

LESSON 8: NUTRITION TO FUEL ACTIVITY

Grade-Level Outcomes

Primary Outcomes

Fitness activities: Demonstrates competency in 1 or more specialized skills in health-related fitness activities. (S1.H3.L1)

Fitness knowledge: Relates physiological responses to individual levels of fitness and nutritional balance. (S3.H8.L1)

Movement concepts, principles & knowledge: Applies the terminology associated with exercise and participation in selected individual-performance activities, dance, net/wall games, target games, aquatics and/or outdoor pursuits. (S2.H1.L1)

Embedded Outcomes

Nutrition: Designs and implements a nutrition plan to maintain an appropriate energy balance for a healthy, active lifestyle. (S3.H13.L1)

Assessment & program planning: Creates and implements a behavior-modification plan that enhances a healthy, active lifestyle in college or career settings. (S3.H11.L1)

Lesson Objectives

The learner will:

- refine movements in Pilates exercises.
- discuss how to maintain an appropriate energy balance for physical activity and school.
- apply basic nutrition terms appropriately.

Equipment and Materials

- Mats
- Music
- Stereo equipment
- Resistance bands

Introduction

Your pre-assessment shows you have a basic understanding of nutrition but aren't as familiar with how it relates to physical activity and performance. We'll spend some time on that today because it's important to understand how nutrition fuels your body for exercise. We also will add some side core exercises to our sequence and focus on the principle of breathing as we work out.

Instructional Task: Nutrition for Physical Activity

■ PRACTICE TASK

Review key points of nutrition and exercise.

Guiding questions for students:

- What are the macronutrients in your diet?
- What are the recommended proportions for an active person?
- What functions do they serve in the body?
- What are some food examples of each type?
- What types of macronutrients are most relied on for fuel during exercise, particularly less than one hour?

- What are nutrient-dense foods? Can you give examples?
- How do you maintain a good energy balance throughout the day?
- Have you ever heard of “bonking” or “hitting the wall”? What is it and how does it happen?
- What role does snacking play in maintaining a good energy balance?

Extensions

- What are micronutrients?
- Are supplements necessary? Why or why not?

Student Choices/Differentiation

- Use a video clip or DVD to start the discussion if desired.
- Provide a handout or poster board with key terminology.
- Students can work in small groups.

What to Look For

- All students are contributing to the discussion.
- Students can provide good examples.

Instructional Task: Warm-Up (10-14 Minutes)

■ PRACTICE TASK

Use the student stretching sequence from Lesson 7.

Stand in Pilates posture (standing straight, with good alignment, relaxed shoulders, hands resting on thighs).

In the hook-lying position (neutral spine), students practice the four-count breathing technique.

Do the butterfly exercise (6-8 reps).

Rehearse the pli  squat.

Student Choices/Differentiation

- Students can choose their own mat and band.
- Students can volunteer to lead the sequence.

What to Look For

- Students are breathing deeply.
- Students achieve an optimal range of motion in the stretches.
- Feet are at 45 degrees in pli  squat.

Instructional Task: Pilates Workout (30-40 Minutes)

■ PRACTICE TASK

Specify the number of repetitions or time for each exercise. Cue the sequence. The principle of breathing is the focus.

Standing lower-body exercises (pli  squats; single-leg raises to front, side, and back; calf raises; or other standing exercises): 7-10 minutes

Side core exercises for obliques (side bends, side stretches): 5-7 minutes

Lead the Pilates exercises from Lesson 5:

- Anterior core (abdominals, obliques, and hip flexors): 5-7 minutes
- Anterior leg work (quadriceps): 5-7 minutes

- Side-lying work (on each side) for lateral leg movements (gluteus medius and obliques): 8-10 minutes
- Posterior core (trapezius, lats, erector spinae): 5-7 minutes
- Posterior legs (glutes, hamstrings): 5-7 minutes

Refinement

Students may inadvertently hold their breath on difficult positions. Remind them to breathe in deeply through the nose at the start of the exercise and to tighten the core on the exhale.

Student Choices/Differentiation

- Use video clips to review the exercises.
- Use a poster board to remind students of the sequence.
- Students can modify the number of repetitions for their level.

What to Look For

- Students are performing all exercises with control.
- Students are breathing rhythmically with the exhale on the more difficult (concentric) phase of the movement.
- Students are creating long lines in the side core exercises—extension through arms and legs.

Instructional Task: Cool-Down (5-6 Minutes)

■ PRACTICE TASK

Use the stretching routine from Lesson 1 followed by relaxation—supine and prone—with a focus on breathing.

Student Choices/Differentiation

- Stretches can be performed using a band.
- Students move through the stretches at their own pace.

What to Look For

- Students are performing the stretches slowly and with control.
- Students are holding each stretch for 30 to 60 seconds.

Formal and Informal Assessments

- Food intake logs and analysis
- Exit slip: What are the macronutrients, and what are their functions?

Closure

- You learned a little more about nutrition and activity today. Start thinking about the ways you can eat better so you can perform better in your activities and at school.
- How did you like the side core exercises I added? Were they challenging?
- You have spent a lot of time working on your Pilates technique as well as learning about other ways to enhance your well-being and health, such as nutrition and stress management. Before our next class, I would like you to think about some aspect of your life related to health or physical activity that you would like to change. You are going to start working on a behavior-modification plan to help you achieve this goal.

Reflection

- Are students feeling fatigued at the end of the workout?
- Now that they have done the main routine for three lessons, are they able to perform it with precision and control?
- Do we need to spend more time on nutrition information or do they have a good grasp, especially for basic healthy eating?

Homework

- Make at least one blog entry about your Pilates workout related to the principle of breathing.
- Think about a health or physical activity behavior you would like to change. Write down a goal for this and record it in your blog. (Embedded outcome: S3.H11.L1)
- Analyze your food intake log. Thinking about the macronutrients, summarize how the foods you consumed helped you meet the recommended daily guidelines as well as how they do not. Did you maintain a good energy balance? What do you need to change? (Embedded outcome: S3.H13.L1)

Resources

Corbin, C., & Le Masurier, G. (2014). *Fitness for life*. Champaign, IL: Human Kinetics.

Crowther, A., & Petre, H. (2009). *Total Pilates: The step-by-step guide to Pilates at home for everybody*. London: Duncan Baird.

Internet keyword search: “Pilates,” “standing routines,” “squats,” “plié squats,” “energy balance,” “carbohydrate,” “fat,” “protein”