NAME: Nutrition and Fitness  
Exercise and the Brain

LESSON PLAN # 5



KALMANOVITZ  
SCHOOL OF  
EDUCATION

***I. Planning Statement***

**Central Focus of Lesson or Learning Segment**

Through health education, students learn skills that enable them to make healthy choices for a lifetime of healthy living. Students develop healthy choices and avoid high-risk behaviors. In this six-lesson module, students learn about nutrition and physical activity, two important factors in their healthy growth and development. Students will learn to monitor their physical activity and ways to increase the amount of time they are physically active.

**Grade:** 4<sup>th</sup>-5<sup>th</sup>

**Content Area:** Nutrition and Fitness: The effect of exercise on the Brain

**Time Allotted:**

45 minutes

**Classroom organization:**

Students will sit at their desk in table groups.

**Instructional resources and materials:**

**Brain Scan A & B, *Mindfulness and the Brain, The Brain Maze, Healthy Powered Kids Brain Power***

**Content Standard(s) – include number and text:**

**Standard 1: Essential Concepts**

- 1.3.N Describe the relationship between food intake, physical activity, and good health
- 1.6.N Explain the importance of drinking plenty of water, especially during vigorous physical activity
- 1.7.N Describe the benefits of moderate and vigorous physical activity.
- 1.8.N Identify ways to increase and monitor physical activity

**Standard 2: Analyzing Influences**

- 2.1.N Identify internal and external influences that affect food choices

**Standard 5: Decision Making**

- 5.2.N Describe how to use a decision-making process to select healthy options for physical activity

**Standard 6: Goal Setting**

- 6.2.N Make a plan to choose physical activities at school and at home

**Standard 7: Practicing Health-Enhancing Behaviors**

- 7.1.N Practice how to take personal responsibility for eating healthy foods.
- 7.4.N Practice how to take personal responsibility for engaging in physical activity

**Specific Academic Learning Objectives:**

- *What do you want students to learn in this lesson? Students will learn:*
  - Students will understand the benefits of engaging in 60 minutes of physical activity every day.
  - students will identify the different kinds physical activity and learn about different ways to be more physical activity each day
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- *What should students be able to do after the lesson? Students will be able to:*
  - State the benefits of exercise on our health
  - Understand that their brain is an organ that need exercise to function at top level
  - need to feed their brains with nutritious foods
  - need to rest their brains with plenty f sleep

**Prerequisites:**

- *What prior academic learning and prerequisite skills do students need for this lesson-*
  - Listening skills.
  - Motor skills,
  - Ability to Find the meaning to a question posed
  - Engage in activity

- *How will you determine whether students have these?*  
When children have a good deal of experience and begin to form some ideas, they need to step back from their hands-on investigative work, review and reflect on what they have done, and bring together data/ideas and formulate patterns and relationships
- *How will you connect to students' assets, including everyday experiences, cultural and language backgrounds and practices, and interests?*  
Developing an in-depth understanding of each learner can be accomplished by developing student learning profiles to capture five important dimensions of learning identity: *biological traits, cultural and societal factors, emotional and social influences, academic performance, and learning preferences*. Work to make each lesson meaningful to all students. Adopt a student-centered approach to instruction increase opportunities for student engagement, which then helps everyone more successfully achieve the course's learning objectives

**(If Applicable) Key ELD Standard(s):**

**Academic Language:**

**Academic language demands:**

- *What academic language is used in the lesson? (language functions, vocabulary/symbols, syntax and discourse)*  
Listening along with student being able to evaluate, describe, and identify the information they will be learning. Another key language demand will be speaking out loud to a partner, table group, or entire class. Students will define vocabulary words and connect to the instructions. Students will need to describe what nutrition is and how they can make good nutritional choices.

**Academic language supports:**

- *Identify the specific strategies/tasks/language supports used before and during the lesson to help all students meet the language demands.*
  - Provide a brief overview of the content material being presented
  - Make available scaffolding and extension options to build on previous learning
  - Provide students with the definitions and model sentences for all vocabulary words
  - Stop and summarize Identify important concepts
  - Maintain eye contact to engage in active listening

**Accommodations (to ensure all students have access to the curriculum):**

- *Describe your instructional strategies and planned supports for:*
  - *individual and/or groups of students who are learning English*
    - Direct/indirect modeling of English language structures and conventions with corrective feedback
    - Decoding simple reading passages
    - Daily language lessons in writing, spelling, and grammar that are connected to the related readings of the content curriculum, not taught as isolated and unrelated skills
    - Giving students an amount of "wait time" to interpret information or to process questions related to content is encouraged before demanding a response.
  - *individual and/or groups of students who have special needs*
    - Extended time to complete assessments will be provided for those students who need that time, or who are guaranteed that time according to I.E.P.s or 504 plans.
    - Summarizing, paraphrasing, and notes will be provided for those students who struggle with reading comprehension and written expression, or those who are guaranteed those accommodations according to I.E.P.s or 504 plans.
    - Proficiency of a specific skill/concept will be appropriate alternative assessments for those students whose multiple intelligences have large weaknesses in reading comprehension and written expression
    - Use *negotiating of meaning* to provide ways to express needs, ideas, thoughts, and intentions

**Assessment:**

- *Describe your planned formal and informal assessments.*
  - Informal assessment will be done as lesson begins. On Going INFORMAL ASSESMENT will take place with the list of questions teacher asks while activity is going on
  - There will be no formal assessment given for this lesson. Students will fill out *Boost your Brain Power*

- *How will your assessment(s) provide evidence of student learning?*  
Through shared activity and table discussions
- *Describe any adaptations of your assessments for:*
  - *individual and/or groups of students who are learning English?*  
-Giving students an amount of “wait time” to interpret information or to process questions related to content is encouraged before demanding a response.
  - *individual and/or groups of students who have special needs?*  
-Extended time to complete assessments will be provided for those students who need that time, or who are guaranteed that time per I.E.P.s or 504 plans.

## **II. Instructional Sequence**

<p><b>Time</b></p> <p><b>10 mins</b></p>	<p><b>Set or introduction:</b> <i>How will you begin the lesson? How will you present a problem or question, engage and motivate learners, connect to prior experience, activate prior knowledge and/or share learning outcomes?</i></p> <p>Option 1) Show students the visual of the two brain scans. - * <i>Handout/visual - Brain Scan Part A</i></p> <p>Ask students to guess what it is showing and what the colors tell us.</p> <p>Show visual of the two brain scans with header “Your Brain After Exercising”</p> <p>- * <i>Handout/visual Brain Scan Part B</i></p> <p>Share that red indicates the very active areas of the brain and blue indicates the least active areas of the brain. Go over the Mindfulness and the Brain-How to Explain the brain to Children</p> <p>Option 2) Ask: Did you know that you can exercise your brain?</p> <p>Have kids brainstorm what this means and how it's done.</p> <p>Discuss and explain that active kids learn better. Regular physical activity helps people (of all ages) to learn, to improve memory, and to help improve focus and attention.</p> <p>Relate this to concepts learned in lesson 4 - Physical Activity.</p> <p>Ask students if they have any experience with this/ have they ever noticed this in their own lives?</p>
<p><b>25 mins</b></p>	<p><b>Developing Content/Body of Lesson:</b> <i>What learning tasks and instructional strategies will you use in the main part of the lesson? How will the lesson unfold? What if students finish early or are not finished?</i></p> <p>Then have students participate in a <b>cool down</b> having them slowly walking in place, gentle stretching of arms up and down, slower breathing, then sitting.</p> <p>– Invite STUDENTS to come up with ideas that can be done in place. Write down several. Try them for 1 minute.</p> <p>Repeat the cool down time. 1 minute</p> <p><b>Experiential Brain Boosting Mindfulness Exercise #2 (slow physical movement followed by stillness and mindful attention and breath awareness) .</b></p> <p><b>Introduce</b> the concept of mindfulness which means paying attention on purpose to what is happening right now with kindness and curiosity. Mindful attention can be used when doing any daily activity from eating, brushing teeth, walking and more. Practicing it with an exercise is a way to remember to use it during the day before a test or a speech or when upset.</p>

Show the VISUAL : *Mindfulness and the brain how to explain it to children infographic*  
Expand and explain by using the infographic - ask for three volunteers to read one part each.

Set up for the exercise. Explain that this exercise will be done silently with the goal of focusing attention on one's self. This is a type of mindfulness exercise that can also help with focusing on school work or any task at hand, as well as helping to feel calmer in a stressful situation.

Ask if any students have done this type of exercise before. If they want to briefly share, allow brief sharing.

Set up expectations- They will do this exercise for about 2 minutes in silence. There is no one right or wrong way to feel during this exercise.

Instruct students to sit comfortably with hands on their belly area.

Eyes are softened and lowered or closed if comfortable.

Take 3 long , deep, breaths in and out of the nose. Then allow the breath to be regular.

Notice their breath moving in and out.

Notice the belly rising on the inhale (imagine filling up like a balloon) and on the exhale, the “balloon deflates”.

Guide them to pay attention to how they are feeling physically.

Feel where their body makes contact with the seat.

Notice feet on the floor.

How does their heart feel; notice the heartbeat.

Continue to notice their breath moving in and out.

Notice their attention and what they are focusing on.

Return to the breath moving in and out.

There is no one right or wrong way to feel during this exercise.

*Optional: If you have a bell or chime, it could be used here. The Insight Timer app has a lovely chime that is used for starting and ending meditations.*

Guide students to slowly open their eyes and to remain silent briefly.

Open up for discussion.

Ask if anyone has any questions or if would like to share what they noticed about the different types of exercises that they did. Ask if anyone felt uncomfortable with anything and if they would be willing to share with the class noting that other student's might feel the same way and are hesitant to speak up

**Closure:**

*How will learners summarize or reflect on what they learned (for example, share work, share a strategy, share a process, discuss what they learned, raise a new question)?*

**Reflection and integration time**

Offer two options- Reflecting individually or in small groups.

Ask students to reflect on what they learned and experienced by filling out the *How to Boost Your Brain Power sheet*

**5 mins**

**Monitoring and Informal Assessment:**

*Throughout the lesson, how will you determine what students are understanding? What kind of questions will you ask? What will you be watching for? How will you keep students on task?*

Ask for reflection and feedback.

Look for participation in coming up with ideas for brain boosting exercises.

Look for participation in the exercises.

To keep students on task use a timer challenge for coming up with quick exercise ideas and allow

	freedom for the ideas to be silly and different and fun!
<b>5 mins</b>	<p><b>Extending the Lesson/Homework (optional):</b></p> <p>Ask students to journal (on paper or provide a journal/ notepad) about the exercises and how they used them and what they noticed- for example, a student sets a goal of doing a 5 min walk followed by 10 jumping jacks and a 2 minute mindfulness break before taking an exam. The student reflects on this in their journal noting if, for example, they felt calmer and /or more focused than usual while taking the exam.</p> <ul style="list-style-type: none"> <li>• Handout – Brain boost activity.</li> <li>• Optional- the Brain Maze</li> </ul>
	<p><b>Reflection, Next Steps:</b></p> <p>Integrate Brain Boosting Breaks into the classroom or school.</p>

### References and Resources

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