



PIONEERING MERIT BADGE

SCOUT / VENTURER NAME: _____

Through exploring the Virtual Race Course for Cyber Sled Race, complete this worksheet to demonstrate your knowledge of pioneering. This worksheet will not be turned in and for your own use to demonstrate knowledge.

What hazards are you most likely to encounter while participating in pioneering activities?

What should you do to anticipate, prevent, mitigate, and respond.

Anticipate

Prevent

Mitigate

Respond

On the next page, explain the prevention of, and first aid treatment for, injuries and conditions that could occur while working on pioneering projects, including rope splinters, rope burns, cuts, scratches, insect bites and stings, hypothermia, dehydration, heat exhaustion, heatstroke, sunburn, and falls.

PIONEERING MERIT BADGE



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Adventure

Rope Splinters

Rope Burns

Cuts

Scratches

Insect Bites & Stings

Hypothermia

Dehydration

Heat Exhaustion

Heat Stroke



Sunburn

Falls

Whip a rope using the basic and West Country Methods and then fuse the ends of the rope.

Show someone how to tie the following knots:

- | | |
|---|--|
| <input type="checkbox"/> Clove Hitch | <input type="checkbox"/> Roundturn with two half hitches |
| <input type="checkbox"/> Butterfly Knot | <input type="checkbox"/> Carrick Bend |
| <input type="checkbox"/> Rolling Hitch | <input type="checkbox"/> Sheepshank |
| <input type="checkbox"/> Water Knot | <input type="checkbox"/> Sheet Bend |

When would you use the following lashings?

Square Lashing

Diagonal Lashing

Round Lashing

Shear Lashing

Tripod Lashing



Floor Lashing

Explain why it is useful to be able to throw a rope?

Then demonstrate for someone how to coil and throw a 40-foot length of 1/4- or 3/8- inch rope.

Explain how to improve your throwing distance by adding weight to the end of your rope.

What are the key differences between synthetic rope and natural-fiber rope?

Which five types of rope are suitable for pioneering work and why? Include the following: breaking strength, safe working loads, and the care and storage of rope.

Use the next pages for your answer.

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Rope Type = _____ **Breaking Strength =** _____

Why is it suitable? _____

Safe working loads = _____

Care & Storage = _____

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Adventure

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Explain the uses for the following splices, then demonstrate to someone how to form each.

Back Splice

Eye Splice

Short Splice

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- ❑ Using a rope-making device or machine, make a rope at least 6 feet long consisting of three strands, each having three yarns then whip the ends.

Explain the importance of effectively anchoring a pioneering project.

Describe the 1-1-1 anchoring system and the log-and-stake anchoring methods.

1-1-1 Anchoring System

Log-and-Stake Anchoring System

Demonstrate and use a rope tackle. Be sure the rope tackle is secured properly. Then explain the advantages and limitations of using rope tackle.

Advantages

Limitations

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Adventure

Describe the potential damage that friction can do to a rope.

Using appropriate lashings and pioneering techniques, build and use one full-size pioneering project (table or a chair).

What did you build? _____

*A table or a chair are pioneering projects that can be worked on individually. The Pioneering Merit Badge also allows for large group pioneering projects like monkey bridges and towers. For Cyber Sled Race, we encourage everyone to build the table or chair but can do larger projects if you choose to.