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FOR HEALTHY LIVING
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Physical Activity: CLIMBING

While participants are climbing, they are getting lots of health benefits. The information in this packet details those benefits, from the muscles that climbing develops to the way it makes people feel.

This packet supplements what you do during the climbing wall session. You do have to get participants to recognize that this activity is great for their physical and emotional health, but you can do that in the way that best works for your group and you. These materials offer lots of different ideas for incorporating the health components into your already fabulously planned session.

Read the Facilitator's Guide in order to understand Frost Valley's physical activity initiative; to effectively use the materials in your session; and for ways to encourage physical activity among your participants in and beyond Frost Valley.

This chart, also featured in the Facilitator's Guide, highlights each of the sections in this module. This can guide you in selecting what to focus on during the session.

Description	Gives a profile of the health benefits of climbing
Type of Activity	Explains that climbing can be both aerobic and anaerobic (muscle building)
Where It Fits within the Recommended Amount of Physical Activity	Points out where climbing fits within the suggested recommended 60 minutes of daily exercise
Parts of Body Used	Names parts of the body that climbing uses
Muscles Affected	Names the specific muscles that climbing builds
Health Benefits	Lists climbing's health benefits
How It Makes You Feel	Explains climbing's positive emotional benefits
Suggestions for Ways to Incorporate	<ul style="list-style-type: none">• Day 1: Offers suggestions for introducing climbing's benefits• Following Sessions: Presents ideas for reinforcing participants' knowledge about climbing's health benefits
Some Fun Ideas	Offers ideas for games and other activities that build participant awareness of climbing's health benefits
Interesting Facts	Generates interest in climbing
Evaluation	Provides a modifiable questionnaire about participants' views on climbing and whether they will continue doing it beyond Frost Valley

DESCRIPTION

Climbing on the climbing wall is a low-impact indoor or outdoor activity that offers a full-body cardio and strengthening workout. It develops many different skills and boosts a person's sense of self. It promotes body awareness and improves balance.

Many people think that climbing relies on upper-body strength. What a skilled climber needs is proper technique, balance, and leg strength. Climbing gets your body into positions that it would not normally be in. It involves reaching with your hands and feet to grab onto holds. It develops muscles that help in other sports. For example, it builds upper-body flexibility for running and cycling; core strength for most sports; agility for soccer; and grip and hand strength for tennis.

The climbing wall in particular offers repeated experiences that enable you to tackle a specific climbing skill or goal. On the climbing wall, you use many of the muscles in your body: fingers, forearms, back, legs, and shoulders.

Climbing has many social and emotional benefits, from heightened determination and problem solving to greater patience and concentration. Because it is a strategic sport, you have to figure out your next move, and think about your options before making that move. You ask yourself questions like: Will this move get me where I need to go? Will this move give me access to another handhold or foothold? Problem solving and visualization are definitely at play! Overall, climbing calls for setting goals and planning how to reach those goals in terms of negotiating and making it to the top of the climbing wall.

Using the climbing wall improves motor skills, spatial awareness (the sense of your body in relation to your physical surroundings), and concentration . . . and even communication and listening skills, because you listen to instructions or work with a partner or a group. Climbing on an outdoor climbing wall lets you experience and enjoy nature.

TYPE OF ACTIVITY: Aerobic and anaerobic (muscle-building and endurance)

Climbing is a low-impact sport of moderate intensity. It increases your heart and respiratory rates, so it is a great cardio workout. It is also an anaerobic sport, specifically in terms of the use of the forearm and pull muscles. Climbers refer to this as "power endurance," or the near-maximum strength needed to climb a continuously strenuous sequence without resting, with reliance of the forearm and the muscles to accomplish this.

WHERE IT FITS WITHIN THE RECOMMENDED AMOUNT OF PHYSICAL ACTIVITY

As a sport of moderate intensity, climbing can fulfill part of the daily requirement of 60 or more minutes of physical activity. It is also a muscle-building activity, which is recommended for at least 3 days per week.

PARTS OF BODY USED	MUSCLES AFFECTED (See <i>Terms to Know</i> in the Facilitator's Guide.)	HEALTH BENEFITS
<ul style="list-style-type: none">• Hands and forearms• Shoulders• Neck• Upper back• Lower back• Thighs and calves• Fingers	<ul style="list-style-type: none">• Biceps• Abs (<i>Abdominals</i>)• Glutes (<i>Gluteals</i>)• Traps (<i>Trapezius</i>)• Lats (<i>Latissimusdorsi</i>)	<ul style="list-style-type: none">• Increases endurance• Increases flexibility, coordination, and balance• Strengthens core muscles• Enhances the cardiovascular system• Enhances socio-emotional health• Reduces stress

HOW IT MAKES YOU FEEL

- Enhances problem-solving and decision-making skills
- Builds self-confidence
- Makes you determined
- Makes you proud and driven to succeed (climbing the wall, getting to the top, etc.)
- Promotes patience
- Reduces stress
- Builds trust in others (when you are climbing together, relying on each other)

SUGGESTIONS FOR WAYS TO INCORPORATE

DAY 1

1. Ask participants to share climbing (wall, rock, bouldering, etc.) experiences they have had:

- Who has done any kind of climbing before? Where did you climb? What kind of climbing did you do? Did you use the climbing wall?
- What do/did you like about climbing? What do/did you dislike about climbing?
- What do you think of climbing as exercise? Do you think it gives you a good workout? Explain why or why not?
- What parts of the body do you think get the most benefit from climbing?
- How might/does climbing make you feel?

2. Point out that climbing on the climbing wall is a great physical activity and that it also really makes you feel good in many ways. Build on what participants noted about its benefits. Share other benefits with the group.

3. If participants are beginners, ask them to observe as you model climbing to figure out which parts of the body and muscles the activity relies on. Affirm contributions. Show students where the body benefits. Explore with them specific aspects of climbing that affect different muscles.

4. Ask the group what they think is the most important skill a climber needs: strength, endurance, flexibility, balance, other? Have participants share their thoughts. Explain that it is a mix of all of these elements but what is most important is PROPER TECHNIQUE.

5. Once participants start climbing, tell them to make a mental note of where they are “feeling” the workout. When they are done, discuss with them which parts of their bodies and/or which muscles they think they will have to work on so they can climb further and negotiate more challenging areas.

6. If relevant, ask participants to set individual climbing goals. For example: How far do they want to climb? What level of difficulty do they want to reach? Which muscles do they want to focus on? The purpose is to have them set one reachable climbing goal and to plan how to achieve that. They can log their progress toward that goal in a journal or on a posted chart.

FOLLOWING SESSIONS

1. Couple climbing with conditioning exercises that work on specific skills; that target specific parts of the body so participants can build strength and experience a good “workout;” and that help participants to improve other aspects of climbing— balance, coordination, posture, etc. These exercises should be age-appropriate. For example:

- **Under age 10:** Pull-ups, push-ups, planks, bridging, and other core builders.
- **Ages 10-15:** Pull-ups; lock-offs (gripping a single handhold with enough strength to allow the other hand to shift to a new handhold); fingerboard pull-ups and a few hangs; controlled campus laddering (climbing in a hand-over-hand, ladder-like motion up the wall with no aid from the feet); various core-strengthening routines; regular workouts on the climbing wall; and stretching of arms, hips, and legs.

2. After each session, encourage participants to do some strengthening, stretching, and aerobic activity to either improve certain aspects of their climbing skills or enhance their overall climbing fitness. At the start of each session, ask participants questions like:

- What activity did you do? How long did you do it?
- With climbing and your other physical activities, do you think you did your 60 minutes’ worth of daily exercise?
- How do you think this exercise will help you improve your climbing skills?

3. During the last session, participants engage in the Climb to the Goal challenge, where they reach or surpass their individual climbing goals. Participants discuss what helped them reach their goals, from physical to mental skill. Point out, where possible, the physical gains they have made and then ask them how they feel about them.

SOME FUN IDEAS

1. Encourage participants to try a new activity at camp and to compare it with climbing.
2. Engage participants in climbing games that build important climbing skills and target parts of the body and muscles that they need to develop these skills. See attached sample games. Participants can also create a variation of a game and/or create a new game that targets specific skills or the development of muscles.
3. One way to measure the amount of physical activity done in a day is by the number of steps taken in a day. Typically, there are 2,000 steps per mile (about 30 minutes of continuous activity). You can measure steps with a pedometer for sports like walking, hiking, and running. But, you need to use a conversion chart for other sports, like climbing. In climbing (ascending), the comparison looks like this:

CLIMBING (ascending)	10 min.	15 min.	20 min.	30 min.	60 min.
# OF STEPS	3,224	4,836	6,448	9,672	19,344

Thirty minutes of climbing is almost five miles' worth of steps! There are recommended guidelines for the number of steps that make up moderate to intense physical activity — and meet the recommended 60 minutes or more of activity each day. For young people, 9,000 steps is the magic number. So 30 minutes of climbing exceeds the 9,000-step expectation! (Purdue University estimates that climbing equates to 244 steps per minute, putting it slightly above the 222 steps per minute estimated by running a 10-minute mile.)

Participants can chart the steps they have taken in a day, including climbing, general walking (using a pedometer), and other activities. Post the Step Conversion table on Page 12 the Facilitator's Guide for participants to see and/or distribute it for them to refer to at the end of each day. Have participants share their step rates.

CLIMBING: Interesting facts

On January 15, 2015, two Americans, Tommy Caldwell and Kevin Jorgeson, became the first climbers ever to free-climb Dawn's Wall, a 3,000-foot vertical wall on El Capitan, the largest cliff in California's Yosemite National Park. They used ropes and safety harnesses to catch themselves in case of a fall, but depended on their strength and their skill in using their hands and bodies to climb the wall by grasping very thin and very small cracks. ⁱⁱ

The Excalibur climbing tower at the Bjoeks climbing center in Groningen, the Netherlands, is known to be the highest climbing tower in the world. It is 121 feet tall, with an overhang of 36 feet. ⁱⁱⁱ

A fitness club in Japan has an Alice in Wonderland-themed climbing wall. Instead of rocks sticking out, the wall has picture frames, mirrors, deer heads, bird cages, and flower vases to grab for climbing. ^{iv}

Vertical Club (now Vertical World) established the first indoor climbing gym in 1987 in Seattle, WA. ^v

Schurman Rock, built in 1939 in West Seattle, is known as the first man-made climbing rock in the nation. ^{vi}

EVALUATION

1. How much FUN do you think the climbing wall is? Choose the number that shows what you think.

3 = A lot of fun **2** = Pretty fun **1** = A little fun **0** = No fun

2. How HEALTHY do you think the climbing wall is? Choose the number that shows what you think.

3 = Very healthy **2** = Pretty healthy **1** = A little healthy **0** = Not healthy

3. Which parts of your body would you say got the best workout from climbing, in all its forms?

- Legs
 - Hips
 - Calves
 - Arms and shoulders
 - Back
 - Hands
 - Fingers
 - Heart
 - Lungs
 - Whole body
-

4. How often might you climb the climbing wall again at Frost Valley? Choose the number that shows what you think.

3 = Very often **2** = Pretty often **1** = Rarely **0** = Never

5. How often might you climb after leaving Frost Valley? Choose the number that shows what you think.

3 = Often **2** = Sometimes **1** = Not very often **0** = Hardly ever
(everyday) (once a week) (once a month) (once a year)

SAMPLE GAMES ^{vii}

- **Balloons** Inflate a balloon and either place it inside or tape it to the outside of the climber's clothing. Have climbers experiment with the position of the balloons and observe how this addition to their bodies affects their positioning on a range of climbs of differing degrees, grades, or levels of steepness. This can be a quick and easy method of getting climbers to climb with straight arms and a twisting motion on steeper ground, as they try to keep the balloon away from the wall.
- **Getting Dressed** This works in a similar way to "one-handed catch," but offers more variety in practice. Hang a range of different items of clothing on the wall. The climbers then have to climb to those clothes and put them on or even take them off without touching the ground, making them think about stable body positions.
- **Musical Climbing** Climbers move to the rhythm of the music. Slower, more controlled movements are required for slower music, while faster music means that climbers have to move dynamically.
- **One-Handed Catch** For a climber on a wall to catch a soft ball, he or she has to get into a stable body position. He or she then has the option of throwing the ball to the instructor or to another climber.
- **Octopus** Identify two handholds, which are level and approximately shoulder-width apart, and a single foothold. While holding the handholds and standing on the foothold, have each climber move his or her body around and try to touch as many different footholds as possible with his or her spare foot.
- **Twister®** This classic party game can keep a group on a climbing wall amused for hours. Have several climbers positioned on a section of wall, well away from each other, with a range of different colors. Play the game as normal, using a standard Twister® spinner, but have all the climbers moving at the same time. The winner is the climber that stays on the wall for the longest time without falling or touching another hold.

ADDITIONAL TYPES OF CLIMBING

At Frost Valley, participants may have the opportunity to participate in other types of climbing. The following describes these activities. Their health elements mirror those associated with climbing done on the climbing wall.

Climbing: Usually done with ropes, this type of climbing is typically practiced outdoors. The person climbing is tied to a rope controlled by another person. Controlling the rope is *belaying*; the person controlling the rope is the *belayer*.

Scrambling: This is a mix of hill walking and climbing. Some scrambles up steep ridges can be very exposed. The steeper the rock, the harder the scramble.

Bouldering: This type of climbing involves using the hands without equipment. The goal is to climb to challenging places that are just a few feet off the ground. You have to support your weight with your arms and legs, which builds upper- and lower-body strength, along with abdominal (core) strength.

ENDNOTES

ⁱ Kenney, Kaye. "Benefits of Climbing." [Internet - WWW, URL] <http://exercise.lovetoknow.com/types-exercise/benefits-rock-climbing>.

ⁱⁱ Tribune wire reports. "2 Americans complete 'world's most difficult' rock climb at Yosemite [Internet - WWW, URL], "<http://www.chicagotribune.com/news/nationworld/chi-el-capitan-climb--20150114-story.html>, 14 January 2015.

ⁱⁱⁱ Murano, Grace. "10 Coolest Climbing Walls" [Internet - WWW, URL] http://www.oddee.com/item_97954.aspx, 2 November 2011.

^{iv} Quay, Anthea, "In Japan, an Alice in Wonderland-inspired Rock Climbing Wall" [Internet - WWW, URL], <http://designtaxi.com/news/350831/In-Japan-an-Alice-in-Wonderland-inspired-Rock-Climbing-Wall/>, 19 October 2011.

^v Wikipedia. "Indoor Climbing" [Internet - WWW, URL], https://en.wikipedia.org/wiki/Indoor_climbing, 08 June 2015.

^{vi} Seattle.gov, "Brief History of Camp Long Started in 1937, dedicated in 1941" [Internet - WWW, URL], <http://www.seattle.gov/parks/environment/history.htm>.

^{vii} Smith, Paul, "Climbing Games" [Internet - WWW, URL] <http://pesdablog.com/pdfs/climbinggamesissuu.pdf>, 2009.