



SCAMPER is an acronym for a useful list of words that can be used to help you think differently about a problem.

Substitute one thing for another.

Combine with other materials, things, or functions.

Adapt: Can it be used for something else?

Minimize/magnify/modify: Make it larger or smaller.

Put to other uses: Can you put it to another use?

Eliminate/elaborate: Remove some part/material, make one part more detailed/refined.

Reverse/rearrange: Flip-flop some section of the item, move parts around.



Here are some improvements that can and have been made to water bottles. Can you think of any more improvements by using the SCAMPER technique?

SCAMPER	Questions to Ask	Water Bottle Improvement	Benefit
Substitute	What could be used instead? What kind of alternate material can I use?	Different bottle material	Plastic bottle is unbreakable, unlike glass
Combine	What could be added? How can I combine purposes?	Add straw into top	Straw allows access to bottom of water bottle without lifting and tilting bottle
Adapt	How can it be adjusted to fit another purpose? What else is like this?	Use squirt top for watering plants	Directed stream gets water to the plant roots
Magnify	What happens if I exaggerate a component? How can it be made larger or stronger?	Larger bottle	More water for better hydration
Minimize	How can it be made smaller or shorter?	Smaller bottom of bottle	Can store in car's cup holders easily
Put to other uses	Who else might be able to use it? What else can it be used for other than its original purpose?	Turn upside down	Hand washing station
Eliminate	What can be removed or taken away from it?	Eliminate the handle	More volume for water storage
Elaborate	What can be expanded or developed more?	Larger base Lower center of gravity	helps keep water bottle from tipping
Rearrange	Can I interchange any components? How can the layout or pattern be changed?	Move handle from side to top	Better ergonomics for hauling large amounts of water
Reverse	What can be turned around or placed in an opposite direction?	Water spout at bottom	Easier to dispense water into cups



Now try using SCAMPER yourself. Your advisor will tell you which item to practice on. Then, fill out the answers to the questions below:

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Substitute: Instead of _____ I can _____.

Combine: I can bring together _____ and _____
to _____.

Adapt: I can adapt _____ in this way _____
to _____.

Modify/**M**agnify/**M**inimize: I can change _____ in this way
_____ to _____.

Put to other uses: I can re-use _____ in this way
_____ by _____.

Eliminate/**E**laborate: I can eliminate/elaborate _____
By _____.

Rearrange/**r**everse: I can rearrange/reverse _____ like this
_____ such that _____.



In your design notebook, apply SCAMPER to your problem using these same sentences. Discuss your options with another student and your Advisor or Ambassador. Decide which one would make the best solution to your problem. Circle it or outline it in your journal.

The Scamper activity is adapted from the Intel® Design and Discovery curriculum and <http://creatingminds.org/tools/scamper.htm>