

Snow Safety Cards[©]



The game is designed to learn responsible behaviour in avalanche terrain. The method is based on the reduction method by Werner Munter. This short manual explains the way the game can be played, but it does not provide all the details of the reduction method. Please refer to literature for full details of the reduction method. More importantly, books and this game are no substitute for formal avalanche training and education.

The educational goal of the game is to encourage fruitful discussion during the course of the game about the possibilities and limitations of the reduction method. Playing the game and discussing the choices made, proves to be a fast and fun way to learn risk reduction in avalanche terrain!

Game Rules

Winning

Players try to collect as many 'tours' or 'descents' as possible. The player with most descents or tours wins.

Number of Players and Cards

The game can be played with a maximum of 4 players. With 4 players all participants get handed out 7 playing cards. With fewer players all players get 9 cards.

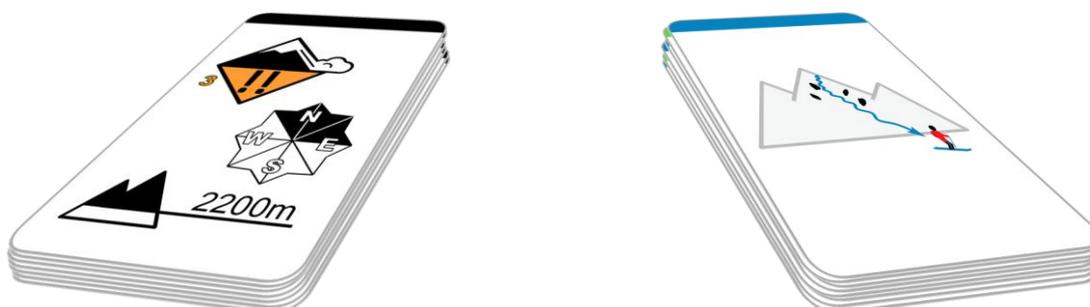
Type of Cards

The deck of cards consists of 3 types of cards.

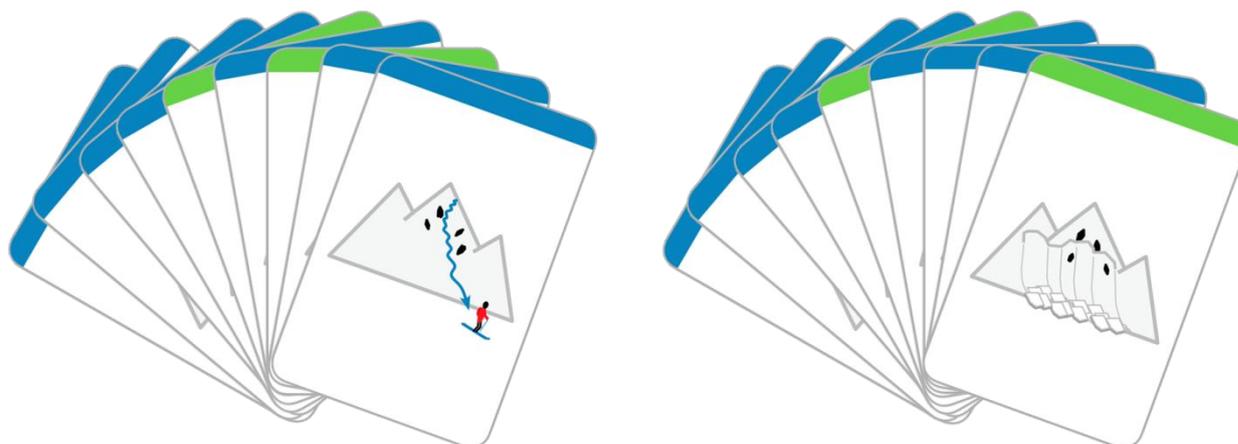
- Black cards: avalanche bulletins.
- Blue cards: action cards, describe the actions or choices made by the group of skiers/snowboarders; for example choice of steepness and aspect of the slope, group size, descending a well tracked slope, etc.
- Green cards: alarms signs or red flags, give information about local conditions.

Start of the Game

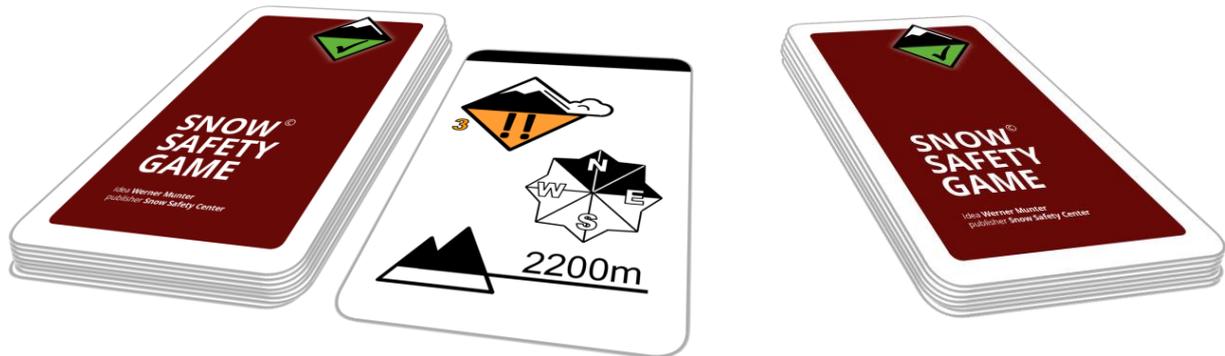
All black avalanche bulletin cards are collected in one stack of cards. All green and blue cards (alarm signs and action cards) are collected in a second stack of cards. Both stacks are shuffled.



Every participant gets handed out at least seven green and blue cards.



The remaining cards are put in a closed stack on the table. One card from the stack of avalanche bulletin cards is revealed:



Stack of avalanche bulletin cards.

Stack of remaining green and blue cards.

Playing the Game

Each round a new black avalanche bulletin card is revealed from the stack. In clockwise direction each player gets a chance to play a card to make a safe tour possible.

Playing cards that make a tour impossible is not allowed; i.e. playing 40 plus steepness at danger rating 3. A round ends once a descent (or tour) is considered 'safe' by the rules of the chosen reduction method: Professional Reduction Method (PRM), 'SnowCard', 'Stop or Go', 'Bierdeckel', Golden Rules, etc. The player putting the last and decisive card on the table, wins the 'descent'.

Once a player is out of cards, the game is over. The player that has collected the greatest amount of 'tours' or 'descents' during the game has won. If nobody is out of cards yet and the stack of green and blue cards ran out, the cards from the completed 'descents' should be shuffled and put back in the stack.

If a player cannot play a card, he has to draw a card from the stack of remaining green and blue cards. If possible this card may be played immediately.

Choosing to stay away from the backcountry, by going for the hot tub of carving turns on groomed slopes, are options that may not be played when another solution is possible. Discuss in your group if and why such cards may be played, but think twice before you play one of these reduction cards!

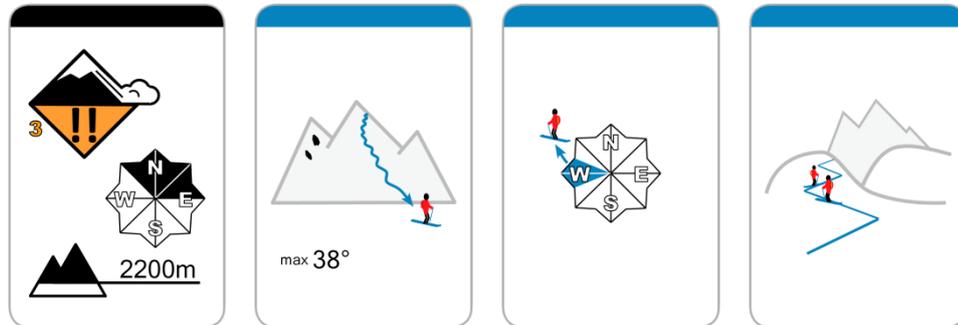
How and when to play green cards is a matter of preference:

- a) Green cards can only be played when they influence the avalanche condition; i.e. danger rating = 2 and playing the green card for large spontaneous avalanches would change the danger rating to 4.
- b) and/or green cards can be played when they are typical for the danger rating; i.e. danger rating = 4 and playing the card for large spontaneous avalanches. Large spontaneous avalanches are typical for this danger rating.

Examples

Two example game rounds for a group of three players: Tim, John and Tracy.

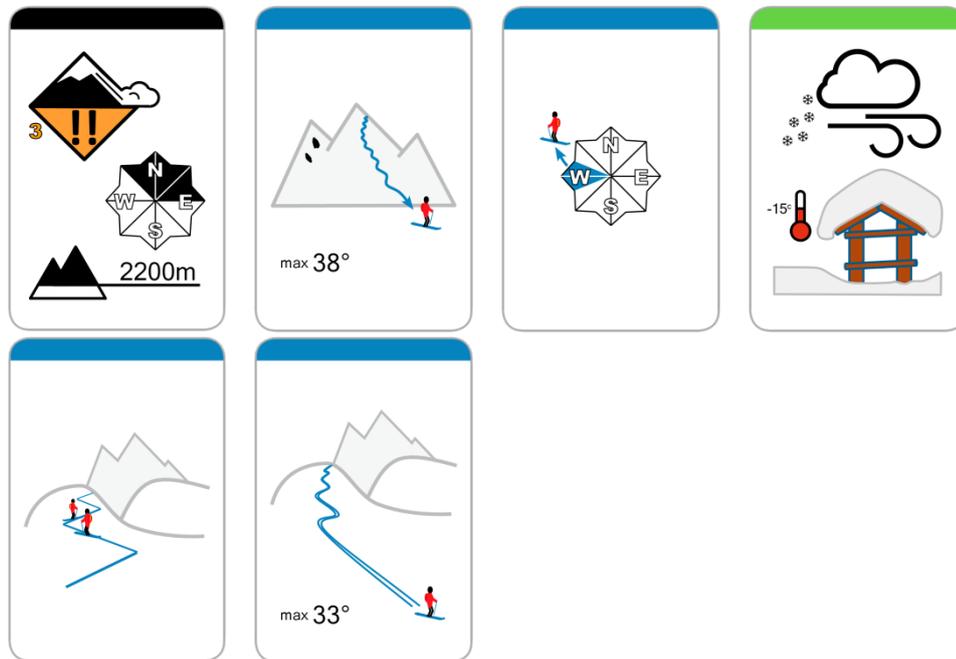
First example:



- An avalanche bulletin is revealed; it reads Considerable danger, on NE – E aspect, above 2200m.
- Tim, the first player, chooses to travel on slopes of steepness below 40 degrees.
- John chooses to descent on a W facing slope.
- Tracy decides to travel in a small group. With this third action card on the table, a safe tour is possible according to the Professional Reduction Method, and she wins this round.

A new avalanche bulletin card is revealed, and a new round starts with Tracy, as she has won the last round.

Second example:



- Avalanche bulletin reads Considerable danger, on NE – E aspect, above 2200m.
- Tracy chooses to travel on slopes of steepness below 40 degrees.
- Tim chooses to descent on a W facing slope.
- John now plays a warning sign card; significant new snow fall, critical new snow amount exceeded. This means there's at least considerable danger on slopes of all aspects. In the PRM all 2nd class reduction factors become invalid, and Tim's card, a descent on a W facing slope, loses its value.
- Tracy chooses to travel in a small group, still not sufficient for a safe tour.
- Since no 2nd class reduction factor is valid, there's no other choice than to play a higher 1st class reduction factor; Tim reduces slope angle even further to maximum 33 degrees. A safe tour is possible, and this round is won by Tim.
- Playing a 2nd action card from the same group, i.e. a second 1st class reduction factor (like in the example above) or a second slope aspect card, is only allowed if no other options are open. Please discuss amongst the group if this is allowed!

Description of Cards

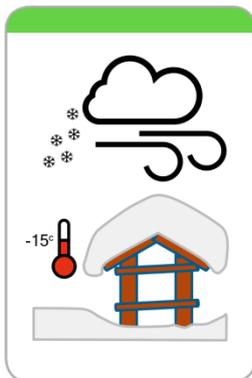
Black: Avalanche Bulletin cards



Example avalanche bulletin card:

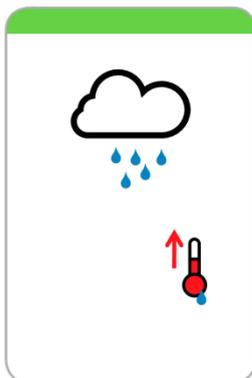
- Danger scale Considerable.
- On aspect NW over North to SE.
- Above 1800m.

Green: Alarm signs, such as new snow activity, rising temperature, spontaneous slab avalanches



Significant new snow activity:

- Critical new snow amount exceeded.
- Windy conditions and low temperature.
- This means at least avalanche danger rating Considerable (3).
- Likely on all aspects, but open for discussion.



Rising temperature and snow turning to heavy rain:

- This means avalanche danger can quickly become High.
- On all aspects.



Large spontaneous slab avalanche:

- This is a possibility during Considerable danger.
- A likely sight during periods of High danger.

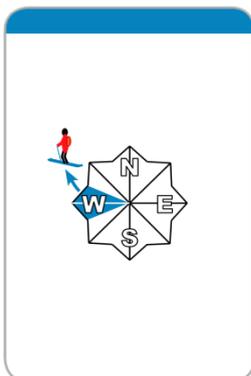


Whumpfing, collapsing sound:

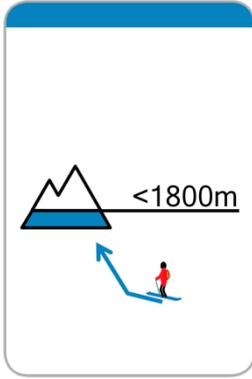
- Distinctive sound when a weak layer collapses below a slab.
- And/or cracks in the snow deck.
- Clear signs of instability.
- This is typical during Considerable danger, and frequent during periods of High danger.

Blue: Action cards, action or choices made by the group

The blue cards are the choices made by the group. Possibly to reduce the exposure to danger, such as maximizing slope steepness, choosing a favourable aspect, staying on groomed slopes or deciding for the hot tub. Can be considered 'Reduction Factors' in Munter's PRM.



Action card where the group decides to travel on West aspect only.



Action card where the group decides to travel at altitudes below 1800m.

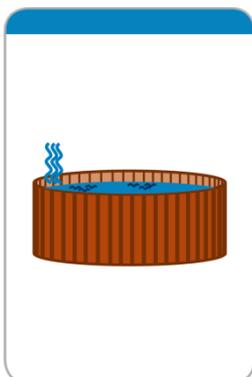


Action card where the group decides to limit travel to terrain of steepness below 33 degrees.



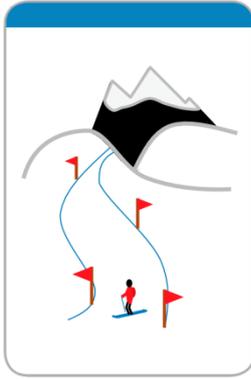
Action card where the group decides to travel on a slope with rocks protruding through the snow deck.

This means steepness of the slope is at least 40 degrees.



Action card where the group decides to stay off the slopes and spend some time dreaming about their next descent in the hot tub.

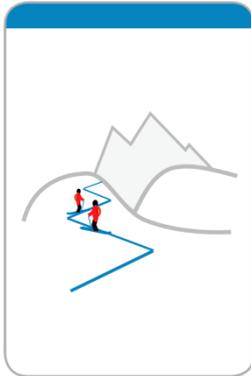
To keep the game challenging and educational, this card may not be played when a safe descent is possible. Generally speaking not below High avalanche danger.



Action card where the group decides to stay on groomed slopes.

In a typical North American setting, staying in bounds gives similar reduction of danger.

To keep the game challenging and educational, this card may not be played when a safe descent is possible. Generally speaking not below High avalanche danger.



Action card where one travels in a small group, but without safety distances between the group members.

A small group is a group size between two and four.



Action card where one travels in a small group, with safety distances between the group members.

A small group is a group size between two and four.

Safety distances at least 10 meters during ascent, 50m during descent.



Action card where one travels in a large group, with safety distances between the group members.

A large group is a group size of more than four people.

Safety distances at least 10 meters during ascent, 50m during descent.



Action card where one travels on a frequently tracked slope; staying within the tracks!