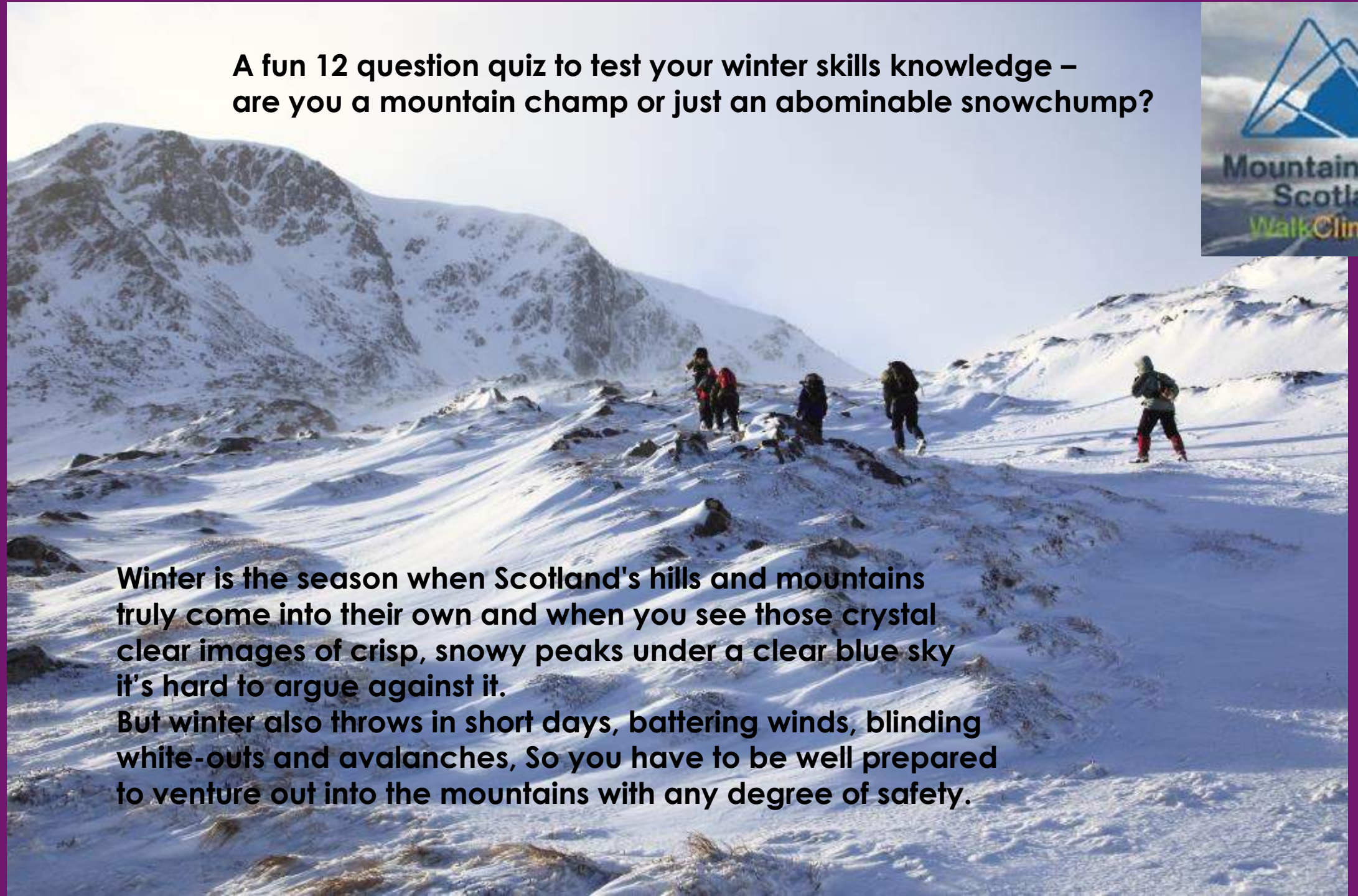
Ibex January Club Night

WINTER SKILLS QUIZ



A fun 12 question quiz to test your winter skills knowledge – are you a mountain champ or just an abominable snowchump?

Mountaineering Scotland
WalkClimbSki

Winter is the season when Scotland's hills and mountains truly come into their own and when you see those crystal clear images of crisp, snowy peaks under a clear blue sky it's hard to argue against it.
But winter also throws in short days, battering winds, blinding white-outs and avalanches, So you have to be well prepared to venture out into the mountains with any degree of safety.

1. What length is best for a general winter mountaineering axe? When the head of the axe is held in your hand and your arm is down by your side the tip of the shaft should reach to your:

a Knee
b Top of your boot
c The ground
d Any length will do – it's the pick that's important

1b Top of your boot is the correct answer:

If the axe is too short the user is likely to start to bend over to use it as they are walking along, putting themselves out of balance. If the axe is too long then it is dangerous for carrying on the rucksack and cumbersome in the event of it being used to ice axe arrest. So the length depends on your height and should just touch the top of your boot when held at your side.

2. Are special boots required for winter hill walking?

a Yes
b No
c Only if you're going to be on the steepest hills

2a Yes is the correct answer:

Your boots are the most essential tool for enjoying the winter hills and it is essential that a rigid winter mountaineering boot is worn to stay safe. Rigid boots are vital for kicking steps in hard snow and for fitting your crampons to.
Winter boots are rated with a 'B' rating system.

3. ‘Micro spikes’ are a lot lighter and cheaper than crampons. What sort of terrain can you use them on?

a Anywhere. They’re ideal for big mountains where you want to keep the weight down.
b Not on rocky mountains, but they’re fine for other hills.
c Nowhere. They’re simply dangerous.
d Great for flat forest tracks or pavements, but not for the hills.

3d Great for flat forest tracks or pavements, but not for the hills is the correct answer:

Micro Spikes or similar are great for walking/running on icy tracks such as forest tracks or pavements. But because they are attached with rubber, as soon as your foot is on a slope they will just roll off.
If you are heading into the hills a proper pair of crampons Is required which are compatible to your boots. Crampons are rated with a 'C' rating system.

TOP TIP: When buying your crampons take your boots into the outdoor store to ensure you get a good fit and the appropriate crampon for your boot.

4. We all know it can be pretty windy in the Scottish hills. What is the highest wind speed you can go out in?

a 40-50 mph
b 50-60 mph
c 60-70 mph
d It depends

4d It depends is the correct answer:

Because there are so many variables such as underfoot conditions, physical ability, whether you re heading into the wind or if the wind is behind you. As a general rule 35-40 mph will start to affect your balance as a fit, strong adult. Over 70 mph is a show stopper!

TOP TIP: A great mountain weather forecast can be found at: www.mwis.org.uk

Wind speeds in the mountains

Wind is the only 'show-stopper' in the hills. It can rain, snow, shine, be minus 10, plus 20, clear or foggy. None of those things are going to physically stop you on the hill or seriously hinder your progress, but wind can – and does, on a regular basis, particularly during the winter months. Here Mountaineering Scotland *Mountain Safety Adviser Heather Morning* shares a few thoughts and facts to ensure that you use the wind to your advantage and help you understand how those wind speed numbers on mountain weather forecasts relate to the physical impact on you out on the hill.

The first thing I look for on the mountain weather forecast is the wind direction and speed to ensure that I use the wind to my advantage. For example, if the wind is forecast to come from the south-west, then I want to ensure that when I am on the exposed higher ground I have the wind behind me, helping me along, rather than hindering progress. This is particularly important if precipitation is also forecast, as it's extremely unpleasant with rain or snow lashing in your face carried on a 30 miles per hour (mph) wind. Far better to have the weather on your back. In addition, battling into a strong wind is very energy-sapping and exposure to wind will be a significant factor in the onset of **hypothermia**.

Take a look at the table below to check out how different wind speeds will affect progress and balance and remember that wind will always increase with altitude so it's a good idea to check the mountain-specific forecasts which will give detail of wind speed at different altitudes. The new **Met Office Mountain Forecast** launched in 2017 will provide both the gust and the average (mean) speed in mph at 300, 600, 900 and 1100 meters above sea level.

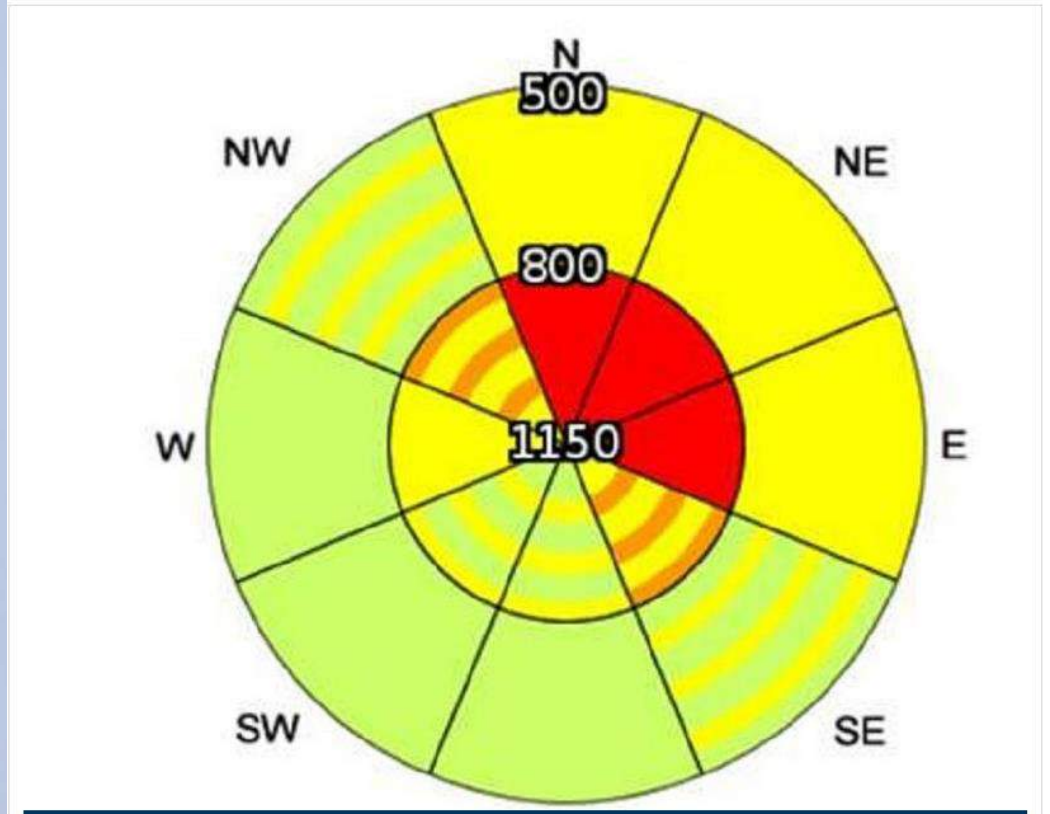
It is worthy of note that the highest wind speed recorded at the summit weather station on Cairngorm was an eye watering 176 mph!

High winds don't mean you have to miss out on your day on the hill, but it might mean that you change your plans. Take a lower route or more grassy 'roly-poly' hill where being blown off balance is unlikely to cause you injury.

Wind speed forecast in mph	Effects on you
Less than 20	Negligible
20-30	Unlikely to affect your balance, but be aware that this is the wind speed that will create the severest wind chill.* A temperature of 0 degrees will be equivalent to -10 degrees. Add a windproof outer layer. Secure map and compass. Goggles will be very useful in winter conditions.
30-40	Starts to affect the balance of a fit/strong adult. You may find that your foot does not quite land where you had planned it to. May be wise to avoid exposed ridge lines, rough underfoot terrain and keep away from exposed edges. Risk of frost nip** on exposed flesh if the temp is below zero.
40-50	Walking will be arduous. You will need to brace/lean into wind, and energy output will be significantly increased. Risk of being blown off balance/sideways. Navigation will be challenging: get your back to the wind and down on one knee to ensure a stable platform to read your map, then put your map safely away in a pocket.
50-60	Walking will be VERY challenging and exhausting. Keep a wide stance, perhaps linking in arms with a weaker member of the party. Move between gusts and brace yourself when a gust arrives. Get off the hill by the easiest and safest route staying well away from ridge crests and corrie rims.
60-70	Attempting to walk in 60-70mph winds is dangerous, and there is a high risk of being blown over and suffering injury. Stay away from difficult underfoot conditions or exposed edges and get off the hill as soon as possible.
70+	You're having a laugh! Seriously though, folks, if you are seeing a wind speed of 70 mph or more on the mountain forecast, this is the time to head for a walk in the glen. If you do get caught out in this strength of wind, go with the wind, avoid exposed ridges/corrie rims, link arms. You may even have to resort to crawling to get across a particularly exposed section and get down to a more sheltered area as quickly as you can. I have been physically picked up and thrown several meters by the wind on the Cairngorm Plateau, fortunately with no serious consequences.

5. Which, statistically, is the most dangerous avalanche warning?

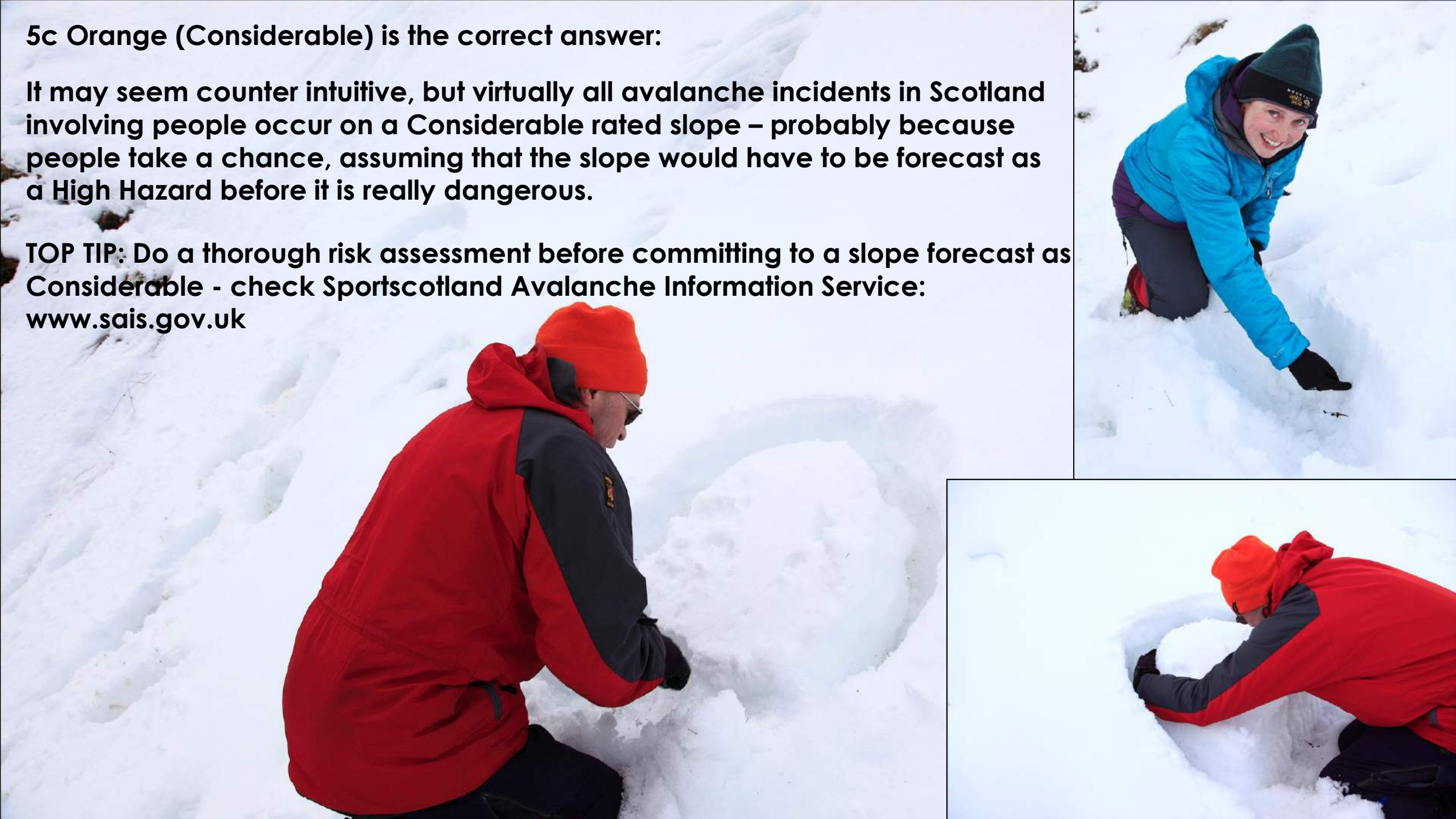
a Green (Low)
b Yellow (Moderate)
c Orange (Considerable)
d Red (High)
e Black (Very high)



5c Orange (Considerable) is the correct answer:

It may seem counter intuitive, but virtually all avalanche incidents in Scotland involving people occur on a Considerable rated slope – probably because people take a chance, assuming that the slope would have to be forecast as a High Hazard before it is really dangerous.

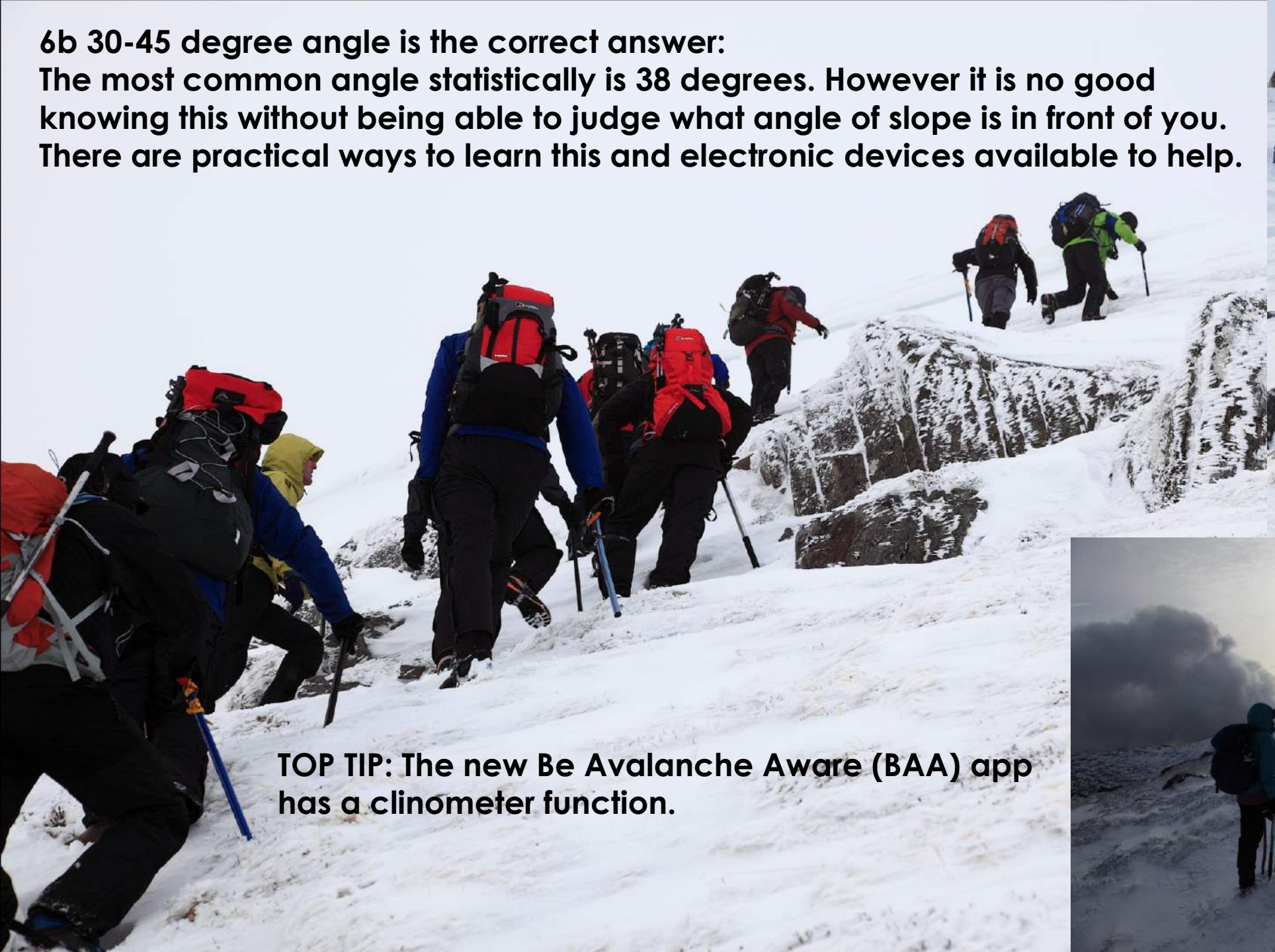
TOP TIP: Do a thorough risk assessment before committing to a slope forecast as Considerable - check Sportscotland Avalanche Information Service: www.sais.gov.uk



6. On what angle of slope am I most likely to trigger an avalanche?

a 20-30 degree angle
b 30-45 degree angle
c 45-60 degree angle

6b 30-45 degree angle is the correct answer:
The most common angle statistically is 38 degrees. However it is no good knowing this without being able to judge what angle of slope is in front of you. There are practical ways to learn this and electronic devices available to help.



TOP TIP: The new Be Avalanche Aware (BAA) app has a clinometer function.

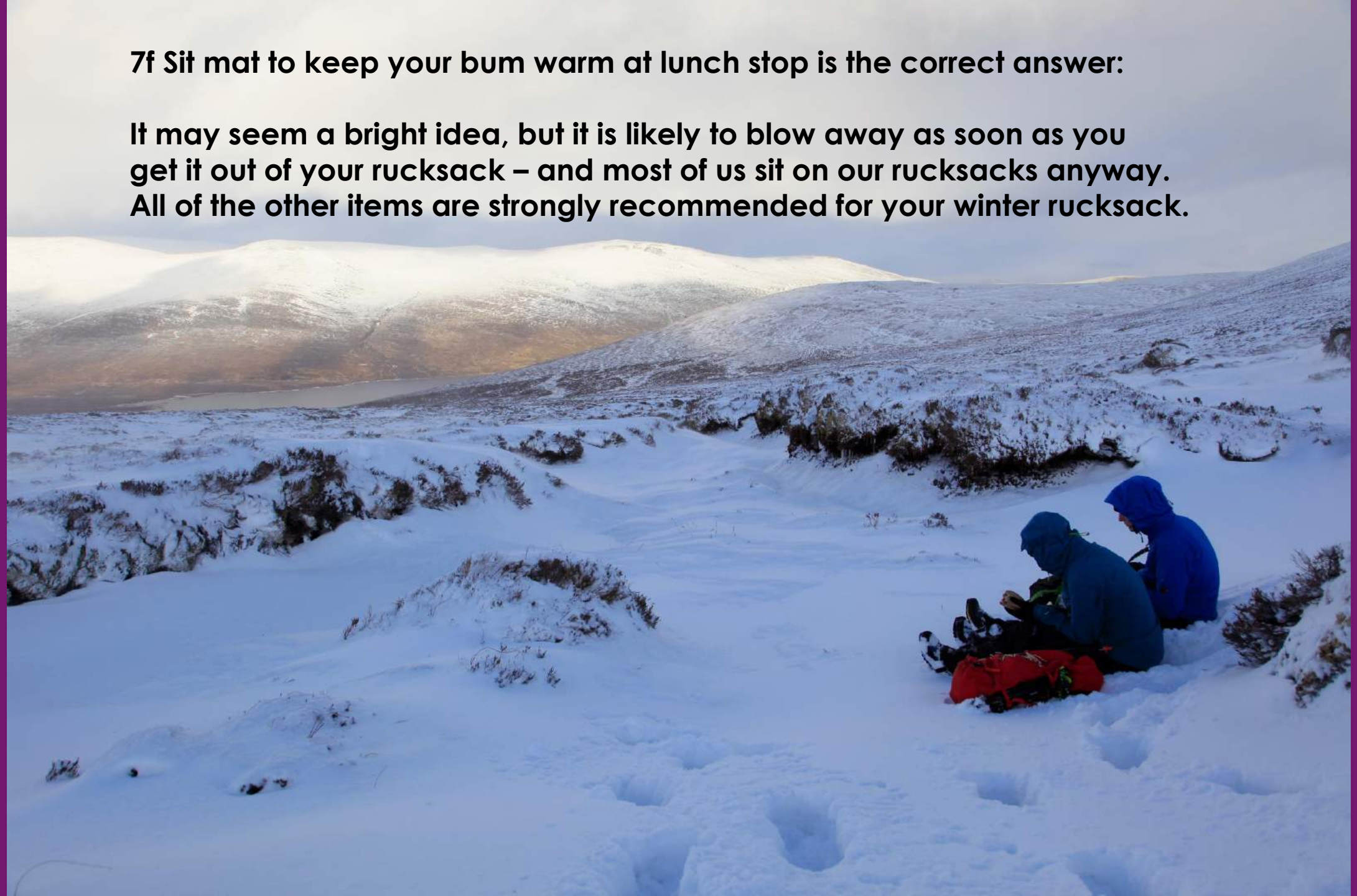
Practising Winter Mountain Rescue – Glen Affric Winterfest 2010

7. Which item below ISN'T a recommended item for your rucksack in winter

a Bivi bag
b Synthetic duvet jacket
c Bag of sweets
d Hot drink
e Group shelter
f Sit mat to keep your bum warm at lunch stop

7f Sit mat to keep your bum warm at lunch stop is the correct answer:

It may seem a bright idea, but it is likely to blow away as soon as you get it out of your rucksack – and most of us sit on our rucksacks anyway. All of the other items are strongly recommended for your winter rucksack.



Winter kit list

To wear:

- Warm/windproof trousers
- Thermal long johns (optional)
- Thermal top
- Fleece top
- Rigid-soled winter boots, with appropriate socks
- Gaiters
- Warm hat
- Gloves or mitts

Optional additional items:

- **Helmet**
- **Snow shovel**
- **Avalanche probes**
- **Avalanche Transceiver**

To carry:

- Rucksack - about 45 litres
- Waterproof jacket (with hood)
- Waterproof over-trousers
- Spare layer e.g. fleece top
- Spare gloves/mitts (at least two pairs)
- Spare hat
- Compass
- Map (waterproof or in waterproof case)
- Watch
- Torch (preferably a head torch)
- Spare batteries or, preferably, a spare head torch
- Emergency survival bag (polythene is OK) and Group Shelter
- Whistle
- First Aid Kit (small)
- Mobile phone
- Sun cream
- Sunglasses – sometimes the sun does shine in winter!
- Goggles – essential for navigation in some conditions
- Walking poles (optional)
- Ice axe
- Crampons
- Food and drink
- Hot drink in a thermos flask
- Spare high energy foods (e.g. sweets or chocolate)

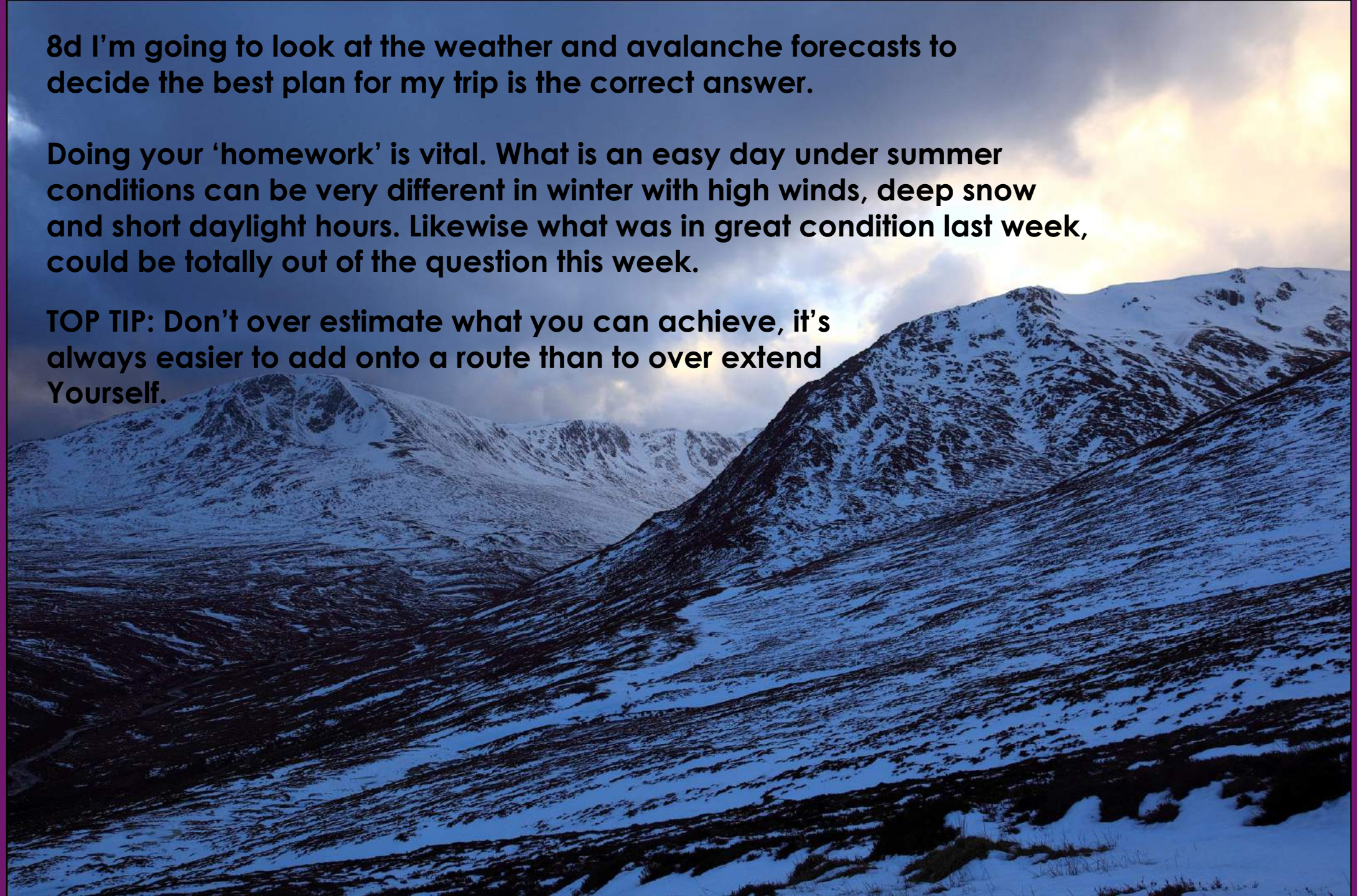
8. Winter days on the hill can be both physically and mentally challenging. Which of the following sentences should be at the forefront of your mind when planning your winter adventures?

a As a strong hillwalker I can easily cope with 3 Munros in winter.

b A 15km day is very achievable for me.

c My mate James did the Ring of Steall circuit last week and said it was amazing, only 7 hours car to car, so that's where I am heading on Saturday.

d I'm going to look at the weather and avalanche forecasts to decide the best plan for my trip.

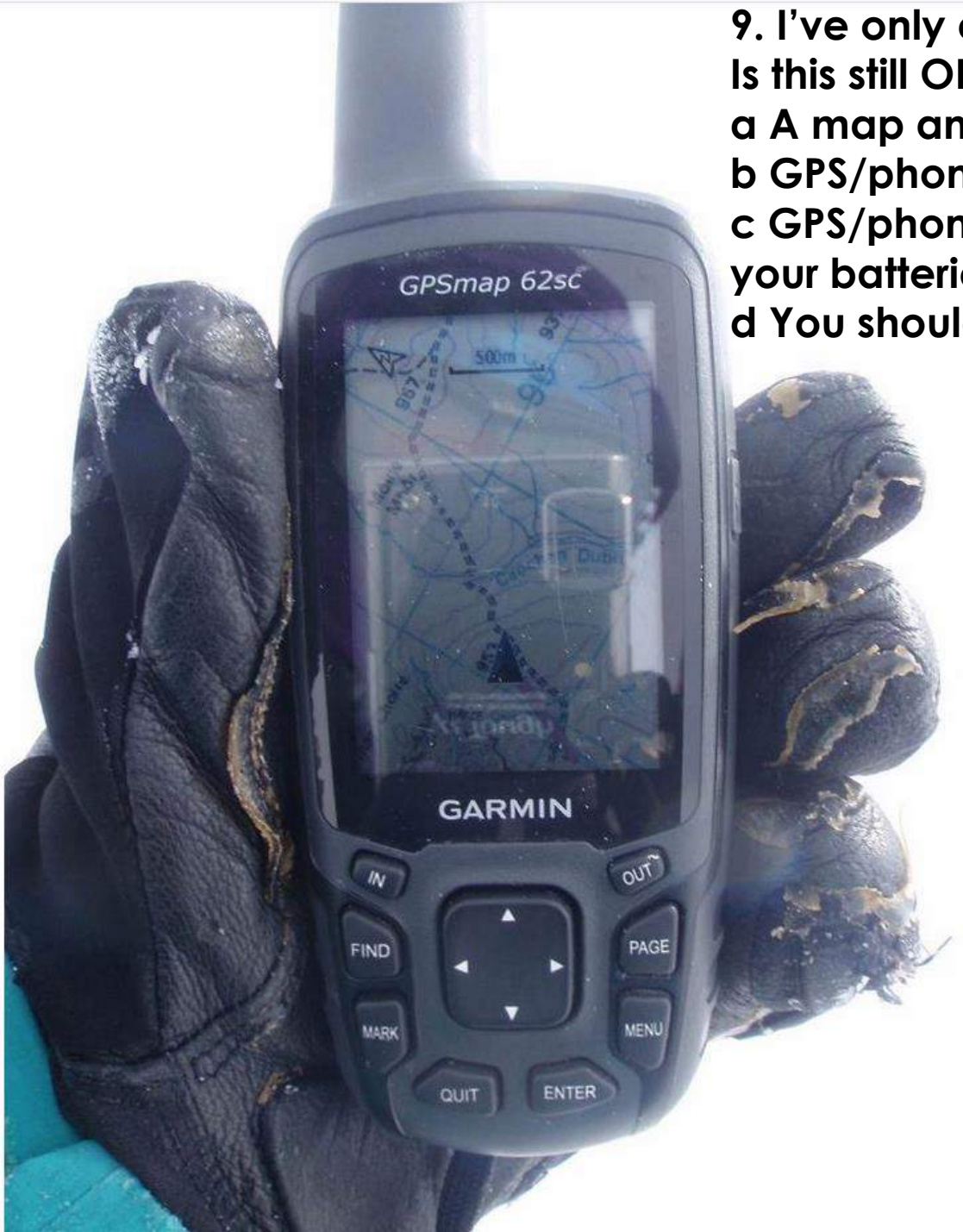


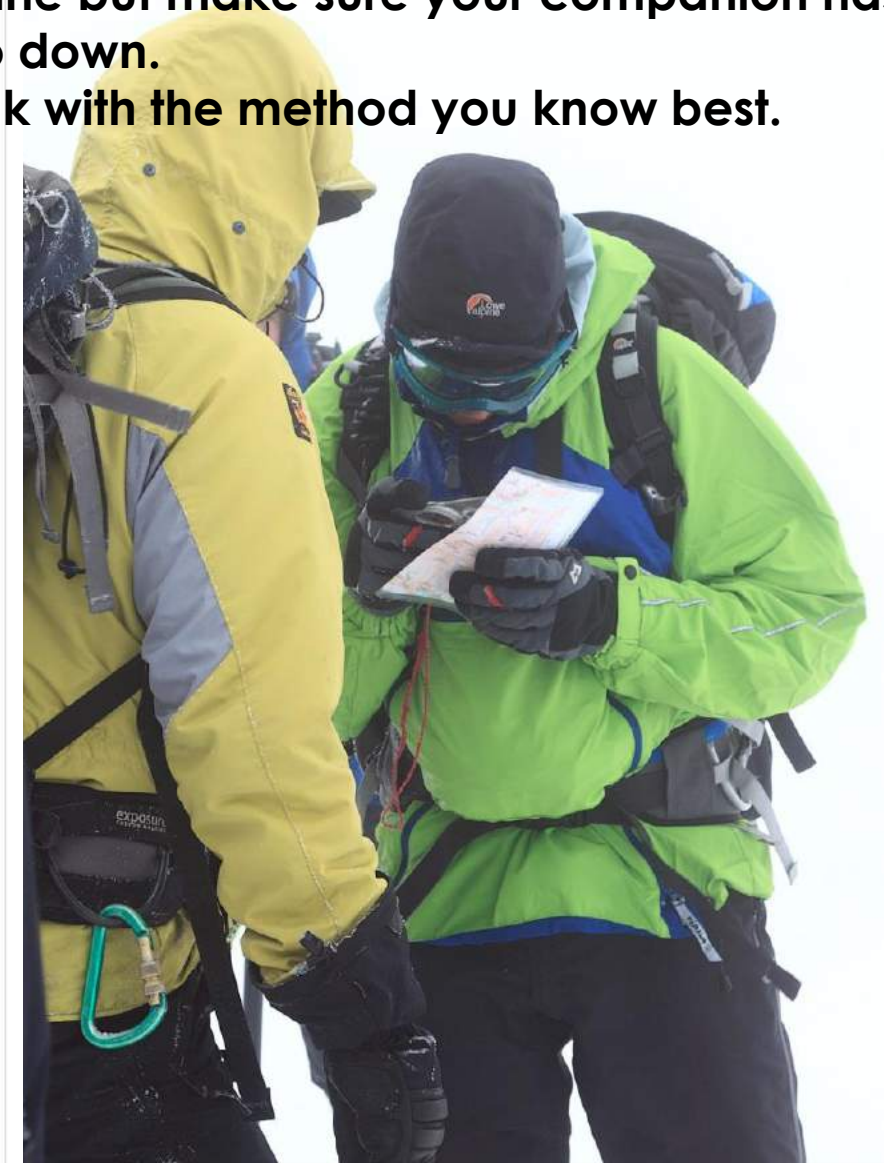
8d I'm going to look at the weather and avalanche forecasts to decide the best plan for my trip is the correct answer.

Doing your 'homework' is vital. What is an easy day under summer conditions can be very different in winter with high winds, deep snow and short daylight hours. Likewise what was in great condition last week, could be totally out of the question this week.

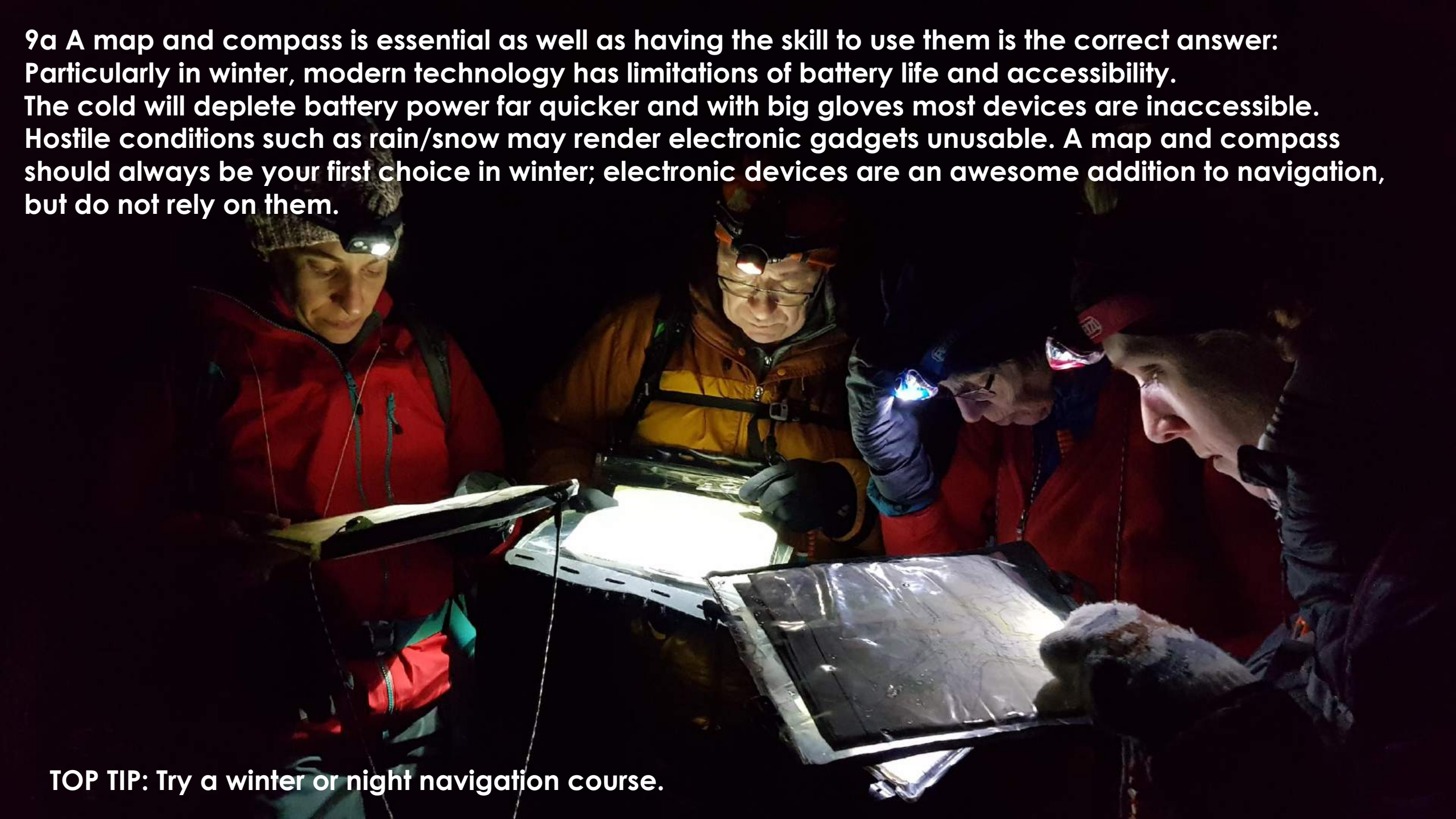
TOP TIP: Don't over estimate what you can achieve, it's always easier to add onto a route than to over extend Yourself.

9. I've only ever used my GPS/phone to navigate in summer.
Is this still OK in winter?
a A map and compass is essential as well as having the skill to use them.
b GPS/phone is way quicker/more accurate – it's all you need.
c GPS/phone is fine but make sure your companion has one too in case your batteries go down.
d You should stick with the method you know best.





9a A map and compass is essential as well as having the skill to use them is the correct answer:
Particularly in winter, modern technology has limitations of battery life and accessibility.
The cold will deplete battery power far quicker and with big gloves most devices are inaccessible.
Hostile conditions such as rain/snow may render electronic gadgets unusable. A map and compass should always be your first choice in winter; electronic devices are an awesome addition to navigation, but do not rely on them.



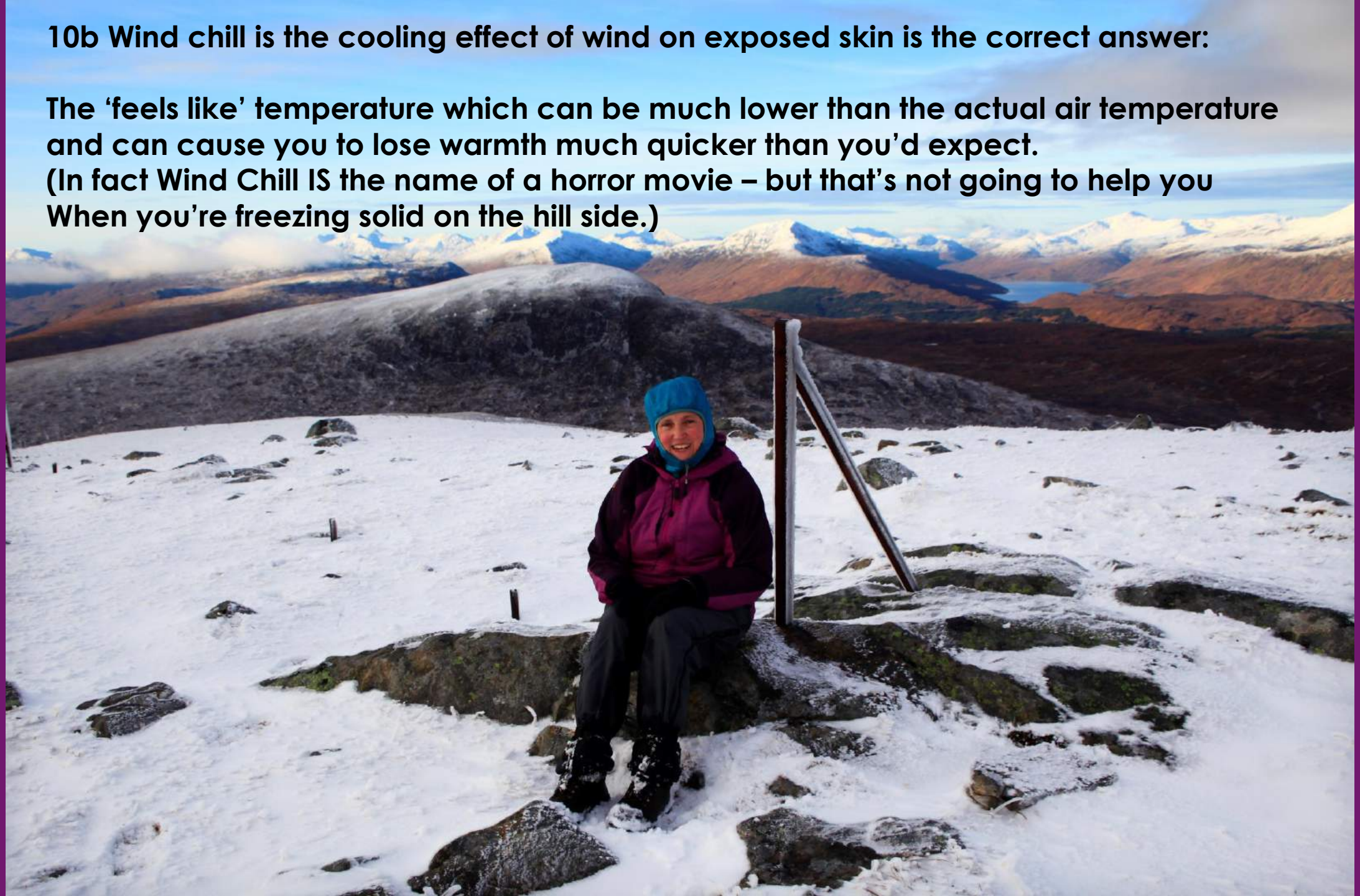
TOP TIP: Try a winter or night navigation course.

10. What does the term ‘wind chill’ mean?

a Wind chill is a horror movie.
b Wind chill is the cooling effect of wind on exposed skin.
c Wind chill is a popular cocktail containing Russian vodka.
d Wind Chill is a brand of outdoor clothing.

10b Wind chill is the cooling effect of wind on exposed skin is the correct answer:

The ‘feels like’ temperature which can be much lower than the actual air temperature and can cause you to lose warmth much quicker than you’d expect.
(In fact Wind Chill IS the name of a horror movie – but that’s not going to help you When you’re freezing solid on the hill side.)



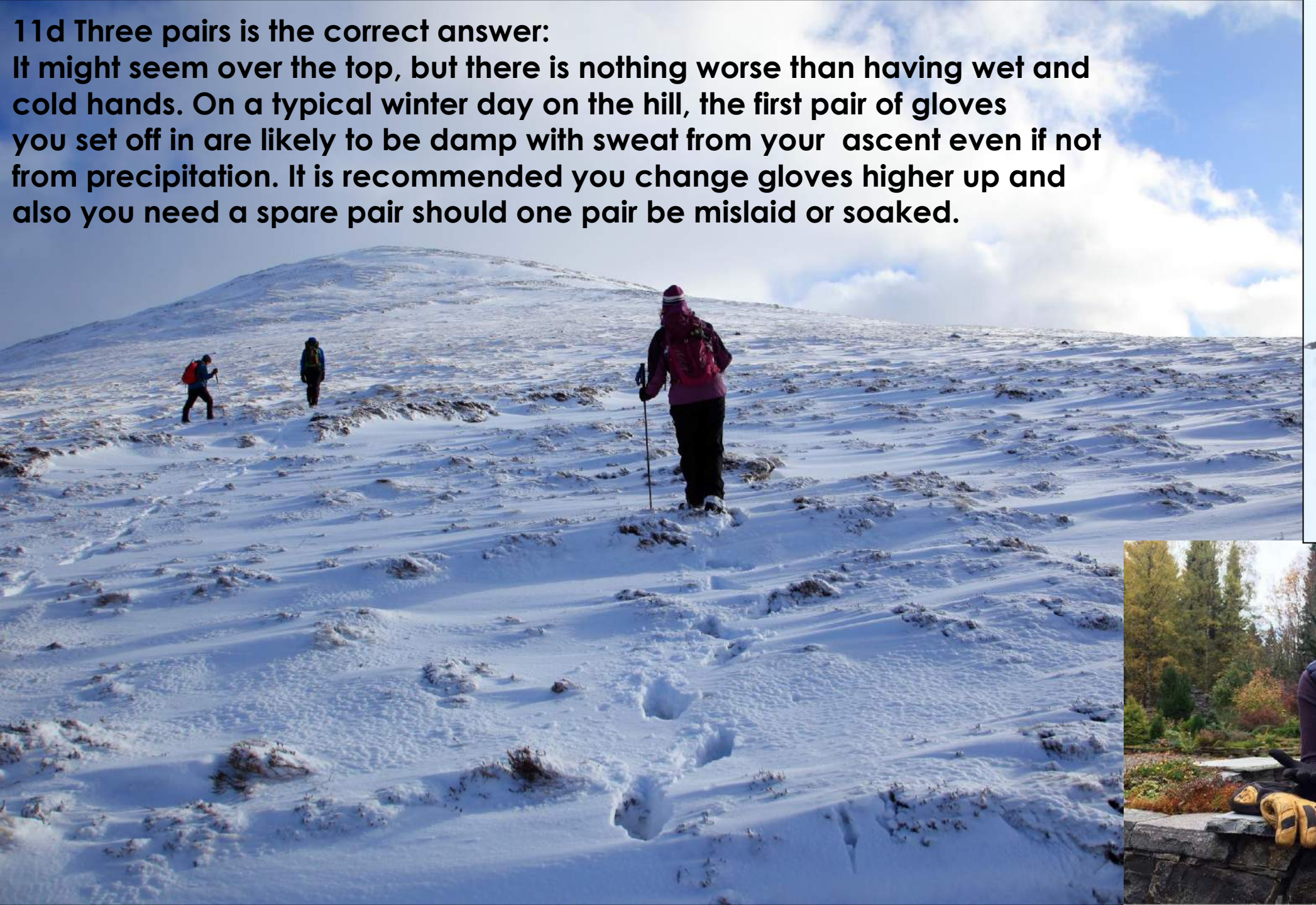
Wind chill factor takes into account wind speeds and humidity to assess How the human body actually feels temperature.

Frost nip is the reversible freezing of superficial skin layers that is usually marked by numbness and whiteness of the skin most common around the cheekbone area at the edge of goggles or the tip of the nose.

11. How many pairs of gloves should you have with you in winter?

a None.
b One.
c Two.
d Three.

11d Three pairs is the correct answer:
It might seem over the top, but there is nothing worse than having wet and cold hands. On a typical winter day on the hill, the first pair of gloves you set off in are likely to be damp with sweat from your ascent even if not from precipitation. It is recommended you change gloves higher up and also you need a spare pair should one pair be mislaid or soaked.



12. What is the best fill for an insulated winter jacket for the Scottish winter?

a Artificial fibre.
b Down.
c Feather/down mix.
d Polystyrene balls.

12a Artificial fibre is the correct answer:

Weight for weight down will keep you warmer than most artificial fibres, but down rapidly loses its insulation properties when it gets wet. In constantly sub-zero temperatures this may not matter, but in a typical Scottish winter temperatures hover around/above zero, which means your clothes are more liable to get wet. Artificial fibres maintain their insulation far better in the wet.

What is hypothermia?

In cold wet conditions, the body can lose heat rapidly. Protective clothing traps air, which acts as insulation, but the insulation is severely reduced if the clothing becomes saturated.

Without protection from the wind, heat loss can become even faster.

As the body becomes colder, blood vessels constrict and blood flow to the extremities is reduced, resulting in loss of feeling in hands and feet.

Shivering produces heat and is remarkably effective, but it is costly in terms of energy input, so that an unfit, hungry or injured walker will become exhausted trying to maintain core warmth and will decline into unconsciousness and, ultimately, death.

Factors which will contribute to a risk of suffering from hypothermia include:

- Damp clothing – caused by perspiration while active
- Wet clothing - caused by rain or snow
- Inadequate windproof or insulated clothing
- Inadequate food and fluid both prior to and during activity
- Remaining stationary for long periods of time. In as little as 15 minutes you can become cold if stationary unless extra layers are added
- Poor morale. Fear, indecision, uncertainty or shock can all contribute to this
- Injury or illness
- Exhaustion. This may be due to an over ambitious route
- Lack of shelter
- Extreme weather conditions. For example, high winds or deep snow can render travel exhausting or even impossible

What can you do to avoid getting hypothermia?

- Wear and carry appropriate shell and insulated clothing, including a spare hat and gloves. Always carry a synthetic duvet jacket to put on over the top of everything else, which is useful for stopping to take on food and drink as well as for wearing in the event of an emergency
- Ensure adequate food and drink both prior to and during your day out. Carry 'high energy' snacks in an accessible pocket so you can 'graze' regularly
- Be conservative in your plans: it's easy to add onto a route, not always so easy to shorten
- Always carry an emergency bivi bag and group shelter.

How would I spot the early stages of hypothermia?

You may observe one or more of these symptoms: shivering, lethargy, apathy, a reduction in rational decision making, slipping and stumbling.

What should you do?

STOP, insulate, eat and drink. If improvements are noted, then head off the hill by the shortest route.

If improvements are not observed, then insulate the victim as best you can with the equipment you have and call for **Mountain Rescue**.

12/12 – Well done! You are a Winter champ