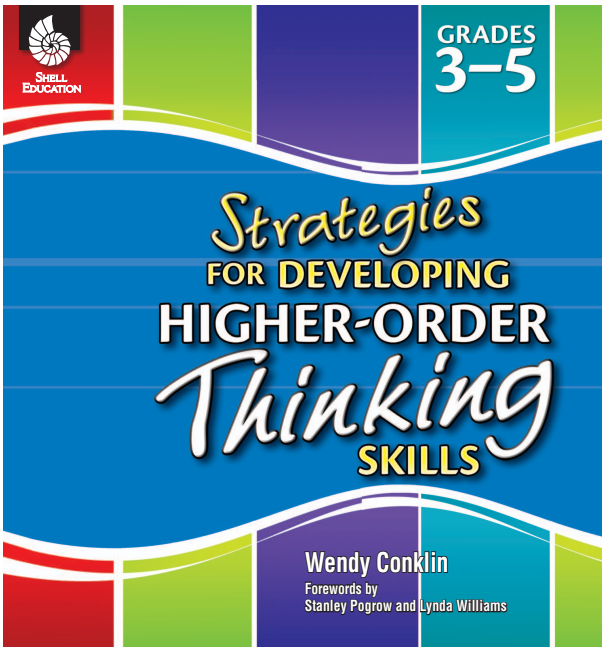
SHELL EDUCATION

Sample Pages from

Strategies for Developing Higher-Order Thinking Skills (3–5)



The following sample pages are included in this download:

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SCAMPER Overview

Most ideas are modifications of something that already exists. SCAMPER is an acronym used for an idea checklist and is an adaptation of the 73 idea-spurring questions created by Alex Osborn (1993). It is designed to help stimulate new ideas and follows the notion that new ideas are modifications of something that already exists. SCAMPER helps students to think differently about their problem, challenge, idea, or goal so that they can come up with unique ideas. Below, the acronym is explained with a definition, questions that can be asked, and key words that can be used.

SCAMPER	Defined	Questions to ask:	Key words to use:
Substitute	Is there a way to substitute something else for the product, process, or problem? Finding replacements can help you to find new ideas. Anything can be changed.	• Can I replace components? • Can I swap materials or ingredients? • Can I switch people? • Can I change the rules?	• alternate • exchange • proxy • replacement • stand-in • surrogate • swap • switch
Combine	How can parts of the products, process, or problem be combined to create something entirely new or different? Combining unrelated items helps you to expand your creative thinking.	• Are there two parts of the problem that I could combine? • Is there an unrelated component that I could integrate with this? • How can I combine materials? • Can I combine it with other objects?	• amalgamate • blend • bring together • come together • join • merge • mingle • mix • unite
Adapt	Can you find a similar solution or change to your problem that is already out there? Is there a way to borrow an idea and change it to make it your own?	• In what ways can this be altered? • How can I make this like something else? • What can I borrow or copy? • How can I change its function?	• adjust • alter • amend • bend • change • fit • modify • revise • rework • vary

SCAMPER Overview *(cont.)*

SCAMPER	Defined	Questions to ask:	Key words to use:
Magnify	How can this idea be exaggerated? By magnifying the situation, you can discover new insights about it as well as find out why it is so important.	• What can be made larger? • What can I do to exaggerate it? • How can I elaborate? • How can I make it a bigger deal?	• amplify • attributes • blow up • elaborate • enlarge • expand • increase in scale • strengthen
Put to another use	How can your product, idea, or problem fulfill a different kind of need? At times, we can find effective uses for our ideas when we think of new ways in which they can be used.	• What else can I use this for? • How can this be used in an unusual way? • How would an animal use it? • How can this be used in a different context?	• apply • bring into play • employ • exercise • harness • make use of • operate • utilize
Eliminate/ minify	How would eliminating or minimizing the problem, idea, or product change the situation? When we trim our ideas down to the bare necessities, we discover the most important parts of it.	• How can I reduce it? • What can I do to minimize it? • In what ways can it be made weaker? • How can it be split into smaller parts? • How can this be understated?	• abolish • curtail • diminish • eradicate • minimize • lessen • reduce to core • functionality • reduce in scale • remove • elements • shrink • simplify

SCAMPER Overview *(cont.)*

SCAMPER	Defined	Questions to ask:	Key words to use:
Reverse/ rearrange	What would happen if the problem, idea, or situation were reversed or rearranged? Is there an unexpected benefit when it is done in a different order?	• Can I switch the positives and negatives about it? • What would result if I made it go backward? • What would result if I did the opposite? • Can it be turned around? down instead of up? up instead of down?	• change • contrary • converse • invert • opposite • reorder • reorganize • repeal • reshuffle • swap • transpose • turn around

SCAMPER can work to help students broaden their understanding of book characters, events and people in history, and even writing ideas. However, within certain content areas, SCAMPER, as described above would be a difficult fit. For example, mathematical and scientific concepts might not need strategies that generate ideas. In these instances, SCAMPER is best used to broaden conceptual understanding of a topic or subject area.

Students can use the SCAMPER method in various ways. First, the problem, challenge, idea, or goal that you want to accomplish should be defined. Then, either sequentially work through the SCAMPER idea checklist to help generate ideas for a change, or skip around and use a few selected ones. Students can even place the words on different faces of a cube (combining two on one of the faces) and roll the cube. The one that lands on top must be worked on first. Then repeat the process for a specified amount of time or until all faces have been rolled. This offers a random way of going through SCAMPER and can increase the flow of creativity.

Steps for Using SCAMPER

1. Decide the skills and objectives you want to teach.
2. Decide on a topic that can teach these skills and objectives.
3. Especially for younger students, find something visual that students can focus upon and that ties to the topic or teaches the skill.
4. Use the guide on the previous pages to build SCAMPER questions on that idea or visual image. (If certain questions do not fit the topic, skip them instead of forcing the idea.)

Egyptian Tombs

Higher-Order Thinking Skill

- SCAMPER

Standards

- Students will know the significant scientific and technological achievements of various historical societies (McREL 8.14)
- Students will use appropriate learning strategies to construct and apply academic knowledge (TESOL 2.3)

Materials

- *Egyptian Tombs Tell Stories* (page 186)
- *SCAMPER Tomb Image* (page 187)

Procedure

Preparation Note: Prior to the lesson, students should have an understanding of ancient Egypt and its customs, including mummies and the tombs where they are laid to rest.

1. Begin by distributing copies of the *Egyptian Tombs Tell Stories* activity sheet (page 186) to students. Have students fold the page in half so that they only see the picture. Remind students that every picture tells a story. Ask students to think about what story this picture tells.
2. Divide students into small groups of four. Tell students to stand in the positions of the characters in the image. Then, tell students to create a dialogue that tells what is happening in the image. During this part of the activity, have the image projected so that the class can compare their real-life reenactment with the image. Let each group share their dialogues.
3. As a class, read the background information on the activity sheet. Now that students know the background, ask them to describe what story this picture tells.
4. Give students a few minutes to revise their reenactments and then have each group share with the class.

Egyptian Tombs *(cont.)*

Procedure *(cont.)*

English Language Support

Be sure to pause during the background information to explain in detail or answer questions so these learners will understand the content.

5. Tell students that they are going to think about this image and its background in new ways. Distribute copies of the *SCAMPER Tomb Image* activity sheet (page 187) to students. Read through each question. Allow students to work with partners to complete this sheet. You might want to do the first one together as a class.
6. Once students finish this activity, have them go back into their small groups to share their work.

Differentiation Tip

Pair students homogeneously for this activity. Be sure to monitor your struggling students closely. If possible, meet with them in a small group as needed.

Assessment

As students share their revised reenactments, double-check that they comprehend the background information. Be sure to offer correct answers if incorrect information is given on the revised reenactments. As a final assessment, have students take the image on their papers and draw speech bubbles for each of the four characters. Have students insert dialogue in the picture to show what is taking place.

Name: _____ Date: _____

Egyptian Tombs Tell Stories

Directions: Read the information below.

Background Information

This painting was found in an Egyptian tomb that is 3,000 years old. From left to right, it shows Horus, Anubis, Thoth, and the dead person. Horus has a falcon head and represents the Pharaoh. Anubis has a jackal head and is facing Thoth, who has a bird head. They are working together to weigh the dead person's heart against the feather of truth. They do this to see if he was a good person. The heart is in the container on the right. The feather is on the left. If the heart is light as a feather, then the person was a good person. In this picture, the gods found that the heart was equal to the feather of truth.

Name: _____ Date: _____

SCAMPER Tomb Image

Directions: On a separate sheet of paper, write notes to answer the questions below.

SCAMPER	Questions:
Substitute	The Egyptians thought the heart was the most important organ in the body. A good heart was the ticket to the afterlife. Egyptians did not remove the heart when making the body into a mummy. What else could have been used to test if a person was a good person? Explain your answer.
Combine	Thoth was the god of wisdom and had the head of a bird, called an ibis. Anubis was the god of embalming. He had the head of a jackal. Jackals were scavengers and often found in cemeteries. If you were to combine these two gods, what would the new god look like? What would it do for the ancient Egyptians? Draw your answer and explain it.
Adapt	This picture shows what Egyptians believed. How can you take an idea from this picture and apply it to today? Why would this idea work today?
Magnify	This picture is often shown in tombs. The weighing of the heart was a big deal. How could this event be made a bigger deal outside tombs before people die? Explain your plan.
Put to another use	What if this picture were not about weighing of the heart? What other explanation could describe what is going on in this picture? Give a new explanation.
Eliminate/ Minify	What is the most important thing about this picture? Redesign this picture for a tomb, keeping only what is necessary.
Reverse/ Rearrange	Pretend this picture meant the opposite of what it means. Describe what is going on in this picture in the opposite way.