

HookahTellMe...

Please cut out the images from below and paste them into the space that best describes the chemicals being spoken about.

--- Answer Key ---

In a hookah, tobacco and charcoal burn together producing smoke that creates



. This can be highly poisonous to the body. Tobacco and charcoal also create high



levels of

and other poisonous chemicals, including



nickel, cobalt,



and

. Most times they are burned with other additives, which increases toxic content that can lead to lung, oral and bladder cancers. As these chemicals burn they travel down to the water jar where they are cooled to be inhaled.



However, the water jar cannot remove

and



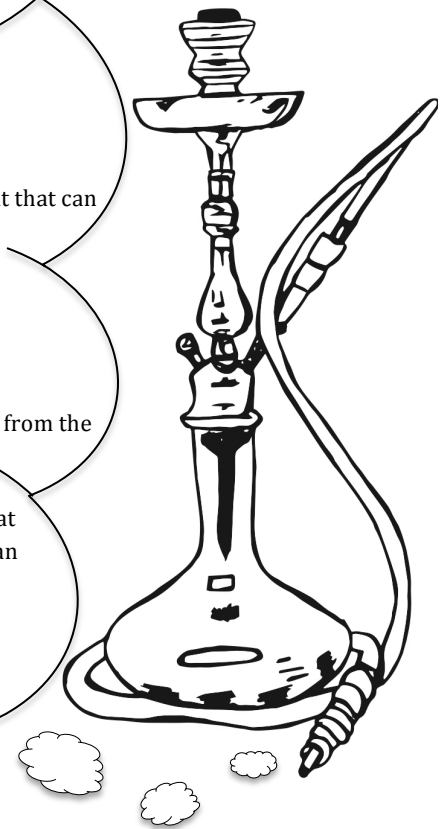
from the

smoke, it only allows the smoke to be cooled to be more easily and deeply inhaled by the lungs.





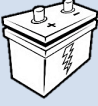


Additionally, hookah smokers can share communicable diseases through the mouthpiece like Mononucleosis (Mono) and Hepatitis. And for those nearby a hookah, they are also at risk of Secondhand Smoke. No one is safe from the chemicals in Hookah and can



become addicted since tobacco contains



The table below provides some information on the chemicals discussed in this activity and some background on the known effects of each chemicals exposure to the human body.

Known Chemical:	What do we know about it?
<p><i>Tar</i></p> 	<p><i>* Sticky and brown, also know as resinous, a highly posinoius chemical to the body; as the result of burning tobacco with other material.</i></p>
<p><i>Carbon Monoxide</i></p> 	<p><i>Odorless and colorless toxic gas that can poison you (The "Quiet Killer").</i> <i>Ex. CO poising can come from a gas stove or other combustion devices if they are leaking or disconnected.</i> <i>(co-carcinogenic)</i></p>
<p><i>Lead</i></p> 	<p><i>* Even low levels of lead in the blood can result in: behavior and learning problems, growth, and lower IQ.</i></p>
<p><i>Zinc</i></p> 	<p><i>Zinc is an essential mineral, and inhaling it can potentially cause an acute metal fume fever.</i> <i>(High exposure: Heavy metal intoxication)</i></p>
<p><i>Acrolein</i></p> 	<p><i>A pesticide used on plants.</i> <i>Effects: may cause eye, nasal, and respiratory tract irritation.</i></p>
<p><i>Formaldehyde</i></p> 	<p><i>* A colorless and strong-smelling gas.</i> <i>Effects of low exposure: a sore throat, cough, and irritated eyes.</i></p>
<p><i>Nicotine</i></p> 	<p><i>*One of the most addicting agents; reinforces addiction by inducing craving.</i> <i>Widespread biological effects: cardiovascular, respiratory, renal, and reproductive system.</i></p>

*** = carcinogenic**



References

Tar:

Carbon Monoxide: <https://www.cdc.gov/co/faqs.htm>

<https://www.epa.gov/indoor-air-quality-iaq/carbon-monoxides-impact-indoor-air-quality>

Lead: <https://www.epa.gov/lead/learn-about-lead#lead>

<http://www.who.int/mediacentre/factsheets/fs379/en/>

Zinc: <https://medlineplus.gov/druginfo/natural/982.html>

<https://www.atsdr.cdc.gov/phs/phs.asp?id=300&tid=54>

Acrolein: <https://www.atsdr.cdc.gov/PHS/PHS.asp?id=554&tid=102>

Formaldehyde:

<https://www.cdc.gov/nceh/drywall/docs/whatyoushouldknowaboutformaldehyde.pdf>

<https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/formaldehyde/formaldehyde-fact-sheet>

Nicotine: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4363846/>

