

## LESSON 11: PLYOMETRICS FOR ALL

### Grade-Level Outcomes

#### Primary Outcomes

**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 appropriately. (S2.H1.L1)

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

**Fitness knowledge:** Demonstrates appropriate technique on resistance-training machines and with free weights. (S3.H7.L1)

**Safety:** Applies best practices for participating safely in physical activity, exercise and dance (e.g., injury prevention, proper alignment, hydration, use of equipment, implementation of rules, sun protection). (S4.H5.L1)

#### Embedded Outcomes

**Challenge:** Chooses an appropriate level of challenge to experience success and desire to participate in a self-selected physical activity. (S5.H2.L2)

**Assessment & program planning:** Analyzes the components of skill-related fitness in relation to life and career goals, and designs an appropriate fitness program for those goals. (S3.H12.L2)

### Lesson Objectives

The learner will:

- discuss the terminology, concepts, and principles of plyometric training and how it may affect overall health.
- demonstrate new plyometric exercises to peer groups and discuss the safety of each movement.
- practice various upper- and lower-body plyometric exercises with a partner.
- design a plyometric workout plan.
- practice upper-body resistance-training exercises.

### Equipment and Materials

- Plyometric boxes
- Speed ladders
- Medicine balls of various weights
- Floor pads
- Mini hurdles
- Plyometric worksheets
- Plyometric program design templates

### Introduction

*Let's review the written test from our previous class to clear up any misconceptions before moving on to new content.*

*Because you have practiced all the parts of your resistance-training program, you are ready to implement it. From now on, we will use the second half of each class for you to perform a segment of your workout and use the beginning of each class to introduce new concepts. Today, we're going to move on to sport-specific and skill-related fitness concepts, including plyometrics. Plyometrics are a version of training that is often done with athletes. However, we are going to explore how everyone can benefit from some plyometric movements. By the end of the module, you will develop a plan for skill-related fitness related to your career or life goals.*

## Instructional Task: Class Discussion on Plyometric Exercises

### ■ PRACTICE TASK

Lead a class discussion on plyometric exercises and their connection to fitness and health.

#### Guiding questions for students:

- What does the term *plyometric* mean?
- What are some activities that require you to “explode” during the movement?
- What are the components of skill-related fitness?
- How do these components relate to participation in different sports?
- What careers or professions can you think of where skill-related fitness is important?

#### Extension

Review a PowerPoint on the six skill-related fitness components.

#### Student Choices/Differentiation

- Have additional handouts ready for students to view different types of plyometric exercises for beginners and advanced performance.
- Have students view a brief video on plyometric exercises.

#### What to Look For

Students can identify specific exercises that are considered plyometric.

## Instructional Task: Upper- and Lower-Body Plyometric Exercises

### ■ PRACTICE TASK

Demonstrate to students a variety of plyometric exercises for each body part. Basic exercises for the lower body include line hops, jumps in place, jumps for height or distance, and speed ladder drills. Basic exercises for the upper body include plyometric push-ups, medicine ball press and catch, and medicine ball throws.

Hand out the plyometric worksheets with the names of several pieces of workout equipment. Have students gather in groups and move from station to station, discussing how to use each piece of equipment for plyometric exercise.

#### Extension

Create a list of exercises for each muscle group using the desired piece of equipment—and it must be in plyometric format.

#### Refinement

Encourage students who have little experience in the weight room to participate in exercises on the lower end of the plyometric spectrum, which (e.g., have longer/more ground contact time).

#### Student Choices/Differentiation

- Students choose which group to work with.
- Students decide which exercises to list on the worksheet.

#### What to Look For

All students are contributing to the group activity.

## Instructional Task: Plyometric Stations

### ■ PRACTICE TASK

Students work with a partner and move from station to station, practicing the activities discussed previously.

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**EMBEDDED OUTCOME: S5.H2.L2.** The first time that students try a new exercise, they should go through it slowly. Have them practice until they can perform it correctly at the slower speed, and then allow them to challenge themselves to go faster or at full speed.

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### Student Choices/Differentiation

- Students choose their partners for station work.
- Students attempt activities at their own pace.

### What to Look For

- Students are able to align appropriate exercises for the intended muscle groups. The demonstrated exercises actually work the body part indicated by the students.
- Students can perform plyometric exercises with proper form.

## Instructional Task: Practicing the Workout Plans

### ■ PRACTICE TASK

Because students have been practicing plyometric exercises with the lower body, have them focus on the upper-body elements of their workout programs. Partners act as spotters.

After the workout, students cool down with their static stretching routines.

### Refinement

As students are working from their plans, observe their technique. Provide corrective feedback on alignment and form.

### Student Choices/Differentiation

- Students choose their partners.
- Students work at their own pace.

### What to Look For

- Students are engaged in the workout.
- Technique for each exercise is correct.
- Spotters are communicating and attentive.

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## Formal and Informal Assessments

Observation of proper technique using specialized equipment, e.g., plyometric boxes, speed ladders, medicine balls, mini-hurdles (informal assessment performed by teacher during practice)

## Closure

- For some of you, today's program might make you a little more sore than normal.
- The explosive nature of plyometric exercises usually requires more energy and effort, therefore breaking down more muscle.
- As with the other components of strength and conditioning, I hope you can acknowledge the need for and importance of adding some plyometric exercises to your workouts, whether you are playing a competitive sport or not.

## Reflection

- Were students able to complete the basic plyometric exercises with enough force to be effective?
- Are students becoming more confident in their lifting programs?

## Homework

- Log your physical activity outside of class.
- Think about your career plans and analyze the physical demands that they might involve. List the skill-related components in which you will need to meet the demands of your career. If your career plans don't involve much in the way of physical demands, think about the physical activities that you plan to include in your lifestyle and base your list on that. Due next class. (Embedded outcome: S3.H12.L2)

## Resources

Bompa, T. (2015). *Conditioning young athletes*. Champaign, IL: Human Kinetics.

Cissik, J., & Dawes, J. (2015). *Maximum interval training*. Champaign, IL: Human Kinetics.

Internet keyword search: "plyometric exercises," "plyometric equipment," "plyometric training"

## PLYOMETRIC WORKSHEET

In groups, discuss and practice using each piece of equipment to design an exercise for the listed body parts.

Body part	Body weight only	Medicine ball	Stability ball	Speed ladder	Mini hurdles	Body bar
<b>Lower body</b>						
Quads						
Hams						
Calves						
Hips: sides						
Hips: front and back						
<b>Upper body</b>						
Chest						
Back						
Shoulders						
Biceps						
Triceps						
Forearms						