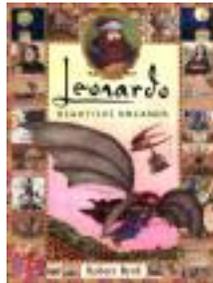


**Project Bright IDEA 2: Interest Development Early Abilities**

**A Jacob Javits Gifted Education Program  
Funded by the US Department of Education  
2004-2009**



**Concept: Exploration**

**Topic: People Who Made a Difference  
Grade 2**

**K-2**

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**Exceptional Children Division**

**Academically or Intellectually Gifted Program**

**The American Association For Gifted Children at Duke University**

## Big Ideas Manifested

**Topic – People Who Made a Difference**

**Literature Selection – Leonardo, Beautiful Dreamer**

**Author –Robert Byrd**

<b>Concepts</b>	<b>Themes</b>
Exploration	Lifelong Thirst for Knowledge
<b>Issues or Debates</b>	<b>Problems or Challenges</b>
New ideas vs. traditions Man vs. nature Man vs. self	Lack of education Lack of money or resources Inability to complete some tasks
<b>Processes</b>	<b>Theories</b>
Observation Inquiry Teaching Problem solving	One person can make a difference Believe in oneself Never give up
<b>Paradoxes</b>	<b>Assumptions or Perspectives</b>
Nothing ventured, nothing gained Give credit where credit is due	Success despite environment

**Concept – Exploration      Topic – People Who Made a Difference**  
**NC SCOS:**

**English Language Arts Goals:**

- 2.01 Read and comprehend both narrative and expository texts appropriate for grade two.
- 2.04 Pose possible how, why, and what-if questions to understand and /or interpret text.
- 2.06 Recall facts and details from a text.
- 3.01 Use personal experiences and knowledge to interpret written and oral messages.
- 3.04 Increase oral and written vocabulary by listening, discussing, and composing text when responding to literature that is read and heard.
- 4.04 Use oral communication to identify, organize, and analyze information.
- 4.05 Respond appropriately when participating in group discourse by adapting language and communication behaviors to the situation to accomplish a specific purpose.

**Math Goals:**

- 3.01 Combine simple figures to create a given shape.
- 3.02 Describe the change in attributes as two- and three-dimensional figures are cut and rearranged.

**Suggested Literature Selection(s) – Leonardo, Beautiful Dreamer**

**Look and Listen for...**

**Intelligent Behaviors**

**Story Focus:** Remaining open to continuous learning  
Listening with understanding and empathy  
Creating, Imagining, Innovating  
Persisting

**Student Activities:** Remaining open to continuous learning  
Listening with understanding and empathy  
Creating, Imagining, Innovating  
Persisting

**Thinking Skills Focus – Figural Similarities and Differences (Chapter 2)**

**Topic Focus – People Who Made a Difference**

**Concept Focus - Exploration**

**Overarching Generalizations –**

- Exploration requires recognizing purpose and responding to it.
- Exploration confronts “the unknown.”
- Exploration may result in “new findings” or the confirmation of “old findings.”

**More Complex Generalization –**

- Exploration can create relationships, which can be harmonious and discordant.

**Directions for Teachers**

Display sentence strips with the generalizations. Discuss topics and vocabulary words needed to gain a deeper understanding of the conceptual lessons.

**Suggested Topics for Discussion**

Contributing to society, being open-minded, persisting, being a lifelong learner, the idea of wondering about the world, setting goals

**Suggested Vocabulary Words for Discussion**

Inspired, curiosity, genius, magnificent, prosperous, renowned, anatomy, sculptor, philosopher, architect, perspective, apprentice, extravagant, ambitious, Renaissance, contemplation, inquisitive, infinite, potential

**Vocabulary Extension**

Illustrate the vocabulary by creating a mini-picture dictionary.

## Hooks

Select a generalization(s) and essential questions. Introduce one or more of the following topics:

### Six Facets of Understanding

<b>Facet 1 – EXPLANATION</b>
<ul style="list-style-type: none"><li>• Present a picture of the horse from <u>Leonardo, Beautiful Dreamer</u>. Discuss and let students tell what they see in the picture.</li><li>• Exploration requires recognizing purpose and responding to it.</li><li>• Why do you think Leonardo chose to study the bodies of living things in order to create his works of art?</li></ul>
<b>Facet 2 – INTERPRETATION</b>
<ul style="list-style-type: none"><li>• Read the excerpt from the book about <i>The Pool of Water</i>. Students brainstorm questions they have about the world.</li><li>• Exploration confronts “the unknown.”</li><li>• How does Leonardo’s thirst to learn how things work relate to you?</li></ul>
<b>Facet 3 – APPLICATION</b>
<ul style="list-style-type: none"><li>• Students solve a real-world math problem. Brainstorm what skills were used to solve the problem.</li><li>• Exploration requires recognizing purpose and responding to it.</li><li>• In what other areas of our lives would we use these skills?</li></ul>
<b>Facet 4 – PERSPECTIVE</b>
<ul style="list-style-type: none"><li>• Create window notes about “The Last Supper.” Survey the students about their responses.</li><li>• Exploration confronts “the unknown.”</li><li>• What are the different points of view about The Last Supper in our class?</li></ul>
<b>Facet 5 – EMPATHY</b>
<ul style="list-style-type: none"><li>• Role-play how you would react if your favorite park was closed due to litter.</li><li>• Exploration may result in “new findings” or the confirmation of “old findings.”</li><li>• Leonardo had a strong interest in the health of the land, how do you feel about protecting our land?</li></ul>
<b>Facet 6 – SELF-KNOWLEDGE</b>
<ul style="list-style-type: none"><li>• Read aloud “I have wasted my hours....Tell me if anything at all was done.” Share a time when you felt as Leonardo did, when you worked very hard on a task and did not accomplish what you thought you could.</li><li>• Exploration may result in “new findings” or the confirmation of “old findings.”</li><li>• What are my strengths and weaknesses in the way I think about my own learning?</li></ul>

**Read:** Leonardo, Beautiful Dreamer by Robert Byrd

## Task Rotation Learning Activities

**K-2**

**All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.**

<p style="text-align: center;"><b>Mastery Learner (A)</b> Sensing- Thinking</p> <p><b>You are a biographer and you are asked to write a biography about Leonardo.</b> <b>List as many of Leonardo’s accomplishments as you can.</b></p> <p>How does exploration require recognizing purpose and responding to it? How does exploration confront the unknown? What intelligent behaviors did you use to create your list?</p> <p style="text-align: center;"><b>V*_L_S_M_B_P_I*_N_</b></p>	<p style="text-align: center;"><b>Interpersonal Learner (B)</b> Sensing-Thinking</p> <p><b>Choose a partner.</b> <b>Dissect a model of a living thing (frog, eye, heart).</b> <b>Draw a picture of the living thing before and after the dissection. Discuss the differences between the two pictures.</b></p> <p>How does exploration require recognizing purpose and responding to it? How does exploration confront the unknown? How does exploration result in “new findings” and the confirmation of “old findings?” How did you apply your intelligent behaviors to complete this task?</p> <p style="text-align: center;"><b>V*_L_S*_M_B*_P*_I_N*</b></p>
<p style="text-align: center;"><b>Understanding Learner (C)</b> Intuitive-Thinking</p> <p><b>Complete a graphic organizer of the intelligent behaviors exhibited by Leonardo.</b></p> <p>How does exploration require recognizing purpose and responding to it? How does exploration confront “the unknown?” What intelligent behaviors did you use to complete this graphic organizer?</p> <p style="text-align: center;"><b>V*_L_S*_M_B_P_I*_N_</b></p>	<p style="text-align: center;"><b>Self-Expressive Learner (D)</b> Intuitive-Feeling</p> <p><b>Create a visual representation of one of Leonardo’s inventions that you most appreciate. Write the qualities of the invention that you most appreciate.</b></p> <p>How does exploration result in “new findings” and the confirmation of “old findings?” How does exploration require recognizing purpose and responding to it? How did you apply your intelligent behaviors to complete this task?</p> <p style="text-align: center;"><b>V*_L*_S*_M_B_P_I*_N_</b></p>

**NC SCOS: English/Language Arts Objectives:**

- 2.04 Pose possible how, why, and what-if questions to understand and/or interpret text.
- 2.06 Recall facts and details from the text.
- 4.04 Use oral communication to identify, organize, and analyze information.
- 4.05 Respond appropriately when participating in group discourse by adapting language and communication behaviors to the situation to accomplish a specific purpose.

**Real World Connections With Products**

Application (compose, dissect, design, create, draw, editorialize)

**Real World Applications**

Writer, biologist, artist, advertising executive, graphic designer

**Real World Terms**

Construct, design, dissect, persuade, organize, relate, editorialize, prioritize

**Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.**

**Materials Needed for Task Rotation and/or Task Rotation Menu**

- Paper and pencil
- Models of living things (frog, eye, heart, etc.)
- Crayons, colored pencils
- Materials to create visual representation

## **MetaCognitive Discussion (Essential Questions)**

### **(Whole Group)**

#### **Conceptual Perspectives:**

1. How does exploration require recognizing purpose and responding to it?
2. How does exploration confront “the unknown?”
3. How does exploration result in “new findings” or the confirmation of “old findings?”

#### **Intelligent Behaviors:**

1. What intelligent behaviors enabled you to complete the learning tasks?
2. How do you demonstrate these intelligent behaviors daily?
3. What intelligent behaviors do you see as strengths in these tasks?
4. What intelligent behaviors did you observe in Leonardo?
5. How would you apply Leonardo’s intelligent behaviors in approaching tasks?

#### **Literary Perspective**

1. How did the design of the book affect your understanding about Leonardo?
2. As you reflect upon the events in Leonardo’s life, what impact do you think he had on the world?
3. Why do you think the author included direct quotes from Leonardo in this book?
4. If Leonardo were living today, how might it affect his inventions?

#### **Student/Teacher Reflections:**

1. How does Leonardo exemplify a lifelong learner?
2. What importance did Leonardo put on nature while exploring living things?

## Math Task Rotation Learning Activities

### K-2

**All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.**

<p style="text-align: center;"><b>Mastery Learner (A)</b> Sensing- Thinking</p> <p>Leonardo said, “ No image, even of the smallest object, enters the eye without being turned upside down.” As you think about this quote complete the following task. <b>Identify examples of flips, slides, and turns.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you? What intelligent behaviors enabled you to identify these examples?</p> <p style="text-align: center;">V _ L * S * M _ B _ P _ I _ N _</p>	<p style="text-align: center;"><b>Interpersonal Learner (B)</b> Sensing-Thinking</p> <p>Pretend you are an image that enters a superhuman eye. <b>Pair and share: Using your body demonstrate a flip, slide, and turn.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you? How has exploration of these mathematical transformations required recognizing purpose and responding to it? What intelligent behaviors enabled you to demonstrate and identify these mathematical transformations?</p> <p style="text-align: center;">V _ L * S * M _ B * P * I _ N _</p>
<p style="text-align: center;"><b>Understanding Learner (C)</b> Intuitive-Thinking</p> <p>Leonardo studied smaller parts of the human body in order to understand it more completely. <b>Make a triangle using more than 2 shapes.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you? How has exploration of these mathematical transformations required recognizing purpose and responding to it? What intelligent behaviors enabled you to create this example?</p> <p style="text-align: center;">V _ L * S * M _ B _ P _ I _ N _</p>	<p style="text-align: center;"><b>Self-Expressive Learner (D)</b> Intuitive-Feeling</p> <p>Leonardo used his mastery of perspective to create <i>The Last Supper</i>. <b>Create a picture using a circle, triangle, square, trapezoid, parallelogram, rhombus, and rectangle that you have drawn and cut out from construction paper.</b></p> <p>How has exploration of these shapes required recognizing purpose and responding to it? What intelligent behaviors enabled you to create this image?</p> <p style="text-align: center;">V _ L * S * M _ B _ P _ I _ N _</p>

### NC SCOS: Math Objectives:

3.01 Combine simple figures to create a given shape

3.02 Describe the change in attributes as two- and three-dimensional figures are cut and rearranged.

**Real World Connections With Products**

Application (investigate, analyze, design, reflect, produce, create, compare, innovate)

**Real World Applications**

Astronomer, hydrologist, forensic pathologist, weapons designer, theatrical designer, electrician, aviation, mathematician, philologist, mechanical engineer, botanist, physicist, architect, artist

**Real World Terms**

Create, identify, communicate, demonstrate

**Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.**

**Materials Needed for Task Rotation and/or Task Rotation Menu**

- Teacher made examples for mastery task
- Pattern blocks
- Pencil and paper

## **MetaCognitive Discussion (Essential Questions)**

### **(Whole Group)**

#### **Conceptual Perspectives:**

1. How does exploration result in “new findings” or the confirmation of “old findings?”
2. How does exploration confront the unknown in the learning tasks that you have completed?
3. How does exploration require recognizing purpose and responding to it?

#### **Intelligent Behaviors:**

1. What intelligent behaviors enabled you to complete the learning tasks?
2. How do you demonstrate these intelligent behaviors daily?
3. What intelligent behaviors did you see as your strength(s) in these activities? Why?

#### **Literary Perspectives:**

1. How did Leonardo’s study of mathematics help him understand perspective, a technique used to create an illusion of space and depth in painting? Explain how you might have used mathematics to create your picture.
2. Leonardo wrote backwards, from right to left. Discuss why you think he kept notes that way. Students will write a note to partner using this backward technique. Discuss what feelings you had after using this technique.

#### **Student/Teacher Reflections:**

If you were to teach this book to next year’s students, what would you do to ensure that they understood the relationship that Leonardo had with mathematics?

**Concept:** Exploration

**Topic:** People Who Made a Difference

**Generalizations:**

Exploration results in “new findings” and the confirmation of “old findings.”

Exploration requires recognizing purpose and responding to it.

Exploration confronts “the unknown.”

**Essential Question(s):**

How does exploration result in “new findings” and the confirmation of “old findings?”

How does exploration require recognizing purpose and responding to it?

How does exploration confront “the unknown?”

**Task Rotation Menu**

<b>Level</b>	<b>Mastery</b>	<b>Understanding</b>	<b>Self-Expressive</b>	<b>Interpersonal</b>
<b>1</b>	Identify examples of flips, slides, and turns.	Make a triangle using more than two shapes.	Create a picture using a circle, triangle, square, trapezoid, parallelogram, rhombus, and rectangle that you have drawn and cut out from construction paper.	Pair and share a flip, slide and turn.
<b>2</b>	Identify shapes that have been flipped, slid, or turned. (Shapes that have been transformed at least twice.)	Show at least two different ways to make a triangle using more than two shapes.	Apply knowledge of flips, slides, and turns to locate examples in our environment.	Role-play a flip, slide or turn to a partner. Your partner will identify which transformation you have demonstrated.
<b>3</b>	Examine a group of shapes that are identified as flipped, slid, or turned. Check for accuracy. Correct any incorrect transformations.	Develop a 3-dimensional figure using plane shapes.	Partners design an invention that uses a flip, slide, or turn.	Pairs take turns creating a shape on geoboards and their partner will create a flip, slide or turn from their partner’s shape.

**Real World Connections With Products**

Application (investigate, analyze, design, reflect, produce, create, compare, innovate)

**Real World Applications**

Astronomer, hydrologist, forensic pathologist, weapons designer, theatrical designer, electrician, aviation, mathematician, philologist, mechanical engineer, botanist, physicist, architect, artist

**Real World Terms**

Create, identify, communicate, demonstrate, construct, design, apply, role play, develop

**Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.**

**Materials Needed for Task Rotation and/or Task Rotation Menu**

- Teacher made examples for mastery task
- Pattern blocks
- Pencil and paper
- Geoboards and rubber bands

## **MetaCognitive Discussion (Essential Questions)**

### **(Whole Group)**

#### **Conceptual Perspectives**

1. How does exploration result in “new findings” or the confirmation of “old findings?”
2. How does exploration confront the unknown in the learning tasks that you have completed?
3. How does exploration require recognizing purpose and responding to it?

#### **Intelligent Behaviors**

1. What intelligent behaviors enabled you to complete the learning tasks?
2. How do you demonstrate these intelligent behaviors daily?
3. What intelligent behaviors did you see as your strength(s) in these activities? Why?

#### **Literary Perspective**

1. How did Leonardo’s study of mathematics help him understand perspective, a technique used to create an illusion of space and depth in painting? Explain how you might have used mathematics to create your picture.
2. Leonardo wrote backwards, from right to left. Discuss why you think he kept notes that way. Students will write a note to partner using this backward technique. Discuss what feelings you had after using this technique.

#### **Student/Teacher Reflections**

If you were to teach this book to next year’s students, what would you do to ensure that they understood the relationship that Leonardo had with mathematics?

**Student Reflections and Assessments  
Task Rotation Learning Experience  
K-2**

**All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.**

<p style="text-align: center;"><b>Mastery Learner (A)</b> Sensing- Thinking</p> <p><b>Create a timeline of what you consider to be Leonardo’s five greatest accomplishments.</b></p> <p>How does exploration require recognizing purpose and responding to it? What intelligent behaviors enabled you to select and order these accomplishments?</p> <p style="text-align: center;"><b>V _ L * S _ M _ B _ P _ I * N _</b></p>	<p style="text-align: center;"><b>Interpersonal Learner (B)</b> Sensing-Thinking</p> <p><b>With a partner assume the role of Leonardo and his lawyer. You are defending Leonardo’s use of dissection as he stands trial for these crimes against The Church. Present your defense to the jury (your classmates).</b></p> <p>How does exploration result in “new findings” or the confirmation of “old findings?” How does exploration require recognizing purpose and responding to it? How does exploration create relationships, which can be harmonious or discordant? What intelligent behaviors enabled you to complete this task?</p> <p style="text-align: center;"><b>V * L _ S _ M _ B _ P * I * N _</b></p>
<p style="text-align: center;"><b>Understanding Learner (C)</b> Intuitive-Thinking</p> <p><b>Assume the role of Leonardo. Write a letter to present day inventors. What advice would you give them?</b></p> <p>How does exploration result in “new findings” or the confirmation of “old findings?” How does exploration confront the unknown? How does exploration require recognizing purpose and responding to it? What intelligent behaviors enabled you to assume this role?</p> <p style="text-align: center;"><b>V * L _ S _ M _ B _ P _ I * N _</b></p>	<p style="text-align: center;"><b>Self-Expressive Learner (D)</b> Intuitive-Feeling</p> <p><b>Create an advertisement for one of Leonardo’s inventions.</b></p> <p>How does exploration result in “new findings” or the confirmation of “old findings?” How does exploration require recognizing purpose and responding to it? What intelligent behaviors enabled you to assume this role?</p> <p style="text-align: center;"><b>V * L _ S * M * B * P _ I _ N _</b></p>

**NC SCOS: English/Language Arts Objectives:**

- 2.04 Pose possible how, why, and what-if questions to understand and /or interpret text.
- 2.06 Recall facts and details from a text.
- 3.01 Use personal experiences and knowledge to interpret written and oral messages.
- 3.04 Increase oral and written vocabulary by listening, discussing, and composing text when responding to literature that is read and heard.
- 4.04 Use oral communication to identify, organize, and analyze information.
- 4.05 Respond appropriately when participating in group discourse by adapting language and communication behaviors to the situation to accomplish a specific purpose.

**Real World Connections With Products**

Application (discuss, compare, contrast, defend, produce, investigate, create, perform)

**Real World Applications**

Lawyer, Priest, Inventor, Advertising Executive, Biographer

**Real World Terms**

Role-play, defend, support, advertise, advise

**Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.**

**Materials Needed for Task Rotation and/or Task Rotation Menu**

- Pencil and paper
- Leonardo, Beautiful Dreamer by Robert Byrd
- Items for advertisement (crayons, markers, video camera, tape recorder, costumes, poster board, etc.)

## MetaCognitive Discussion (Essential Questions)

### (Whole Group)

#### Conceptual Perspectives:

1. How does exploration result in “new findings” and the confirmation of “old findings?”
2. How does exploration confront “the unknown?”
3. How does exploration require recognizing purpose and responding to it?
4. How does exploration create relationships, which can be harmonious or discordant?

#### Intelligent Behaviors

1. What intelligent behaviors enabled you to complete the learning tasks?
2. How do you demonstrate these intelligent behaviors daily?
3. What intelligent behaviors did you see as strengths in these tasks?
4. What intelligent behaviors did you observe in Leonardo?
5. How would you apply Leonardo’s intelligent behaviors in approaching tasks?

#### Literary Perspectives:

1. Discuss three or more words that describe Leonardo, Beautiful Dreamer.
2. How does Leonardo compare to someone else you know, or have read about, that has made a difference?
3. As you reflect upon events in Leonardo’s life, what do you think the world would be like today if he had succeed in one of his endeavors?
4. What reactions did you have while reading Leonardo, Beautiful Dreamer?
5. How did the time period in which Leonardo lived affect how his inventions were received?

#### Student/Teacher Reflections

Have students respond to the question, how have your thoughts changed about exploration?  
What qualities did you observe in Leonardo?

**Math Student Reflections and Assessments**  
**Task Rotation Learning Experience**  
**K-2**

**All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.**

<p align="center"><b>Mastery Learner (A)</b> Sensing- Thinking</p> <p><b>Construct an example of a shape that has been slid, flipped, or turned.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you?            What intelligent behaviors enabled you to construct these examples?</p> <p align="center"><b>V _ L * S * M _ B * P _ I _ N _</b></p>	<p align="center"><b>Interpersonal Learner (B)</b> Sensing-Thinking</p> <p><b>Create with a partner a 1-minute dance routine that incorporates the use of a flip, slide, and turn. Your classmates will record the presence of these transformations in your routine.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you?            How does exploration confront “the unknown?”            How has exploration of these mathematical transformations required recognizing purpose and responding to it?            What intelligent behaviors enabled you to demonstrate and identify these mathematical transformations?</p> <p align="center"><b>V _ L * S * M * B _ P * I _ N _</b></p>
<p align="center"><b>Understanding Learner (C)</b> Intuitive-Thinking</p> <p><b>Explain how you could teach someone in your class to construct a 3-dimensional figure using plane figures.</b></p> <p>How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you?            How has exploration of these mathematical transformations required recognizing purpose and responding to it?            What intelligent behaviors enabled you to teach your classmate how to construct a 3-dimensional figure?</p> <p align="center"><b>V * L * S * M _ B * P * I * N _</b></p>	<p align="center"><b>Self-Expressive Learner (D)</b> Intuitive-Feeling</p> <p><b>Select a real-world object that uses flip, slide, or turn. Explain how you would improve upon this design.</b></p> <p>How has exploration of these shapes required recognizing purpose and responding to it?            What intelligent behaviors enabled you to make these improvements?</p> <p align="center"><b>V * L * S * M _ B * P * I * N _</b></p>

**NC SCOS: Math Objectives:**

3.01 Combine simple figures to create a given shape.

3.02 Describe the change in attributes as two- and three-dimensional are cut and rearranged.

**Real World Connections With Products**

Application (choreograph, design, form, inform, how-to, invent)

**Real World Applications**

Dancer, quilter, sculptor, presenter, inventor

**Real World Terms**

Invent, choreograph, construct, teach, improve

**Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.**

**Materials Needed for Task Rotation and/or Task Rotation Menu**

- Pattern blocks
- Music samples and tape player
- Construction paper
- Scissors, glue
- Pencil and paper
- Various objects for improving upon inventions

## **MetaCognitive Discussion (Essential Questions)**

### **(Whole Group)**

#### **Conceptual Perspectives:**

1. How has exploration of these mathematical transformations resulted in “new findings” or the confirmation of “old findings” for you?
2. How has exploration of these mathematical transformations required recognizing purpose and responding to it?
3. How does exploration confront “the unknown?”

#### **Intelligent Behaviors**

1. What intelligent behaviors enabled you to complete the learning tasks?
2. How do you demonstrate these intelligent behaviors daily?
3. What intelligent behaviors did you see as strengths in these tasks?
4. What intelligent behaviors did you see in your partners/ classmates during these tasks?

#### **Literary Perspectives:**

1. As you reflect on these tasks and our book, Leonardo, Beautiful Dreamer, what real world truths can you identify?

#### **Student/Teacher Reflections**

What conclusions did you reach about how mathematics is used in the real world? Brainstorm a list of things that you see in the real world that are mathematical in nature.

### **Additional Support Materials**

[www.mos.org/leonardo/](http://www.mos.org/leonardo/)

[www.answers.com/topic/leonardo-da-vinci](http://www.answers.com/topic/leonardo-da-vinci)

### **Favorite Read-Alouds**

Rachel: The Story of Rachel Carson by Amy Ehrlich

Harvesting Hope: The Story of Cesar Chavez by Kathleen Krull

The Great Expedition of Lewis and Clark by Private Reubin Field, Member of the Corps of Discovery

### **Finger Plays, Nursery Rhymes and Songs**

### **Video Clips**

### **Paintings & Prints**

*Mona Lisa*

*The Last Supper*



# **APPENDIX**

## **A**

### **Additional Instructional Concept-Based Activities**