



CPS - Creative Problem Solving

Summary of Thinking Tools for Team Challenges and Instant Challenges

Generating Tools - Step 1 Generate your ideas 	Focusing Tools - Step 2 Narrow down your generated ideas 
▲ (G1) Attribute Listing Helps you look at new possibilities for an object, task, creation, or procedure by First Identifying the Main Characteristics or Qualities and then Exploring Ways to Change, Modify, Improve or Enhance	▼ (F1) ALoU Advantages (What is appealing?) Limitations (How might we?) overcome Limitations (Explore ways of overcoming them), and Unique Features (What are some good things that could happen as a result of us using this option)
Examples of Use Create masks using unique ways of using materials, create the characters, costume design, prop enhancement, procedure improvement, task modification	Examples of Use Choose your Team Challenge, Evaluate the Advantages, Limitations (and how to overcome them) and Unique potentials of an option.
▲ (G2) Brainstorming <i>Stop "n" Go Brainstorming</i> - Continue alternating between think and write down (for 2 minutes) and then (for 1 minute) share written ideas out loud. <i>ABC Brainstorming</i> - Possibility for each letter of the alphabet	▼ (F2) Evaluation Matrix Uses deliberate efforts to evaluate, weigh or choose options against a number of specific criteria.
Examples of Use Create a Storyline	Examples of Use Find strongest options for Side Trips Choose on of several possible themes Evaluate configuration of a mechanical device
▲ (G3) Force-Fitting Encourages new possibilities to arise from unexpected connections. Select an item and determine a new connection	▼ (F3) Hits and Hot Spots Marks new and interesting options and gathers similar "Hits" into like groups. (Use stickers or a marker to dot Hits)
Examples of Use Identify Characters, Create an original prop Combine materials to create an original costume	Example of Use For a large number of ideas generated
▲ (G4) Morphological Matrix Find new combinations of parameters or characteristics of an item or situation.	▼ (F4) Paired Comparison Analysis Rank a SMALL number of choices (4-6)
Examples of Use When a large pool of options are needed, When a change or an improvement is needed, improve an existing by changing its individual features.	Examples of Use Which theme to use Which character will be the comedian Which genre for story line (mystery, farce, satire)
▲ (G5) SCAMPER Uses Action words (Substitute, Combine, Adapt, Modify, Put, Eliminate, and Rearrange) to "trigger" new options.	▼ (F5) Sequencing (S-M-L) (Short-Medium-Long) Organize tasks along a time line
Examples of Use Create technical devices, Create characters, Use of given materials in an Instant Challenge	Examples of Use What tasks need to be done when? Who should do the task?