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Pathfinder's Name

## Cycling

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1. Know the name and explain the purpose of the various parts of a bicycle.

	Name	Purpose
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____
13.	_____	_____
14.	_____	_____
15.	_____	_____

2. Properly replace a blown inner tube.

Date completed \_\_\_\_\_

3. Do one of the following.

- a. Visit a bicycle repair shop and watch a demonstration of bicycle repairs.
- b. Visit with an amateur/professional cyclist and have that person explain repairs that can be made to a bicycle quickly during an event or race.
- c. Disassemble the parts of the bicycle necessary to do a simple cleaning and demonstrate how to clean the bicycle properly.

Date completed \_\_\_\_\_

4. Adjust the brakes and front and rear derailer properly.  
Date completed \_\_\_\_\_

5. Know and practice courtesy, safety, and rules of the road as they pertain to bicycling.  
Date completed \_\_\_\_\_

6. Why is it essential to always wear a cycling helmet?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are the rules in your city/town and state/province/country for wearing a cycling helmet? (both minors and adults)?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

7. Demonstrate your ability to read a road map or use a GPS course-mapping program, routing your 50-mile (80 km) course and following it accurately on the ride  
Date completed \_\_\_\_\_

8. Have the following riding record:  
a. Take three separate 10-mile (16 km) rides in different locations.  
b. Take a 50-mile (80 km) ride in ten hours or less.  
Date completed \_\_\_\_\_

## Cycling, Advanced

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- 1. Have the Cycling Honor.
- 2. Describe how to select the correct frame size, handlebar, and saddle height to fit one's body size.

Frame Size \_\_\_\_\_

\_\_\_\_\_

Handlebar \_\_\_\_\_

\_\_\_\_\_

Saddle Height \_\_\_\_\_

\_\_\_\_\_

- 3. Describe briefly all the desirable features of a bicycle used for long distance touring.

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- 4. Take apart, clean, and reassemble the bearings in the front and rear wheels, headset, and bottom brackets.

Date completed \_\_\_\_\_

5. Explain and demonstrate the meaning of “BCD” as it relates to the crank.  
Date completed \_\_\_\_\_

6. Select the front and rear sprockets combination that would give the best results under the following conditions:

Conditions	Front/Rear sprocket combination
Riding in hilly terrain	_____
Touring with packs on the bicycle	_____
Riding in level country	_____

7. Explain how the riding characteristics of a bicycle are affected by:

a. The geometry of the bicycle frame including:

Head and seat tube angles \_\_\_\_\_

\_\_\_\_\_

Fork rate \_\_\_\_\_

\_\_\_\_\_

Chain stay length \_\_\_\_\_

\_\_\_\_\_

Bottom bracket height \_\_\_\_\_

\_\_\_\_\_

Wheel base length \_\_\_\_\_

b. The kind of wheels used including:

Clincher or tubular tires \_\_\_\_\_

\_\_\_\_\_

Small or large frame hubs \_\_\_\_\_

\_\_\_\_\_

Number of spokes used on each wheel \_\_\_\_\_

\_\_\_\_\_

Number of spokes each spoke crosses \_\_\_\_\_

\_\_\_\_\_

8. Make a list of desirable equipment items to be taken on a multi-day bicycle tour, including shelter and cooking equipment.

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9. Review courtesy and safety rules used while bicycling. What are the rules for the road for cyclists in your local area?

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10. What are the advantages of drafting?

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Know how to safely and properly draft.

Date completed \_\_\_\_\_

**11.** Know the different clothing articles used in bicycling and the advantages of each.

Clothing/Equipment	Advantages
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

**12.** List the maintenance checks needed prior to riding a 100-mile (160 km) tour, including items such as:

**a.** Truing tires completed

\_\_\_\_\_  
\_\_\_\_\_

**b.** Cables are tightened

\_\_\_\_\_  
\_\_\_\_\_

**c.** New tubes and tires, pressures checked

\_\_\_\_\_  
\_\_\_\_\_

**d.** Chain lubrication

\_\_\_\_\_  
\_\_\_\_\_

**e.** Brake pad thickness checked

\_\_\_\_\_  
\_\_\_\_\_

f. Repair tool kit verified

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13. Develop a plan that involves hydration and nutrition that you will use before, during, and after a ride.

Date completed \_\_\_\_\_

14. Have the following riding record while working on this honor:

a. Make three single-day 20-mile (32 km) rides in different locations.

Date completed \_\_\_\_\_

b. Complete either a 75-mile (120 km) one-day bicycle trip or a multi-day 100-mile (160 km) bicycle tour.

Date completed \_\_\_\_\_

15. Evaluate the 75-mile trip (120 km) or 100-mile (160 km) tour. Answer such questions as:

a. What were high/low points of the ride?

b. What parts of your preparation helped you succeed? What could you have better prepared for?

c. When did you almost quit? Why?

d. How did your hydration and nutrition plan work during your ride? What was most helpful? What would you change about your plan next time?

e. What would you do differently next time?

Date completed \_\_\_\_\_