

Joining the trades from the perspective of an Employer.

Written by Michael Appleton July 2019, with the hopes of helping a few people that are like me to realize college doesn't have to be the only path. I am currently 29 years old, and I have been in the trades since I was 16. Today I help run a successful, Customer Service focused Plumbing, Heating, Air Conditioning and Electrical Service Company in Warrenton VA with the help and support of an AMAZING team.

I want to first start with my reasoning behind writing this document. This subject is something I hold dear to my heart. High School and I did not get along very well, elementary and middle school too for that matter. I spent as much time as I could in the shop class; it was much more interesting to me than other classes. I recognized at an early age that math was used in measuring, building things, designing things, diagnosing problems and one other thing I've always had an interest in, money. I would often get in trouble, be the cause of the classroom distractions or be the kid that was on the teacher's "bad side". One huge thing I wish I could have learned before I started high school is not everyone learns the same way and there is nothing wrong with that. I am a kinesthetic learner, I have to visualize it, I need to see it, touch it, play with it, take it apart, put it back together to fully understand something. I know I am only one of many that learn this way. For this reason, I have excelled in the trades and found that it could be a wonderful path for many people. It can provide a great living for them and their family, give you an awesome fulfilling feeling knowing that you are making a difference in the quality of other people's lives and your community. Success CAN be reached without college, I promise.

In an attempt to help keep this letter clear and structured, I will break this up into 2 categories of what I would consider to be key items that an employer would focus on when making a decision on hiring someone that is applying to join their team in an entry level position. 1. Personality and Professionalism. 2. Technical Knowledge.

1. Personality and Professionalism.

At first thought, joining the trade might sound like a day full of working with your tools, fixing plumbing leaks, changing the blower motor inside of a furnace or running a circuit for the new ceiling fan the customer wants in their living room. I must stress that this is only half of the job. No one has ever gotten to the point of getting to fix that leak without first having to excel in all the areas listed below;

- Communication. learning and constantly practicing the art of communication is a major key to success in this industry....and life in general. Clear, direct, present, respectful, confident communication is something that is a must, the great part of this that it can be practiced every day and no matter how well you do this, there is always room to improve. Never work off assumptions. Never take for granted

that just because you know and understand something that someone else does as well without clearly communicating it to them.

- Respect. This list of things that individuals in the industry must respect is a long one, at the top of this list, is you. Respect yourself, hold yourself to a higher standard than people would expect. Respect the trade, your quality of the work that you do and the manner in which you do it, be a professional. Respect your team, making great things happen never involves only one person, in this line of work it takes a team and all roles on that team are very important, you have to rely on each other to get anything accomplished. Do all you can to build people up, one major rule I live by is; If you want to be happy, you must first learn how to make other people happy, you can replace the word happy with anything you want from life and I believe this still holds true. Respect the customer. At the end of the day, without the customer, we do not exist. Holding yourself to the highest of standards and going above what is expected of a tradesman will get you further than anything. Their property, their time, their perspective, all must be respected at the highest level. We are working in people's homes, where they raise their family, where they eat their dinner, where their relatives come to visit. Having a tradesman there can be a very uneasy feeling for a lot of people, the more respect we can show in this area, the more we are setting ourselves up for success.
- Appearance. When you think of a plumber, what do you think? They might smell a little "funny"? They might be dirty, with stained up blue jeans and muddy work boots? I can tell you as an employer how I think of a plumber, and it's nothing like what is listed above. I can promise you, as a Master Plumber I know just as much about the plumbing system in a home as a doctor knows about the human body, the skill in which I perform my work is as precise as the doctor in the operating room. Tradesman prevent more illnesses than doctors have ever cured. As a tradesman it's hard to get this concept through to people but the one thing that takes no talent that will put us leaps and bounds ahead of what most people think of when they think of a plumber, is our appearance. Keep a clean shaved face, a clean collared shirt tucked into a clean pair of pants, a nice-looking clean pair of boots, and then keep a backup change of clothes in your work truck. Want to easily gain a boat load of confidence? Clean yourself up nice and see how you feel. As a tradesman we are professionals and we need to look like it at all times, whether we are in the middle of the job or stopping at the gas station to fill up and grab a drink on the way there.
- Embrace technology. We live in an amazing time to be alive where technology can be a huge help and asset in our work and lives. Do you think communication can be hard in person? It's even harder in an email. Do you think looking like a professional in person takes a lot of effort? It takes even more in an email. Think you don't need to email as a tradesman, or know how to update the operating system on an iPad? You have to in today's world. Every bit of our field "paperwork" is now done over an iPad using an App that houses all of your job

information and pricing information. All estimates, invoices and check list are built on a tablet from the customers home and sent to them and the office over an email. Learning proper grammar, spelling and how to formulate your thoughts into writing is a key factor in being a successful tradesman. I certainly wish I had paid a little closer attention in English class.

A few key points to take away on personality and professionalism.

- Be comfortable and confident, people like doing business with those they know, like, and trust.
- Learn to give credit and take responsibility.
- Stick to your word, if you say you're going to do it, do it.
- Respect everyone and everything, especially yourself.
- Build people up, belittling people is a lose-lose situation.
- Keep your eyes and ears open at all times, be extremely observant.
- Mental laziness is a dangerous thing. Everything in the entire world started as a thought inside someone's head followed by action
- Make a plan, then put action behind it and stick to it, not the other way around.
- Be coachable, no matter how good you are at something there is always room to be better.
- If you feel that you are the smartest person in the room, teach or find another room.

I want to conclude this section with a few of my favorite quotes that I feel are very related to all of the points I have stated above.

"Whether you think you can, or think you can't, you are right." – Henry Ford.

"Opportunity is missed by most people because it is dressed in overalls and looks like work." – Thomas A. Edison

2. Technical Knowledge.

Below I have listed all the things I feel that would "jump start" someone's career in the trades. If you can learn all of this before you leave high school, you will be leaps and bounds ahead of most. These are not things that are trade specific, they are parts, tools and equipment you will need to know and be familiar with no matter if you are interested in Plumbing, Heating and A/C or Electrical.

Pipe and fitting, when and what are they used for, pressure and temperature ratings, where they can be installed, where they can't be installed.

- CPVC
- PVC
- L copper
- M copper
- K copper

- Iron pipe
- Brass
- Pex
- Schedule 40, 80 & 120 PVC.
- Threaded connections, glue connection, soldered connection, brazed connections, flared connections, compression connections.
- Fittings – 90, 45, street 90, street 45, tee, wye, cross wye, flanges, union, male adapter, female adapter, reducer, offset reducer, bushing, check valves, nipples, fixture supply lines, mixing valves, pressure reducing valves, ball valves, gate valves, globe valves.
- pipe hangers and strapping, insulators, standoff, split ring hangers, base plates, floor flanges.

Electrical terms, components and wire.

- Amps, Volts, Ohms and being proficient with a multimeter.
- Gauge of wire and wire sizing.
- Types of electrical wiring, romex, uf, mc, thhn, solid, stranded, 2 wire w/ ground, 3 wire w/ ground.
- breakers, disconnects, junction boxes, control boards, indoor/ outdoor rated, meter. Overhead and underground, conduit.
- types of devices, toggle switches, duplex receptacles, quad receptacles, 3 ways, 4 ways, GFCI, bubble covers, temperature switches, cad cells.

Equipment. It's important to know the differences in all types of equipment, where they are used, how they are sized and the standards for installing/ servicing them.

- A/C
- Heat Pump
- Natural gas furnace, 80% induced draft and 90% condensing induced draft.
- LP gas furnace, 80% induced draft and 90% condensing induced draft.
- Dual Fuel systems
- Oil Furnace
- Gas (natural & LP) boiler
- Oil boiler
- Geothermal
- Electric Water Heater
- Heat Pump Water Heater
- Natural Draft Water Heater (Natural & LP Gas)
- Power Vent Water Heater (Natural & LP Gas)
- Oil Fired Water Heater
- Tankless Water Heater
- Water Filters
- Water Treatment System
- Well Pump
- Pressure Tank
- Pressure Switches
- Thermal Expansion Tank

- Pressure Reducing Valve
- Toilets
- Faucets
- Pressure Balancing Mixing Valves (shower valves)
- Electric Meter
- Electric Panel
- Main Breaker
- Whole Home Generator
- Electrical Grounding
- Bonding of Gas and Water Lines
- Sub Panels

I hope that you all can find this information valuable; I know that it's a lot to take in all at once. If I can help in any way, I encourage you to reach out to us at Appleton Campbell.

-Michael Appleton

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