



## **ORIENTEERING AT THE ARBORETUM**

*(As of 10/29/18)*

The Yakima Area Arboretum offers a beautiful and convenient location for an introduction to basic orienteering skills. Our prepared courses provide the opportunity to experience the Arboretum's vast offering of native and introduced plant life. Please respect this plant life by following the Arboretum's few simple rules. If you have questions about the Arboretum, or would like to browse for a gift or refreshment in the Tree House Garden Store, stop by the Jewett Interpretive Center.

### **The Courses – Short & Long**

Two courses have been developed at the Arboretum. The shorter course consists of nine compass bearings and is approximately one half mile in length. The second and more difficult course has ten compass bearings and is approximately one mile in length. Both courses utilize Arboretum grid markers as reference points for each compass bearing. The grid markers are either six inch diameter concrete markers with brass or aluminum plates or 3 1/2 inch white PVC markers. Each has four sets of letters and numbers. As the markers are at ground level, they may occasionally be difficult to locate due to grass, leaves and, yes snow. The markers on the long course can be particularly hard to find since it is mostly made up of PVC. Both courses offer the orienteer an easy and accurate means to check their compass bearings and a reference point to locate interesting plant life.

### **Tree & Shrub Identification**

Most of the trees and shrubs at the Arboretum are marked with both scientific and common names on aluminum tags. A computer program available at the Jewett Interpretive Center lists the location of trees and shrubs' based on their distance and direction from grid markers. Ask at the Interpretive Center for assistance.

### **Declination**

Compass bearing for both courses are based on true north so that you must correct for the declination (the difference between true north and magnetic north). The declination correction for Yakima as of 10/29/2018 is 15 degrees. If your compass cannot be set to correct for declination, you will need to subtract 15 degrees from each bearing given in the course.

Here are two useful sources for determining declination.

#### **NOAA Declination Computer:**

(Best if using a United States zip code.)

<http://www.ngdc.noaa.gov/geomag-web/#declination>

**Geological Survey of Canada Declination Computer:**

(Once you determine latitude / longitude, this is a good declination calculator, particularly for locations outside the United States. Also, includes information on using a compass.)

<http://geomag.nrcan.gc.ca/apps/mdcal-eng.php>

**Distances**

Distances between bearings will be given in feet. To move from point to point you will need to know the length of your step or your pace (the distance between two heel strikes of the same foot; twice the distance of one step). These can be easily determined at the beginning of the course by stepping off the 100 foot distance between two grid markers. Start at marker D-E 9-10 and walk directly north to grid marker D-E 8-9, counting your steps or paces as you go. This is the number of steps or paces you will use to cover a distance of 100 feet. Divide this number into 100 feet and you will know the length of your step or pace.

**Getting Started**

The courses begin near the flag pole. Find grid marker DE 9-10 by proceeding from the corner of the rose garden nearest the flag pole approximately 35 feet at a compass bearing of 50 degrees. Determine the length of your pace or step if you don't already know it and you're ready to begin. Remember to correct for declination! Enjoy your Arboretum and good luck!

**ACKNOWLEDGEMENTS**

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Special thanks to:

The Yakima Arboretum Board

Rita Pilgrim, Director: Yakima Area Arboretum

The scouts and adult leaders of Troop 200, Boy Scouts of America

## SHORT COURSE – Experience level: Medium

The short course begins on marker D-E 9-10. You can find this marker by going 35 feet at a compass bearing of 50 degrees from the corner of the rose garden nearest the flag pole.

Grid marker:	Compass Bearing:	Distance:
#1 (D-E 9-10)	90 degrees	200 feet
#2 (F-G 9-10)	0 degrees	200 feet
#3 (F-G 7-8)	297 degrees	224 feet
#4 (D-E 6-7)	72 degrees	316 feet
#5 (G-H 5-6)	198 degrees	316 feet
#6 (F-G 8-9)	236 degrees	361 feet
#7 (C-D 10-11)	22 degrees	539 feet
#8 (E-F 5-6)	194 degrees	412 feet
#9 (D-E 9-10)	End of Course	

### Points of Interest:

#1: The course begins at grid marker D-E 9-10 near the flag pole and rose garden at the north entrance of the Arboretum. On your way to the next point, you will pass a European Tricolor Beech with leaves of variegated pink, white and green.

#2: This grid marker is near a White bark Pine, identified by leaves in clusters of five, each 1 ½ to 2 ½ inches long and bark which is creamy-white to pale brown, and broken into scales.

#3: You should find your grid maker near the Japanese Garden within fifteen feet of a large Japanese Pagoda Tree with compound leaves and dimpled bark. On your way to the next marker you will pass a large Chinese Chestnut Tree, which during the fall produces prickly seed pods 2 inches in diameter.

#4: This marker will place you near the Caretaker House and offers a view of the Arboretum's old Christmas Tree. Look closely and you will still see old lights.

#5: At this marker you are near an entrance to the Wetlands Trail. The Wetland's fifteen acres include four distinct plant communities and excellent wildlife viewing. Also, stop and study the Trees of Washington exhibit reader board approximately fifty feet from this marker.

#6: Again you arrive near the Japanese Garden approximately fifteen to twenty feet from a Hagen Cherry with branches hanging to the ground. From this point you will pass between a Contorted Black Pine and a Black Hills White Spruce on your right and an Eastern White Pine and Siberian Spruce on your left.

#7: This marker places you in a grove of Crabapple Trees showcasing several flowering varieties.

#8: Near this marker you will find a Green Hawthorn and a Columnar Single seed Hawthorn. Look closely and touch if you dare to understand why these trees are called Hawthorns.

#9: You should end the course where you began. Congratulations! Reward yourself with a visit to the Jewett Interpretive Center or challenge yourself with the Long Course.

## THE LONG COURSE – Experience level: Difficult

### *Trees of Washington*

The long course starts at grid marker D-E 9-10. You can find this marker by walking 35 feet at a compass bearing of 50 degrees from the corner of the rose garden nearest the flag pole. This course highlights native trees and plants of Washington (see points of interest for each grid marker).

Grid Marker:	Compass Bearing:	Distance:
#1(D-E 9-10)	18 degrees	316 feet
#2(E-F 6-7)	321 degrees	640 feet
#3(A-B1-2)	129 degrees	781 Feet
#4(G-H 6-7)	346 degrees	412 feet
#5(F-G 2-3)	270 degrees	200 feet
#6(D-E 2-3)	139 degrees	922 feet
#7(J-K 9-10)	174 degrees	906 feet
#8(K-L 18-19)	214 degrees	361 feet
#9(I-J 21-22)	333 degrees	671 feet
#10(F-G 15-16)	End of Course	

### Points of Interest:

#1: The course begins at grid marker D-E 9-10 near the flag pole and rose garden at the north entrance of the Arboretum.

#2: On your way from E-F 6-7 to A-B 1-2 as you pass a bench look for a Ponderosa Pine on your right. On your left at a distance of approximately 50-100 feet is a grouping of three Western\_Larches. The Ponderosa Pine, used for lumber and millwork, is the most important pine in the United States. Note the five to eleven inch needles in groups of two and three. The bark is dark brown to cinnamon red and divided into irregular plates. The cones are rounded with prickles on the scales. The Western Lurch is a cone bearing tree that loses it needles each fall. Look for soft, 1-1 1/2 inch needles in clusters and dark to reddish brown bark in oblong scaly plates. Cones are oblong and 1-1 1/2 inches long.

#3: At point A-B 1-2 you are in the midst of Grand Fir, Douglas Fir, and Ponderosa Pine. Approximately 25 feet southwest of the grid marker are two large Douglas Firs, the most important lumber species in the U.S., has 3/4 to 1 1/2 inch needles of the blue green or yellow green color and 3-4 inch long cones protected by “pitch forks” (three lobed bracts). Approximately 15 feet northwest of your location is a Grand Fir. Also known as White Fir, the Grand Fir has single needles aligned in a row along each side of

the twig with 2-4 1/2 inch cones upright. Young trees are popular as Christmas trees and larger trees are logged for pulp wood and lumber.

#4: At G-H 6-7 you are near the fifteen acres of the Arboretum's Wetland and the Edward M. Schroeder Wetland Trail with varied wild life and native plants including Black Cottonwood, Stinging Nettles, Poison Ivy, and Clematis. On your way to the next marker stop to read the Trees of Washington exhibit board. You will also pass newly planted Vine Maples and White Bark Pines, on your right and Lodge pole Pines on your left. The Vine Maple has hand-like many-lobed leaves which produce a colorful showing in the fall. The Lodge pole Pine displays needles in clusters of two, 1 to 3 inches long. Oval cones 3/4 to 2 inches long may remain unopened on branches for several years.

#5: Twenty feet east of marker F-G 2-3 you will find a Ponderosa Pine. Within twenty feet of the marker are two Western Paper Birches demonstrating orange-brown or white bark with horizontal lines (lenticels) and separates into papery layers. Leaves are alternate, pointed at the end and heart shaped at the base. Wood's Roses can be found bordering this area. Flowers or hips are arranged in clusters on a shrub approximately three feet high. On your way to the next marker note the young Quaking Aspen on your right near the pond.

#6: The Quaking Aspen you passed are common in valleys and on northern slopes of Eastern Washington. Their leaves are oval to circular in shape, quiver or "quake" in even light breezes and turn golden yellow in the fall. The bark is smooth with fissures in older trees and greenish-white in color. Also note young Douglas Firs and non-native Alpine Firs near marker D-E 2-3.

#7: At J-K 9-10 you are near the Arboretum's Japanese Garden. Stop back for a pleasant visit after completing the course.

#8: You are now entering the newest addition to the Arboretum. Markers may be considerably harder to find as the turf wants to continually grow over them.

#9: At marker I-J 21-22 you are near a number of non-native Norway Pines. Near the pump house on your way to your final marker you will pass two Alaskan Cedars on your right. Also known as Yellow Cedar or Yellow Cypress and used in boat building and furniture, the Alaskan Cedar has scale like, overlapping leaves 1/8 inch long found on hanging branches. Cones are 1/4 to 1/2 inch in diameter with four to six scales.

#10: Stop a moment here to view the old compost ring before proceeding to the Jewett Waterfall Garden featuring plants native to Washington State at the entrance to the Jewett Center. Congratulations on completing the Trees of Washington orienteering course. Stop in at the Jewett Interpretive Center for information on the Jewett Waterfall Garden, the Wetland Trail, and the Japanese Garden.