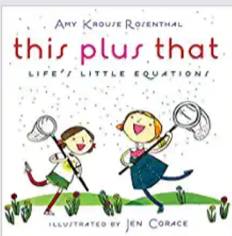




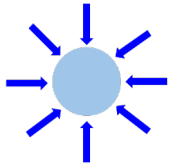


# Critical and Creative Thinking Family Edition

→ Directions: Look over these activities and choose ones that seem interesting to your family.

<b>Encapsulation</b>	<b>Point of View</b>						
<p>September 22 marked the first day of Fall in the Northern Hemisphere.</p> <div style="text-align: center;">  </div> <p><b>What might be some equations that “equal” Fall? Remember you can add, subtract, multiply, and divide when you write your equations.</b></p>	<p><b>Choice 1</b> What would the arrival of Fall look like from the point of view of Summer? Of Winter?</p> <p><b>Choice 2</b> Find a leaf that has fallen to the ground. Take a series of photographs that capture the leaf from a variety of perspectives.</p> <div style="text-align: right; margin-top: 20px;">  </div>						
<b>Plus, Minus, Interesting</b>	<b>Fluency, Flexibility, Originality, Elaboration</b>						
<div style="text-align: center; margin-bottom: 10px;">  </div> <p>Create a PMI chart about cooler temperatures.</p> <ul style="list-style-type: none"> <li>• What are some good things about them?</li> <li>• What are some bad things about them?</li> <li>• What makes them interesting?</li> </ul> <table border="1" style="margin: 10px auto; border-collapse: collapse; width: 60%;"> <tr> <td style="width: 33%; text-align: center; padding: 5px;">P</td> <td style="width: 33%; text-align: center; padding: 5px;">M</td> <td style="width: 33%; text-align: center; padding: 5px;">I</td> </tr> <tr> <td style="height: 40px;"></td> <td></td> <td></td> </tr> </table> <p>Can you come up with 3 ideas for each category?</p> <p><b>Here are some other options for PMI charts to create.</b></p> <ul style="list-style-type: none"> <li>• Going for a hike</li> <li>• Raking leaves</li> <li>• Apple picking</li> <li>• Carving pumpkins</li> <li>• <b>Seesaw</b></li> </ul> <div style="text-align: center; margin-top: 10px;">  </div>	P	M	I				<ol style="list-style-type: none"> <li>1. Make a list of all the ways you can eat an apple.</li> <li>1. All of the pencils and paper in your house has disappeared. What other ways can think of to show they work you have done?</li> <li>1. The Honda Motor Company was founded on September 24, 1948. Design a car that you think Honda might make in the year 2048. Describe it using words, pictures, labels, etc.</li> <li>1. Create an advertisement to help customers learn more about the new car you designed.</li> </ol> <div style="text-align: right; margin-top: 20px;">  </div>
P	M	I					



### Encapsulation

In order to communicate in a clear and concise manner, we often need to encapsulate our thinking. This is a skill that helps us organize our thinking by focusing on main ideas and/or key words.



### Point of View

When learners consider other points of view or perspectives, they begin to develop their abilities to listen with understanding and empathy (one of Costa's 16 Habits of Mind). Tasks that focus on point of view offer learners the opportunity to think flexibly, debate ideas respectfully, and consider "big picture" ideas.



### Plus-Minus-Interesting

Learners use the PMI structure to keep an open-minded attitude and consider an issue from multiple perspectives. Younger learners may consider what would make a certain idea interesting (i.e. What if books were round?), older learners may use the "I" to consider implications.

### Fluency, Flexibility, Originality, Elaboration (FFOE)

These thinking strategies and processes help students brainstorm, make connections, and develop creative ideas.

**Fluency** – The ability to generate numerous ideas or alternatives to solve a problem that requires a novel solution.

**Flexibility** – The ability to consider a number of different perspectives in an effort to generate a wide variety of ideas or alternatives.

**Originality** – The ability to generate novel, unique, and rare ideas or alternatives to solve a problem that requires an innovative solution.

**Elaboration** – The ability to generate a large number of details or descriptions that explain a specific and novel solution to a problem.

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

S.C.A.M.P.E.R. is a model that helps us create unique thoughts, explore relationships, and search for new or different combinations. SCAMPER involves a variety techniques (**S**ubstitute – **C**ombine – **A**djust or **A**dapt – **M**odify – **P**ut to Other Uses – **E**liminate or **E**laborate – **R**everse or **R**earrange) that help to change and improve something by changing one or more parts of the original idea.



**Remember, you can S.C.A.M.P.E.R. any of these activities on the first page. This might make them more interesting and enjoyable to work on.**