LET THE GAMES BEGIN
Utah Resources
What do mining and skiing have in common? Both were important factors in the growth of Utah. Both are included in the exciting history of Park City.

Silver Mining
At one time, Park City mines were some of the richest in the United States! Silver mines, discovered in Park City, brought wealth, power, influence and opportunity to a few lucky men. While most miners remained poor and worked in dangerous conditions underground, a few used luck, hard work and knowledge to become extremely rich! One of these miners was Thomas Kearns. Kearns was a teenager when he left home to seek his fortune in the mines. After arriving in Park City, he first worked as a mucker (a poor worker who shoveled ore into the underground ore wagons). He used his knowledge of mining and ore veins to stake a claim in a mine that he thought might be rich in silver. His hunch proved to be correct, and he became a millionaire! The Silver King Mine, in Park City, provided this Irish Catholic miner with great wealth and power. At the beginning of the 1900's, successful miners like, Thomas Kearns, changed the image of downtown Salt Lake City by building fabulous mansions on South Temple. The Kearns Mansion, an elegant reminder of Park City's exciting past, was donated to the state and is now Utah's Governor's Mansion. The economic resources that came from mining led to great growth for Salt Lake City and the state of Utah.

Winter Sports
The development of downhill skiing and ski jumping began as early as the 1920's and 1930's. Skiers used to ski at Pinecrest, in Emigration Canyon, a few miles east of Salt Lake City. Becker Hill, not far from the 2002 ski jump, was also a popular spot. The organization of ski clubs and ski teams, at Brighton and Alta, marked the expansion of the ski industry in Utah. The old mining town of Park City was reborn as a modern ski resort. The buildings, which provided homes, stores, saloons, hospitals and churches used by miners, are now visited by tourists interested in shopping, skiing and enjoying the Old West atmosphere.

History of Skiing

1920's
Brighton was a favorite retreat from the summer heat for the early settlers of Salt Lake City. In the 1920's, the Wasatch Mountain Club encouraged hiking and ski touring. The foothills of Salt Lake City attracted groups of spectators, watching skiers jump from the small rolling hills.

1930's
Professional jumping contests were promoted with great interest! It was during this period that Utahns were first introduced to the Engen brothers. Alf and his brother Sverre jumped at Becker Hill in the very first contest held there. They were later joined by their younger brother Corey in 1933, and the three put on shows for spectators during the 1930's and 1940's with their daring moves and great skill.
The county commission was persuaded to plow the road in Big Cottonwood Canyon to allow for year-round traffic. The Alpine Ski Club was formed. Using an elevator drum, a rough cable tow was created in the Brighton area. The Salt Lake City Winter Sports Association was formed.

1938 The T-bar cable tow was put in place, and a group of skiers in Alta built Utah’s first lift. Alta opened for its first ski season.

Late 1930’s Snow Basin in Ogden Canyon opened. Timphaven in Provo Canyon opened.

1958 Solitude ski area in Big Cottonwood Canyon opened.

1960 Timphaven was sold to Robert Redford and renamed Sundance.

1963 Brian Head ski area in the mountain tops above Cedar City (in southern Utah) opened. Park City ski area opened.

Early 1970’s Powder Mountain near Ogden and Mount Holly-Elk Meadows near Beaver opened.

1971 Snowbird ski resort opened.

1981 Deer Valley ski resort opened.

Questions and Activities (PRIMARY AND INTERMEDIATE)

SOCIAL STUDIES: Natural History of Utah

Do you know the names of the Olympic Mascots? Copper, Coal and Powder are also the names of three natural resources found in the state. Where can you find copper, coal and “powder” in Utah?

HISTORY: Miner’s Child

Park City has an interesting history. First it was a mining town, and now, it is an upscale ski resort and tourist site. Write a story as if you were a child of a miner in old time Park City. What would be your fears? What would you do for fun? What might your dreams be?

SCIENCE: Beat you to the Top

Skiing was a popular sport with people who didn’t mind hiking up the hill in order to ski back down. In order for the sport to grow, inventors needed to find a way to get people to the top of the mountain! The rope tow, T bar and ski lift were invented to solve this problem. Use your creative thinking to think of three new ways to transport skiers to the top of a ski run.
Dan Jansen: A Hero Who Never Gives Up

The Olympic Winter Games only comes around every four years. During practice for the Games, Dan was at the top of his sport. Each time, he was favored to win the gold medal. Dan competed in the 1984, 1988 and 1992 Games, and each time, something went wrong.

The 1992 Olympic Games in Albertville, France, was especially hard on Dan. Dan loved his family and was worried about his sister, who was very ill with leukemia. Just three hours before Dan was to race, his sister Jane died. Dan went on with the race but fell, losing his chance for a gold medal again. At this point in his life, Dan could easily have given up his goal for the gold. But instead, he decided that he would race once more and win for his sister Jane.

All over the world, people watched the Olympic Winter Games as they were broadcast from Lillehamer, Norway, in 1994. Everyone knew the story of Dan Jansen and his striving for gold. Dan’s last chance would be the 1,000 meter race. His family, in the stands, cheered him on. Dan now had a wife and a little daughter Janey, who was named after his sister.

It was as if the whole world held its breath when the race began. Everyone hoped that Dan would not fall and that he would reach his goal. Dan skated the best race of his life and crossed the finish line in first place. The gold was his at last. People all over the world cheered and cried, in fact, Dan even received a congratulations call from the President of the United States! Dan Jansen made his dream come true.

Dan Jansen came from a big family. There were nine children in his Wisconsin home. In big families it is sometimes hard to find something that you can do better than anyone else, but Dan found that he had a real talent. Dan Jansen could ice skate very fast. In fact, by the age of 10 years old, Dan was speed skating in racing competitions. He loved the sport and decided early on that he wanted to be an Olympian and win the gold.

Many people dream of becoming a member of an Olympic Winter Games team, but few reach the goal. No one doubted that Dan would be an Olympian, in fact, he never had trouble making speed skating teams. Dan worked hard and won in almost every world-class event that he entered, every event except the Olympic Winter Games! Although Dan was usually favored to win the gold, it seemed that he was doomed to bad luck.
This lesson discusses determination and overcoming discouragement when seeking to reach important goals. The story of speed skater Dan Jansen gives an excellent example of holding to a dream. Obtain a copy of the CD and video “Dream with Me” from the Governor’s Music and Education Program.

**Objectives:**
- Discuss the ways in which Dan Jansen had a dream and worked to make his dream come true.
- Use writing and drawing to demonstrate how it feels to reach a dream.

**Introduction:**
Ask students what exciting event is coming to Salt Lake City? What makes the Olympic Winter Games different from any other sport competition? Explain that Olympians demonstrate a desire to achieve against all odds. Many athletes face great discouragement during their search for Olympic gold medal.

**Activity:**
Read or have students read the story of Dan Jansen. Discuss how hard it is to work on a goal without becoming discouraged and giving up.

Show the video: “Dream with Me.” Discuss the variety of sports and athletes filmed in the video. Every athlete was once in elementary school and had to deal with discouragement just as students do today. Athletes, who make it to the Games, learn how to never give up on their dreams.

What happens if we don’t reach our goal? Discuss what happens if athletes work hard but do not make it to the Olympic Winter Games. Sometimes people alter dreams to meet new goals and find success. We can shine through defeat, as well as, through success, as long as we do our best and keep trying.

Pass out the words to “Dream with Me” from the Governor’s Music and Education Program. Play the CD and teach the song.

After students are familiar with the song, discuss the words. What is the difference between the dreams we have while we are asleep and those dreams that we have for the future? Ask students if there have ever been times when they tried to accomplish a goal and kept failing. Have students share ways in which they might keep trying and not give up. Assign students to draw a picture of themselves reaching a favorite dream. Students may also write how they look and feel after sticking to their goals and reaching their dream.
Dream with Me

Music by Sam Cardon
Lyrics by Don Stirling and Additional lyrics by Sam Francis
"Dream with Me" from the Governor's Music and Education Program™ “Light the Fire Within”

I can scale the highest mountain
I can make a winning goal
Touch the furthest star that I can reach for
I can conquer every challenge
I can vanquish every fear
I'll reach for the sky

Dream with me
Of moments in the sun
Of new friendships and fun
Of a lifetime of memories
Dream with me
Of stepping to the stand with a medal
in my hand
Dream with me

Dream with me
I can run as fast as lightning
Score a perfect ten
Cheer for a teammate
Try and try again

Dream with me
Of moments in the sun
Of new friendships and fun
Of a lifetime of memories
Dream with me
Of stepping to the stand with a medal
in my hand
Dream with me

I can soar just like an eagle
Rise up with all my might
Twisting and turning and land feather light
I believe that I can do it
Stand up to every test
I'll try and I'll try

Dream with me
Dream with me
Dream with me
Dream with me
Dream with me
Dream with me
Dream with me

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Winning and Losing... What’s Important?

**Primary Grades**

- Have all students take the value survey (see survey sheet).
- Make graphs of the results and compare: (on the board or overhead)
  - Each category
  - Girls and boys
  - Class average in each category
- Discuss what values are demonstrated by choices in this survey. Ask the students if these values are what we want to demonstrate? Why or why not?
- What actions show good sportsmanship?

**Intermediate Grades**

(Adapt Primary Grade ideas)

- Make copies of the survey. Each student passes the survey to five other friends.
- Tally the results and discuss findings.
- Ask the students if they were surprised by the results. Why or why not?
- Discuss and compare the results of the areas above (each category, girls vs. boys, and class average) and have students try to explain the differences in the results.
- What actions show good sportsmanship?

**Extensions**

- Break the students into groups and have each group report back their results. Have them create a graph using poster board, a computer an overhead master.
- Ask the students whether or not they think the Olympic athletes place too much emphasis on winning? Why or why not? Is this a good or a bad thing? Why or why not?
Winning and Losing... What’s Important?

How much do you value...

<table>
<thead>
<tr>
<th></th>
<th>Very little</th>
<th>Little</th>
<th>Much</th>
<th>Very Much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Winning</td>
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<td></td>
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<tr>
<td>2. Having fun, playing the game</td>
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<tr>
<td>3. Friendship</td>
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<tr>
<td>4. Exercise</td>
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<tr>
<td>5. Fair Play</td>
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<tr>
<td>6. Uniforms</td>
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<tr>
<td>7. Competition, being my best</td>
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<tr>
<td>8. Being part of a team</td>
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<tr>
<td>9. Coaching</td>
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<tr>
<td>10. Refereeing</td>
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</tbody>
</table>

You may leave your name anonymous, but to calculate what males and females value most, we need this information below: Check the appropriate answer.

____ Male       ____ Female
Olympic Ideals: Reaching Goals

Setting goals is an important step in achieving what you want in life, but as your plans change, your goals must change too. The five Olympic ideals, provide a model for goal setting and understanding challenges.

The five Olympic Ideals are:

1. **Vision**

   Begin with the end in mind. Think of the final goal that you want to achieve. Create a visual mind picture of what you will look like, feel like, and sound like when you have reached your goal. Close your eyes and remember your “vision” as often as you can. It will keep you motivated when things get tough.

   Draw a picture or write a journal entry that describes how you will feel when you have reached your goal.

2. **Commitment**

   Don’t let yourself be distracted by things that keep you from accomplishing your goal. Invest your time and energy in what you want MOST, not what you want at the moment.

3. **Discipline**

   Discipline means that you pay attention to what you need to be doing and that you do whatever it takes to accomplish the goal. You take responsibility and keep promises to yourself and others. No excuses!

4. **Focus**

   Translate the “vision” you imagine for yourself into a reasonable plan that identifies the things you must do to achieve success.

   Write a step by step plan and review it often.

5. **Persistence**

   When things get tough, just keep doing your best! Keep picturing the vision of yourself having reached your goal. Don’t give up! Get out there, follow your plans the best you can, and you will succeed. You can count on it!
Fitness and Health

Athletes must maintain correct weight in order to be good at their sport. This usually means that they keep their body fat low and often work hard at increasing body mass. Athletes look closely at their caloric intake and fat needs before they plan healthy meals.

Go to http://www.phys.com to answer these questions about your fitness and health.

1. According to this site, what is your **IDEAL WEIGHT**?

2. What is your **BODY FAT PERCENTAGE**?

3. What is your **BODY MASS**?

4. According to this site, how many **CALORIES** should you have a day? ______________

5. **CALCULATE YOUR FAT NEEDS**:
   a. Maximum of _______ calories worth of fat per day.
   b. No more than _______ grams of fat total.
   c. No more than _______ grams in the form of saturated fat.

6. **PLANNING MEALS**

Use various Internet sites to plan three healthy meals you would enjoy eating. Be sure to follow the dietary guidelines and stay within your calorie and fat allotments.

Check out some of the sample menus available on this site before you create your own.

<table>
<thead>
<tr>
<th>Meal</th>
<th>Food Items</th>
<th>Calories</th>
<th>Fat Grams</th>
<th>Calories from Fat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td></td>
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<tr>
<td>1.</td>
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<td>2.</td>
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<tr>
<td>3.</td>
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</table>
Sports Pictograms

For each group of events in the 2002 Games, there is a pictogram or symbol that can easily be recognized by people, regardless of what language they speak.

These pictograms are designed to look like branding irons used by cowboys to keep track of their livestock (horses, cattle, etc.). They reflect Utah’s rugged history and western landscape.

WRITE THE NAME OF THE SPORT UNDER THE CORRECT ICON.

Descriptions of each sport are listed on the back of this page.
During the 2002 Games, athletes from all over the world will compete in more than 78 different events!

- **BIATHLON**—combines cross-country skiing with precision shooting
- **BOBSLEIGH**—two-man and four-man sleds speed down the mountain
- **CROSS-COUNTRY SKIING**—skiers race up and down through the woods
- **CURLING**—heavy stones slide across the ice towards a target
- **DOWNHILL/SUPER-G**—skiers race down a steep course with turns and jumps, going as fast as 60 mph
- **FIGURE SKATING**—single ice skaters perform gymnastics and dance on ice
- **FREESTYLE AERIALS**—competitors on skis perform flips and twists in mid-air
- **FREESTYLE MOGULS**—skiers gracefully race down the hill with a series of bumps and small jumps
- **GIANT SLALOM**—skiers race down a steep course weaving between 40 to 60 gates marked with rectangular flags
- **ICE HOCKEY**—teams compete on skates to hit the hockey puck into the goal
- **ICE SLEDGE HOCKEY**—Paralympic athletes compete on sleds with skates, similar to ice hockey in the Olympic Winter Games
- **LUGE**—competitors, lying on their backs with feet-first, ride a a sled down a track
- **MIX PAIRS/DOUBLES**—couples perform dance and gymnastic programs on ice skates
- **NORDIC COMBINED**—combines cross-country skiing and ski-jumping
- **SHORT TRACK SPEED SKATING**—several ice skaters sprint around the ice track at one time
- **SKELETON**—athletes ride head first on a thin steel sled down the bobsled track
- **SKI JUMPING**—competitors jump off a long, steep track and fly through the air
- **SLALOM**—skiers weave through 55 to 75 tightly-spaced gates marked with triangular flags
- **SNOWBOARDING**—competitors perform tricks and race downhill with both feet on one board
- **SPEED SKATING**—skaters race around a long track for long distances
A Sports Scavenger Hunt!

Learn more about your favorite Olympic Winter Games sport by reading the descriptions in the “Let the Games Begin” sport section. Additional sport information can be found online at the “About this Sport” section on the Salt Lake 2002 Olympic Winter website www.saltlake2002.com and the “Curriculum” section of www.uen.org/2002.

1. Select an Olympic Winter Games sport.

2. Which sport did you choose? ____________________________

3. Sketch the pictogram of this winter sport below (2002 Olympic Winter Games pictograms are found in this section):

4. List the equipment needed for this sport. ____________________________

5. Name a famous Olympic athlete for this sport. ____________________________

6. What venue will host the sport during the 2002 Olympic Winter Games?

7. When was the sport added to the Olympics? ____________________________

8. Where did the sport come from?

9. What skills are needed for this event? ____________________________

10. Describe three other interesting facts that you learned about the sport.

   a. ________________________________________________________

   b. ________________________________________________________

   c. ________________________________________________________
Game Fame

The sports included in the Olympic Winter Games are constantly increasing. Some sports are ancient, like speed skating. Some are new, like freestyle aerials. In order to be included in the Olympic Winter Games, a sport must be popular in at least 25 countries on at least two continents.

Work alone, or with friends, to create a new team or individual sport. Include the following details.

Description of sport
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Rules
_______________________________________________________________________
_____________________________________________________________________
____________________________________________________________________
______________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

New sports are created regularly. How do they become part of the Olympic Games?
Worksheet: Events

Design Your Own Event Ticket

Design an admission ticket to an Olympic Winter Games or Paralympic Winter Games event of your choice. Many tickets are decorated with images of the sport so that they can be kept as souvenirs. Include time, date, sport information and a tear-off section.
Olympic Event Lesson and Activity Ideas

Listed below are lesson and activity ideas that may be used with the Olympic event information found on the following pages.

**LANGUAGE ARTS: Sportscasting**

The Olympic Games are televised all over the world! Sportscasters seek ways to describe the events, so that those not attending the Games understand what is going on. They try to capture the excitement of the event through words. Think of something that you really enjoy doing. Imagine that you have been hired as a news-caster to describe your event on the radio. Use the reporter questions: who, what, where, when, how and why as you write your newscast. Use descriptive words that help listeners visualize and catch the excitement of the event. Present your speech to the class. The listeners will rate each speech on a scale from one to ten. Higher ratings reflect the attitude of the audience as they catch your enthusiasm.

**CREATIVE THINKING: Make it Better**

Athletes wear special clothing to protect them from injury. Consider a favorite game or activity such as riding a scooter. Scooters are popular but can be dangerous. Design protective clothing that might prevent scooter injuries. Brainstorm ways in which the scooter might be improved to ride smoother and safer.

**ART: Come to the Games**

Create a flyer or brochure to advertise a particular sport/event. Use reporter questions (who, what, where, when and why) to build excitement and advertise the event. Consider which colors, drawings and words could be used to create an effective flyer that encourages spectator attendance.

**MATH: Meters vs. Feet**

Meters are used to describe most dimensions and distances of events, venues and equipment. Why is the metric system used? Convert the metric measurements found in the sports information pages into feet and yards.

**PHYSICAL EDUCATION: Getting in Shape**

Outstanding athletes are supported by excellent coaches. Watch as the speed skaters (or other athletes) compete in their events. Consider the strengths and skills needed to perfect a performance. What exercises might build these skills? How might the athletes practice during the summer? Imagine that you are a coach for speed skating (or another sport). Organize a plan to help young people learn about and perform well in this event. Write an outline of your plan.

Consider the muscles needed to perform well in a certain event. What kinds of exercises might the competitors use when they are away from the snow or ice? What might you do to build some of the important muscles for your favorite sport? Develop an exercise plan to help you prepare for competition in that event. Follow your plan for at least two weeks. What kinds of changes did you notice in your strength and muscles?

Winter sport athletes must practice even during the summer months. What games or activities might keep them in shape for their sport? List existing games or invent new exercises that would be useful to athletes while in summer training. Prepare a demonstration of your plan for the athletes.

**SCIENCE: Inventing**

Sports equipment continues to improve through science and technology. Select a favorite sport. Study the equipment and play area used in the sport. Consider ways to improve performance. If possible, make a prototype of the equipment using your ideas. Draw your ideas showing ways to improve the equipment or play area.
Alpine ski racing is among the most exciting Olympic Winter Games events! Downhill skiing is fast and dangerous. Skiers travel straight down the mountain at breakneck speed. The super-G is a flight down 700 meters through 30 gates; giant slalom requires strength and precision as skiers race through gates with wide, sweeping turns. The slalom tests a racer’s sense of balance, speed and agility as he or she zigzags through dozens of quick turns.

Olympic alpine events include five events: super GS, downhill, slalom, giant slalom (GS), and combined with separate events of each for men and women. Different courses and terrain are required for each alpine event. During the 2002 Olympic Winter Games, Snowbasin will host the super G, downhill and combined events.

### Downhill

Downhill is the fastest alpine event. Competitors get only one run. Racers wear skintight, elastic one-piece suits with padded forearms and travel at high speeds. A few gates are used to control speed. A series of dips and bumps often cause the skier to “take flight.” The men reach speeds of up to 85 mph and the women up to 70 mph. The winner is often one hundredths of a second faster than the other competitors. Some downhill gates are set to control speed while others give direction. Downhill courses are designed specifically for speed.

### Super G

The super G is a relatively new event involving only one run. The super G is a shorter course with more gates than downhill. The racers wear one-piece suits and approved helmets. They make long sweeping turns at high speeds for the entire length of the course. A cross between the giant slalom and downhill, super G combines the wide, high-speed turns of giant slalom with the openness of a downhill course.

### Slalom/Giant Slalom

#### Slalom

The gates in slalom are formed by alternating pairs of red and blue poles set in a rhythmic pattern down the hill.

#### Giant slalom (GS)

The giant slalom has a longer course and wider gates than the slalom. Skiers must race through breakaway poles with wide, sweeping turns. The giant slalom tests the skier’s strength, technique and ability to choose the fastest line down the course. Racers complete two runs; the fastest combined time earns the gold. Racers wear skintight, elastic one-piece suits with padded forearms. The gates for the giant slalom use two pairs of alternating red and blue poles set to conform to the terrain.

### Alpine combined

The alpine combined includes one downhill run and two slalom runs. The slalom run tests the racer’s balance, speed and agility as they zigzag through hinged breakaway poles. Skiers must finish all three runs to qualify, and the racer with the fastest combined time wins.
Sprinting up a long flight of stairs before threading a needle gives an idea of what it’s like to compete in biathlon. This sport combines the endurance of cross-country skiing with the precision and calm of marksmanship.

Competitions, combining skiing and shooting, were first organized in 1776 in Norway, where participants fired rifles while racing. The first Olympic Winter Games in Chamonix, France, included a ski patrol race. This event was organized as a demonstration and was repeated at the 1928, 1936, and 1948 Olympic Winter Games. It was not until 1949, that the International Olympic Committee decided to accept Sweden’s proposal to include a combination of cross-country skiing and shooting in the Olympic program. Biathlon is an individual competition, open to civilian competitors. The first Olympic biathlon was held in Squaw Valley, California, in 1960.

There are eight biathlon events in the Olympic program. Men and women compete in sprint, pursuit, individual and relay. The specific distances are as follows:

<table>
<thead>
<tr>
<th>MEN’S EVENTS</th>
<th>WOMEN’S EVENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10km sprint</td>
<td>7.5km sprint</td>
</tr>
<tr>
<td>12.5km pursuit</td>
<td>10km pursuit</td>
</tr>
<tr>
<td>20km individual</td>
<td>15km individual</td>
</tr>
<tr>
<td>4x7.5km relay</td>
<td>4x7.5km relay</td>
</tr>
</tbody>
</table>

Bobsledding is a sport of skill, strength, and speed, in which 2 or 4 man teams race down a 1500-meter, banked ice track. The bobsled teams’ success depends on four factors: the speed of the start, the pilot’s ability to drive, the condition of the runners and the aerodynamics of the sled.

There are two types of racing sleds—a 2-man sled weighing approximately 200 kg (440 lbs) and a 4-man sled, weighing 275 kg (605 lbs). ‘Junior Bobs,’ sleds for beginners, are significantly lighter, weighing about 70 kg (154 lbs). The weight and dimensions of the sleds are standardized for competition purposes, but components, such as steering reins, seats and push bars, are often customized to fit individual pilots and crew.

The bobsleigh competition contains four runs (or heats) per team, over two consecutive days. The winner is the team with the fastest combined time over the four runs. Spotters and timers along the track monitor the bobs. The total combined weight (sled plus riders) is restricted to 390 kg (858 lbs) for 2-man and 630 kg (1386 lbs) for 4-man.
Cross-country skiing is a popular recreational and professional sport. Many of Utah’s hiking and bike paths become great cross-country ski trails during the winter. People enjoy strapping on their cross-country skis and heading out across a quiet expanse of untouched snow.

Cross-country skiing might look like an easy glide through the woods, but it is a difficult sport that requires both speed and endurance. Competitors ski on courses that test many skills. Racers cross rolling hills, endure uphill climbs and brave downhill speed. Although many people do not consider cross-country skiing to be a spectator sport, one of the most exciting moments of the Nagano Games was during the 4x10-kilometer cross-country relay. The skier from Norway won by a foot after a neck-and-neck race against Italy and Finland.

Cross-country skiing includes four distance and sprint races for individual competitions and one race for team competitions. Race distances range from 5 to 50 km. Men compete in races of the following distances: 15 km, 30 km, 50 km, and 4 x 10 km (relay). Women compete in races at the distances of 5 km, 10 km, 20 km, and 4 x 5 km (relay).

Curling originated in Scotland in the 16th century. Scottish marshes froze during the winter, and the local farmers played a sport consisting of sliding heavy “Kuting Stones” across frozen ice sheets. The player placed his fingers into small niches scraped into the stone. He threw the stone with a twist, causing the stone to curl in the direction of the twist. Curling stones were “channel stones,” worn smooth by moving water. Brooms were used to clear the snow from the path of the stones. Around the 17th century, handles began to appear on stones allowing for greater control. Although the marshes of Scotland have been drained and there are no ice sheets, the spirit of curling lives on. Early Scots felt that curlers should play to win but never to humble their opponents. Competitors demonstrated their skill in a spirit of good sportsmanship and honorable conduct. Today’s curling enthusiasts are proud of their sport and the values it promotes.

Curling is a game of strategy and is often referred to as “chess on ice.” Competitors slide 42-pound stones of granite toward the target, or house, while trying to knock their opponents’ stones out. Two sweepers use their brush heads to reduce friction in front of the stone and keep the rock on target. Vigorous sweeping requires upper-body and cardiovascular training. The game involves great precision and teamwork.
Freestyle skiers are the adventurous athletes of the Olympic Winter Games. The Freestyle aerialists fly into the air from specially designed ski ramps. There they perform acrobatics 50 feet in the air. Freestyle mogul skiers seek speed and style, while they race between and over mounds of snow. These freestyle events are fairly new to the Olympic Winter Games. At Deer Valley Resort in 2002, the moves and tricks will be better than ever.

Skiers ski down a run, jump off a ramp (called a “kicker”), and perform twists, flips, and spins, in mid-air. Skiers race through and over mounds of snow. They perform tricks off two eight-foot jumps, including such moves as the spread eagle, twister, helicopter, daffy, kosac, iron cross and backscratcher. Jonny Moseley, an award winning mogul skier, won the gold at the Nagano Olympic Winter Games and moved the moguls event into the spotlight.
Ice Hockey

Sticks slap against the ice, pucks whiz around the rink, and players clash together in one of the most exciting and popular events of the Olympic Winter Games.

Hockey is played with two teams. Each team has five skaters and a goalie. Skaters reach speeds of 40-60 km/hr. Players are substituted as often as every 40-60 seconds. Hockey sticks are made of aluminum or plastic. The game is played with a hard rubber disk called a puck. The puck is hit with the hockey stick and can reach speeds of more than 150 km/hr. Players wear protective gear that includes shin guards, gloves, elbow pads, shoulder pads, helmets and visors.

Penalties are called on players for a variety of offenses. When a penalty is called, the player is sent off the ice for two, five or ten minutes. Players are occasionally suspended for the remainder of the game.

To play at the international level, players must be proficient in the following skills:

SKATING - Skaters must be able to change directions and stop quickly.

SHOOTING - Players must be skilled in a variety of shots using the hockey stick. Some of the shots are called the wrist, the snap, the slap, flips and backhand shots.

PUCK CONTROL - Players must control the puck during passing, receiving and shooting.

CHECKING - Players are required to react to changing situations and to know the position of their own teammates and those of the opposition at all times.

Luge

The word luge comes from the French word for sled. Although luge is a relatively new Olympic Winter Games sport, sled racing is a very old winter pastime. References to sled racing in Norway date to 1480.

The sport of luge is an exciting timed sport! Competitors lie on a small sled, feet first. They hurtle up to 90 mph through 17 curves on 4,318 ft of track in less than one minute. There are no brakes. Lugers can go upwards of 85 to 90 mph. In a doubles race, the heavier of the two lies in front, and the two work together as a team throughout the race. Luge races can be won or lost by the slimmest of margins, often as little as 1/1,000th of a second.

Luge has been an Olympic event since the 1964 Innsbruck Games. The sport consists of three events: men’s singles, women’s singles and doubles.
To compete in nordic combined, an athlete must have the physical strength of a cross-country skier and the nerve of a ski jumper. Often called the decathlon of skiing, nordic combined requires excellence in two different sports. At the Salt Lake 2002 Games, athletes will spend the first day of the competition soaring off the normal or large ski jump (90K or 120K). The next day, the athlete, who scored the highest in the jumping competition, starts first in a pursuit cross-country ski race around a challenging trail. Competitors chase after him in the order of the jumping results, attempting to make up the lost time and overtake the leader. The first skier to cross the finish line is the overall winner.

By the mid-19th century, nordic ski carnivals were popular throughout Norway. The nordic combined was the most important event at these carnivals. Nordic combined has been part of the Olympic Games since the inaugural Olympic Winter Games in Chamonix, France, in 1924. At the Oslo 1952 Games, officials switched the order of the events—jumping first, racing second—to make for a more exciting finish. As is the case with the other nordic events (cross-country, jumping, biathlon), athletes from Scandinavian countries generally win the greatest number of medals. It wasn’t until 1960, that a German postal worker named Georg Thoma, who stood 1.59 meters (5 feet 2.5 inches) tall, became the first non-Scandinavian to win the nordic combined title. Women do not compete in nordic combined.

There are three events in nordic combined: the individual K90 and 15 km, the sprint K120 and 7.5 km, and the team K90 and 4x5 relay. Normal ski jumping rules and scoring apply.
Let the Games Begin • Events

Skeleton

Try to imagine lying headfirst on a small sled and speeding down an icy track at over 137 km/h (over 80 mph)! For those brave enough to try it, skeleton is one of the most unusual and exciting sports of the Olympic Winter Games. In 2002, for the first time in Olympic competition, skeleton athletes will race on the bobsled track at the Utah Olympic Park. Women will have their first Olympic opportunity to participate in skeleton races.

Skeleton is an individual sport. A single athlete rides a thin, steel sled steered by shifting weight or lightly dragging a toe. The competitor holds onto the sled while taking a running start on spiked shoes. The athlete then boards the sled face-down, with the chin nearly scraping the ice. The athlete with the fastest time takes the gold.

Ski Jumping

Have you ever wished you could fly? Ski jumpers realize this goal as they soar above the snow in hopes of long flights and high scores. The competitor travels down a steep ramp and then catapults high into the air. Through a combination of body and ski positioning, air currents, and skill, the skier seeks to stay airborne as long as possible. Ski jumpers are able to soar more than the length of a football field. In 2002, the thin air at the Utah Olympic Park should produce even more spectacular jumps.

Elements of ski jumping include: the in-run section, the long ramp leading toward the takeoff where the skier jumps; the landing hill, the steep downward slope over which the jumper flies; and the out-run area, where the jumper comes to a stop.

Jumpers perform on a normal ski hill (K90) and a large ski hill (K120). In competition, each athlete jumps twice. Style is judged from the takeoff to the landing. Points for a jump are decided by a formula for the distance plus “style” points, which are awarded by five judges, who look at form in the air and while landing.

Along with the individual ski jumping event, the team competition has been on the Olympic program since the 1924 Winter Games in Chamonix, France.

In the team competition, four jumpers comprise a team. The cumulative score of all jumpers is used to determine the team rank. A maximum of four points can be deducted if the skier does not land in the Telemark position, with one leg before the other. Jumpers receive a maximum of 10 penalty points for a fall.
Snowboarding was developed in the United States in the 1960s as people across the country began to seek out new wintertime activities. The United States held its first national championships in 1982 and hosted the first World Championships in 1983. In 1987, a four-stop, World Cup tour was established with two stops in the United States and two in Europe. The International Snowboarding Federation (ISF) was formed in 1990, to govern international competition, and the International Ski Federation (FIS) followed suit in 1994, making snowboarding an officially sanctioned discipline eligible for the Olympics. The FIS pushed for snowboarding’s inclusion in the 1998 Games and still acts as the international federation for the sport.

There are two snowboard events each for men and women halfpipe and parallel giant slalom.

Halfpipe is performed on a funnel-shaped run and consists of a qualifying round and a final round. The top six in the qualifying round proceed to the final round. Judges score the competitors on many criteria, paying close attention to form and overall impression. Competitors complete a series of twists, flips, spins, and handsprings, exciting the crowd with their acrobatics on the snow, much like skiers do in the freestyle events.

Parallel giant slalom is much like a downhill ski race. The course is 500 m long and consists of 23 to 25 gates, around which each boarder must pass. The top 16 boarders in the qualifying round continue to the final round. Two boarders race on the same course at a time.
There are two different types of speed skating—short track and long track. Both require speed and agility on the ice while circling the rink. The object of speed skating is to skate a specific distance in the fastest time.

Short track skating is a sport in which several skaters compete on the ice at the same time in individual and relay competitions. In long track speed skating, two skaters compete at a time skating longer distances on a longer track.

**Short Track**

In the individual event, four skaters start together on the same line. The first skater to cross the finish line is declared the winner. They race head to head in an oval without designated lanes. Seven rubber blocks in each turn mark the course. Skaters may cross into the infield ice, but they must always skate around the blocks in the corners. They may touch the ice inside the blocks with their hands.

Passing must be done without body contact. Pushing, bumping and blocking may be grounds for disqualification. Short track skaters lean as they turn and often bump into one another. In the first rounds, four to six skaters start each race. The two who finish first and second advance to the next round. The winner is the first to cross the finish line.

There are four short track speed skating competitions each for men and women: 500m, 1,000m, 1,500m, 3000m (women’s relay), and 5,000m (men’s relay) events.

Several skaters work as a team in relay races. The short track relay requires one skater to finish two laps. Team members may trade off at any time in any order, as long as, the skaters complete the relay touch-off.

**Long Track**

Long track skating is done in designated lanes, with only two skaters on the ice at a time. There is no body contact between skaters. There are five speed skating competitions each for men and women: 500m, 1,000m, 1,500m, 3000m (women), 5,000m, and 10,000m (men) events.
WHERE AM I?

Descriptions of each venue are listed in this section. Review the Venue description pages. Read about the sports hosted at each venue. Use a Utah or Wasatch Front road map, the venue map on the following page and the hints below to identify which Olympic Winter Games venue is being described.

1. From Salt Lake City, go east on Interstate 80. Turn south onto Highway 224. Watch out for snowboarders!

Venue: ________________________________
Sports hosted here: ____________________________

2. Head south on Interstate 15 from Salt Lake City. Take Interstate 215 westbound. You will find sticks, pucks and a lot of excitement!

Venue: ________________________________
Sports hosted here: ____________________________

3. An event that most people don’t know about is at this venue. From Salt Lake City, go north on Interstate 15. Exit on Highway 89 north.

Venue: ________________________________
Sports hosted here: ____________________________

4. Take Interstate 80 east past Park City to U.S. Route 40. Head toward Heber City. Enjoy a sport that combines skiing and marksmanship.

Venue: ________________________________
Sports hosted here: ____________________________

5. Here you will find the fastest alpine ski event. Take Interstate 15 north from Salt Lake City. Exit on Interstate 84 east. Take Highway 167.

Venue: ________________________________
Sports hosted here: ____________________________

6. If you are looking for skiers flying upside-down and gliding between rocks, this is the place. Travel east on Interstate 80 from Salt Lake City to highway 224. Pass the Park City Mountain Resort.

Venue: ________________________________
Sports hosted here: ____________________________
Use this map and a road map of Utah or the Wasatch Front to answer the questions on the “Where am I?” worksheet.
Topographical Map of Snowbasin

Snowbasin Ski Area is the venue for three skiing events: Downhill, combined downhill and super-G. Check out the topographical map of the Snowbasin Ski Area. You will see contour lines that show the shape and elevation of the land. They are sometimes called “level lines” because they show points that are at the same level. The closer together the contour lines appear on a topographic map, the steeper the slope.

HOW TO READ A TOPOGRAPHICAL MAP

The top of this drawing is a contour map showing the hills that are illustrated at the bottom.

1. Which is higher, hill A or hill B? __________________
2. Which is steeper, hill A or hill B? __________________
3. How many feet of elevation are there between contour lines? ____________________
4. How high is hill A? __________ hill B? __________

LOOK AT THE TOPOGRAPHICAL MAP OF SNOWBASIN ON THE NEXT PAGE TO ANSWER THE FOLLOWING QUESTIONS.

5. How many feet are there between each major contour line? _______________________
6. The bottom of the ski lifts (shelter) is between what two major contour lines?
7. Which section of the Snowbasin map shows the steepest mountains?
   a) northeast   b) northwest   c) southeast   d) southwest
8. Would you be walking uphill or downhill to go from the Easter Bowl to Wheeler Spring? _______________
9. Why do you think planners chose Snowbasin for the downhill skiing events?

Vocabulary

1. CONTOUR LINE: a line on a map, showing height above or below sea level.
2. TOPOGRAPHICAL MAP: a map that shows elevations as well as the positions of mountains, rivers, and other features, often in color and with contour lines.
3. ELEVATION: the height above sea level.
Topographical Map of Snowbasin
LET THE GAMES BEGIN • THINKING SKILL
Worksheet: Venues

NAME _____________________________________________

Now what do we do?!
(READ ABOUT SOLDIER HOLLOW ON THE VENUE DESCRIPTION PAGE.)

Everyone has problems! Students, workers, companies and nations deal with them every day.

At the Salt Lake Organizing Committee, where the 2002 Games are planned, workers have weekly meetings in which they brainstorm situations and discuss solutions to problems that might arise during competition.

Read the Scenario below. List the possible problems involved. Use your problem solving skills to prevent the situation from happening and deal with the problem if it does.

Competition has been fierce at Soldier Hollow during cross-country skiing competitions. Rivals have been neck-and-neck during the races. In order to keep their lead, a team spends extra time waxing their skis for the next race. Unfortunately, the waxing equipment is left on, and by 6:00 a.m., their waxing cabin and the waxing cabin next to them are in flames. All the equipment in the first cabin is gone, and other cabins are in danger. HELP!!!

Identify the many varied and unusual problems surrounding this scenario for...

- the athletes, particularly the team whose cabin burned down
- the spectators
- the media (NBC broadcasters, for example)
- the Soldier Hollow site

Describe what might be done to prevent this situation from happening.

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________

Describe what can be done to solve the problems arising from the fire.

__________________________________________________________________________________________________________

__________________________________________________________________________________________________________
Protect the Environment: Snowbasin

(READ ABOUT SNOWBASIN ON THE VENUE DESCRIPTION PAGE.)

Sports, culture and the environment are the three required components of the Games. Planners for the 2002 Olympic Winter Games made a special effort to protect and, when possible, improve the land. Each venue has special problems and unique needs.

Objectives: STUDENTS WILL

► Identify problems involved when disturbing natural areas
► Study Snowbasin’s environmental issues and solutions
► Use what they have learned to address similar school-wide environmental concerns

Introduction:

1. Ask students what they think of when they here the word environment.
2. Discuss environmental issues familiar to students.
3. Explain that concern for the environment is a major focus for each Olympic Winter Games.
   Ask, “Why would Olympic organizers care about the environment?”

Activity:

► Duplicate and distribute the Snowbasin information sheet.
► Ask small groups of students to read the information.
   ▪ Students will categorize environmental issues (recycling, reforesting, reseeding, erosion control, etc.).
   ▪ Groups will create separate charts detailing the solutions used to address each environmental concern.
   * Students will report on their findings.
► Use the findings to address environmental concerns on the school grounds.
   (In what way might our school address recycling, erosion, etc.?)
► Use an environmental solution to improve the school grounds.

Extensions:

Each venue information page has an abbreviated list of their environmental initiatives. For a complete version, go to the SLOC website: www.saltlake2002.com. Each venue is listed with a complete environmental report. Compare and contrast the environmental concerns of each venue.
Lesson

THE ZAMBONI: As Smooth as Glass

Summary:
Students learn the purpose of the Zamboni and participate in a hands-on experience showing how a Zamboni smooths ice after it has been chopped up by ice skaters.

Objective:
Students will demonstrate the way a Zamboni resurfaces ice after skating events.

Introduction:
List and discuss skating events. Ask students to tell what might help skaters do their best. Discuss the need for smooth ice. Ask students what they know about ice rinks and how they work. List their ideas on the board. Introduce the Zamboni. Lead a discussion on how a Zamboni is critical in maintaining an ice rink. Pass out copies or make an overhead describing the Zamboni. (See next page for a description of how a Zamboni works.)

Activity:
Fill baking pan with one inch of water and put the pans in the freezer. Make sure each pan is set flat. Later, after the water has frozen, review introductory material. Divide the students into groups of four and pass out materials. Each child will do one of the following jobs. 1. Gouge the ice with a fork to simulate ice skates. 2. Scrape the debris off the ice with the spatula. 3. Wipe off the ice with a damp warm rag. 4. Use a spray bottle filled with warm water to coat the ice. Put the pans back in the freezer to refreeze.

While the ice is refreezing, predict what will happen to the surface of the ice. Remove the pans from the freezer and discuss the results.

Extensions:
ların be a committee deciding whether or not to purchase a Zamboni for an ice sheet. Justify the purchase of an expensive machine; explain what the Zamboni does and why it is needed for the rink.

Compare and contrast the kitchen tools with each part of the Zamboni.

View the video “Dream with Me” and notice the segment with skaters.

CURRICULUM

Science

MATERIALS

1. Baking pan for each group
2. Metal spatula for each group
3. Fork for each group
4. Water
5. Freezer
6. Rag for each group
7. Ruler
8. Spray bottle for each group
The Zamboni and How It Works

A. Blade scrapes off large chunks of ice and debris
B. Auger gathers ice and debris
C. Spinning blade throws it into the bucket
D. Bucket can hold 2600 pounds of snow and ice
E. Water container used for washing the ice
F. Squeegee used to remove excess washing water
G. Hot water is applied to create a bond with the existing ice
Olympic Venue Lesson and Activity Ideas

Listed below are lesson and activity ideas that may be used with the Olympic venue information found on the following pages.

SCIENCE: Olympic Environment
Read the information on the Utah Olympic Oval (or any other venue). Review the Environmental Features listed in the section. List the ways in which the Utah Olympic Oval has considered the environment in its venue design. Discuss ways in which the Olympic Oval’s use of recycled materials might benefit the community. Brainstorm ways that your school might encourage environmental sensitivity.

SOCIAL STUDIES: Finding Your Way
Review the directions to a certain venue found on the venue description pages. Obtain a road map of Utah. Pretend that you are visiting Salt Lake City for the Olympic Winter Games. Using the map, trace a route from the Salt Lake International Airport to your venue by following the directions provided in the venue information pages. Use the scale on the map to track the mileage. Identify each venue on a Utah map.

MATH: How Much Can You Afford
You have identified a route from the airport to a specific venue. Use the venue information, the phone book, and other resources, to plan how much it will cost to buy two tickets to a speed skating event, rent a car for two days and stay in a local hotel for two evenings. You may continue to plan a trip by considering how much it will cost to eat out or prepare your own meals in a lodging that allows cooking. Use the ticket price information and the capacity numbers to figure how much money would be spent if each person in the venue paid full price.

ART: Design
If you were a venue designer, what would your venue look like?
Consider the needs of spectators, reporters, team members, parking, restrooms etc. Sketch the building or site. You may wish to draw a side view (an elevation) and top view (bird’s-eye view) to show what it would look like inside and out.
Deer Valley Resort

LOCATION: Approximately 36 miles (30 minutes) from Salt Lake City International Airport in the historic mining town of Park City.

DIRECTIONS: Take Interstate 80 (I-80) east from downtown Salt Lake City. Exit at Kimball Junction. Take State Route 224 and watch signs for Park City and Deer Valley Ski Areas. Follow Route 224 and signs to Park City. Turn left onto Deer Valley Drive and head south. Follow signs to the Resort.

EVENTS: Slalom and combined slalom
Freestyle aerials
Freestyle moguls

TICKETS: Ticket prices start at $45

YEAR BUILT: 1981

PHYSICAL DESCRIPTION: The 84 ski runs and six bowls provide a range of skiing from beginner to expert

CAPACITY: 20,000

ELEVATION: Base altitude: 2002 meters/6570 ft.
Summit: 2917 meters/9570 ft.

AVERAGE ANNUAL SNOWFALL: 762 centimeters/300 inches

ENVIRONMENTAL FEATURES:
The venue provides a habitat for elk, mountain lions, mule deer, black bear and moose.

Environmental efforts include:
- Reseeding the slopes to maintain quality vegetation
- Using erosion mats for erosion protection
- Channeling water runoff to reduce erosion

The Resort has planted 2,500 trees and spends $10,000 annually to ensure a healthy forest.

The Resort tests runoff water quality each spring for phosphates, nitrogen, solids and pH level. Results indicate steady improvement over 15 years.

THE RESORT ALSO:
- Recycles paper, glass, cardboard, tires, motor oil, and aluminum products
- Uses washable plates and glassware and serves beer in glasses
LET THE GAMES BEGIN • VENUES

The E Center at West Valley City

LOCATION: 3200 South Decker Lake Drive, West Valley City, Utah 84119

DIRECTIONS: Take Interstate 215 south from downtown Salt Lake City. Exit on 3500 South and travel east to Decker Lake Drive about one block. Turn left (north) and follow the road to the arena.

EVENTS:
- Ice hockey

TICKETS: Ticket prices start at $45

CAPACITY: 10,451

YEAR BUILT: 1997

PHYSICAL DESCRIPTION: A 28,000-square-meter/300,000-square-foot indoor facility for sports and entertainment, the ice arena is home to the Utah Grizzlies Hockey League team.

ENVIRONMENTAL FEATURES INCLUDE:
- Reused excavation and topsoil to fill water troughs
- Created higher berms and parking islands
- Created new topsoil by mixing soil with fertilizer, saving $9,000
- Ground up and recycled glass
- Crushed concrete for use as roadbase
- Replanted trees, uprooted during construction, on-site

The Center’s structure conserves energy through:
- A unique roof constructed with a reflective white rubber surface
- Heating and cooling system that work with the energy-saving roof
- Windows that help reduce winter heating and summer cooling costs

The E Center de-ices parking lots and sidewalks with magnesium chloride—more landscape friendly than salt. The Center recycles paper, cardboard, aluminum, wood and trash.
LOCATION: 4390 Harrison Boulevard, Ogden, Utah, in Weber County. Located on the campus of Weber State University, next to the Dee Event Center. Approximately 59 km/36.6 miles from the Olympic Village.

DIRECTIONS: Take Interstate 15 North from downtown Salt Lake City. Exit on U.S. 89 north to Harrison Boulevard. Turn right onto Harrison Boulevard and drive two miles to the Dee Event Center and Weber State University. Turn right onto the drive for the Ice Sheet.

EVENTS: Curling

COMPETITION DAYS: 12

TICKETS: Ticket prices start at $35

CAPACITY: 1,949

YEAR BUILT: 1993

PHYSICAL DESCRIPTION: A concrete floor replaced the original sand-base floor in July 1999

ELEVATION: 1460 m/4790 ft.
Park City Mountain Resort

LOCATION: 1310 Lowell Ave., Park City, Utah. Park City Mountain Resort is approximately 45 km/28 miles from the Olympic Village.

DIRECTIONS: Take Interstate 80 east from downtown Salt Lake City. Exit at Kimball Junction, State Route 224. Follow Route 224 and signs to Park City Mountain Resort.

EVENTS: Giant slalom, Snowboarding

TICKETS: Ticket prices start at $35

CAPACITY: Halfpipe, 10,000

YEAR BUILT: 1963

ELEVATION: Base: 2103.12 m/6900 ft. Summit: 3048 m/10,000 ft.

ADDITIONAL FACTS: The resort's director of skiing is Picabo Street, 1998 Olympic gold medalist in the super-G and 1994 Olympic silver medalist in downhill. Park City Mountain Resort has held 14 Alpine Skiing World Cups, the last taking place in November 2000. In addition, Snowboarding World Cups have been held at Park City Mountain Resort since 1999.

The Peaks Ice Arena

LOCATION: 100 North Seven Peaks Boulevard, Provo, Utah, in Utah County. The ice hockey venue is approximately 82 km/51 miles from the Olympic Village.

DIRECTIONS: Take Interstate 15 south from downtown Salt Lake City. Exit east at Center Street in Provo (No. 268). Proceed through town; Seven Peaks Park will be on the right.

EVENTS: Ice hockey

TICKETS: Ticket prices start at $45

CAPACITY: 8,000

YEAR BUILT: 1999

ELEVATION: (Base) 1388 m/4553.8 ft.
LOCATION: Rice-Eccles Olympic Stadium is located on the University of Utah campus.

DIRECTIONS: Drive south on State Street in Salt Lake City to 400 South and turn left. Follow 400 South to 1400 East. The Stadium is located on the University of Utah campus.

EVENTS: Opening and Closing Ceremonies

TICKETS: Ticket price is $885

CAPACITY: 57,500

YEAR BUILT: 1998

A sophisticated, computerized irrigation system waters the SportGrass on the stadium playing field. SportGrass, a combination of synthetic backing and natural grass, sits on a sand base that provides drainage and prevents the accumulation of water puddles. The field is watered daily and cut three times a week.

The Stadium’s recycling effort includes:
- Recycling bins near soft-drink vending machine areas
- Recycling newspapers
- Recycling white paper in non-public areas

HISTORY: The first recorded University of Utah football game took place in 1894, on Cummings Field, two years before Utah became a state. The University built its first stadium in 1927, with seating for 20,000. It was expanded in 1947 and 1966. Robert L. Rice donated $1 million in 1972, and the stadium was named Rice Stadium. The University added 5,000 new seats in 1982.

By 1997, the facility had the dubious reputation of being the oldest and smallest in the Western Athletic Conference. In June 1997, the University began work on the present stadium and completed renovation in 1998, at a cost of $43.5 million. As a result of a $10 million gift, from the George S. and Dolores Dore Eccles Foundation, the venue was renamed Rice-Eccles Stadium in 1998.
Salt Lake Ice Center

LOCATION: 301 West South Temple, Salt Lake City, Utah

DIRECTIONS: The Salt Lake Ice Center is located in downtown Salt Lake City between 300 West and 400 West on South Temple.

EVENTS: Figure skating, Short track speed skating

TICKETS: Ticket prices start at $20

CAPACITY: 17,238

YEAR BUILT: 1991

PHYSICAL DESCRIPTION: The 4-hectare/10-acre venue features a six-story, 74,000-square-meter/800,000-square-foot indoor facility for sports and entertainment that is home to the Utah Jazz of the National Basketball Association.

ENVIRONMENTAL FEATURES: The venue has a million-gallon water reservoir that holds rain and snow runoff. The reservoir releases water in a regulated flow into the city water system as needed. Designed as a community emergency center in the event of a disaster, the venue’s earthquake-proof roof was the first of its kind in the United States. Visitors enjoy the public plaza with its 200 trees, including 134 flowering pear. No pesticides are used on the grounds.

The arena’s indoor environmental features include:

- An ice-sheet refrigerant of an oil-mixed RF-26, which is safer than freon
- Detection units that monitor the ice sheet and warn of leakage
- A hot and cold air exchange run by natural gas-fueled boilers to provide the Center’s heat
- Biodegradable cleaning products, several of which are nontoxic or harmless to humans and exceed compliance requirements

The arena’s management and concessionaires:

- Recycle paper products, aluminum cans and cardboard

ADDITIONAL FACTS: The arena’s construction was the driving force for recycling an environmentally contaminated “brownfield” on Salt Lake City’s west side. The Center replaced abandoned buildings and a gas station’s leaky tanks, that were contaminating the surrounding area. Even more, it provided the impetus for the landowners, entrepreneurs and contractors to restore nearby buildings for use as businesses and residences.
Snowbasin Ski Area

LOCATION: Located in the Wasatch-Cache National Forest, Snowbasin Ski Area is approximately 87 km/54 miles from the Olympic Village.

DIRECTIONS: Take Interstate 15 north from downtown Salt Lake City. Exit on Interstate 84 east to Mountain Green. Take State Route 167 (Trapper's Loop). Follow Snowbasin Ski Area signs from Trapper's Loop.

EVENTS: Downhill, combined downhill, and super-G

TICKETS: Ticket prices start at $45

CAPACITY: Downhill: 23,500, Combined Downhill and Super-G: 20,000

YEAR BUILT: Courses were completed in the summer of 1998. Chair lift construction was completed in the fall of 1998. Snowmaking lines were constructed in the summer of 1999.

PHYSICAL DESCRIPTION: Olympic gold medal winner Bernhard Russi designed the men's downhill course. It is considered one of the top courses in the world.

ELEVATION: Base: 1957 m/6420 ft. Summit: 2838 m/9311 ft.

AVERAGE ANNUAL SNOWFALL: 1016 cm/400 inches

ENVIRONMENTAL FEATURES: Ninety percent of the racecourse is in the National Forest. Care was taken with the environment when constructing the new trails.

ENVIRONMENTAL EFFORTS INCLUDE: The Snowbasin venue is located partly in the Wasatch-Cache National Forest in the headwaters of Wheeler Creek, an important source of drinking water for the city of Ogden and a critical habitat for the sensitive Bonneville Cut Throat trout. The mountain also provides key habitat to one of the largest populations of sensitive Flammulated owls in northern Utah.

Snowbasin environmental considerations:
- Avoid sensitive areas
- Develop water storage wells, used in snowmaking, rather than creating storage reservoirs
- Revegetate hundreds of acres with seed mixes of native species seed mix
- Use native materials to face buildings in visually sensitive areas, allowing them to blend with the natural ridgelines and landscapes
- Screen mountain top buildings with evergreen tree plantings
- Restore several hundred feet of stream channels to their historic location and condition
- Restore native vegetation to several acres of wetlands and riparian areas by replanting locally adapted willows
- Salvage thousands of tons of valuable topsoil from base area parking lots and move them onto the mountain, to promote better revegetation of ski slopes
- Use helicopter "sky cranes" to move and install lift towers in remote locations, thereby dramatically reducing road construction on the mountain
- Cover hundreds of acres of bare soil with mulch blankets to enhance seedling establishment and survival
- Replant tens of thousands of native trees and shrubs lost to construction work
- Replace wetlands lost when covered up by the road
- Protect sensitive bird species from direct harm by suspending work near occupied nests
LOCATION: Soldier Hollow is approximately 69 kilometers/43 miles from Salt Lake City, approximately ten kilometers/six miles from Heber City and about two miles southwest of Midway in Heber Valley. Soldier Hollow is adjacent to the northwest corner of Deer Creek Reservoir.

DIRECTIONS: Take Interstate 80 east past Park City to U.S. Route 40. Drive south past Jordanelle Reservoir toward Heber City. Turn right on State Route 113 and follow it to Midway. Turn left on State Route 113 to Tate Lane. Make a right turn onto Tate Lane. Turn left at Soldier Hollow Lane (formerly known as Stringtown Road) and follow the access road to the Soldier Hollow venue in Wasatch Mountain State Park.

EVENTS:
- Biathlon
- Cross-country skiing
- Nordic combined

TICKETS: Ticket prices start at $25

CAPACITY: 20,000

YEAR BUILT: A design team began work in April 1998, and trail construction was completed in November 1999.

PHYSICAL DESCRIPTION:
A 518-hectare/1280-acre site at the eastern edge of Wasatch Mountain State Park is open and largely treeless. Elevation at the high point is 1793 meters/5882.5 feet. Base elevation is 1670 meters/5477.6 feet and stadium elevation is 1690 meters/5544.6 feet.

AVERAGE ANNUAL SNOWFALL:
215 cm/84 inches

ENVIRONMENTAL FEATURES: Water formerly used for irrigation will be redirected to create 1.0 hectare/2.5 acres of wetlands in Soldier Hollow Meadow, offsetting the more than half an acre of natural wetlands displaced by the adjacent ski track. Irrigation ditches have been removed so that the natural drainage flow returns to the wetland areas. Trees have been planted along the trails to shade exposed areas, and native grasses have been planted throughout the meadows, offsetting erosion caused by ski track construction. Biologists planted willow, hawthorn, cottonwood and other native wetland species wiped out by past cattle grazing.
Utah Olympic Oval

LOCATION: 5662 South 4800 West in Kearns, Utah.

DIRECTIONS: Take Interstate 15 South to 5300 South. Travel west on 5300 South, which turns into 5400 South, to 4800 West. Turn left and follow the road past Kearns Oquirrh Park Fitness Center to Ed Mayne Drive. Turn right and follow the road to the parking lot on the south end of the Utah Olympic Oval.

EVENTS: Speed skating

TICKETS: Ticket prices range from $20 to $175

CAPACITY: 6,500

YEAR BUILT: May 1999 to March 2001

PHYSICAL DESCRIPTION: The Oval’s signature is a unique, cable-suspended system that helps eliminate massive trusses that would ordinarily be necessary to support the structure. The roof is 1,200 tons lighter than a traditional truss solution. Due to its elevation, Utah’s dry air and the building’s design, the ice sheet is expected to be the fastest in the world. The oval is exceptionally flat and without banked turns, due to the fact that the concrete was placed with a continuous pour, costing approximately $30 million. It contains a 400-meter enclosed oval with two full-sized hockey sheets, a weight training room, a sports medicine room, 15 locker rooms, a pro shop, concessions and a skate rental area. The covered oval is one of only six enclosed ovals in the world (there are three in North America).

ALTITUDE: 1425 meters (4675 feet)

ENVIRONMENTAL FEATURES: The Oval, which is 655 feet long by 310 feet wide by 55 feet high, has a unique design that allows the roof to be positioned about 20 feet lower than a conventional roof, reducing the building’s volume and increasing its energy efficiency. Roofing materials have been installed to reflect heat, that would normally be absorbed. The venue’s flooring is from recycled materials and about 7000 reused temporary seats will be installed for spectators. Planners have reused about $1.5 million worth of refrigeration equipment from the old outdoor speed skating track. The refrigeration system is free of ozone-harming CFC and HCFC gases. The Zamboni ice resurfacing machines were retrofitted to run on natural gas. The building’s owner and contractors are rewarded for recycling steel, aluminum, cardboard, concrete, bricks and asphalt discarded at the site.
LOCATION: Utah Olympic Park, 24 miles east of Salt Lake City and four miles north of Park City on State Route 224.

DIRECTIONS: Take Interstate 80 east from downtown Salt Lake City and head toward Park City. Exit at Kimball Junction, State Route 224. Follow State Route 224 to Bear Hollow Drive and turn right. Follow the road to the Park’s front entrance.

EVENTS: Bobsleigh  
Luge  
Nordic combined  
Skeleton  
Ski jumping  

TICKETS: Ticket prices start at $35

CAPACITY: Bobsleigh, luge and skeleton: 15,600. Ski jumping: 21,000

YEAR BUILT: Opened in 1992, with ongoing construction, completed in 2001

PHYSICAL DESCRIPTION: A 156-hectare/386-acre complex includes a regulation Olympic bobsleigh and luge track and five regulation jumps.

ELEVATION: 2205 meters/7234 feet

AVERAGE ANNUAL SNOWFALL: 7.5 meters/295 inches.

ENVIRONMENTAL FEATURES: Home to small mammals, birds, deer and elk, the venue was designed to impact the land and its wildlife as little as possible. An ongoing monitoring effort tracks construction progress to ensure protection of the Upper East Canyon Creek watershed in which the park sits.

The bobsleigh/luge run is built close to the ground, blending in with the landscape. It is one of only three runs in North America.

The Park's environmental action plan calls for inspections during and after construction to ensure minimal soil erosion and to protect natural habitats. The plan includes:

- Revegetation of disturbed soils with native seed mixtures
- Restoration of stream channels
- Re-establishment of natural wetlands
- Restoration of natural habitat
- Management of storm water
- Recycled paper, aluminum, trash and vehicle motor oils
- Processing and disposing of toxic wastes off-site, ensuring minimal contamination risk

While the jumps are permanent, the stadium and seating area are temporary due to an agreement with adjoining landowners and to meet ongoing needs.