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FOR HEALTHY LIVING  
FOR SOCIAL RESPONSIBILITY

# Physical Activity: PADDLING & ROWING SPORTS

While participants are engaged in a paddling or rowing activity, they are getting lots of health benefits. The information in this packet details those benefits, from the muscles paddling and rowing sports develop to the way they make people feel.

This packet supplements what you will be doing during paddling and rowing sports. You do have to get participants to recognize that these activities are 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 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.

<b>Description</b>	Gives a profile of paddling and rowing's health benefits
<b>Type of Activity</b>	Explains how paddling and rowing are aerobic and strength building
<b>Where It Fits within the Recommended Amount of Physical Activity</b>	Points out where paddling and rowing fit within the suggested recommended 60 minutes of daily exercise
<b>Parts of Body Used</b>	Names parts of the body that paddling and rowing uses
<b>Muscles Affected</b>	Names the specific muscles that paddling and rowing builds
<b>Health Benefits</b>	Lists paddling and rowing's overall health benefits
<b>How It Makes You Feel</b>	Explains paddling and rowing's positive emotional benefits
<b>Suggestions for Ways to Incorporate</b>	<ul style="list-style-type: none"><li>• <b>Day 1:</b> Offers suggestions for introducing paddling and rowing's health benefits during the first day of the session</li><li>• <b>Following Sessions:</b> Gives lots of ideas for reinforcing participants' knowledge of paddling and rowing's health benefits during the remaining sessions</li></ul>
<b>Some Fun Ideas</b>	Offers ideas for games and other activities that build participant awareness of paddling and rowing's health benefits
<b>Interesting Facts</b>	Generates interest in paddling and rowing
<b>Evaluation</b>	Presents a modifiable questionnaire about participants' views on paddling and rowing and about whether they will continue beyond Frost Valley

## DESCRIPTION

Paddling and rowing sports—kayaking, canoeing, paddle boarding, and row boating — are moderate-intensity exercises that enhance aerobic fitness, strength, flexibility, and endurance. They exercise major muscle groups in different ways and also provide a non-weight-bearing cardio workout. They help you exert lots of energy — and you can exert even more if you paddle or row faster!

These sports also have mental and emotional benefits. They make you feel peaceful because of the sound and feel of the water and the comforting pull and rhythms of the paddle or oar and they connect you to the outdoors and introduce you to interesting natural outdoor sights.

There are differences between paddling and rowing, which you might discover:

<b>PADDLING</b>	<b>ROWING</b>
Uses paddles	Uses oars
Torso drives the paddling stroke	Legs and arms drive the rowing stroke
Kayaks, canoes, stand-up paddleboards, rafts	Traditional rowboats (and more modern sweep-oar boats, sculls)
Can use one paddle on one side to keep the boat straight	Need two blades (oars), one on each side, to keep the boat straight
Paddlers face forward	Rowers face backward
Paddles are not attached to the boat	Oars are attached to the boat

The sports are similar in many ways. Individually, they focus on different parts of the body.

**Standard row boating** Rowing is an excellent way to exercise. In addition to strengthening arm, leg, back, and core muscles, it builds stamina and provides a good cardio workout. An experienced rower in an efficient rowboat can keep up a steady rate of four to five miles an hour!

**Traditional canoeing** Paddling a canoe develops upper-body strength, builds core muscles, and improves aerobic fitness. The main muscles used in canoeing, as you pull the paddle against the water, are those in the upper back, forearms, and abdominals. You don't usually use your leg muscles when canoeing. Rigorous paddling can get the heart and breathing rates up! Canoeing in rougher waters helps you burn more energy. You exert lots of energy lifting and putting down canoes and carrying them to and from the water.

**Kayaking** This paddle sport provides a full-body workout —back, chest, midsection (abs), arms, and legs. The legs contribute to a good kayak stroke, transferring the body's power through the kayak to make it move through the water. They also work with the hips to help turn and stabilize a kayak.

What's the difference between a canoe and a kayak? Typically, a canoe is an open boat in which paddlers sit on a seat. A canoe paddle normally has one blade. In a

kayak the paddler sits on a low seat with their legs extended in front. A kayak paddle is bladed at both ends.

There are different types of paddle boarding. You might try each one to see how they affect the body in somewhat different ways and how each type of paddling requires a different relationship and interaction with the water.

**Prone paddle boarding** There are two types of prone paddle boarding:

**Belly paddle boarding (lying-down paddling)** Belly paddling uses the basic paddle stroke, with the arms as the paddles. It's a bit like freestyle swimming: You move each arm forward to grab the water and pull through it and down to the side of the paddleboard. Paddling while lying on the board builds your biceps and triceps. Prone paddling does put a lot of stress on the shoulders and neck because you hold your head above shoulder level and it's also easier to negotiate tougher waters, as in the ocean. Some say that belly paddling is similar to running or biking up a steep hill. It is a great endurance sport, keeping your heart at a low, steady rate.<sup>1</sup>

**Kneel-down or knee paddle boarding:** This is similar to belly paddling, but you are on your knees paddling with both arms at the same time and really working your back, shoulders, and core muscles, especially the abs. Some say that knee paddling is faster than prone paddling, which means it's good for developing balance. In knee paddling, you can keep your neck at shoulder level (parallel), reducing the strain on the neck and shoulders.

**Stand-up paddle boarding (SUP):** When stand-up paddle boarding, you stand on the paddleboard and use a paddle to move through the water. Your legs, as well as your core abdominal and back muscles, get a significant workout because they keep you balanced on the board. (Working to maintain balance also increases your focus.) It develops your arms and shoulders because you use them to paddle through the water. And you strengthen your torso by twisting as you paddle. This type of paddling provides a great cardio workout.

#### **TYPE OF ACTIVITY: Aerobic/Strength-building**

Paddle boarding of all types provides a great cardio workout and builds a variety of muscles. It's also great for developing balance and flexibility.

## WHERE IT FITS WITHIN THE RECOMMENDED AMOUNT OF PHYSICAL ACTIVITY

Paddling and rowing sports can fulfill the cardio (aerobic) and strength-building portion of the suggested 60 minutes of daily activity. You can add warm-ups and exercises that build core muscles before getting into a boat or on a paddleboard.

PARTS OF BODY USED	MUSCLES AFFECTED (See <i>Terms to Know</i> in Facilitator's Guide)	HEALTH BENEFITS
<ul style="list-style-type: none"> <li>• Legs</li> <li>• Arms/forearms</li> <li>• Back</li> <li>• Buttocks</li> <li>• Chest</li> <li>• Torso</li> <li>• Shoulders</li> <li>• Hands</li> </ul>	<ul style="list-style-type: none"> <li>• Abs (<i>Abdominals</i>)</li> <li>• Biceps</li> <li>• Rotator cuff muscles</li> <li>• Triceps</li> <li>• Traps (<i>Trapezius</i>)</li> <li>• Lats (<i>Latissimusdorsi</i>)</li> <li>• Rhomboid</li> <li>• Hamstring</li> <li>• Quads (<i>Quadriceps</i>)</li> <li>• Heart</li> <li>• Lungs</li> </ul>	<ul style="list-style-type: none"> <li>• Improves balance</li> <li>• Reduces stress</li> <li>• Improves joint strength</li> <li>• Builds muscular strength (especially core muscles)</li> <li>• Improves cardiovascular fitness</li> <li>• Improves posture</li> </ul>

## HOW IT MAKES YOU FEEL

- Relaxes and calms (from being on the water, being outside, the rhythmic motion of oars or paddles)
- Helps you feel one with nature
- Improves balance and flexibility
- Gets you to love the feel of the water on your face and body

## SUGGESTIONS FOR WAYS TO INCORPORATE

### DAY 1

1. When introducing the rowing and paddling sports program, begin by asking participants:
  - Who has rowed a boat? Who has paddled a canoe or a kayak?
  - Have you been on a paddleboard? How did you paddle (lying on your belly, sitting on your knees, standing up)?
  - If you've tried two or more, which of these sports do you like best? Why?
  - What do you think of rowing a boat, paddling a canoe or kayak, and/or paddling a paddleboard as exercise? What kind of a workout does each give you?
  - What parts of the body do you think get the most benefit from paddling and rowing sports?
2. Point out that rowing and paddling sports are great physical activities, and especially fun because they get you outside and in the water. Share the benefits of these activities as a whole, building on what participants answered in the first step.
3. For each activity that you model, have participants observe and point out which parts of the body/which muscles are working. If there is time during the first session, you might model each activity and then have participants try it out to identify the parts of the body that are doing the work and likely to get the most physical benefit.
4. If participants are going to do several types of rowing and paddling exercises during the session, it might be fun for them to note similarities and differences among the activities in a large Venn diagram (see Sample Venn Diagram, below) or other type of chart. Or they can simply discuss the differences each day. For example, if they paddleboard on their bellies one day, then stand-up paddle the next, they can discuss the differences between the two exercises —and even debate which one gives the best workout! They can determine which of the exercises builds fitness for other sports. This way they can see how different activities support each other in terms of overall physical development.

### FOLLOWING SESSIONS

1. Couple teaching with games that work on specific skills, target specific parts of the body so participants can build strength and experience a good "workout," and help participants to improve other aspects of paddle and rowing sports—balance, coordination, etc. See Game Ideas (these can be modified, especially for paddle boarding) below.
2. Have participants do some pre-paddling or rowing exercises that build important muscles, skills, endurance, etc. See Workout Ideas, below.

## SOME FUN IDEAS

1. Encourage participants to try a new activity at camp and to compare it with a paddling or rowing sport that they have participated in.
2. Challenge participant teams to design a skills-building prone/kneel-down paddleboard game. They can work on this after the session and during recreational boating and paddling sports time, then teach it to their peers over the remaining days of the session.
3. One way to measure the amount of physical activity done in a day is by the number of steps taken. The average step rate for the number of miles is 2,000 steps per mile (about 30 minutes of continuous activity). A pedometer counts steps for activities like walking, hiking, and running. There is a way to calculate other physical activities' step equivalents based on minutes. Look at the comparisons for some paddling and rowing sports:

KAYAKING	10 min.	15 min.	20 min.	30 min.	60 min.
# of STEPS	1,661	2,492	3,322	4,983	9,966

CANOEING	10 min.	15 min.	20 min.	30 min.	60 min.
# of STEPS	2,182	3,273	4,364	6,546	13,092

There are recommended guidelines for the number of steps that constitutes moderate to intense physical activity and can add up to the recommended 60 minutes of daily activity. For young people, 9,000 steps is the magic number.

Participants can chart the steps they have taken in a day, including one of the rowing/paddling activities noted above, general walking (using a pedometer), and other activities. Post the Step Conversion table on page 12 of 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, looking at increased activity, the effect on their bodies, etc.

## ROWING AND PADDLING: Interesting facts

*Kayak* means "man-boat" (also known as "hunter's boat"). The word comes from the word *qajaqin* the Greenlandic Inuktitut language. Eskimos used the kayak to hunt seals.<sup>ii</sup>

For many different peoples, from Native American tribes to the Polynesians, the canoe had a variety of uses —primarily transport, trade, and warfare.<sup>iii</sup>

The first official canoeing and kayaking sporting events were held in the mid-19th century.<sup>iv</sup>

In 1924 in Paris, flat-water canoeing was featured at the Olympic Games as a demonstration sport. It became an Olympic an official Olympic sport in 1936 in Berlin.<sup>v</sup>

The first person to cross the Atlantic Ocean in a kayak was 29-year-old World War I veteran Franz Romer. In 1928, the German-born kayaker left Lisbon, Portugal, and traveled 4,000 miles to arrive in Puerto Rico.<sup>vi</sup>

Rowing was first used as a means of transport in, Greece, Rome, and ancient Egypt.<sup>vii</sup>

Galleys, used as war vessels and ships of state, were common in ancient Egypt (on the Nile River) and subsequently in the Roman Empire (on the Mediterranean) from at least the 25th century to the 4th century B.C.E. Rowing was also an important adjunct to sailing for the Anglo-Saxons, Danes, and Norwegians in their military forays on the water.<sup>viii</sup>

Rowing on the River Thames in England, in small boats and barges, began as early as the 13th century. There was soon a company of watermen transporting passengers up, down, and across the Thames in and near London.<sup>ix</sup>

Thomas Edward Blake is credited with the creation of the very first paddleboard in 1926. He is said to have modeled his board on an ancient wooden Hawaiian surfboard called the *o/o* (used by Hawaiian royalty). Blake hollowed out his surfboard by drilling it full of holes and then re-covering the entire board. Blake broke many paddleboard racing records.<sup>x</sup>

Paddle boarding picked up again in the 1980s, during which time Craig Waterman designed a new stock paddleboard called the Waterman, which many paddleboard racers used.<sup>xi</sup>

Women first competed in the Olympic canoeing program in 1948.<sup>xii</sup>

Birgit Fischer holds the records for being both the youngest and the oldest Olympic canoeist to win gold, at ages 18 and 42. She holds 12 medals.<sup>xiii</sup>

## EVALUATION

1. How FUN would you say rowing and paddling is? Choose the number that shows what you think.

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

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2. How HEALTHY would you say rowing and paddling is? Choose the number that shows what you think.

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

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3. Which parts of your body would you say got the best workout from rowing and paddling?

- Legs
  - Hips
  - Shoulders and neck
  - Lower back
  - Heart
  - Lungs
  - Whole body
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4. How often might you participate in rowing and paddling again at Frost Valley? Choose the number that shows what you think.

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

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5. How often might you participate in rowing and paddling again 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)

## ENDNOTES

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- <sup>i</sup>Daniels, Kyle. "Lost at Sea, Prone Paddling Fundamentals" [Internet - WWW, URL] <https://racemill.com/features/paddle/prone-paddling-fundamentals>, 20 March 2015; El-Gazzar, Amin. "Paddleboard Aerobic Exercises" [Internet - WWW, URL] <http://www.mademan.com/mm/paddleboard-aerobic-exercises.html#ixzz3f7r7s1TE>, 23 March 2011
- <sup>i</sup>Daniels, Kyle, "Lost at Sea, Prone Paddling Fundamentals," [Internet - WWW, URL] <https://racemill.com/features/paddle/prone-paddling-fundamentals>, 20 March 2015; El-Gazzar, Amin, "Paddleboard Aerobic Exercises, [Internet - WWW, URL] <http://www.mademan.com/mm/paddleboard-aerobic-exercises.html#ixzz3f7r7s1TE>, 23 March 2011.
- <sup>ii</sup>Olympic.Org., "Canoe/Kayak Sprint Equipment and History" [Internet - WWW, URL] <http://www.olympic.org/canoe-kayak-sprint-equipment-and-history?tab=history>; Wikipedia, "Kayak" [Internet - WWW, URL] <https://en.wikipedia.org/wiki/Kayak>; KalliKids, "Children's Kayaking & Canoeing: Facts and Ideas" [Internet - WWW, URL] <http://www.kallikids.com/en/KalliKids/For-families/expert-pin-boards/index.cfm/page/kayak-canoe>.
- <sup>iii</sup>Olympic.Org., "Canoe/Kayak Sprint Equipment and History" [Internet - WWW, URL] <http://www.olympic.org/canoe-kayak-sprint-equipment-and-history?tab=history>.
- <sup>iv</sup>Ibid.
- <sup>v</sup>Ibid.
- <sup>vi</sup>Woody Island Resort, "8 Interesting Facts about Kayaking You May Not Know"[Internet - WWW, URL] <http://www.woodyi.com/blog/item/8-interesting-kayaking-facts>, 21 May 2014.
- <sup>vii</sup>Olympic.Org., "Rowing Equipment and History" [Internet - WWW, URL] <http://www.olympic.org/rowing-equipment-and-history?tab=history>.
- <sup>viii</sup>Editors of Encyclopedia Britannica, "Rowing: Boat Propulsion and Sport" [Internet - WWW, URL] <http://www.britannica.com/topic/rowing-boat-propulsion-and-sport>.
- <sup>ix</sup>Ibid.
- <sup>x</sup>Wikipedia, "Paddleboarding" [Internet - WWW, URL] <https://en.wikipedia.org/wiki/Paddleboarding>; Engevik, Jen."The Art of the Paddleboard" [Internet - WWW, URL] <http://topkit.com/the-art-of-the-paddleboard>, 25 September 2013.
- <sup>xi</sup>Wikipedia, "Paddleboarding" [Internet - WWW, URL] <https://en.wikipedia.org/wiki/Paddleboarding>.
- <sup>xii</sup>International Canoe Federation, "Canoeing & Olympics" [Internet - WWW, URL] <http://www.canoeicf.com/icf/Olympic-Games/Canoeing-at-the-Olympic-Games.html>.
- <sup>xiii</sup>The WorldPaddle Awards, "Birgit Fischer" [Internet - WWW, URL] <http://www.worldpaddleawards.com/organisation/birgit-fischer-german>.
- <sup>xiv</sup>AMC Outdoors, "Games Paddlers Play" [Internet - WWW, URL] <http://www.outdoors.org/publications/outdoors/web/paddling-games.cfm>, June 2004.
- <sup>xv</sup>Kalama, Dave. "Dave Kalama's Paddleboarding Workout: Bear Crawl" [Internet - WWW, URL] <http://www.mensjournal.com/expert-advice/dave-kalama-s-paddleboarding-workout-20120910/bear-crawl>.
- <sup>xvi</sup>Crowhurst, Christopher."Shoulder Exercises for Kayaking and Canoeing" [Internet - WWW, URL] <http://www.paddlinglight.com/articles/shoulder-exercises-for-kayaking-and-canoeing/>, 17 November 2011.
- <sup>xvii</sup>Smart-Start-Kayaking.com, "Paddling Fitness" [Internet - WWW, URL] <http://www.smart-start-kayaking.com/Paddling-Fitness.html>.