

Ideate* with confidence. Take a weekly Inventamin™.

*Ideate--to form an idea, imagine or conceive--*Webster's New World Dictionary*

Eliminate a Stressful Operation

If you cannot improve directly, consider the possibility of preventing, reducing, or eliminating the harmful effect that makes your system or process fail. Consider eliminating something that makes your system difficult or causes inconvenience.

Examples:

- Some computer programs crash from time to time, making you lose the work that you have not saved. Now it is possible to direct a program to automatically save your work every few minutes.
- In a work environment illness is a harmful effect that affects regular attendance. If employees are vaccinated against the flue, illness is reduced and attendance is improved.
- Ultraviolet light can cause damage to the skin when working in the sunlight for long periods of time. Sun block lotion applied to the skin blocks some of the ultraviolet light while it blocks the loss of moisture from the skin.
- Opening and closing doors is inconvenient for customers carrying purchases out of stores. Some stores, even in cool climates, have eliminated doors and replaced them with a wall of moving air that customers can easily move through.

Practice

Your Examples: What examples can you find of where this Inventamin™ has been used? Search for how or where the recommendation "Eliminate a Stressful Operation" might be used to improve something.

Identify non-technical applications of where "stressful operations" were eliminated. Identify natural applications where "Eliminate a Stressful Operation" might have occurred.

Hint: When working with a recommendation the objective is to use it as one possible pathway to solving a problem. A recommendation is also a resource to help you solve a problem. The use of resources is important to solving inventive problems. When working to solve an inventive problem we would like to find an "ideal" solution. The ideal solution means that everything remains the same, nothing changes, and the problem is solved. Rarely is this ever achieved, but it should be the innovator's objective. Resources (substances, energy, functions, information, space, time, etc.) that exist within the system are what we use to move toward the ideal goal. Understanding and revealing resources in your system helps you apply recommendations (Inventamins™), and provides a means for looking at the system in more detail. Some people do this naturally – but most people need some guidance. People who are great innovators or who have the ability to apply the Theory of Inventive Problem Solving, *TRIZ*, have mastered the art of revealing resources and recombining them in new ways to achieve innovative results.

Lesson: Think about what people see when they are looking for or applying "Eliminate a Stressful Operation." Select an object. Look at it. Think about how "Eliminate a Stressful Operation" could be used to change it. List several possible ways and write them down or draw them. Even those ideas that seem silly could turn out to be useful. Discuss your ideas with your partner or the class. Display drawings of your examples. Bring examples to share or display for the class.

Invitation

Each week, you'll receive another Inventamin™ and an opportunity to practice using it. We ask you share your findings and/or ideas with us to help everyone become more innovative. We will include some examples submitted by the previous participants. Your participation is important – the object of receiving Inventamins™ is to learn to become more inventive and innovative and to practice, practice, practice.

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Share with your teaching colleagues

Send us the name and email address of a colleague or friend who might be interested in subscribing to Inventamins™.

How are people using Inventamins™?

Teachers are using them as innovation/creative homework assignments, enrichment, or enhancement exercises to provide weekly stimulation of student thinking

Friends are sharing them with friends

Parents are sharing them with children

And adults in all walks of life are using them to stimulate their own thinking

Send your observations, ideas and names to inventamin@ideationtriz.com

Teacher Suggestions:

Use of the weekly Inventamin™ will vary considerably from teacher to teacher. Some prefer to use them in brief lessons at a regular time during the week. Some prefer to use them to fill in the end of a class. Some like to use them as a problem of the week to be posted on Monday and discussed on Friday. Some like to use them as homework assignments or enhancement and extra credit opportunities. A teacher's creative use of the inventive recommendation may also shape the lesson--How would you use the Inventamin in your classroom?

Additional Information

What are Inventamins™?

Inventamins™ are simply recommendations for inventing, innovating, problem solving, and creating. They are different ways to look at a problem that have been used by other creative people for many years. These recommendations were developed from the knowledge contained in more than two million patents. Researchers examined the patents to determine which were truly inventive and identified patterns of how the inventions were made. When a pattern was identified and described, it was tested to determine if it could be used to solve other problems. Today there are more than four hundred recommendations that have been identified, tested, and found to be useful in solving inventive problems. Patents deal with technical problems. Because Inventamins are abstracted from the patents, there are many places that the Inventamins may be found or applied in addition to technology. There may be examples in nature, in literature, in management, in psychology, in everyday life.

What is TRIZ?

TRIZ, (pronounced as trees) is a Russian acronym for the **Theory of Inventive Problem Solving**. It is a problem-solving method that is based on technology rather than psychology. In 1946, Genrich Altshuller, a Russian inventor, determined that the process of inventing could be significantly enhanced with a system that provided:

- A systematic step-by-step procedure
- Guidance through the solution space to the area of the best solutions
- Reliable and repeatable results
- Access to the knowledge contained in patents
- Access to the accumulation of human innovation experience

As the TRIZ knowledge base grew, rigorous analysis revealed an objective, verifiable set of patterns and regularities related to the evolution of technological systems. What began as a powerful set of problem-solving tools has evolved into a true **science of innovation**. Inventamins™ are developed from the knowledge and analytical tools of TRIZ.