EO M324.03 – LIGHT A FIRE WITHOUT MATCHES

1. **Performance.** Light a Fire Without Matches.

2. **Conditions**

   a. Given:

      (1) Survival kit,

      (2) Supervision, and

      (3) Assistance as required.

   b. Denied: Matches.

   c. Environmental: Field setting, during a Weekend Bivouac FTX, with a low to moderate rating under the Canadian Forest Fire Danger Rating System.

3. **Standard.** The cadet shall follow the process to light a fire using one of the following:

   a. bow and drill,

   b. fire saw,

   c. flint and steel, or

   d. sun and glass.

4. **Teaching Points**

TP	Description	Method	Time	Ref
TP1	Identify methods of lighting a fire without matches, to include: a. bow and drill, b. fire saw, c. flint and steel, and d. sun and glass.	Interactive Lecture	20 min	C0-111 (pp. 428–432) C2-008 (pp. 273–278)
TP2	Demonstrate methods of lighting a fire, to include: a. bow and drill (spindle), by: (1) preparing a bow and drill; (2) moving the bow back and forth rapidly, exerting additional pressure as the drill bores into the wood; b. fire saw, by rubbing one piece of wood vigorously against another in a sawing motion; c. flint and steel, by: (1) scraping magnesium with a knife to make a pile; and (2) striking the steel against flint; and d. sun and glass, by using a piece of convex glass to concentrate rays of the sun on tinder.	Demonstration	30 min	C0-111 (pp. 428–432) C2-148 (pp. 127–132)

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TP	Description	Method	Time	Ref
TP3	Have the cadets practice lighting a fire by either: a. bow and drill, b. fire saw, c. flint and steel, or d. sun and glass.	Performance	60 min	

5. **Time**

a.	Introduction/Conclusion:	10 min
b.	Interactive Lecture:	20 min
c.	Demonstration:	30 min
d.	Performance:	60 min
e.	Total:	120 min

6. **Substantiation**

a. An interactive lecture was chosen for TP 1 to orient cadets to methods of lighting a fire without matches and generate interest in the topic.

b. Demonstration was chosen for TP 2 as it allows the instructor to demonstrate and explain different methods of lighting a fire without matches.

c. Performance was chosen for TP 3 as it allows the cadets to practice lighting a fire without matches while under supervision.

7. **References**

a. C0-111 (ISBN 0-9740820-2-3) Tawrell, P. (2002). *Camping and Wilderness Survival: The Ultimate Outdoors Book*. Green Valley, ON: Paul Tawrell.

b. C2-008 (ISBN 0-00-265314-7) Wiseman, J. (1999). *The SAS Survival Handbook*. Hammersmith, London: HarperCollins Publishers.

c. C2-148 (ISBN 978-0-8118-3292-5) Davenport, G. (2006). *Wilderness Survival* (2nd ed.). Mechanicsburg, PA: Stackpole Books.

8. **Training Aids**

a. Flint and steel,

b. Glass,

c. 1.8-kg (4-lb) axe with a 91-cm (36-inch) handle,

d. 60-cm (24-inch) bow saw,

e. Shovel,

f. Pail filled with sand or water,

g. Tinder, and

h. Kindling.

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9. **Learning Aids**

    a. Flint and steel,

    b. Glass,

    c. 1.8-kg (4-lb) axe with a 91-cm (36-inch) handle,

    d. 60-cm (24-inch) bow saw,

    e. Tinder, and

    f. Kindling.

10. **Test Details.** This EO is assessed IAW Chapter 3, Annex B, Appendix 7 (M324 EC-03).

11. **Remarks.** This EO should be conducted during the allocated Bivouac FTX.

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