

CQ Entry: Rearranging (SCAMPER)

For successful synthesis to emerge, three associated levels of thinking must all occur at the same time in a dynamic, three component process which is a great deal like writing poetry or songs. All three levels operate concurrently and recursively (like the cat chasing its tail). The three levels of thinking are: Envisioning, Inventing, and Rearranging or (SCAMPERing).

SCAMPERING and Rearranging

The foundation for the top two levels is the rearranging, manipulating, sorting and analyzing data. A student formulating a plan to create a more human society may take and mix up the elements from successful strategies employed to create more human societies in other countries. This is no time for imitating (copying) recipes of the past, in part because none of them have been fully successful. Search for a unique plan fashioned out of old parts and new parts.

One model for such synthesis is SCAMPER, with each letter standing for a strategy.

There are many questions that can help students to "think laterally" or "get out of the box." This ability to extend beyond the obvious and the time-worn is an essential ingredient in effective problem-solving because it helps to generate the unusual and imaginative solutions we associate with the skill of synthesis, the rearranging, modifying and combining of elements in novel ways to achieve desired and often startling results.

SCAMPER is one set of questioning strategies that works well. Students can be taught to ask how to change an existing product, item or idea by asking how to Substitute, Combine, Add, (Modify, Magnify, Minify), Put to other uses, Eliminate, and Reverse. SCAMPER tools are used on answers that we already have to questions, when we need a detour in our thinking to see something in a new way. It requires the suspension of judgment and a playful attitude. Many of the ideas will not lead anywhere, but they may add up to be more than the sum of their parts.

One of the benefits of using the SCAMPER tools is that you, the student, are both asking and answering the questions. Your questions, though often very divergent, require a thorough on-going knowledge of the required content. Evaluation of your thinking and competency in the subject matter are accomplished through an analysis of the coherence of the question asked, answer given, and next questions posed.

To use SCAMPER tools, take the answer to a question such as, "Stress can be reduced in our culture by ensuring that all basic physiological and safety needs are met." and ask the questions:

S "What could take the place of our current system of providing physiological and safety needs?" (SUBSTITUTE)

C "Are there any models different than ours that could be incorporated into ours to make it a better system?" (COMBINE)

A "What is different in our culture today, that did not exist when our system was developed, that demands new approaches, and what might they be?" (ADD)

M "What could we take that we already do and make it better, or more effective in meeting the needs of people?" (MODIFY)

P "How might these changes effect to problem of global hunger?" (PUT TO OTHER USES)

E "What social practices should be ended?" (ELIMINATE)

R "What would a society be like that refuses to guarantee the physiological and safety needs of it's citizens?" (REVERSE)

For this component of synthesis to produce powerful results, the other two components - inventing and envisioning - must be operating concurrently, as they supply the pressure which inspires creation. You arrange, blend, combine, integrate, test, and adjust the thought fragments until new pictures emerge and the pressure eases.

1. In a CQ Entry, practice "SCAMPERing" by taking your essential question and manipulating it according to the SCAMPER formula. You should begin with a hypothetical answer, solution, plan, procedure, or suggestion, and then apply the formula to that prospective answer.

Use the example SCAMPER outline on the top of this sheet as a guide:

1. ON THE LEFT SIDE of your notebook, create a SCAMPER List based on your essential question and a hypothetical answer mentioned above.
 - Write out your essential question. **You may take this opportunity to modify (narrow or expand) your essential question based on your research to date.** That is why this phase is called refinement and focus.
 - Create a hypothetical answer to your question based on what you know to date. It is possible that you can create more than one hypothesis, meaning more than one answer.
 - Make a SCAMPER list for each of your hypotheses – SCAMPER Questions Only.
2. ON THE RIGHT SIDE of your notebook, provide an answer to each of your SCAMPER questions for each of your hypotheses.

Your entry should be a written description, and must be done with integrity and demonstrate a concentrated effort in both content and presentation.

Example Notebook Entry

Left Side	Right Side
Essential Question: How can perfection be achieved? Hypothesis 1: Perfection can never be achieved because all things change. Hypothesis 2: Perfection is not an achievement but a state of being, a practice SCAMPER for Hypothesis 1: S = Substitute: What could take the place of our current obsession about being perfect? C = Combine A = Add M = Modify P = Put to other uses E = Eliminate R = Reverse	SCAMPER answers for Hypothesis 1: S= People could begin to understand that they are already perfect as they are, in their own "imperfection." They can take each moment and live it, and then let it go, as all things change even in every moment. C = A = M = P = E = R =