# Push-In Gifted & Talented (K-2)

The K-2 gifted and talented program is a thinking skills program designed to introduce students to different ways of thinking. It is aligned with the higher levels of Benjamin Bloom's Taxonomy with lessons in convergent analysis, divergent synthesis, and critical evaluation. This program is offered one period every three weeks to all kindergarten, first, and second grade students. It introduces students to thinking skills needed to become successful and innovative thinkers in the 21st Century, and it provides opportunities for learners with different thinking strengths to shine.

| Unit 1 | Unit 2 | Unit 3 | Unit 4 |
|---|---|---|---|
| Divergent Thinking | Convergent Thinking:<br>Deductive Reasoning<br>Analytical Thinking | Visual-Spatial Reasoning | Critical & Creative Thinking |
| 10 weeks | 10 weeks | 10 weeks | 10 weeks |

# Push-In Gifted & Talented Curriculum
# Kindergarten

## Unit 1
## Divergent Thinking

### Learning Targets

**Essential Question(s):**
- ➢ How can we use divergent thinking?

**Enduring Understanding(s):**
- ➢ Students will recognize that thinking can be fluid and flexible in order to solve problems.

**Learning Targets/Objectives:**

***Students will...***

- Identify that there are many correct responses/possibilities (fluency).
- Identify that ideas may begin from a common "stem" and then branch in different directions from there (flexibility).
- Identify that all ideas are welcomed, even those that seem silly at the time (originality).
- Recognize that it is important to see things creatively, which helps produce many possibilities for solving problems.
- Identify that it is encouraged to piggyback on ideas from others (elaboration).

### Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Black Dot Composition | Inspired by the book, Ten Black Dots by Donald Crews, use sticker dots to create pictures and add details | 1 class period |
| Alphabet Letter Composition | Inspired by the book, Curious George's ABCs by H. A. Rey, create a picture using a die cut letter of the alphabet and add details | 1 class period |
| Dot and Letter Composition | Use at least one die cut letter and one sticker dot to create a picture that goes together | 1 class period |
| Animal Soup | Create a unique animal species by combining the features and name elements of two different animals | 1 class period |

### Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA W.K.2, SL.K.3, SL.K.4, SL.K.6
  - W.K.2: Use a combination of drawing, dictating, and writing to compose texts in which they name what they are writing about and supply some information about the topic.
  - SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
  - SL.K.4: Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
  - SL.K.6: Speak audibly and express thoughts, feelings, and ideas clearly.

**Unit 2**
**Convergent Thinking**

**Learning Targets**

**Essential Question(s):**

➢ How can we use convergent thinking?

**Enduring Understanding(s):**

➢ Students will recognize that interrelationships, outside knowledge, and deferring judgment are necessary in order to make accurate conclusions.

➢ There is only one right answer to convergent thinking problems.

**Learning Targets/Objectives:**

***Students will...***

- Identify clues and attributes of problem situations.
- Employ logical reasoning in order to deduce solutions.
- Identify interrelationships between clues (common or unique attributes).
- Defer judgment until all appropriate information is gathered (patience).
- Identify that it is encouraged to share ideas from others and to utilize outside knowledge (collaboration).

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Pattern Block Logic Puzzles | Use deductive reasoning to solve logic puzzles with pattern blocks | 1 class period |
| Pattern Block Task Cards | Fill shapes with specified types and numbers of pattern blocks | 1 class period |

## Evidence of Learning

### Formative Assessments:

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

### Summative Assessments:

- Teacher recommendations
- Cognitive Skills Assessment

### Resources/Materials:

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.K.1.A, SL.K.3, SL.K.6
    - SL.K.1.A: Follow agreed-upon norms for discussions (e.g., listening to others with fcare and taking turns speaking about the topics and texts under discussion).
    - SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
    - SL.K.6: Speak audibly and express thoughts, feelings, and ideas clearly.
- NJ Student Learning Standards: Math MP.1
    - MP.1: Make sense of problems and persevere in solving them.
    - K.G.A: Identify and describe shapes.
    - K.G.B: Analyze, compare, create, and compose shapes.

# Unit 3
# Visual-Spatial Reasoning

## Learning Targets

**Essential Question(s):**

➢ How can we use visual-spatial thinking?

**Enduring Understanding(s):**

➢ Students will recognize thinking can be assisted through both hands-on and mental manipulation of objects.

➢ Visual patterns are predictable.

➢ Tolerance for ambiguity and perseverance are essential components for flexible, high-level visual thinking.

**Learning Targets/Objectives:**

***Students will...***

- Manipulate shapes in order to achieve solutions.
- Develop memories for visual details.
- Practice hands-on activities to build in 3D.
- Identify predictable visual patterns.
- Employ both convergent and divergent thinking strategies with spatial perception activities.

**Suggested Activities**

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Coding Grids | Use arrow tiles and directional awareness to represent routes mapped out on grids; order arrow tiles to create algorithms that accurately represent routes taken | 1 class period |
| Cube Challenge Tasks | Use snap cubes to build familiar objects pictured on task cards | 1 class period |
| Pattern Block Shape Puzzles | Build a variety of 2D shapes using pattern blocks | 1 class period |
| Butterfly Symmetry | Use pattern block manipulatives to complete symmetrical designs; use symmetry to create an original butterfly species | 1 class period |

**Evidence of Learning**

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.K.1.A, SL.K.3
  - SL.K.1.A: Follow agreed-upon norms for discussions (e.g., listening to others with fcare and taking turns speaking about the topics and texts under discussion).
  - SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
- NJ Student Learning Standards: Math MP.1, K.G.A, K.G.B
  - MP.1: Make sense of problems and persevere in solving them.
  - K.G.A: Identify and describe shapes.
  - K.G.B: Analyze, compare, create, and compose shapes.

## Unit 4
## Critical Evaluation & Creative Thinking

### Learning Targets

**Essential Question(s):**

➢ How can we use critical evaluation and creative thinking?

**Enduring Understanding(s):**

➢ Students will recognize the possibility of more than one correct solution.

➢ From many possible choices, students' considerations help them make the best choice.

**Learning Targets/Objectives:**

***Students will...***

- Recognize that often there is no one right answer.
- Utilize criteria to narrow down choices to the best choice.
- Make decisions based on valid factual or observable considerations.
- Be able to support/justify choices.
- Identify solutions for our everyday lives.

### Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Create Your Own Game | Play and evaluate teacher-made game boards to learn more about game design and get ideas for | 1-2 class periods |

| | | |
|---|---|---|
| | designing original games; design, construct, and test self-made game boards | |

## Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.K.1.A, SL.K.3, SL.K.6
  - SL.K.1.A: Follow agreed-upon norms for discussions (e.g., listening to others with fcare and taking turns speaking about the topics and texts under discussion).
  - SL.K.3: Ask and answer questions in order to seek help, get information, or clarify something that is not understood.
  - SL.K.6: Speak audibly and express thoughts, feelings, and ideas clearly.
- NJ Student Learning Standards: Math MP.1
  - MP.1: Make sense of problems and persevere in solving them.
- NGSS K-2 Engineering Design ETS1-1, ETS1-2, ETS1-3
  - ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
  - ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
  - ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

# Push-In Gifted & Talented Curriculum
# First Grade

## Unit 1
## Divergent Thinking

### Learning Targets

**Essential Question(s):**

➢ How can we use divergent thinking?

**Enduring Understanding(s):**

➢ Students will recognize that thinking can be fluid and flexible in order to solve problems

**Learning Targets/Objectives:**

***Students will...***

- Identify that there are many correct responses/possibilities (fluency).
- Identify that ideas may begin from a common "stem" and then branch in different directions from there (flexibility).
- Identify that all ideas are welcomed, even those that seem silly at the time (originality).
- Recognize that it is important to see things creatively, which helps produce many possibilities for solving problems.
- Identify that it is encouraged to piggyback on ideas from others (elaboration).

### Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Name the Group | Use flexible thinking to notice the various characteristics of objects in pictures and use them for categorization | 1 class period |
| Alliteration Letter Composition | Inspired by the book, Curious George's ABCs by H. A. Rey, create a picture using a die cut letter of the alphabet; expand and develop the idea with the use of words, pictorial details, and alliteration | 1 class period |
| What Can You Do? | Use objects and shapes in pictures to produce novel ideas; expand and develop ideas with the use of words and pictorial details | 1 class period |
| Squiggle & Dot Stories | Integrate a squiggle and at least one sticker dot into a picture and write a story about it | 1 class period |

### Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA NJSLA.W4, SL.1.1.A, SL.1.3
  - W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
  - SL.1.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
  - SL.1.3: Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

**Unit 2**
**Convergent Thinking**

**Learning Targets**

**Essential Question(s):**

➢ How can we use convergent thinking?

**Enduring Understanding(s):**

➢ Students will recognize that interrelationships, outside knowledge, and deferring judgment are necessary in order to make accurate conclusions.

➢ There is only one right answer to convergent thinking problems.

**Learning Targets/Objectives:**

***Students will...***

- Identify clues and attributes of problem situations.
- Employ logical reasoning in order to deduce solutions.
- Identify interrelationships between clues (common or unique attributes).
- Defer judgment until all appropriate information is gathered (patience).
- Identify that it is encouraged to share ideas from others and to utilize outside knowledge (collaboration).

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Pattern Block Logic Puzzles | Use deductive reasoning to solve logic puzzles with pattern blocks | 1 class period |
| Pattern Block Tasks | Build shapes with a specified type and number of pattern blocks | 1 class period |
| Create an Algorithm | Create an algorithm to represent a function for completing a task | 1 class period |
| Birds on a Wire | Use a series of clues and deductive reasoning to put different colored birds in the correct order | 1 class period |

## Evidence of Learning

### Formative Assessments:

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

### Summative Assessments:

- Teacher recommendations
- Cognitive Skills Assessment

### Resources/Materials:

- Teacher-created resources for lesson plans

## Standards

### Standards:

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.1.1.A, SL.1.3
    - SL.1.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
    - SL.1.3: Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- NJ Student Learning Standards: Math MP.1
    - MP.1: Make sense of problems and persevere in solving them.

## Unit 3
## Visual-Spatial Reasoning

## Learning Targets

**Essential Question(s):**

➢ How can we use visual-spatial thinking?

**Enduring Understanding(s):**

➢ Students will recognize thinking can be assisted through both hands-on and mental manipulation of objects.

➢ Visual patterns are predictable.

➢ Tolerance for ambiguity and perseverance are essential components for flexible, high-level visual thinking.

**Learning Targets/Objectives:**

***Students will...***

- Manipulate shapes in order to achieve solutions.
- Develop memories for visual details.
- Practice hands-on activities to build in 3D.
- Identify predictable visual patterns.
- Employ both convergent and divergent thinking strategies with spatial perception activities.

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| 3D Snap Cube Building Tasks | Use snap cubes to build structures pictured on task cards | 1 class period |
| Pentomino Challenge Tasks | Use pentomino puzzle pieces to complete task card challenges | 1 class period |
| Flower Symmetry | Use pattern block manipulatives to complete symmetrical designs; use symmetry to create an original type of flower | 1 class period |

## Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.1.1.A, SL.1.3
  - SL.1.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
  - SL.1.3: Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- NJ Student Learning Standards: Math MP.1, 1.G.A
  - MP.1: Make sense of problems and persevere in solving them.
  - 1.G.A: Reason with shapes and their attributes.

# Unit 4
# Critical & Creative Thinking

## Learning Targets

**Essential Question(s):**

➢ How can we use critical and creative thinking?

**Enduring Understanding(s):**

➢ Students will recognize the possibility of more than one correct solution.

➢ From many possible choices, students' considerations help them make the best choice.

**Learning Targets/Objectives:**

***Students will...***

- Recognize that often there is no one right answer.
- Utilize criteria to narrow down choices to the best choice.
- Make decisions based on valid factual or observable considerations.
- Be able to support/justify choices.
- Identify solutions for our everyday lives.

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Create Your Own Game | Play and evaluate teacher-made game boards to learn more about game design and get ideas for designing original games; design, construct, and test self-made game boards | 2-3 class periods |

## Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.1.1.A, SL.1.3
    - SL.1.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
    - SL.1.3: Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.
- NJ Student Learning Standards: Math MP.1
    - MP.1: Make sense of problems and persevere in solving them.
- NGSS K-2 Engineering Design ETS1-1, ETS1-2, ETS1-3
    - ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
    - ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
    - ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

# Push-In Gifted & Talented Curriculum
# Second Grade

## Unit 1
## Divergent Thinking

### Learning Targets

**Essential Question(s):**

➢ How can we use divergent thinking?

**Enduring Understanding(s):**

➢ Students will recognize that thinking can be fluid and flexible in order to solve problems.

**Learning Targets/Objectives:**

***Students will...***

- Identify that there are many correct responses/possibilities (fluency).
- Identify that ideas may begin from a common "stem" and then branch in different directions from there (flexibility).
- Identify that all ideas are welcomed, even those that seem silly at the time (originality).
- Recognize that it is important to see things creatively, which helps produce many possibilities for solving problems.
- Identify that it is encouraged to piggyback on ideas from others (elaboration).

### Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Other Uses | Identify alternate uses for common objects | 1 class period |
| Strangely New | Choose characteristics of one animal to place on another animal; identify abilities or functions that the "new" animal possesses after the changes are made | 1 class period |
| What Can You Do? | Use objects and shapes in pictures to produce novel ideas; expand and develop ideas with the use of words and pictorial details | 1 class period |
| Squiggle & Dot Stories | Integrate a squiggle and at least one sticker dot into a picture and write a story about it | 1 class period |

## Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA NJSLA.W4, SL.2.1.A, SL.2.1.C
    - W4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
    - SL.2.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
    - SL.2.1.C: Ask for clarification and further explanation as needed about the topics under discussion.

# Unit 2
# Convergent Thinking

## Learning Targets

**Essential Question(s):**

➢ How can we use convergent thinking?

**Enduring Understanding(s):**

➢ Students will recognize that interrelationships, outside knowledge, and deferring judgment are necessary in order to make accurate conclusions.

➢ There is only one right answer to convergent thinking problems.

**Learning Targets/Objectives:**

***Students will...***

- Identify clues and attributes of problem situations.
- Employ logical reasoning in order to deduce solutions.
- Identify interrelationships between clues (common or unique attributes).
- Defer judgment until all appropriate information is gathered (patience).

- Identify that it is encouraged to share ideas from others and to utilize outside knowledge (collaboration).

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Logic Grid Puzzles | Use logic grids to organize clues and solve logic puzzles at a variety of levels | 1 class period |
| Pattern Block Logic Puzzles | Use deductive reasoning to solve logic puzzles with pattern blocks | 1 class period |
| Create an Algorithm | Create an algorithm to represent a function for completing a task | 1 class period |
| Cognition Cube Challenges | Use a series of clues and deductive reasoning to put colored cubes in the correct order | 1 class period |

## Evidence of Learning

### Formative Assessments:

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

### Summative Assessments:

- Teacher recommendations
- Cognitive Skills Assessment

### Resources/Materials:

- Teacher-created resources for lesson plans

## Standards

### Standards:

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.2.1.A, SL.2.1.C
    - SL.2.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
    - SL.2.1.C: Ask for clarification and further explanation as needed about the topics under discussion.
- NJ Student Learning Standards: Math MP.1
    - MP.1: Make sense of problems and persevere in solving them.

**Unit 3**
**Visual-Spatial Reasoning**

## Learning Targets

### Essential Question(s):

➢ How can we use visual-spatial thinking?

### Enduring Understanding(s):

➢ Students will recognize thinking can be assisted through both hands-on and mental manipulation of objects.
➢ Visual patterns are predictable.
➢ Tolerance for ambiguity and perseverance are essential components for flexible, high-level visual thinking.

### Learning Targets/Objectives:

***Students will...***

- Manipulate shapes in order to achieve solutions.
- Develop memories for visual details.
- Practice hands-on activities to build in 3D.
- Identify predictable visual patterns.
- Employ both convergent and divergent thinking strategies with spatial perception activities.

## Suggested Activities

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Snap Cube Challenges | Build a series of structures with snap cubes and identify the architectural plan for each structure | 1 class period |
| Tangram Challenge Tasks | Use tangram puzzle pieces to complete task card challenges | 1 class period |
| Pattern Block Symmetry | Take turns, with a partner, placing pattern block shapes on either side of a “line” of symmetry to create symmetrical designs; create symmetrical designs independently | 1 class period |

## Evidence of Learning

### Formative Assessments:

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

### Summative Assessments:

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
  - CRP4: Communicate clearly and effectively and with reason.
  - CRP6: Demonstrate creativity and innovation.
  - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.2.1.A, SL.2.1.C
  - SL.2.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
  - SL.2.1.C: Ask for clarification and further explanation as needed about the topics under discussion.
- NJ Student Learning Standards: Math MP.1, 2.G.A
  - MP.1: Make sense of problems and persevere in solving them.
  - 2.G.A: Reason with shapes and their attributes.

**Unit 4**
**Critical & Creative Thinking**

**Learning Targets**

**Essential Question(s):**

➢ How can we use creative & evaluative thinking?

**Enduring Understanding(s):**

➢ Students will recognize the possibility of more than one correct solution.

➢ From many possible choices, students' considerations help them make the best choice.

**Learning Targets/Objectives:**

***Students will...***

- Recognize that often there is no one right answer.
- Utilize criteria to narrow down choices to the best choice.
- Make decisions based on valid factual or observable considerations.
- Be able to support/justify choices.
- Identify solutions for our everyday lives.

**Suggested Activities**

***Suggested activities include, but are not limited to, the following:***

| Lesson Name/Topic | Lesson Objective(s) | Time Frame |
|---|---|---|
| Create Your Own Game | Play and evaluate teacher-made game boards to learn more about game design and get ideas for designing original games; design, construct, and test self-made game boards | 2-3 class periods |

## Evidence of Learning

**Formative Assessments:**

- Teacher observation data
- Task completion checks
- Student feedback (responses to questions/discussions)

**Summative Assessments:**

- Teacher recommendations
- Cognitive Skills Assessment

**Resources/Materials:**

- Teacher-created resources for lesson plans

## Standards

**Standards:**

- NJ 21st Century Life and Careers Standards CRP4, CRP6, CRP8
    - CRP4: Communicate clearly and effectively and with reason.
    - CRP6: Demonstrate creativity and innovation.
    - CRP8: Utilize critical thinking to make sense of problems and persevere in solving them.
- NJ Student Learning Standards: ELA SL.2.1.A, SL.2.1.C
    - SL.2.1.A: Follow agreed-upon norms for discussion (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
    - SL.2.1.C: Ask for clarification and further explanation as needed about the topics under discussion.
- NJ Student Learning Standards: Math MP.1
    - MP.1: Make sense of problems and persevere in solving them.
- NGSS K-2 Engineering Design ETS1-1, ETS1-2, ETS1-3
    - ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
    - ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
    - ETS1-3: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.