The 4-H Everyday Outdoor Skills Challenge - 2023

4-H Leaders Key – Level I

Skill 1. Learn two methods for finding North-South-East-West directions without a compass.

Method A. The Shadow Stick Method
https://www.youtube.com/watch?v=A6McnNPHJIA

Watch the short YouTube videos prior to speaking with your 4-H member. Ask them if they know which direction the east-west stick is positioned after marking the shadow movement with short pegs from a 3 foot shadow stick. Hint: shadows move toward the east as the sun sets in the west in the northern hemisphere each afternoon.

Method B. The Watch Method
https://www.youtube.com/watch?v=ExRa2C1vMuY

Watch the video, then ask the 4-H member which watch hand points toward the sun. Then, ask them where they need to draw a north south direction line. The answer is that the direction of SOUTH is half-way between the hour hand and the 12-o’clock position on the watch!

Skill 2. Everyday Cooler Packing: Prepare a cooler for a 3-day Fishing/Hunting/Camping Trip

Watch the video. Does the 4-H member know these facts about food storage in coolers?

- Block ice lasts longer than cubed or shaved ice.
- Ice should be kept in the center of a cooler and the water that melts should not be drained.
- Clear ice has less air and lasts longer than “cloudy” ice.
- Everything, including the cooler, should be chilled prior to packing.
- The suggested ratio of ice:food is 2:1 for a full 3-day trip with an average quality cooler in temperatures that reach 80 degrees in the afternoon and cooler out of direct sunlight.

Skill 3. Everyday flashlight
https://www.rei.com/learn/expert-advice/flashlight.html

a. Lumens measure total light output. For comparison purposes, a 60 watt incandescent light bulb is approximately 800 lumens.

b. Lumens and beam distance traveled are much different! How tightly lumens are restricted in diameter is key to how far the lumens will travel in distance. Floodlights are lumens spread out broadly and spotlights are lumens tightly pinpointed to one spot. Even a smaller lumen flashlight with a tight focused lens can see further away than a higher lumen flashlight with broad focus lens. Field of view is the trade-off.

c. Sportsmen will find great use in headlamp-style or small hand held-style flashlights with adjustable focus lenses in the 180 - 350 lumen output range. Models that take either a 3 volt lithium or AA batteries are popular.

Send name and county of 4-H member completing sportsman’s skills challenge by July 15, 2023 to:

Curt Sinclair, 4-H Extension Specialist
Email: sinclair@illinois.edu
The Everyday 4-H Outdoor Skills

4-H Leaders Key - Level II

When the 4-H member contacts you to communicate their mastery, please quiz them on these key points to the Level II challenges.

Level II – Skill 1. Everyday knots. Tying Loop knots and Hitches

https://www.netknots.com/rope_knots/loop-knots

The Bowline is one of the most useful knots because it forms a non-slip loop that does not bind under intense pressure. The knot falls back apart when pushed in reverse of the pulling angle. So strong, but so easy to untie not damaging the rope itself.

The Hitches are super quick to tie and fix are useful to sportsman. Cleats are on docks and boats; clove hitches are useful in general securing of cords for many outdoor uses.

Level II – Skill 2. Everyday Archery Gear – Know your Bows

https://www.youtube.com/watch?v=b2sCnGGwX_w
https://www.youtube.com/watch?v=ayZWBwfQH8U

4-H members should be able to describe how the simple stick-string long bow has advanced into the curved back (recurve) limbs on a recurve bow. How simple and fun these are to shoot, yet they do not compare to the speed, accuracy, and power that can be found in modern compound bows with cables and cams. Compound bows are generally more expensive to purchase but offer a “let off” of poundage held by the shooter at full draw and come in a variety of adjustable sizes and are now more popular as a result.


Length of blade and blade flexibility are the main differences in these knife types. Learn from these videos why both blades are very valued by sportsman for trimming meat and filleting fish. The 4-H should get extra credit for displaying their ability to clean a panfish!

https://www.youtube.com/watch?v=FAuvb03cl6Y Meat trimming
https://youtu.be/dsYcPw5Nhn8 Fish Filleting

Contact:

Curt Sinclair, 4-H Extension Specialist
Email: sinclair@illinois.edu
LEVEL III Outdoor Skill Challenges - Mechanics

Once a 4-H member claims to be ready to communicate their knowledge of these skills below, be ready with this knowledge to quiz their level of learning.

Once you are satisfied with their efforts, please email me their name and county and I’ll enter them in a drawing for a very nice multi-tool giveaway sponsored by Pheasants Forever!

**Level III - Skill 1. ** Boat/ATV Trailer– Wheel Bearing Maintenance

All trailers need maintenance of wheel bearings, but boat trailers are particularly vulnerable due to the fact that they are immersed in water and immediately cooled down after being hot from spinning to the lake for several miles! This quick cool-down contracts the metal and grease and pulls water into the hub. Annual repacking, as learned in this video, will prevent wheel bearing rust and failure!

Learn to maintain your trailer wheel hubs here:  [https://youtu.be/ebLKVVUjsOo](https://youtu.be/ebLKVVUjsOo)

**Level III – Skill 2. ** Everyday Tools and Batteries.

Use a 12 point for convenience, but use a 6 point for more power on tough jobs. The 6 point has 100% contact with the bolt head!

Metric tools are based on millimeters and the Society of Automotive Engineers (S.A.E.) use an English system based on inches. You’ll need both in your toolbox today!

Is a Hex key and an Allen wrench the same thing? Yes.

It’s not just that a 1.5 volt or 9 volt battery has the proper voltage at rest. Does it have enough power when put under a load or actually asked to work? Truly learn to test your batteries by watching this:  [https://www.youtube.com/watch?v=HciKzMG7mMU](https://www.youtube.com/watch?v=HciKzMG7mMU)

**Level III - Skill 3. ** All-Terrain Vehicle Safety – eLearning Course

Discuss the 8 Golden Rules of ATV safety found at:  [www.atvsafety.org](http://www.atvsafety.org)

These are non-negotiable for all riders!

Contact:

Curt Sinclair, 4-H Extension Specialist

Email:  sinclair@illinois.edu