Leading Questions during Can Do & Challenge Phases

- What are you trying to do?
- What other ways could you do this? What other ways could this be accomplished?
- How does that work?
- Are there trade-offs? What are they?
- What could go wrong? What makes doing it this way hard? How could you make it easier?
- What do you need to know to make this work? What tests could you make or do so that you know what you need to?
- Where does the robot expect to start? (Initial conditions; assumptions)
- Does the robot expect to have its {arm, pusher, basket ...} in a certain position or place when you start?
- What is the robot looking for/expecting? Is that what you want it to look for?
- How does the robot know when to {turn, stop, start, ...}?
- How does the robot know where to {turn, stop, start, ...}?
- What can we use on the board/table/playing field to show the robot {where, when} to {turn, stop, start, reach, ...}?
- Does the program expect/assume the robot to go {fast, slow, forward, backward, straight, ...}?
- Are the motors going the direction the program expects? Do you need to change the orientation of the wires? (Motor polarity)
- Is the program talking to the same ports that have wires connected to them on the robot?
- How do you know you have the right value? How much is too much? How much is too little? (Bracket parameters)
- Is it too {wide, narrow, long, wobbly, fast, slow, ...}? Could you change that?
- If you change this one thing about the robot, what else has to change? Will that affect your program? How?
- How can you make the robot turn {more tightly, faster, slower, a specific amount/distance, right, left, ...}?
- How can you make the robot go {faster, slower, forward, back, ...}?
- How can you make the robot find the {landmark, wall, line, ...}?
- What’s the smallest change you can make to test this?
- What are you testing? Is that one thing or more than one? How could you test less? (May not be possible)
- How many times have you tested? Is it enough? (Rule of thumb – test at least three times/repeats)
- Did the program get changed? (Notice passive phrasing so as not to seem blaming.)
- Did the robot get changed?
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- Did something happen to change the _______?
- Does everything that used to work well still work well? (Regression testing)
- Do you need to make something (a jig, a device) to help you {line up, position, set, ...} the {robot, arm, pusher, ...}? 
- What if you push instead of pull?
- What other way could you do this task? What other way could you solve this problem? Push, pull, drop, lift, approach from the {front, top, side, back, ...}, sweep, backhand, ...?
- Have you asked your teammates what they think? Do they have suggestions?
- Has someone else on the team written a program with this icon? How does that program work?
- Have you turned on Context Help?
- Can you think of a tool or device that makes an action that would help you? Scissors? Hook? Bulldozer? Lever? Crane? ...
- What do you think the problem is? Why? Can this problem be split into parts? What are they?
- What did you last change? What was last changed?
- What does this do? How?
- Do you need to take a break?
- Take a deep breath. Let it out slowly. Are you ready to try again? Would you feel better if one of your teammates helped you?
- Can you talk to {teammate} about it? Maybe {she, he} has some ideas. Who else might have some good ideas? Is there a {book, website, ...} where you could look for some more ideas?
- Try listening as if you just walked in to the room for the first time. Try explaining this problem to me as if I as {a guest who just came in, a space alien, another coach, a judge, ...}. Try listening with a fresh pair of ears.
- How would you explain this problem to your {science teacher, Mom, Dad, another PA (program aide), mentor, coach, ...}?
- Tell me what this program is supposed to do, step by step. Slow down and let me catch up.