

SCAMPER

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“Manipulation is the brother of creativity.”

~Michael Michalko, *Thinkertoys: A Handbook for Creative Thinking Techniques*

RATIONALE

Looking for a new spin on an old idea?

Trying to figure out how to solve a problem by working smarter not harder?

Then the SCAMPER strategy may be the answer you are looking for to spark your own creativity, and the creativity of your students.

SCAMPER is a mnemonic acronym that provides a structured way to assist students and teachers with understanding creative problem solving and developing extension-building activities based on prior ideas and processes (Hale-Evans, 2006). First proposed by Alex Osborne in 1953, this thinking strategy was further developed by Bob Eberle and noted in his 1971 book, *SCAMPER: Games for Imagination Development*. Eberle states that much as the word scamper suggests “running playfully about as a child”, the strategy SCAMPER may also evoke the need “to run playfully about in one’s mind in search of ideas” (Eberle, 1984).

Why is creative problem solving useful to teach? Assisting ourselves and our students’ to be creative and critical thinkers are key goals of any teacher or school. Yet, you may ask, why is SCAMPER so useful? Creative problem solving strategies involve “a system, a method, a plan for dealing with perplexing situations” (Eberle, 1984). The SCAMPER technique offers a systematic and practical way to stimulate divergent thinking, imagination, originality, and intuition while scaffolding students’ creative thinking for independent use on other tasks and assignments. (Glenn, 1997)

HOW TO USE THE STRATEGY

The SCAMPER Process

First, consider the target or challenge.

What do you want to change, modify, or update? This could be something you have created yourself or something that has been discovered or made by someone else. A target could be an object, an idea, a process, or just about anything that you want to update.

SCAMPER Acronym

Adapted (Michalko, 2006)

Each of the letters in the acronym SCAMPER stands for a stage in the process. They include the following elements:

S	Substitute	Substitutions is a trial-and-error method where you can try things out, see if it works, then try something different.
C	Combine	Combining involves synthesis, the process of combining previous ideas or things together to create something new.
A	Adapt	Think about what is already known about the problem and how others are solving it. Become aware of the process others are using.
M	Modify (also, Magnify or Minify)	When you modify and alter something, you reflect on what is needed to support and make it better, greater, simpler, or even more complex. Magnifying will concentrate on making things bigger, thicker, stronger, or more intense. Minifying will concentrate on makings lighter, slower, less frequent, or reduced in some capacity.
P	Put to other uses	Consider ways that the target can be used other than originally intended.
E	Eliminate (also, Elaborate)	To remove or omit part or all of a particular quality. If using elaborate, to add more details.
R	Reverse (also, Rearrange)	When using reverse, focus on the opposite or contrary meaning. When using rearrange, consider how the change of order or sequence would affect the target or challenge.

Next go through each letter of the SCAMPER acronym using helper questions.

Ask yourself questions for each SCAMPER letter in order to gain perspective and practice in creative thinking.

Mnemonic	Meaning	Helper Questions
S	Substitute	<ul style="list-style-type: none">• What can I substitute?• Who can I substitute?• Who else?

		<ul style="list-style-type: none"> • What else? • What other place? • What other time, routine, or process?
C	Combine	<ul style="list-style-type: none"> • Combine what? • Combine ideas? • Combine purposes? • Combine materials? • Can anything be blended or ensemble?
A	Adapt	<ul style="list-style-type: none"> • How is the problem currently solved? • How can it be made more accommodating? • How can it be more compatible? • How can it be more consistent?
M	Modify (also, Magnify or Minify)	<ul style="list-style-type: none"> • How can this be altered for the better? • What can I modify? • Modify color? • Modify shape? • Change motion or sound? • Change size, form, or taste?
P	Put to other uses	<ul style="list-style-type: none"> • What else can this be used? • What are those uses? • Who else could use it? • How would they use it?
E	Eliminate (also, Elaborate)	<ul style="list-style-type: none"> • What should I add or take away? • What should I simplify or enrich? • Should it be plain or fancy? • How can I do these? • How will this affect the target?
R	Reverse (also, Rearrange)	<ul style="list-style-type: none"> • What other arrangements might be better? • What would happen if I flipped the order? • Rearranged the sequence, layout, or pattern? • Turned it over or backwards?

Reflection

Upon completion of a SCAMPER activity, take the time to reflect on what has been accomplished. You may want to write or journal your thoughts and think about the changes that were made to the original problem or challenge. Noting specific instances of creative thinking can provide a powerful understanding and use of critical thinking skills.

SCAMPER Organizer

Name: _____
Topic: _____



SCAMPER Strategy

S Substitute	C Combine	A Add	M Modify	P Put together	E Eliminate	R Reverse

Blank Template

Name: *Elementary Example* _____
Topic: *How to help* _____



SCAMPER Strategy

S Substitute	C Combine	A Add	M Modify	P Put together	E Eliminate	R Reverse
<i>Handwritten example: I could substitute a book club for a class.</i>	<i>I could combine the problem-solving and the job.</i>	<i>Handwritten example: I could add a job to the problem-solving.</i>	<i>Handwritten example: I could modify the way to do it.</i>	<i>Handwritten example: I could put together the job and the problem-solving.</i>	<i>Handwritten example: I could eliminate the job.</i>	<i>Handwritten example: I could reverse the job.</i>

Elementary Example

Name: *Secondary Example* _____
Topic: *Reading challenge* _____



SCAMPER Strategy

S Substitute	C Combine	A Add	M Modify	P Put together	E Eliminate	R Reverse
<i>Handwritten example: I could substitute a book club for a class.</i>	<i>Handwritten example: I could combine the problem-solving and the job.</i>	<i>Handwritten example: I could add a job to the problem-solving.</i>	<i>Handwritten example: I could modify the way to do it.</i>	<i>Handwritten example: I could put together the job and the problem-solving.</i>	<i>Handwritten example: I could eliminate the job.</i>	<i>Handwritten example: I could reverse the job.</i>

Secondary Example

ASSESSMENT

Evaluating your own or your student's SCAMPER organizer is the perfect way to assess the

understanding of not only the use of the strategy but also the development creative thinking and problem solving skills. While SCAMPER can be taught explicitly, teachers will also want to consider using them in the combination with other projects and activities to increase a focus on problem solving and innovative thinking.

RESOURCES

S.C.A.M.P.E.R

<http://www.slideshare.net/angelamaiers/scamper-1217523>

This SlideShare presentation provides visuals to go along with the SCAMPER elements.

I Can Be An Inventor, Too!

http://utminers.utep.edu/kbolten/lessons/pdf/1st/soc_studies/1st_ss_inventor.pdf

By participating in the problem solving process and creating their own invention, students will learn that anyone who has an idea for a new product can be an inventor. The students will use a notebook to record ideas and a creative thinking technique called S.C.A.M.P.E.R.

SCAMPER Random Question Tool

<http://litemind.com/scamper-tool/>

Use this tool to get a random SCAMPER question to spark new ideas.

SCAMPER Mind Map

<http://litemind.com/wp-content/uploads/misc/litemind-scamper-reference.pdf>

Think of it as a handy one-page reference you can use whenever you are stuck or just need a kick start to get your creative juices flowing.

SCAMPER

<http://creatingminds.org/tools/scamper.htm>

The authors of this site give details on when to use the strategy of SCAMPER.

SCAMPER

<http://wwwfp.education.tas.gov.au/English/scamper.htm>

SCAMPER helps students ask questions that require them to think "beyond the lines" of a text. As such, it helps develop their critical thinking skills and supports them in constructing their own imaginative texts. It is a useful cooperative learning tool and a great stimulus for role play.

REFERENCES

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