

Fleming College

# Creative Thinking: A 21<sup>st</sup> Century Skill

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# Alex Osborn

## Basic Beliefs about Creative Education



1. The foremost function of the mind is to solve problems
2. Imagination is the golden key to problem-solving
3. Imaginative ability can be deliberately developed

Osborn (1959). Speech delivered at University of Toledo

# Alex Osborn

## Basic Beliefs about Creative Education



“Effective problem-solving therefore calls for knowledge and judgment, as well as imagination....

On the other hand, failure to solve problems is usually due to lack of imaginative effort, rather than lack of knowledge or judgment.”

Osborn (1959). Speech delivered at University of Toledo

# Alex Osborn

His dream...



“To bring a more  
creative trend to  
American  
Education”



# International Center for Studies in Creativity

Buffalo State – State University of New York

## Fast Facts

- Founded 1967
- Offer MS in Creativity
- Certificate in Creativity and Change Leadership
- Program for Distance Learners
- Over 500 alumni
- CRS Library Collection



INTERNATIONAL CENTER *for*  
STUDIES *in* CREATIVITY

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# Road Map for Session

1. Understanding what creativity is & why it is important
2. Developing creativity & creative thinking
3. Taking it forward



# Examining Creativity

(in pairs)



# Examining Creativity

(in pairs)

## What is Creativity?

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- Words
- Phrases





*A Closer  
Look at  
Creativity*

**Creativity is...**

**the ability to modify  
self-imposed constraints.**

**Ackoff & Vergara (1988)**

# Let's Do Some Math

1000

40

1000

30

1000

20

1000

10

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4100



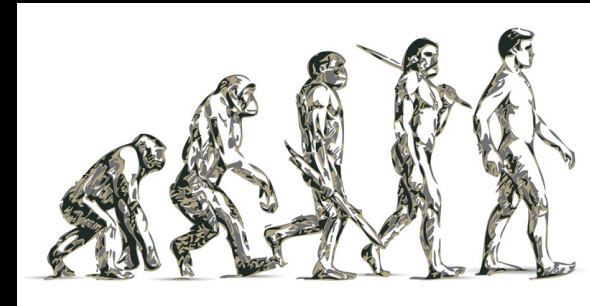
# **Creativity is an Ability**

**Ability implies...**

# Creativity is an Ability

**Ability implies...**

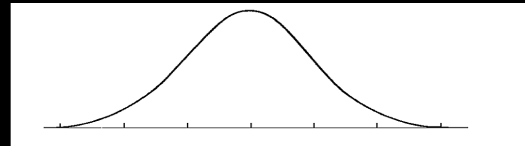
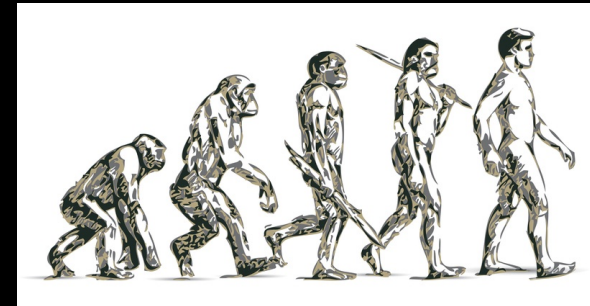
- All people are creative



# Creativity is an Ability

## Ability implies...

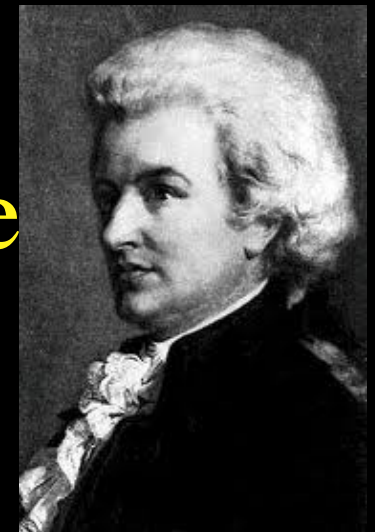
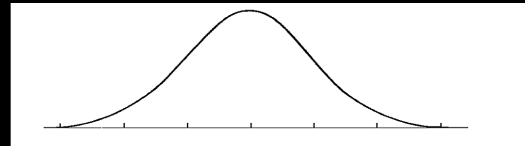
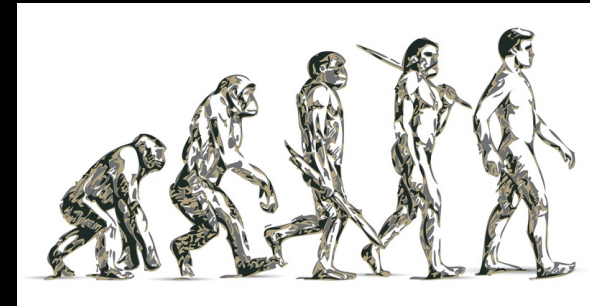
- All people are creative
- People vary in regard to their creative ability

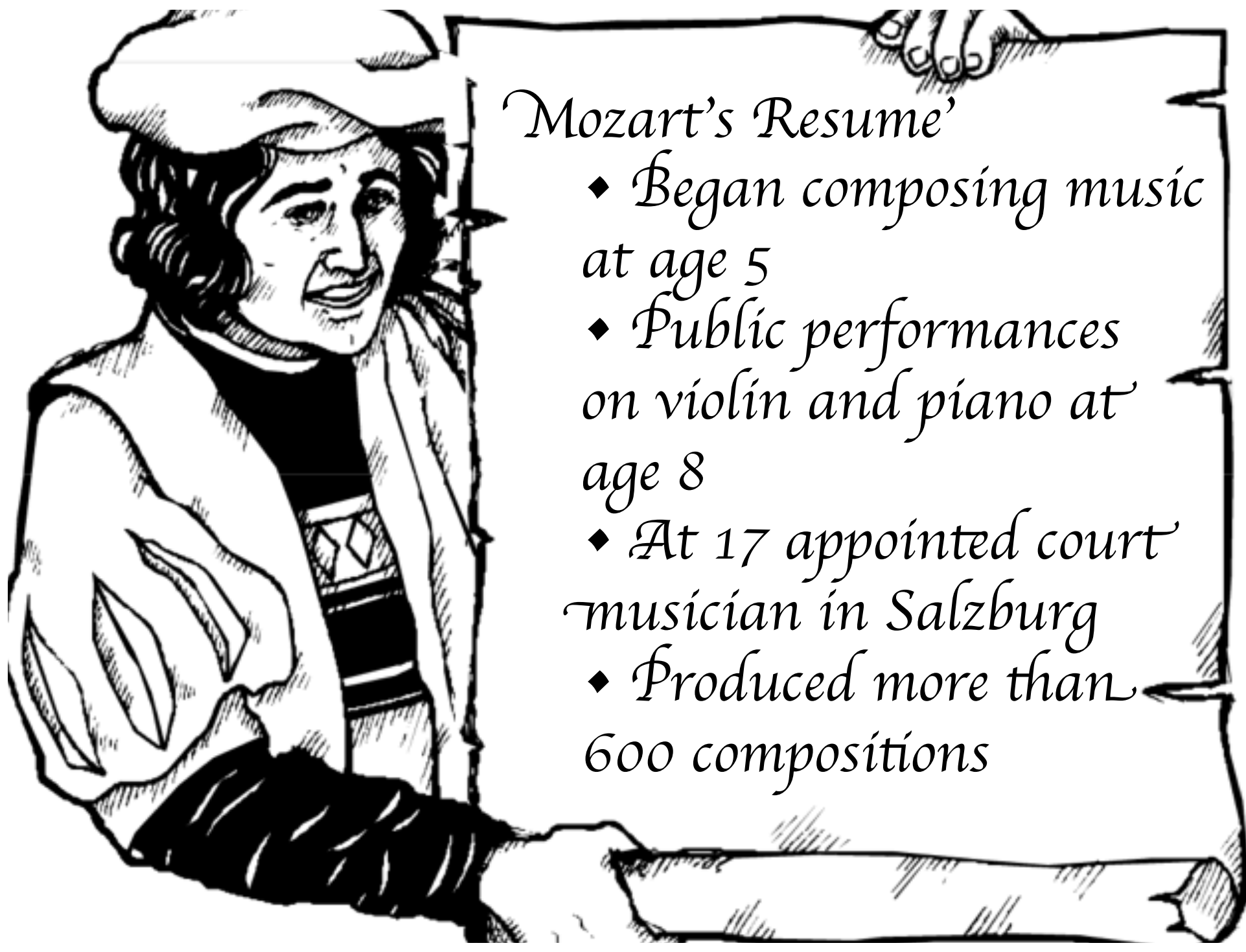


# Creativity is an Ability

## Ability implies...

- All people are creative
- People vary in regard to their creative ability
- Whatever your level of creative ability it can be enhanced





## *Mozart's Resume'*

- ◆ *Began composing music at age 5*
- ◆ *Public performances on violin and piano at age 8*
- ◆ *At 17 appointed court musician in Salzburg*
- ◆ *Produced more than 600 compositions*

# Mozart: The Rest of the Story

- Domineering father – Leopold Mozart
  - Wrote THE book on violin instruction
  - At 3 started young Mozart on an intensive training program
  - Leopold revised young Mozart's early compositions



# Classic Definitions

Creativity is the production  
of original ideas  
that are considered valuable



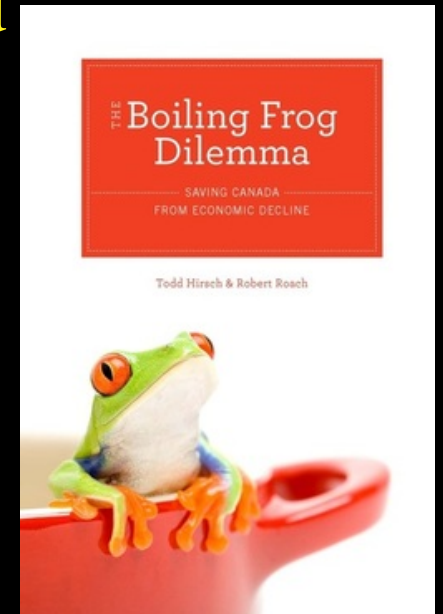
Innovation is the successful  
introduction of new useful ideas.

(Burnside, Amabile & Gyskiewicz, 1988)



# Creativity Supports

- Invention
  - The process of creating something new and useful
- Innovation
  - The application of an existing technology to a new and very useful purpose
- Design
  - The improvement of an existing technology to create a more practical, more useful, or more aesthetically pleasing item



# Examining Creativity

(in pairs)

What is Creativity?      Why is creativity important?

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- Words
- Phrases

- Personally
- Professionally
- Institutionally
- For students





Change

**GREEN RED BLUE GREEN**  
**BLUE YELLOW ORANGE**  
**RED BLACK BLUE RED**  
**GREEN RED BLUE GREEN**  
**ORANGE GREEN ORANGE**  
**BLACK YELLOW BLACK**  
**BLUE RED GREEN BLUE**  
**ORANGE BLUE ORANGE**  
**GREEN YELLOW GREEN**

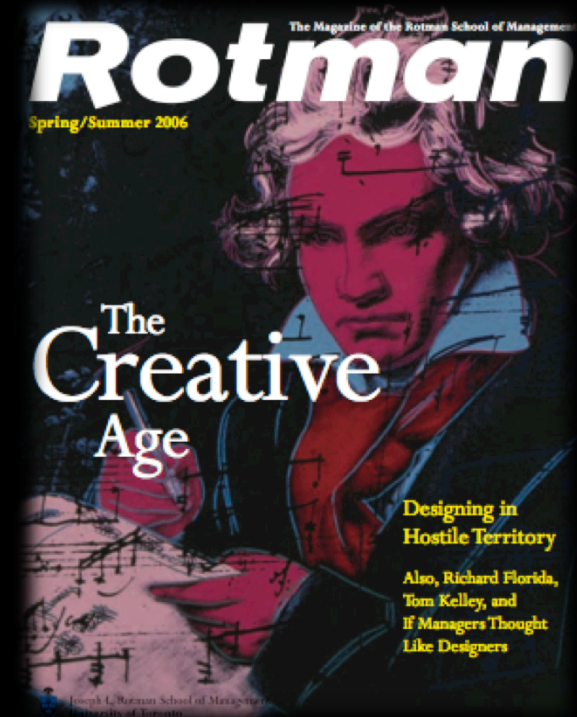




# 21<sup>st</sup> Century Skills: Learning for Life in Our Times

- Learning and Innovation Skills
  - Critical thinking & Problem Solving
  - Communication & Collaboration
  - Creativity & Innovation
- Digital Literacy Skills
  - Information Literacy
  - Media Literacy
  - Information & Communication Technologies
- Career & Life Skills
  - Flexibility & Adaptability
  - Initiative & Self-Direction
  - Social & Cross-Cultural Interaction
  - Productivity & Accountability
  - Leadership & Responsibility

# welcome to the creative economy



More than 70% of senior executives report that creativity & innovation is in their top three drivers for growth.

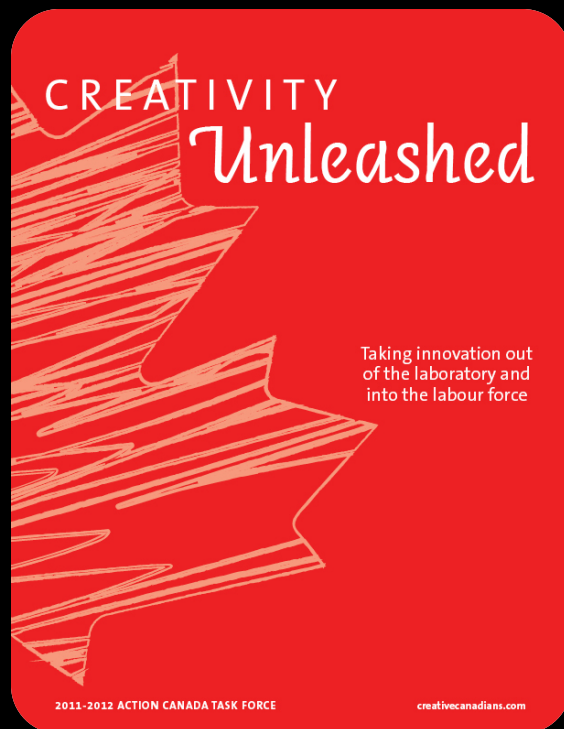
Source: McKinsey Quarterly (2008)

"Make no mistake about it, business is a creative activity, and the *creative economy* is here to stay,"  
*Rotman School*



# Canada Task Force on skills of the Canadian labour force

## RECOMMENDATIONS



- Awareness and Research
- Creative Skills Training for Business Leaders
- Canadian Creativity Challenge to Solve Problems
- Find ways to make the Canadian Labour Force more Creative

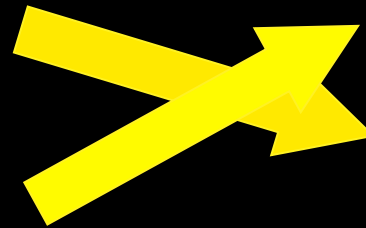
# Hierarchy of Thinking: Bloom's Taxonomy in the 21<sup>st</sup> Century

## Original Terms

- Evaluation
- Synthesis
- Analysis
- Application
- Comprehension
- Knowledge

## New Terms

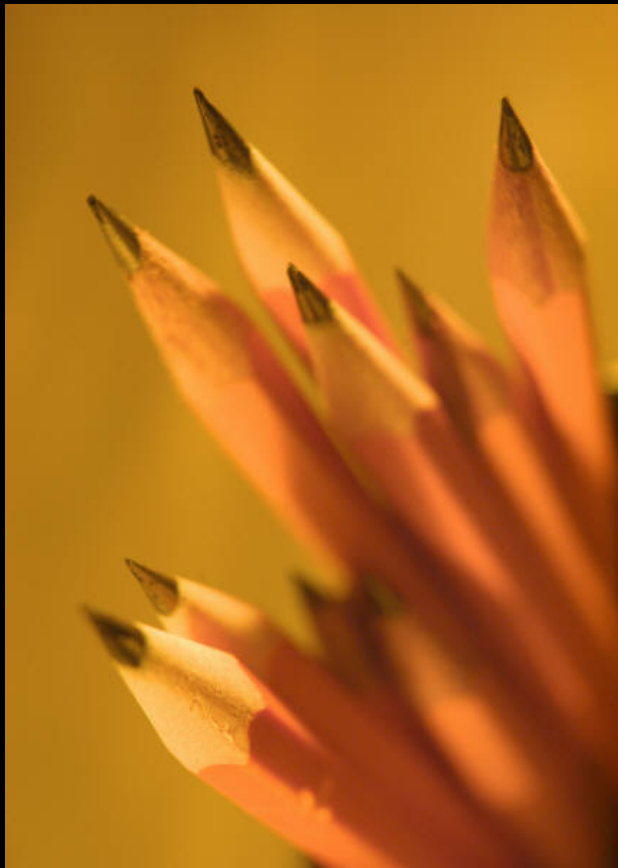
- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering



(Based on Pohl, 2000, *Learning to Think, Thinking to Learn*, p. 8)



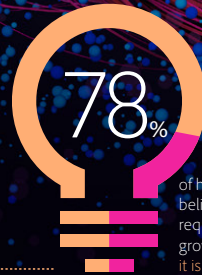
How well do schools prepare students to join today's world?



“Most educational efforts emphasize convergent thinking, and therefore may do very little, if anything, for creative potential.”

# Creative candidates get hired.

Creativity is critical to economic growth.



of hiring managers believe creativity is required for economic growth and 85% believe it is valuable to society.



think businesses grasp the importance of creativity.

## STUDENTS ARE UNPREPARED FOR FUTURE JOB MARKET.

Are students ready for today's dynamic workplace?

7 in 10

say no.

Seven in ten hiring managers agree that students are unprepared and lack the necessary skills for success.

## EVOLVING MARKETPLACE AND TECHNOLOGY ARE CHANGING THE EVALUATION CRITERIA FOR CANDIDATES.

Which skills have gained the most value in driving salary increases in the last five years?



51% Problem solving



47% Creativity

What skills are becoming most essential for new hires to possess?

## HIRING MANAGERS TURN FOCUS TO CREATIVITY AS ESSENTIAL SKILL.

Creative skills are preferred over conventional skills by more than



5 to 1

94%

of hiring managers agree creativity is key when evaluating candidates for a job.

82%

of hiring managers seek well-rounded candidates who can creatively apply core skills to a range of business and technical problems.

### Tech-savvy

88%

### Communicate through digital and visual media

82%

### Creativity

76%

For the complete study, visit [www.adobe.com/go/edu\\_creative\\_study.html](http://www.adobe.com/go/edu_creative_study.html)

# Sheridan Creative Campus Initiative

- 480 students enrolled in general elective on Creative Thinking: Theory and Practice
- 700 seats filled in fall and winter courses associated with Board approved certificate in Creativity and Creative Problem Solving
- Over 200 faculty, staff and administrators trained in Creative Problem Solving
- 11 faculty and staff trained as CPS facilitators

# Deliberate Creativity: Creative Problem Solving



**Nielsen & Thurber (2010) based on the work of Puccio & Miller (2003)**





**1. Clarify**  
**Identifying the challenge**



**2. Ideate**  
**Generating ideas**

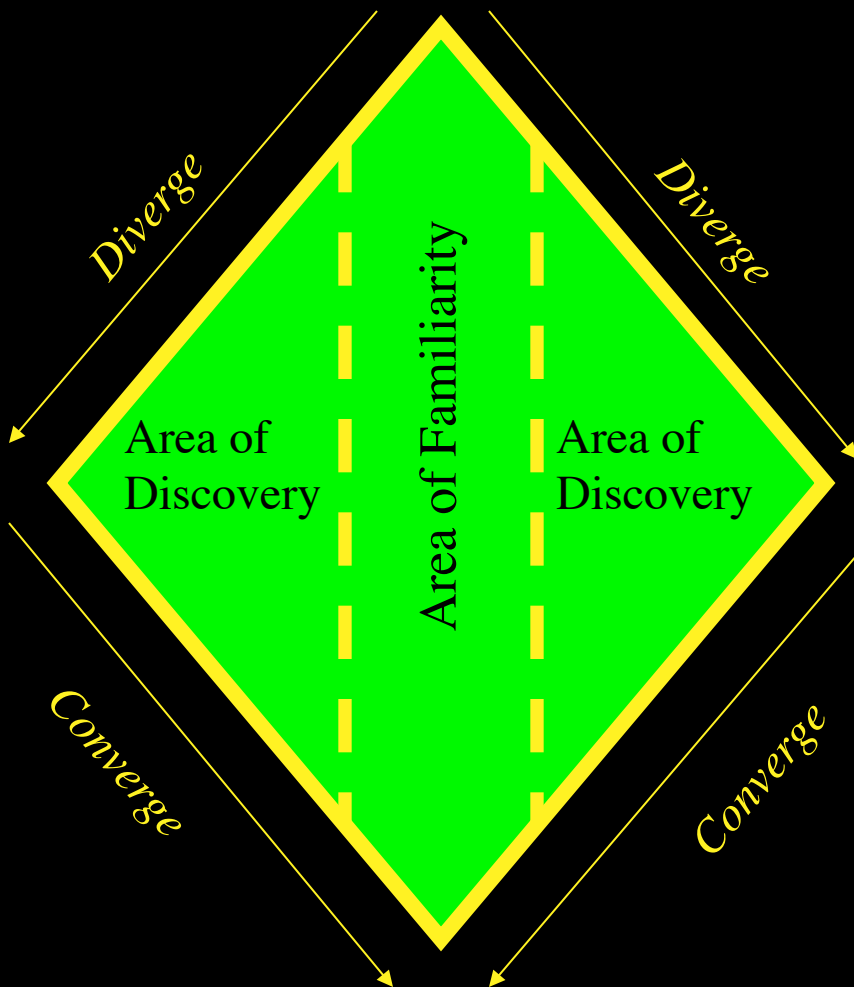


**3. Develop**  
**Bringing ideas to life**



**4. Implement**  
**Giving ideas legs**

# Dynamic Balance: The Core to the CPS Process



## Divergent Thinking Guidelines:

- Defer Judgment
- Go for Quantity
- Make Connections
- Seek Novelty

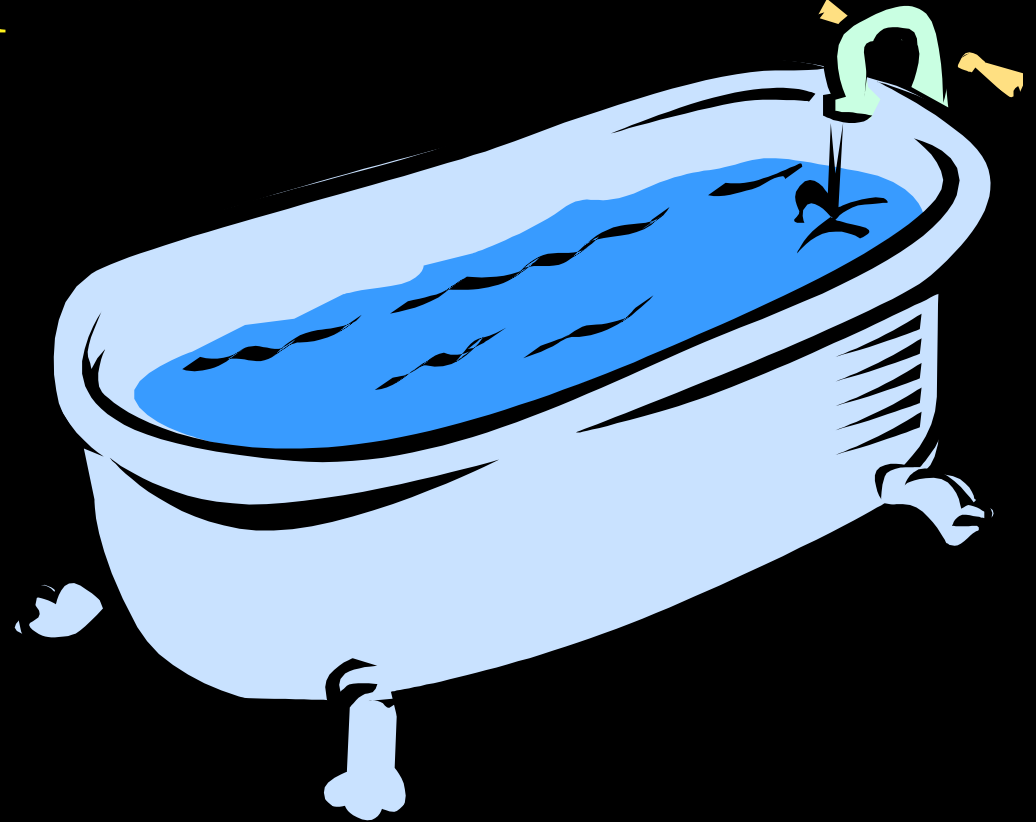


# Divergent Thinking Guidelines

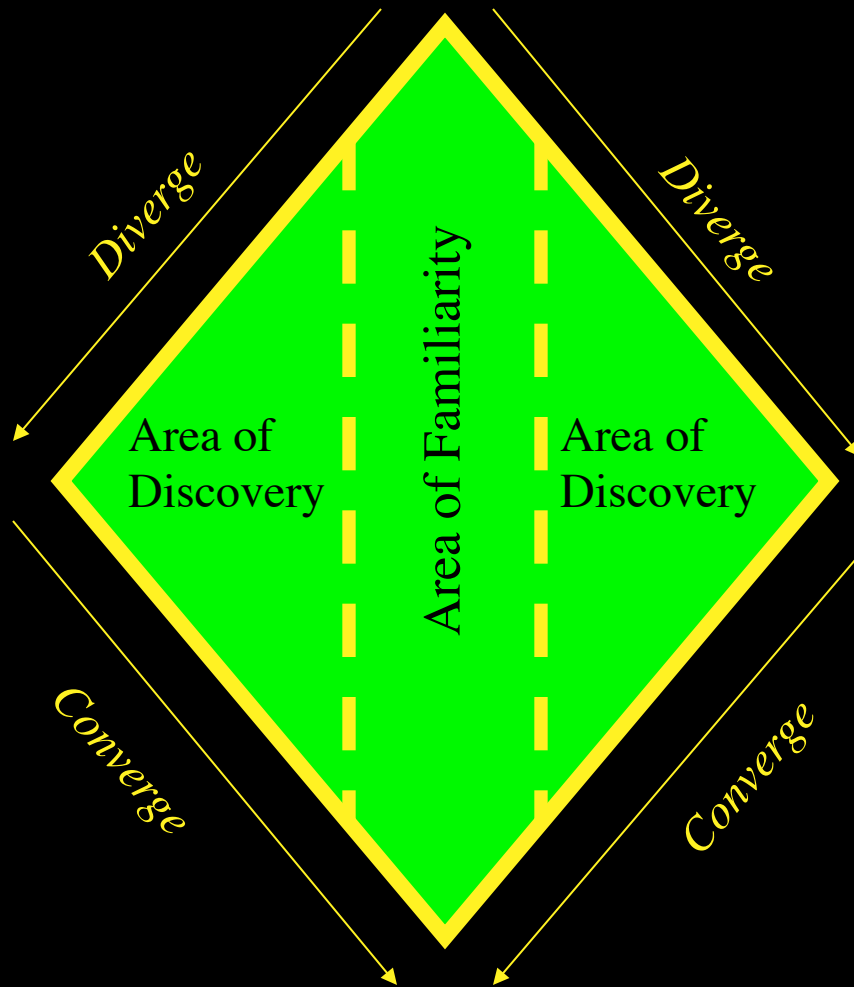
- Defer Judgment
- Go for Quantity
- Make Connections
- Seek Novelty

## Divergent Thinking Activity

How to improve a bathtub?



# Dynamic Balance: The Core to the CPS Process

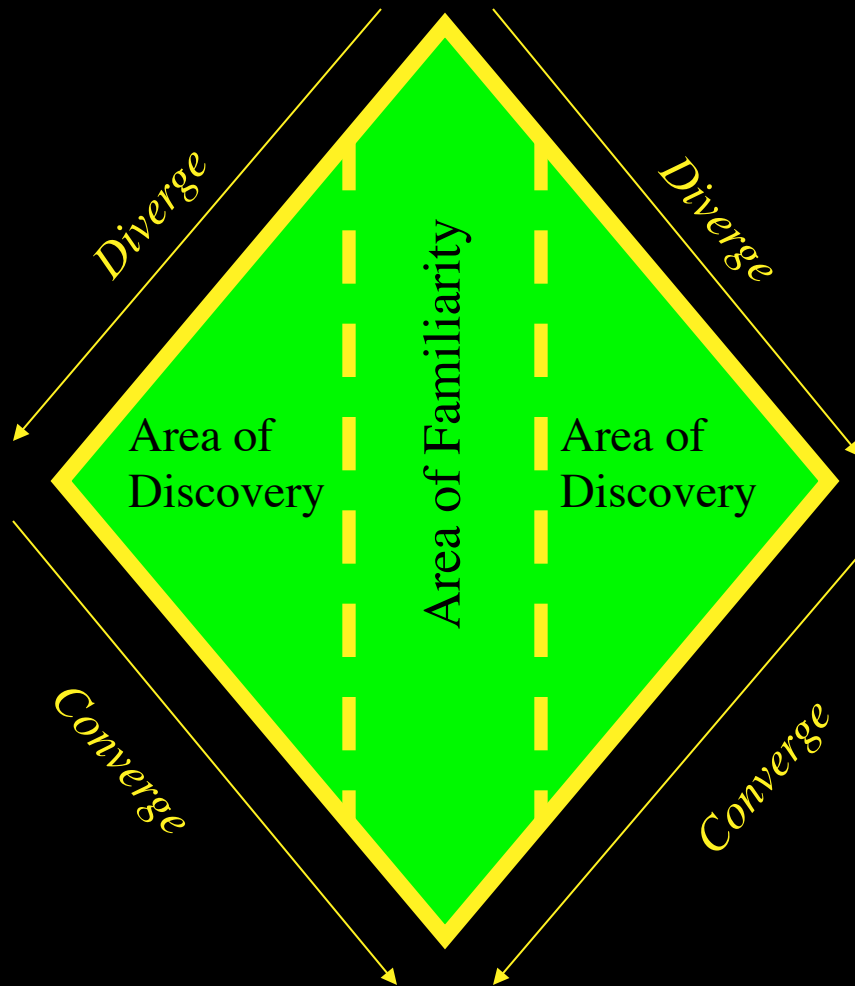


## Divergent Thinking Guidelines:

- Defer Judgment
- Go for Quantity
- Make Connections
- Seek Novelty

How Well Did You Do?

# Dynamic Balance: The Core to the CPS Process



## Convergent Thinking Guidelines:

- Use Affirmative Judgment
- Consider Novelty
- Check Your Objectives
- Be Deliberate

# Taking it Forward





# Resources

<http://creativity.buffalostate.edu/>

*Creativity Rising: Creative Thinking & Creative Problem Solving in the 21<sup>st</sup> Century* (ICSC Press)

*Creative Leadership* (Sage)

*Great Courses – “Creative Thinker’s Tool Kit”*



# Creativity Workshop & Information Session

Sheridan – Oakville Campus – May 5

Conference Center Rooms A & B – 7:00 to 8:30



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## Topics

- MS in Creativity
- Certificate in Creativity and Change Leadership
- Program for Distance Learners
- Latest faculty research
- Team exercise



**Thank You**