



Post-visit: *Cross Country Skiing*

Classroom Activity

Brief Synopsis

Once students have had a cross country skiing experience at Eagle Bluff, they have first-hand knowledge of its physical nature. In these activities, students will explore the fitness levels of skiing in comparison to other popular sports/hobbies as well as the lessons that can be learned from skiing beyond just the skills.

Ages: Grades 5-8

Vocabulary: calorie, fitness, kilometer, platitude

Outcomes:

1. Students will become familiar with the caloric expenditures of various physical activities.
2. Students will be able to graph a data set.

Activity 1: *Fitness Face-off*

Time: 60 minutes

Materials:

- Worksheet
- Pencil
- Graph Paper

Activity 2: *Advice from a Ski*

Time: Two (2) class periods.

Materials:

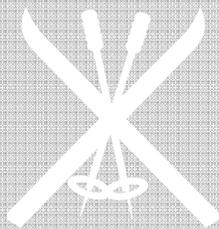
- Paper
- Pencil

Minnesota Academic Standards:

Science: 5.II.D.2, 9-12.I.D. 1

Language Arts: 5.III.A.2, 6.III.A.3, 8.III.A.2

Physical Ed: 5.1.2, 5.2.2, 5.3.2&3, 5.5.3, 5.6.5, 6.1.2, 6.4.1, 6.5.5, 6.6.1&4, 7.4.1, 7.5.1, 7.6.3, 8.3.4, 8.5.1



Activity 1: Fitness Face-off

Background: Cross country skiing burns more calories per hour than any other sport. It offers a low-impact aerobic form of exercise and is advocated by medical professionals as the best cardiovascular fitness activity. Skiing at Eagle Bluff gives you a chance to participate in one of the many heart-healthy activities that you can do throughout your life.

Procedures:

1. Have students brainstorm some of physical activities they participated in at Eagle Bluff including Cross Country Skiing.
2. Have students brainstorm other physical activities they do in their daily lives.
3. Based on their best judgment, have students rank activities from least calorie consumptive to most.
4. Use “Calorie Calculations” worksheet to have students calculate the amount of calories actually used while participating in those activities.
5. Rank the post-calculation results from least calorie consumptive to most.

Discussion:

- Compare results. Were the results unexpected?

Extension:

- Graph the calories burned according to activity in a chart style of your choice.
- **Kilometers for Kids Program:** The American Cross Country Skiers has created the new Km's With Kids program in an effort to encourage young children to XC ski more often. Children meeting the standards standard of kilometers skied during a single ski season for their age group will qualify for a prize packet full of goodies from AXCS and other sponsors. www.xcskiworld.com/axcs/kms_kids.htm

Activity 2: “Advice from a Ski”

Background: From physical fitness to exploring wilderness, people can benefit from cross country skiing in many ways. Greater benefits than physical accomplishment can also be achieved. We can learn many lessons about ourselves and about life through the act of cross country skiing.

(Continued on back)

Procedure:

1. As a class, verbally review the course of events during cross country skiing class at Eagle Bluff including the history overview, equipment introduction, skiing demonstration, and the trip around the trails.
2. Have students individually write down 2-3 moments of class that made an impression on them i.e. falling a “million” times, that skiing was easier than they thought, skiing down a hill and falling into a drift of snow, etc. Encourage students to be as reflective as possible.
3. Students should choose one of their moments to write an original saying or platitude i.e. if they fell a lot but then got the hang of skiing they could write “if at first you don’t succeed, try and try again” or if they exerted lots of energy “a ski a day keeps the doctor away.”
4. Have students share their saying with the entire class.

Extension:

- Decorate posters inspired by the sayings the students created.
- Compile a book of the sayings. Potential titles: *Everything I need to know I learned from cross country skiing...* , *Cross Country Skiing’s Little Instruction Book*, *Advice from a Ski...* the options are many!

Related Literature:

Marja's Skis by Jean Pendziwol - Marja looks up her older sister and can't wait to join her in skiing to school. When Marja turns seven, she's finally ready. Her father tells her, "When you are strong inside, you can do anything," and despite her mother's fears, she skis off to school on her own. Then a shocking event turns Marja's world upside down. How will she cope? Evocative prose and beautiful bring this moving tale, set in a 19th-century Canadian logging town, to life.

Resources:

- American Cross Country Skier website: www.xcskiworld.com
- Minnesota Public Radio Segment on Snow Snakes: http://news.minnesota.publicradio.org/features/2003/01/27_horwichj_snowsnake/



Great Moments in Cross County Skiing

BIRTH) Like several other sports, XC skiing emerged from the more mundane necessity of every day life. Gliding on skies over deep snow has been practiced for at least 4,000 years. It is not too surprising that the stability and speed-enhancing utility of putting long wooden planks under the feet was discovered in a place where deep snow covers the landscape 6-8 months of the year. Perhaps the exact origin of skiing cannot really be identified geographically. However, the first practitioners were probably the migratory Sami of what is now northern Norway, Sweden, and Finland, living very near the Arctic circle. Skis gave them greater mobility for hunting reindeer. The ski technology of the Sami was likely passed southward to the Vikings through occasional contact and further developed throughout Scandinavia. While Norwegians may not be able to claim skiing as their own invention they definitely gave skiing its name. The word "ski" is derived from the old Norse language (from *skith* - a stick of wood).

995 AD) Norway's first king Olav I, (better known as Olav Tryggvason) was described as a fine sportsman both on land and on the sea. "*Han løper bedre på ski enn andre menn*" wrote historians of the day. Historians also tell us that skiing was one of the eight "arts" that another Viking king, Harold Hardråde, mastered. Of course, others around the kings were also good skiers and occasionally there were competitions that resulted. One famous race pitted King Harold against a young unknown named Heming. King Harold thought that nobody could match him on skis, and went so far as to proclaim that thought quite publicly. So perhaps it was one of sport's early "upset" victories in the making when Harold the King found himself matched stride for stride by Heming the Young. Legend has it that the youngster won.

1205) Two of king Håkon of Norway's *birkebeinerne*, Torstein Skjeva and Skjevald Skrukka, were charged with the task of skiing and/or fighting their way from Lillehammer to Østredalen while carrying the two-year-old son of the king, Håkon Håkonsson. King Håkon was attempting to unify Norway, and not everyone wanted to go along, especially other tribal leaders of the time. For these other would-be "kings", Killing Håkon's son and breaking the lineage was a major goal. The two gaunt and poorly clothed skiers ("birkebeiner" translates to bark legs, for the strips of wood bark that were used to help keep their lower legs warm) could not have known how important their tiny cargo would become. Thanks to their heroic efforts, the boy lived to become a king that expanded Norway's boundaries beyond what they had ever been, or would be again. Today, this famous flight for survival lives on as the Norwegian "Birkebeiner", a popular 58 km "touring" race over the same trek that the two made in 1206 (along with American and Canadian races by the same name). Now competitors are required to carry a 5kg backpack as a memorial to the burden carried during that first "race".



1767) Descriptions were written of "professional" skiing competitions in Norway. Many of the participants were members of the military who were part of the "ski-company". These competitions were not limited to what is today called Cross Country, but also included "*skiskyting*" (biathlon), and downhill racing. The winner's premium was sufficient to pay for a horse and two cows, so the competitions were fierce! Looking back 100 years or so, it is important to realize that the extreme specialization that we see today within skiing was not always present. Before 1850, skiers didn't even use 2 ski-poles, just one, long multi-purpose staff. In the past, ski-jumping, "downhill" racing and cross country were all practiced and contested by the same skiers. In fact, athletes generally performed all three disciplines on the same pair of skis! Today, that "all-around" ability survives as a foundation of the approach to teaching skiing to children in Norway. Small children use one pair of skis for all disciplines, and learn to jump, skate, slalom, etc. Ski poles are considered optional equipment! Only later does specialization take place.

20th Century) In contrast to the sport's crude beginnings, today modern cross country skiing is a highly specialized discipline.

- 1960) Specialized track making machines appeared in time to prepare the courses for the winter Olympics in Squaw Valley, California. In Europe prior to 1974, it was the duty of the military, hundreds of soldiers on skis, to compact and prepare race courses for major competitions. Today, special grooming and track setting machines create consistent and ideal conditions for the skiers.
- 1970) Equipment used has been modified continuously. Scandinavia dominated innovations in ski design and manufacture then in 1970 several Austrian ski manufacturers introduced fiberglass skis to the sport.
- 1990) Today carbon fiber, fiber glass and other high performance materials have replaced the heavier wooden skis, and relegated these beautiful hand-crafted pieces to the walls of nostalgic skiers, or the fire place. Ski wax development, both the glide and the kick wax, has also contributed to improved ski performance. In Scandinavian public libraries, you can find numerous books on the art and science of ski-waxing!

Fitness Face-off

Taken from the "Calories Burned Calculator"
at: www.dietandfitnesstoday.com

Activity	Calories burned/hr	Weight (lbs)
Skiing, slow or light effort	571 calories/hour	150
Skiing, downhill	357	150
Hiking	428	150
Soccer	500	150
Basketball	428	150
Baseball/Softball	357	150
Playing Video Games	178 (not Wii sports games)	150
Ice Skating	450	150
Gymnastics	285	150
Swimming, general	428	150
Swimming, sport	714	150
Snowboarding	357	150
Cycling	571	150
Dance	321	150
Martial Arts	714	150
Fishing	178	150
Walking	250	150
Tennis	500	150