Pioneering Adventure Skill

Reference Material

The following reference material provides useful information about this Adventure Skill.

Note: It is not possible to “study” for an Adventure Skill. Knowledge gained from reading must be supported by real and practical experience in the selected Adventure Skill.

The Scouting Trail - The Scout Shop
The Sea ScoutBook - The Scout Shop
Kubuk -The Scout Shop

A number of pioneering resources are available via www.issuu.com in the Scouting Ireland area
Competency Statements

Stage 1
- I know what equipment is needed for making pioneering gadgets.
- I know how to build a gadget using elastic band techniques.
- I can be responsible for myself while we are pioneering.
- I know the different emergency services that are available and how and when to call them.
- I understand why I should follow directions from an instructor.
- I have built at least two simple pioneering gadgets.

Stage 2
- I know how to get help if someone is hurt during a pioneering activity.
- I can tie the basic knots I need for pioneering.
- I can prepare ropes for use in pioneering.
- I can coil a rope.
- I can undertake tasks assigned to me while we are pioneering.
- I have made a knot board.
- I have built at least three simple pioneering gadgets using elastic band techniques.

Stage 3
- I know what equipment I need for making various pioneering gadgets
- I know how to treat basic cuts and scratches.
- I know about the safety precautions that are needed when pioneering
- I know the main principles of ‘Leave No Trace’.
- I have taught other Scouts how to tie some basic knots.
- I have built at least two gadgets using ropes and poles.

Stage 4
- I know the correct use, care, and storage of the tools we use in pioneering.
- I know the different types of rope used in pioneering.
- I know how to take care of all kinds of rope.
- I know how to tie the knots necessary for building pioneering structures safely.
- I know the safety precautions to be observed for the safe lifting of pioneering spars.
- I can use guy ropes to make pioneering gadgets stable.
- I know the basic components of pioneering structures and how to make them.
- I can tie the main lashings necessary to make most pioneering gadgets.
- I can be responsible for myself while pioneering.
- I have built gadgets on camp and assisted my ‘team’ in building a tower or a bridge.

Stage 5
- I know how to select suitable poles and spars for a pioneering project.
- I know how to treat cuts and sprains.
- I know what to do in case of an accident while pioneering and how to be safety conscious.
- I can help a younger Scout to build a pioneering gadget.
- I can set up a simple pulley system for lifting and tensioning ropes.
- I can coil, whip and splice a rope.
- I am aware of the building process/procedure while pioneering.
- I have taken part in the construction of at least two pioneering projects.

Stage 6
- I know how to plan and construct pioneering projects to be built by my team.
- I know how to reeve up, use and safely secure pulleys in pioneering projects.
- I can be responsible for my team while building pioneering projects.
- I know the correct lifting techniques for raising a tower or an A frame.
- I know the best types of anchorage to use for a pioneering project and can use them.
- I can lead the construction of an element of a large-scale pioneering structure.
- I have taught a younger Scout how to tie the lashings necessary for a pioneering project.
- I have taken part in the construction of at least two large-scale pioneering structures.

Stage 7
- I know how to inspect for damage, care for and store ropes, pulleys and poles.
- I know the importance of safety at all stages of construction, use and dismantling of a pioneering structure.
• I know how to plan and execute the build of a large-scale pioneering structure.
• I can check the safety of all knots and lashings used in a large-scale pioneering structure.
• I have led the construction of at least one large-scale pioneering structure.

Stage 8
• I have led the construction of at least two large-scale pioneering structures and managed them safely.
• I know how to set up and manage a belay on pioneering or climbing structures.
• I know how to use safety harnesses and securely tie off rock climbing harnesses.
• I know how to secure rope structures and high wire elements.
• I hold an outdoor First Aid certificate.

Stage 9
• I can design, plan and build large-scale pioneering structures.
• I know the importance of safety at all stages of construction, build, use and dismantling of a large-scale pioneering structure.
• I know how to control and supervise the construction of a large-scale pioneering structure and its use in programme.
• I can be responsible for ensuring large-scale projects happen safely, and that those participating are learning the skills required.
Skills Requirements

Stage 1

*I know what equipment is needed for making pioneering gadgets.*

The Scout should be able to list and explain the use of various pieces of equipment used in the construction of simple small pioneering projects; Poles and staves; Ropes and sisal for lashing;

*I know how to build a gadget using elastic band techniques.*

The Scout should build a series of gadgets using elastic bands and bamboo poles. Pioneering structure techniques need to be observed in the building structure;

Simple tripod frame; Patrol Flagpole; Pot stand

*I can be responsible for myself while we are pioneering.*

The Scout needs to show an awareness of what is happening around himself/herself. The need for care and safety and awareness of others and what they are doing should be evident in their behavior.

*I understand why I should follow directions from an instructor.*

The Scout should know about the importance of listening to the instructor so that they are aware of what to do and the dangers of doing things that they don’t fully understand.

*I have built at least two simple pioneering gadgets.*

The Scout should have participated in the construction of at least two simple pioneering gadgets perhaps constructed on a camping adventure or as part of a pioneering activity.

Stage 2

*I know how to get help if someone is hurt.*

The Scout needs to show an ability to recognize that someone is hurt and needs help. The Scout should also know how to get help and by what means. How to recognize that someone is hurt. How to compare injured parts with uninjured parts. Methods of getting help. Methods of caring for someone that is hurt.

*I can tie the basic knots I need for pioneering.*

The Scout should be able to tie under supervision and use: clove hitch, reef knot, square lashing tripod lashing, diagonal and sheer lashings.

*I can prepare ropes for use in pioneering.*

The Scout needs to be observed doing or assisting others in selecting ropes for a pioneering project. (Reference Scouting Trail Pages 178)

*I can coil a rope.*

The Scout should be able to coil a rope so it will not twist or curl. (Underarm coiling should not be encouraged as it causes the rope to twist and curl). The Scout should also be able to ‘finish’ off the end of the coil so it can be carried and stored.

*I can undertake tasks assigned to me while we are pioneering.*

The Scout needs to be observed in action over a number of a pioneering project.

*I have made a knot board.*

The Scout will have made a simple knot board for his/her Lodge/Six/Patrol Corner. The knot board should display at least six basic knots of their choice.

*I have built at least three simple pioneering gadgets using elastic band techniques.*
The Scout should have participated in the construction of at least three simple pioneering gadgets perhaps constructed on a camping adventure or as part of a pioneering activity. The Scout should be showing a progression of skills in the construction of these simple projects.

Respect farm animals and wildlife. Minimise camping impact and the effects of fire. Be considerate of others. Travel and camp on durable surfaces. Leave what you find. Plan ahead and prepare.

I have taught other scouts how to tie some basic knots.

This is best observed in actions during a pioneering activity. The Scout should be supportive and help the younger Scout become proficient at tying knots of all kinds.

I have built at least two gadgets using ropes and poles.

The Scout should have participated in the construction of at least two simple pioneering gadgets perhaps constructed on a camping adventure or as part of a pioneering activity. The Scout should be showing a progression of skill in the construction of these simple projects.

Stage 3

I know what equipment I need for making various pioneering gadgets.

The Scout will explain how to choose a suitable project with the skills of the Patrol in mind and the key steps necessary to enable it to be built safely. Preparation and planning skills. Preparing an equipment list. Listing the main pioneering elements in a structure.

I know how to treat basic cuts and scratches.

Scouts need to talk themselves through the process of treatment. This demonstration/talk can be done in a practical way on a volunteer. How to clean the wound. How to reassure the casualty. How to apply a bandage.

I know about the safety precautions that are needed when pioneering.

The Scout should know how a structure is built and discuss possible danger points and what to do to avoid accidents during an activity. The use of hard hats. How a heavy load might be lifted. How to use guy ropes for security. Discuss how a project is constructed. Be able to identify danger points in the build process.

I am aware of the Leave No Trace principles.

Scouts should demonstrate an understanding of the key points in a practical way in a camp situation. Dispose of waste properly.

Stage 4

I know the correct use, care, and storage of the tools we use in pioneering.

The Scout needs to show an awareness of the tools likely to be used in pioneering activities, how these tools are used and cared for so that they are working properly. List the tools necessary for pioneering - saw, knife, mallet, spade, sledge hammer. Demonstrate how to use each tool safely. Demonstrate how to clean, care for and store tools when not in use.

I know the different types of ropes used in pioneering.

The Scout should be able to ‘size’ a rope and select the right ropes to use for different elements of a pioneering project. Know the difference between natural and synthetic rope.
Skills Requirements

I know how to take care of ropes of all kinds.

The Scout should be able to talk about ropes and demonstrate how to look for damage and care for ropes by not over straining. The Scout should be able to coil large ropes and prepare them for storage.

Coil a rope.
Know how to check rope for fraying, grit, over straining, friction burns.
Discuss how to clean a rope.
Demonstrate how to coil a heavy rope and tie it up for storage.

I know how to tie the knots necessary for building rope and pole structures safely.

The Scout should be able to demonstrate through the building of a structure all the pioneering knots and lashings, attachment of safety ropes and guys, how to tie off securely to an anchor.

Clove hitch, round turn and two halve hitches, square, diagonal, sheer, tripod lashing, Norwegian lashing, figure of eight loop, sheet bend.

I know the safety precautions to be observed for the safe lifting of pioneering spars.

The Scout should be able to discuss the method used to lift a pioneering pole to a height and demonstrate the procedure during the construction of a project.

Demonstrate how a sheer legs is constructed and used to aid lifting.
Demonstrate how a single pole can be used for leverage with the aid of a rope.
Discuss the arrangement and management of a lift Care area and fall space of a structure.

I can use guys to make a pioneering gadgets stable.

The Scout should show an understanding of why guys will be necessary and why the structure will need to be secured. The Scout should then set up guy ropes on a structure before it is raised and lead the securing of those guys using pegs or pickets.

I can tie the main lashings necessary to make most pioneering gadgets.

The Scout will demonstrate that they can tie the proper lashing associated with a pioneering structure correctly.

I know the basic components of pioneering structures and how to make them.

The Scout should know the basic elements that are combined to make pioneering structures – ‘A frames’, ‘Trestles’, Tripods, H frames. The Scout should also be able to demonstrate on a pioneering structure or via drawing the components present in a structure. Lastly, the Scout should be able to construct the components and discuss the need for uniformity and stability in their construction.

I can be responsible for myself while pioneering.

This requirement implies that a Scout has some experience and is aware of how they should act, be responsible for their actions while working on a pioneering project. This is best demonstrated in a pioneering situation where the Scouts can be observed in action.

I have built gadgets on camp and assisted my ‘team’ in building a tower or bridge.

The Scout, as part of a team, will have been involved in the construction of a number of projects. The Scout will discuss the steps required to build a structure.

(Medium size projects are considered to be structures: Bridge and towers that are of simple construction design and low level height (approx 3 metres high). They will be capable of being built by a Patrol without too much adult intervention.)

Choose a project or design a project.
Plan how it is to be build.
Identify the pioneering elements in its construction.
Manage the build and deconstruction of a project.

I know how to select suitable poles and spars for a pioneering project.
Stage 5

The Scout needs to be observed directing his/her Patrol in the selection of pioneering poles for a project. Demonstrate how to choose suitable poles. List the ropes, lengths and sizes, required for a project.

**I know how to treat cuts and sprains,**

Scouts need to talk themselves through the process of treatment. This demonstration/talk can be done in a practical way on a volunteer.

State the rules of First aid. Demonstrate how to treat a minor cut. Discuss how they would know a bone is broken. Discuss how they would take care of the victim. Discuss what they would tell a medical person when summoning help.

**I can help a younger Scout to build a pioneering gadget.**

This is best observed in action during the construction of a pioneering project. The Scout should be supportive and help the younger Scout achieve his objective. The younger Scout may be doing this project as part of their pioneering badge requirement.

**I know what to do in case of an accident and how to be safety conscious.**

The Scout needs to show an ability to recognize that someone is hurt and needs help. They must indicate care for the injured party before departure for help. They should also know how to get help and by what means. How to recognize that someone is hurt. How to compare injured parts with uninjured parts. Methods of getting help. Methods of caring for someone that is hurt. **I know all about the ‘Leave No Trace’ principles.**

The Scout needs to be aware that living and walking through open countryside has an impact of some kind and that we need to minimize this intrusion. The Scout should suggest best practice and discuss how to minimize impact while also enjoying the outdoor experience. Of particular concern is disturbance of river bed. Cutting and pruning of overhead branches.

**I can set up a simple pulley system for lifting and tensioning ropes.**

The Scout needs to be aware of the recommended pulley combinations suggested for a project and explain why this combination is used. The Scout should also be able to discuss how a project is built in a safe manner using pulleys to assist in lifting loads and assembling the various elements of a project.

**I can coil, whip and splice a rope.**

The Scout will demonstrate this skill by making a personal length of rope whipped at one end and an eye splice created at the other.

**I am aware of the building process/procedure while pioneering.**

**I have taken part in the construction of at least two pioneering projects.**

The Scout, as part of a team, will have been involved in the construction of a number of projects. The Scout will discuss the steps required to build a structure.

**(Large scale projects are considered to be structures bridges and towers that have sizeable design elements and may require the use of pulleys for tensioned rope work. (approx 3 meters high). They will be capable of being built by a Patrol but will require adult help in lifting and pulling project into place)**

Choose a project or design a project. Plan how it is to be built. Identify the pioneering elements in its construction. Manage the build and deconstruction of a project.

**I know how to plan and construct pioneering projects to be built within my Patrol.**
Skills Requirements

Stage 6

The Scout, as part of a team, will have been involved in the construction of a number of projects. The Scout will discuss the steps required to build a structure. The Scout will have completed a number of projects with their patrol and be observed doing so.

Choose a project or design a project. Plan how it is to be built. Identify the pioneering elements in its construction. Manage the build and deconstruction of a project.

I know how to reeve up, use and safely secure pulleys in pioneering projects.

The Scout should demonstrate how to reeve up a single and double pulley arrangement on a project under construction and secure it safely. Reeve up a simple pulley system and lift a weight. Show how the pulley is secured to an anchor point. Discuss how the ratio of pulleys are calculated.

I can be responsible for my Team while building pioneering projects.

This requirement implies that a Scout has some experience and is aware of how they should act, lead and be responsible for a Team working on a pioneering project. This is best demonstrated in a pioneering situation where the Scouts can be observed in action.

I know the correct lifting techniques for raising a tower or an A frame.

The Scout should be able to manage and direct a team in the safe lifting of a tower using two different methods:

- Shear leg assist.
- Guy ropes and footing principles.
- Higher than project belay.
- Discuss the arrangement and management of a lift.
- Care area and fall space of a structure.
- The Scout should know how a structure is built and discuss possible danger points and what to do to avoid accidents during an activity.
- The use of hard hats.
- How a heavy load might be lifted.
- Be able to identify danger points in the build and lift process.

I know the best types of anchorage to use for a project and can use them.

The Scout should be able to construct the following:

- 3 - 2 - 1.
- Log and picket.
- Dead man’s anchor.
- Fixed tree anchorages.
- Know when to use them and be able to demonstrate their construction.
- Demonstrate how to protect a tree if using as an anchor point.

I can lead the construction of an element of a structure.

The Scout needs to demonstrate an understanding of the leadership and management of the building of a structure and suggest the best ways of using structures as part of the scout programme.

- Discuss the control of a pioneering structure.
- List the regular safety check that need to be performed.
- Discuss the construction steps.
- Lead the construction of a structure under mentor supervision.

I have taught a younger Scout how to tie the lashings necessary for a pioneering project.

This is best observed in action during a pioneering activity. The Scout should be supportive and help the younger Scout become proficient at tying knots and lashing correctly.

I have taken part in the construction of at least two large scale pioneering projects.

The Scout, as part of a team, will have been involved in the construction of a number of projects. The Scout will discuss the steps required to build a structure.

(Large scale projects are considered to be: structures, bridges and towers that have sizeable design elements and may require the
use of pulleys for tensioned rope work. (approx 3 meters high). They will be capable of being built by a Patrol but will require adult help in lifting and pulling the project into place.

Choose a project or design a project.
Plan how it is to be built.
Identify the pioneering elements in its construction.
Manage the build and deconstruction of a project

_I know how to inspect for damage, care for and store ropes, pulleys and poles._

**Stage 7**

The Scout needs to display an interest in ropes. The Scout should be able to check, manage and care for equipment.

Coil a rope.
Know how to check rope for fraying, grit, over straining, friction burns.
Discuss how to clean a rope, pulleys.
Demonstrate how to coil a heavy rope and tie it up for storage.
Discuss how to check soundness of pioneering poles.

_I know the importance of safety at all stages of construction, use and dismantling of a pioneering structure._

The Scout will demonstrate this skill be being observed in the construction and dismantling of a number of large pioneering structures.
(Scouting Trail Page 211 Be Prepared ‘Emergencies’ chapter.)

The Scout should be able to manage and direct a team in the safe lifting of a tower using two different methods:

Shear leg assist.
Guy ropes and footing principles.

Higher than project belay.
Discuss the arrangement and management of a lift.
Care area and fall space of a structure.
The Scout should know how a structure is built and discuss possible danger points and what to do to avoid accidents during an activity.
The use of hard hats.
How a heavy load might be lifted.
Be able to identify danger points in the build and lift process.

_I know how to plan and execute the build of a project._

The Scout, as part of a team, will have been involved in the construction of a number of projects.
The Scout will discuss the steps required to build a structure.

Choose a project or design a project.
Plan how it is to be built.
Identify the pioneering elements in its construction.
Manage the build and deconstruction of a project.

_I can check the safety of all knots and lashings used in a pioneering project._

The Scout needs to have extensive experience of knot tying and be able to discuss the qualities of good knot tying and how it affects safety of a structure.

_I have lead the construction of at least one large scale pioneering project._

The Scout should have lead the construction of a number of complex pioneering structures and be observed in action before they should undertake the leadership of a large project.

_I know how to build a project safely._
Skills Requirements

The Scout should be aware of the need for proper belaying of structures and personnel while building a structure. This belaying skill should also be demonstrated in rock climbing or tree climbing situations.

Set up a multi point belay.
Demonstrate how to belay and protect a person.
Be able to use a climbing harness.
Be able to use a stitch plate and figure of eight descender.

I know how to use safety harnesses and securely tie off rock climbing harnesses.

The Scout needs to be familiar with safety harnesses and how to use them. In the use of harnesses the Scout should know how to tie off and secure a safety harness using a figure of eight or bowline knot and how carabiners are used in such situations. The Scout should also be able to set up and manage a safety belay – (higher than element belay).

I know how to secure rope structures and high wire elements.

The Scout should have experience of erecting rope structures and high wire elements and be able to discuss how to secure users of these structures while in use via above structure belay mechanisms and methods.

Knowledge of belay and safety rope procedures. Discuss higher than element belaying. Demonstrate how to hold a person that has fallen and bring to safety.

I have an outdoor First Aid certificate.

I know how to design and construct large scale scout engineering projects.

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I can lead the construction of at least two projects and manage them safely.

The Scout should have lead the construction of a number of simple pioneering structures and be observed in action in the leadership of a large project.

The Scout needs to demonstrate an understanding of the leadership and management of the building of a structure and suggest the best ways of using structures as part of the Scout Programme. Safety has to be to the fore in the mind of the Scout as he/she discusses how they would go about fulfilling this requirement.

Discuss the control of a pioneering structure.
List the regular safety checks that need to be performed.
Discuss the construction steps.
Lead the construction and deconstruction of a project.

I know how to set up and manage a belay on pioneering or climbing structures.
The Scout should discuss how structures are built with reference to good design, stability and use of pioneering components.
Knowledge of pioneering elements.
Diagonal bracing.
Testing procedures of a structure.

I know the importance of safety at all stages of construction, build, use and dismantling of a project.

This requirement implies that a Scout has some experience and is aware of how they should act, lead and be responsible for a Group working on a pioneering project. This is best demonstrated in a pioneering situation where the Scouts can be observed in action.

• Guy ropes and footing principles.
• Higher than project belay.
• Discuss the arrangement and management of a lift. Care area and fall space of a structure.
• The use of hard hats.
• How a heavy load might be lifted.
• Be able to identify danger points in the build and lift process.

I know how to control and supervise the construction of a pioneering structure and its use in programme.

The Scout should have lead the construction of a number of simple pioneering structures and be observed in action in the leadership of a large project.

The Scout will demonstrate this skill by being observed in the construction and dismantling of a number of large pioneering structures.

The Scout should be able to manage and direct a team in the safe lifting of a tower using two different methods.

I can be responsible for ensuring large scale projects happen safely, and that those participating are learning the skills required.

This requirement implies that a Scout has some experience and is aware of how they should act, lead and be responsible for a Patrol working on a pioneering project. This is best demonstrated in a pioneering situation where the Scouts can be observed in action. The Scout needs to demonstrate an understanding of the leadership and management of the building of a structure and suggest the best ways of using structures as part of the Scout programme.