

Phoenix Bikes
Family Mechanics Workshop

Materials:

Tools, Stands, Handouts, Bike Maps, Pens

Place a basic set of tools at each work stand.

Make sure there are enough tire levers for every pair to have at least one (preferably two)

Time: 1.5 hours

10 – 14 participants (5 – 7 adult/kid pairs); English & Spanish Translation

1) Introduction

- What shop does, what programs we have, how we support ourselves, in 3 sentences or less
- Say your name and something about – color of first bike, favorite xmas cookie, sound a bike makes, what you'd take on a bike ride, your favorite food to eat before a ride, etc.

2) Tools & Parts of the Bikes

- Hand out bike part sheets & review briefly, pointing to a bike
- Name-That-Part Gameshow : parents vs. kids – 1 vs. 1, first to answer gets a point
 - o This is a ...[point to handlebar].
 - o We call this the [point to the crank].
 - o The [derailleur] moves the chain and changes the gears.
 - o The spokes connect the rim to the ...[hub]
 - o You pull these to stop... [point to brake levers]
 - o The stem is connected to the frame by the ...[headset]
 - o The [fork] holds the front wheel in place.
 - o A cyclist sits on the... [seat or saddle]
- Explain that tool names will be taught as you go, but the first one to learn is “work stand” (Spanish?). Tell participants to put their bike in a stand, if available.

4) ABC SPIN – Safety Check

- Review: Every time you go for a ride, you should do the *ABC SPIN* safety check. Have participants guess what things are most important to check when you go riding, and what the letters might stand for.
- When the acronym has been explained, tell participants that they can fill in the blanks on their handout with info from below. Review the how-to below only if there is sufficient time and this is a priority for the group.

A) AIR – How to Check Tires & Tubes

- Ask group how to gauge tire pressure (with fingers, with psi gauge) and discuss how much air to put in different kinds of bikes.
- Show the group how to remove a wheel – show quick release and axle bolt
 - o Tell participants to take off their wheel and put it back on.
- Show the group the steps to change a tube, explaining each step. Show how to check for something poking through the tire. Show them the different valve types and how to pump up both.
- One-Armed Tire Change: Tell participants to take off their wheels again. When wheels are off, tell pairs that they must change their tire, using only one hand each (for pairs with smaller children, kids can use 2 hands). Go.

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B) BRAKES – How to Check & Adjust Brakes

- Explain how to check brakes. You want to make sure the brakes stop the bike without needing to pull the lever all the way to the handlebar
- Show how to adjust at barrel adjuster & at the brake itself.
- Also make sure that the pads aren't touching the rim and aren't missing the rim or off-center. How can you tell when the pads are too worn down?
- Tell participants to adjust the brakes on their bikes. Used brake pads can be given for free.

C) CHAIN & CRANK

- Explain how to check chain tension & crank tightness. Explain how to tell if crank wiggle is due to crank or bottom bracket.
- Show how to adjust chain tension on bmx / kids bike without derailleur. Explain that derailleur keep chain tight on geared bikes.
- "limit screws" keep chain from falling off, but can keep chain from getting into extreme gears. Demonstrate how to adjust.

SPIN) How to Check Wheels & How to 'Spin' Safely

- Make sure wheel is seated correctly in the fork or dropouts. Check for wheel wobble – truing & cone adjustment. If serious, bring to a shop, if not serious, ok to ride. Very loose cones can destroy hub.
- Use a participant to discuss bike fit.
 - o Handlebar, stem & brake lever adjustment to ease pressure on wrists and minimize back pain.
 - o Seat height adjustment to make riding more efficient and prevent knee pain.

5) Safe Routes: Hand out bike maps and ask participants to find their house and to identify symbols for safe bicycling routes. Talk about local cycling laws (rights, as well as responsibilities (riding on sidewalks, lights at night, stopping at stop signs & red lights, hand signals, etc). Talk about what to do if there is an accident. (See WABA, DDOT, and Bike Arlington resources for maps and road guidelines.)

- o Simon Says Signal Right: You say signal one direction and demonstrate. When they get the hang try to trick them. Rotate leaders, including kids. Practice bike path commands – 'on your left,' moving aside, etc. For fun – have people do the opposite of what you say.
- o Safe Route Home: Hand out pens to each pair. Using the bike maps, have each pair find the best route from their house to school, to the store, workplace, etc.
- o Find bike shops and place to rest on the map. What other community resources are important to know about.

6) Questions: Leave lots of time to help parents and kids fix their bikes and ask questions.

- If there is time, go outside & practice riding & hand signals. Use "used helmets" in the shop.