

Innovation Training Module

SCAMPER

Have you ever wished your school bag had a built - in phone charger? Or wondered why your water bottle couldn't keep itself clean? Maybe you've thought about a bicycle that folds into a backpack or a pencil that never becomes too short to use.

If yes, congratulations - you are already thinking like an innovator!

Many people believe that innovation means inventing something completely new. But in reality, some of the world's greatest inventions were simply improvements to existing ideas. Smartphones were not the first phones. Electric cars were not the first cars.

Even online learning is an improved version of classroom learning.

The secret is learning how to improve what already exists.

One of the best tools for doing this is called **SCAMPER.**

What is SCAMPER?

SCAMPER is a creative thinking technique that helps you generate new ideas by asking seven simple questions about an existing product, service, or process. Instead of waiting for inspiration to strike, SCAMPER gives your brain a roadmap for creative thinking.

Each letter in the word "SCAMPER" represents a different way of improving an idea.

- **S – Substitute**
- **C – Combine**
- **A – Adapt**
- **M – Modify**
- **P – Put to Another Use**
- **E – Eliminate**
- **R – Reverse or Rearrange**

By answering these seven questions, you can transform an ordinary object into something smarter, easier to use, and more useful.

Let's explore each step.

S – Substitute

Ask yourself:

What can I replace?

Can a material, part, person, or process be changed?

For example, plastic shopping bags can be substituted with cloth bags to reduce pollution.

Imagine your school desk. Instead of wood, could it be made from recycled plastic? Could ordinary chalk be replaced with dust - free chalk to keep classrooms cleaner?

Sometimes, changing just one part creates a much better product.

C – Combine

Ask:

Can I combine two ideas into one?

Many successful products combine different functions.

A smartwatch combines a watch, fitness tracker, alarm, calculator, and phone notifications into one device.

What if your school ID card also worked as your library card and attendance card?

What if your umbrella had a small torch attached to it for walking safely at night?

Combining ideas often makes life simpler and more convenient.

A – Adapt

Ask:

Can I borrow an idea from somewhere else?

Nature is one of the greatest teachers of innovation.

Scientists developed Velcro after observing how burr seeds stuck to animal fur.

Bullet trains in Japan were redesigned after studying the beak of the kingfisher bird, making them faster and quieter.

You can also adapt ideas from everyday life.

Could the wheels of a suitcase inspire an easier way to carry heavy school bags?

Could a restaurant token system help organise the school canteen queue?

Innovation often begins by learning from something that already works well.

M – Modify

Ask:

Can I change the size, shape, colour, or appearance?

Sometimes a small modification creates a big improvement.

Imagine a ruler that bends without breaking.

A water bottle could become collapsible so it takes less space when empty.

School benches could be adjustable to suit students of different heights.

You are not changing the purpose of the object - just making it work better.

P – Put to Another Use

Ask:

Can this be used in a completely different way?

Many everyday objects have more than one purpose.

Old newspapers become gift wrapping.

Plastic bottles become plant pots.

Shipping containers become classrooms, homes, and offices.

Think about an old bicycle tyre.

Could it become a garden swing?

Could it protect young trees?

Could it become playground equipment?

Looking at familiar objects differently is an important innovation skill.

E – Eliminate

Ask:

What can I remove to make it simpler?

Many great products became successful because unnecessary features were removed.

Think about a school timetable app.

Does it really need ten different menus, or could it work with just three?

Could a pen have fewer parts so it costs less and is easier to recycle?

Could school forms become shorter and easier to fill?

Sometimes, **less is more.**

Removing unnecessary complexity often makes products better.

R – Reverse or Rearrange

Ask:

Can I change the order or do things differently?

Instead of asking, "How is this usually done?" ask, "What if we did the opposite?"

Restaurants usually bring food after you order.

What if students could pre - order lunch before school starts to reduce waiting time?

Most backpacks open from the top.

Could one open completely like a suitcase for easier packing?

Changing the sequence of steps often reveals new possibilities.

Let's Try SCAMPER!

Choose an everyday object like a pencil.

Now ask yourself:

- **Substitute:** Can wood be replaced with recycled paper?
- **Combine:** Can it include an eraser and ruler?
- **Adapt:** Can it work like a mechanical pencil?
- **Modify:** Can it become triangular for a better grip?
- **Put to Another Use:** Can used pencils become plant markers?
- **Eliminate:** Can sharpening be removed completely?
- **Reverse:** Can the writing tip appear from both ends?

Just one object can generate dozens of innovative ideas!

Imagine what you could do with bicycles, classrooms, school buses, water bottles, or playgrounds.

SCAMPER in Everyday Life

Innovation is not only for scientists or engineers.

You can use SCAMPER to improve:

- Your study routine
- School projects
- Science models
- Community problems
- Household chores
- Sports equipment
- Gardening methods
- Classroom activities

Whenever you notice something inconvenient, don't complain.

Ask a SCAMPER question instead.

Activity for Young Scientists

Choose any object around you.

It could be:

- **A school bag, A dustbin, A notebook, A chair, A lunch box or A bicycle**

Draw a table with seven columns labelled SCAMPER.

Write one improvement idea under each heading.

Challenge yourself to create **at least seven new ideas** from just one object.

You may be surprised at how creative your mind can be!

Every Innovation Starts with a Question

Innovation is not about having magical ideas.

It is about asking better questions.

SCAMPER teaches us that creativity is a skill anyone can learn. By looking at familiar objects in new ways, we discover opportunities to improve the world around us.

The next time you use something at school or home, don't just ask, **"What is this?"**

Ask, **"How could this be better?"**

That simple question could be the beginning of your next great invention.

Y	E	N	N	D	A	Y	S	E	I	A	L	C	D
Y	A	I	C	O	N	E	C	S	R	M	C	Y	I
R	D	E	T	R	D	I	G	P	M	S	O	C	M
R	U	D	R	Q	R	U	R	H	L	I	I	L	A
S	T	T	R	C	I	E	B	E	G	R	A	A	R
I	R	U	L	A	D	N	I	R	C	P	H	L	Y
E	C	E	O	N	D	P	L	E	S	B	L	E	P
R	R	P	I	A	C	L	G	R	H	R	I	I	E
A	L	L	M	H	C	L	D	I	O	B	U	C	I
R	Y	E	G	A	A	C	H	E	X	A	G	O	N
C	T	R	I	A	N	G	L	E	G	L	M	A	L
L	A	R	E	T	A	L	I	R	D	A	U	Q	A
C	C	A	G	P	O	E	N	H	O	L	N	U	H
U	R	E	C	T	A	N	G	L	E	M	M	H	S

Word Search 2607
Names of 2D and 3D Shapes

PRISM	TRIANGLE	QUADRILATERAL
CONE	CIRCLE	CYLINDER
HEXAGON	SPHERE	RECTANGLE
PYRAMID	CUBOID	

(Answers on Back Cover Inside)