Creative thinking is taking an idea, exploring mediums as ways to express that idea, and then presenting the finished product to an audience—is not that different from processes used in design thinking and creative problem-solving models.

Based on a 2021 Alignment Review Conducted by Karin Hess Using the Essential Skills and Dispositions Developmental Framework¹
Introduction

Creativity has traditionally been associated with a person’s innate ability in the arts. For example, writers, painters, and musicians are considered to be creative when they produce original ideas, works, or techniques. However, creativity is not limited to demonstrating originality. More than 50 years ago, E. Paul Torrance introduced three additional characteristics that could be used to assess creativity: fluency (the ability to generate creative ideas), flexibility (the ability to change, rearrange, or synthesize ideas), and elaboration (the ability to specify solution or product details in order to test, get feedback, or make refinements to a solution or product). It is important to note that all four of these characteristics do not need to be present for a product to be considered creative. An abstract painting may lack elaboration but still demonstrate an original perspective.

Today, creativity and innovation are talked about in broader and more actionable terms that cut across content disciplines, such as when creative problem-solving processes are used to design (or improve upon) a product, solution, or process. The iterative processes artists use to create new work—having an idea, exploring mediums as ways to express that idea, and then presenting the finished product to an audience—is not that different from processes used in design thinking and creative problem-solving models: defining a problem, generating ideas and related information, considering possible approaches for intended users, developing and testing prototypes or solutions, getting feedback, and refining final ideas or products.

These rubrics define three dispositions of creativity for assessment purposes across many content disciplines:

1. **Applying creative thinking**, processes used to interpret problems and generate approaches to solving them

2. **Developing creative products or solutions**, individually or with others (e.g., planning, getting feedback, and testing and then refining ideas in order to develop products and solutions that are valued for being imaginative or useful)

3. **Reflecting on and building confidence** as a creative thinker and problem solver

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Below are a few other distinctions to know about these rubrics:

- **The rubrics were designed primarily for the purposes of instruction/formative feedback, peer assessment, and self-reflection**—not simply for a teacher to derive a score or grade. They therefore encourage students to learn from trying out and then refining untested and novel ideas.

- In the tables outlining the rubrics that follow, criteria for the competencies of self-awareness and monitoring and adapting are in shaded boxes as a reminder to use them to guide peer assessment and self-reflection, as well as ongoing conferencing activities with students.

- The phrases creative challenge, creative problem-solving task, and creative products or solutions are used throughout the rubrics. This wording is intended to set apart open-ended creative learning activities from what educators might typically teach as problem-solving processes in science, mathematics, and other such topics. And while applications of content are important to creative thinking and developing creative products, be they graphic designs, experimental uses of mediums in the fine arts, written material, or designs for manufactured products, it is the synthesis of the content with new approaches and possibilities that is most important to consider for assessing creative thinking or creative products. Mandating the use of a single approach to solve a creative challenge is antithetical to creativity, and often it is trial and error that leads to new learning and insights.

- Unlike in many rubrics used today, in these rubrics **all performance-level descriptors are stated in the positive to describe what students CAN do at that level**, not what they can’t do (which makes self-assessment more instructive). Positive wording reflects skills that continue to develop over time.

- Rubric descriptors are cumulative across performance levels: “I can also ...” means, “In addition to a lower, adjacent-level descriptor, I can also do this.”

- **Specific rubric wording used at some performance levels has a particular meaning**: “With prompting” means the teacher directly reminds, intervenes, or corrects in the moment, whereas “with guidance” means the teacher models or provides a process or checklist for students to follow.
## Alignment with the Essential Skills and Dispositions Developmental Framework

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<td><strong>Seizing personally meaningful insights and connections to imagine new possibilities, evaluating ideas for both novelty and effectiveness, testing boundaries, and identifying constraints</strong></td>
<td><strong>Dealing with uncertainty, taking risks, and balancing novel possibilities with limitations and norms throughout the creative process</strong></td>
<td><strong>Exploring and creating to test the relevance and effectiveness of an idea, overcoming setbacks, innovating through an iterative cycle, and communicating ideas to understand the perspective of others</strong></td>
<td><strong>Thinking about personal interests, strengths, inhibitions, and past experience throughout the creative process, and drawing on prior understanding to discover and interpret meaningful challenges</strong></td>
<td><strong>Recognizing patterns and growth in one’s own work and ideas, integrating feedback and ideas of others, continuing to seek out new experiences, and developing a driving purpose</strong></td>
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### Applying Creative Thinking and Developing Creative Products Focus Questions

- **How do I come up with new ideas or solutions and then decide which ones will work best for the situation or show my most unique ideas?**
- **Am I willing and able to take risks, try alternative ideas, and stick with an unfamiliar challenge throughout the creative process?**
- **What is my process for developing, testing, and refining my creative products or solutions to make them more clear, imaginative, or effective?**
- **How am I using my curiosity, personal interests, and past learning to build my skills and confidence when taking on creative challenges?**
- **How do I use feedback and new learning to evaluate progress, modify an approach, or redesign a product to better reflect my personal ideas?**
Applying Creative Thinking and Developing Creative Products

Cultivating & Evaluating Ideas
How do I come up with new ideas or solutions and then decide which ones will work best for the situation or show my best ideas?

I can...
share creative ideas that reflect my interests or my “curious questions”. (with guidance)

I can also...
describe how someone else’s ideas can help me to complete my challenge. (with guidance, such as through collaboration)

I can also...
make connections to past problems and explain why some ideas would not work well for this situation or the problem-solving task.

I can also...
add more details or make changes to my/our plan for the final product or solution after getting feedback from others.

Emerging
Developing
Applying
Extending

Tolerating Risk & Ambiguity
Am I willing and able to take risks, try alternative ideas, and stick with an unfamiliar challenge throughout the creative process?

I can...
try working on a creative problem with others, even if it’s not like problems we’ve had in the past. (with guidance)

I can also...
listen to the ideas of others and ask questions to understand how their ideas might help to solve a new challenge. (with guidance, such as an active-listening protocol)

I can also...
figure out when to move or try a new idea when something isn’t working. (e.g., it isn’t practical in the real world or you have limited materials, tools, or medium)

I can also...
explain how getting stuck or trying different ideas helped me solve a creative problem.

Self-Assessment
Self-Awareness
How am I using my curiosity, personal interests, and past learning to build my skills and confidence when taking on creative challenges?

I can...
describe how one of my ideas or questions connects to a problem we want to solve. (with prompting)

I can also...
pick a creative problem-solving task that interests me from a list of choices. (with guidance)

I can also...
develop a solution or product and use feedback from others to make it better.

I can also...
work with others to figure out how to use our ideas, skills, or tools to solve a new creative problem-solving task.

I can also...
describe how one of my ideas or skills to complete a creative problem-solving task (with guidance, such as sentence starters).

I can also...
describe how I used my interests or skills to complete a creative problem-solving task (with guidance, such as sentence starters).

I can also...
describe a good idea that could help solve a challenge. (with guidance, such as through collaboration)

I can also...
make a list and explain the three most helpful things I/we did to solve a creative problem-solving task.

I can also...
describe something I might learn when I work on a problem-solving task. (with prompting)

I can...
describe how I meet learning goals when I complete a creative problem-solving task (with guidance, such as sentence starters).

SELF/ASSESSMENT Monitoring & Adapting
How do I use feedback and new learning to evaluate progress, modify an approach, or redesign a product to better reflect my personal ideas?

K-2 grades
Applying Creative Thinking and Developing Creative Products
Applying Creative Thinking and Developing Creative Products

**Cultivating & Evaluating Ideas**
How do I come up with new ideas or solutions and then decide which ones will work best for the situation or show my best ideas?

I can...
- suggest ways to use familiar skills or approaches to solve a new challenge (with prompting).

I can also...
- evaluate why some ideas used in the past would not work well for this creative challenge (with guidance, such as a decision tree).

**Tolerating Risk & Ambiguity**
Am I willing and able to take risks, try alternative ideas, and stick with an unfamiliar challenge throughout the creative process?

I can...
- work with others to suggest imaginative possibilities or practical solutions for creative challenges that are not like problems we've had in the past.

I can also...
- identify strengths and limitations of ideas suggested before I develop a plan (e.g., lack of skills, time, materials/tools, or originality; not practical/useful).

**Experimenting & Validating**
What is my process for developing, testing, and refining my creative products or solutions to make them more clear, more imaginative, or more effective?

I can...
- follow a process provided to develop or adapt an example into a final solution or product that reflects my own ideas or interpretation (with guidance).

I can also...
- explain how I got feedback from others to make improvements to a draft product or solution (with guidance, such as a feedback protocol).

**Self-Assessment**
How am I using my curiosity, personal interests, and past learning to build my skills and confidence when taking on creative challenges?

I can...
- choose a creative challenge when given options and explain how my interests, strengths, or past experiences helped me make the choice (with guidance).

I can also...
- investigate a creative challenge: make observations, locate related information, or adapt strategies that might work (with guidance or collaboration).

**Monitoring & Adapting**
How do I use feedback and new learning to evaluate progress, modify an approach, or redesign a product to better reflect my personal ideas?

I can...
- explain how I used feedback from others to improve a product or solution (with guidance, such as a feedback protocol).

I can also...
- identify new skills or learning I might need to solve a creative challenge (with guidance, such as a KWL chart).

**Extending**

Developing

Applying

Emerging

I can...
- evaluate why some ideas used in the past would not work well for this creative challenge (with guidance, such as a decision tree).

I can also...
- list multiple ways to work on a challenge and explain how choices for this plan use our personal skills and ideas to find a solution (with guidance).

I can also...
- use feedback from others to elaborate on or make changes to my/our plan to develop a final product or solution.

I can also...
- suggest ways to use familiar skills or approaches to solve a new challenge (with prompting).

I can also...
- identify strengths and limitations of ideas suggested before I develop a plan (e.g., lack of skills, time, materials/tools, or originality; not practical/useful).

I can also...
- describe my creative process: develop a plan, get feedback, or test a solution, and decide what changes were needed to make it better.

I can also...
- describe how building on ideas from different approaches or sources helped me make a plan to solve a creative challenge.

I can also...
- explain how I learned from doing this challenge that will help me when I try new challenges.

I can also...
- explain how a challenge helped me try new approaches or tools and what I did to stick with it and not give up.

I can also...
- analyze how changes made to my final product or solution made it better (more clear, more imaginative, or more effective).

I can also...
- explain how creative challenges helped me learn new skills or make new connections (e.g., expand my interests or see a pattern or alternative solution).

I can also...
- summarize what helped me to make progress at each step: planning, getting feedback, testing, or making changes to a solution (with guidance).

I can also...
- explain how creative challenges helped me learn new skills or make new connections (e.g., expand my interests or see a pattern or alternative solution).

I can also...
- work with others to suggest imaginative possibilities or practical solutions for creative challenges that are not like problems we've had in the past.

I can also...
- identify strengths and limitations of ideas suggested before I develop a plan (e.g., lack of skills, time, materials/tools, or originality; not practical/useful).

I can also...
- describe my creative process: develop a plan, get feedback, or test a solution, and decide what changes were needed to make it better.

I can also...
- describe how building on ideas from different approaches or sources helped me make a plan to solve a creative challenge.

I can also...
- explain how I learned from doing this challenge that will help me when I try new challenges.
Applying Creative Thinking and Developing Creative Products

**Cultivating & Evaluating Ideas**

How do I come up with new ideas or solutions and then decide which ones will work best for the situation or show my best ideas?

- **I can...**
  - collaboratively brainstorm novel ways to approach a new challenge from different perspectives (with guidance, such as using a creative problem-solving model).

- **I can also...**
  - evaluate the novelty or the effectiveness of approaches or possible solutions.

- **I can also...**
  - seek and use input on specific elements of my plan (materials/tools used, final product, testing ideas, etc.) to refine my approach or solution.

- **I can also...**
  - describe how I was able to convey my interests, personal insights, or novel ideas in solving a personally meaningful challenge.

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**Tolerating Risk & Ambiguity**

Am I willing and able to take risks, try alternative ideas, and stick with an unfamiliar challenge throughout the creative process?

- **I can...**
  - work with others to brainstorm approaches to imaginative products or practical real-world solutions, and determine possible limitations for each creative challenge (with guidance).

- **I can also...**
  - plan a solution path for solving an imaginative or practical challenge that requires using some new or unfamiliar approaches and addresses possible risks or constraints.

- **I can also...**
  - carry out my plan for developing a creative solution that reflects my ability to work through challenges and is personally meaningful.

---

**Experimenting & Validating**

What is my process for developing, testing, and refining my creative products or solutions to make them more clear, more imaginative, or more effective?

- **I can...**
  - identify how my skills and familiar techniques and materials might be used to develop a creative solution that reflects my own ideas or interpretation.

- **I can also...**
  - make a plan to develop a prototype of my final product and test it or get feedback from others to make possible improvements (with guidance, such as a feedback protocol).

- **I can also...**
  - summarize the process I used for developing a plan, testing or getting feedback on a solution, and deciding what changes were needed to make it better.

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**SELF-ASSESSMENT Self-Awareness**

How am I using my curiosity, personal interests, and past learning to build my skills and confidence when taking on creative challenges?

- **I can...**
  - suggest ways to reframe a creative challenge to make meaningful connections with my interests, strengths, or questions (with guidance, such as sample driving questions).

- **I can also...**
  - use new information related to a creative challenge to rethink my understanding of how to work on the problem (with guidance or collaboration).

- **I can also...**
  - develop a creative solution by modifying familiar strategies and using personal insights, observations, and feedback.

- **I can also...**
  - identify moments of new insights, self-confidence, or self-doubt when working on creative challenges and determine what helped me to persist.

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**SELF-ASSESSMENT Monitoring & Adapting**

How do I use feedback and new learning to evaluate progress, modify an approach, or redesign a product to better reflect my personal ideas?

- **I can...**
  - use examples from this challenge to describe how solving a personally meaningful challenge.

- **I can also...**
  - collaboratively brainstorm novel ways to approach a new challenge from different perspectives (with guidance, such as using a creative problem-solving model).

- **I can also...**
  - work with others to brainstorm approaches to imaginative products or practical real-world solutions, and determine possible limitations for each creative challenge (with guidance).

- **I can also...**
  - plan a solution path for solving an imaginative or practical challenge that requires using some new or unfamiliar approaches and addresses possible risks or constraints.

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**Extending Developing Emerging Applying**

New Hampshire Learning Initiative and JFF, June 28, 2021, Dr. Karin Hess, Educational Research in Action, LLC. This resource is a product of the Building Essential Skills Today (BEST) Research–Practice Partnership. For more information, visit best-future.org. Unless noted otherwise, all materials in this toolkit are copyrighted under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. Permission for use requires full citation.
# Applying Creative Thinking and Developing Creative Products

## Cultivating & Evaluating Ideas

How do I come up with new ideas or solutions and then decide which ones will work best for the situation or show my best ideas?

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<td>generate approaches to imaginative products or practical real-world solutions and determine possible limitations for each creative challenge (skills, materials, tools, medium, etc.).</td>
<td>identify how my personal skills and familiar techniques, materials, and resources can be used to develop a creative solution or product that reflects my own ideas or interpretation.</td>
<td>evaluate the novelty or the effectiveness of approaches or possible solutions.</td>
<td>evaluate the effects of approaches used and decisions made throughout the creative process and suggest how my learning might be applied to challenge established social, cultural, or artistic norms.</td>
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## Tolerating Risk & Ambiguity

Am I willing and able to take risks, try alternative ideas, and stick with an unfamiliar challenge throughout the creative process?

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<td>plan a solution path for solving an imaginative or practical challenge that requires modified or unfamiliar approaches and addresses possible risks or constraints.</td>
<td>develop a prototype of my solution and test it or get feedback from others to determine possible improvements (with guidance, such as a feedback protocol).</td>
<td>carry out my plan for developing a creative solution that reflects my ability to work through challenges and is personally meaningful.</td>
<td>analyze alternative approaches that could have increased applying my personal insights or advanced the overall quality of my final product (clarity, effectiveness, or uniqueness).</td>
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## Experimenting & Validating

What is my process for developing, testing, and refining my creative products or solutions to make them more clear, more imaginative, or more effective?

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<td>develop a meaningful solution path to a challenge by integrating what I already know (familiar approaches or problems) with new ideas or information from other sources.</td>
<td>use examples of decisions made during the creative process to describe how I’m applying new learning, developing personal insights, or overcoming limitations.</td>
<td>use examples from this challenge to evaluate how solving a personally meaningful challenge can be used in future challenges.</td>
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## SELF-ASSESSMENT Self-Awareness

How am I using my curiosity, personal interests, and past learning to build my skills and confidence when taking on creative challenges?

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<td>with peers, use individual interests, skills, and motivations to define a creative challenge in different ways or to generate alternative approaches (with guidance, such as sample driving questions).</td>
<td>develop a meaningful solution path to a challenge by integrating what I already know (familiar approaches or problems) with new ideas or information from other sources.</td>
<td>develop a meaningful solution path to a challenge by integrating what I already know (familiar approaches or problems) with new ideas or information from other sources.</td>
<td>analyze what helped me to make progress at each step; using input on specific elements of my plan and refining or personalizing my solution.</td>
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## SELF-ASSESSMENT Monitoring & Adapting

How do I use feedback and new learning to evaluate progress, modify an approach, or redesign a product to better reflect my personal ideas?

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<td>select a creative challenge to work on from options generated by others (with guidance).</td>
<td>make a plan to get feedback from others so I can make possible improvement to a proposed solution.</td>
<td>analyze what helped me to make progress at each step; using input on specific elements of my plan and refining or personalizing my solution.</td>
<td>use examples from this challenge to evaluate how solving a personally meaningful challenge can be used in future challenges.</td>
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