Monet’s Water Lilies, 1996, glazed ceramic, Team Design, Grade 9, Hood View Junior Academy

Educator’s Guide

CHESS SETS IN MINIATURE

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LESSON PLAN
CHESS SETS IN MINIATURE

CHESS SETS AND THE STUDENT
Chess sets are an exciting art project for your students. Any student can create a great set, given some supplies and ample room to experiment. Nor is there a lack of subject matter. Students’ lives today are filled with all sorts of material they can draw on to create a chess set. Stories, books, television and popular culture will provide plenty

OBJECTIVES

AESTHETICS & CRITICISM Students will consider how artists tell a story or create a mood through their work by looking at chess sets as sculpture. Students will compare chess sets for differences in themes (subjects), materials and techniques. Students will talk about workmanship and what it means.

ART HISTORY AND CULTURE Students will learn about the history of chess and design of playing pieces. Students will discuss why the game of chess has been so popular over time. Students will explore themes within various chess sets (opposing sides) and how what they tell us about other people.

CREATE, PRESENT AND PERFORM Students will choose a theme, design and then create a chess set.

NEED TO HAVE READY

VISUAL & LITERARY RESOURCES
- PowerPoint: A Brief History of Chess
- PowerPoint: Student Designed Sets
- Actual chess sets in the classroom
- Collected images of chess sets
- Other Resources in this Lesson Plan

VOCABULARY
- Space: Negative and Positive
- Color
- Texture
- Three-dimensional
- Size
- Sculpture: found object, additive or subtractive techniques
- Subject matter (themes)
- Chess pieces: king, queen, bishop, knight, rook, pawn
- Workmanship

PRODUCTION MATERIALS
Choice of materials and technique to be used to be made by artist(s) or teacher.

LESSON CRITERIA
Students will create a chess set with a theme (subject) using texture or color for contrast with craftsmanship in mind.

Parents Versus the Kids, 1994, markers on paper, Individual, Grade 5, Wishram Elementary

MARYHILL MUSEUM OF ART
LOOKING AT CHESS SETS

Show examples of chess sets—historical and student-made sets. Post pictures of chess sets. Look at actual chess sets in the classroom.

SUBJECT MATTER Talk about themes (subjects) in chess sets. Why are there so many themes? Did they differ over time? Culture? Individual? Chess sets can have identical pieces on each side or each side can represent an opposing side. Look for examples of opposing sides. Some sets represent things in the world around us. Some sets do not. Look for examples of each.

DISTINGUISHING CHARACTERISTICS OF PIECES Look for textures and colors. How are these used to distinguish one side from the other in the game or individual pieces from one another (king vs. pawn, for example)? Talk about the pieces of the game and their characteristics. Talk about their names and function in the game. Look at size. Are some pieces the same size and others a different size? Is size related to importance?

CHESS AS SCULPTURE Introduce the term 3-dimensional. Discuss how most sculpture exist in 3-dimensions. Talk about creating pieces in the round; that something in 3-dimensions have a back, front and sides. One way to examine this is to have students bring in a photograph of themselves. The in groups or 2 or more ask students to talk about how the photograph is in 2-dimensions but their bodies are in three. Examine space. Explore negative and positive space. Look at individual pieces for balance and the ability (and need) for individual chess pieces to stand by itself. Discuss ways to achieve this.

CRAFTSMANSHIP Talk about the care needed during production to make chess sets that can be used. Discuss that care and attention are important.

DEMONSTRATION AND PRODUCTION

MATERIALS If the materials for the set are provided to the class, set up the work space and demonstrate the techniques best suited to the material chosen. If the materials to create the set are to be selected by the student, allow some time to experiment with materials. Please note: Sets can be made out of variety of materials and a variety of techniques. Please remind students that attaching things to playing pieces or the playing pieces to bases can be tricky and this should be explored in tandem with the material. Wire, yarn for tying, school glue or tabs into slots (with glue) are just some techniques that can work. Glue guns are quick, but the point of attachment does not hold up to handling and use. For most sets bases are not necessary, but pieces do need to have the ability to stand.

DESIGN Give the students plenty of paper and encourage them to “design” an image for each of the pieces in the set. They might want to make both sides of the set identical or as opposing sides. It is important that each student design all the pieces before starting the production work. (Note: In the case of “found object” sets, designing the set on paper may not work as students will just need to experiment with their materials.)

PRODUCTION Let the students begin creating the actual pieces based on their designs. In many ways this is the hardest part of the entire project as students can quickly tire of producing chess pieces. This is where craftsmanship counts. Making sixteen pawns may take longer then they expect. Keep encouraging them. All artists go through this.

ASSESSMENT Assess student work using lesson criteria. Appreciate the work for color, texture, and contrasts between pieces. Appreciate completeness of theme. Appreciate workmanship.
A BRIEF HISTORY OF CHESS

People have invented and played games for centuries. But of all of them, it is chess that has been the most popular over time, and is one of the longest lived games on the planet.

THE GAME

Chess was invented in India over a thousand years ago as a game of strategy. It probably evolved from the Indian game of chaturanga, played with two or four players and sometimes with dice.

Over time it spread East and West from India, changing as it moved to and from groups of people and place to place. In the East chess took different forms and had different rules. In the West it took a thousand or more years for it to travel from India through Persia and Arabia before it reached Europe. During that time, it slowly became the game we know today.

Europeans first learned the game from traders in the east or from the Muslims who once ruled parts of Spain or southern Italy. The name chess comes from an old French word that in turn probably came from an earlier Persian word: shah or king. The game quickly became a favorite throughout Europe. Europeans changed the name of some of the pieces to king, queen, bishop, knight and foot soldier (pawn). The Persian name rook (sometimes called castle) was confused with the Italian name for tower and so survived.

However the game was slow to play and sometimes took days to finish. There were also too many variations of the game. By 1500, efforts to shorten and standardized the game resulted in the game we recognize today. As Europeans colonized the world they took chess with them to all parts of the world.

THE PIECES

Very early pieces used by the Indians and the Persians were probably carved to represent the military: generals, soldiers, elephants, horses, ships, camels, forts and ramparts. When the Arabs began to play, they created simple shapes and forms abstracted from these older pieces. When chess was introduce to Europe, artists first just copied the Arab models, but before long began to decorate surfaces before eventually carved them in the round. Their subjects were kings, queens, knights, bishops, castles—the people and things they were familiar with in everyday life. Still other artists continued to make simple playing pieces as these were more practical for play.
THE VOCABULARY OF THE PIECES

KING
The king is the most important player in the game. There is one king to each side. All the other players are there to protect him. The king moves in short, careful steps; one square at a time in any direction.

- **Size**: Usually the king is the largest piece in the game.
- **Imagery**: The piece can be represented by a man (but not always), king, chief, sultan, emperor or czar. In other types of sets (such as animals or plants) it is represented by something important (such as a lion in an animal set). It has also distinguished by size. Sometimes, the king has props such as a crown, scepter and imperial robes.
- **Key Words**: Important. Regal. Boss. Powerful. The king can be majestic, haughty, and careful.

QUEEN
The queen (the piece hasn't always been female) is one of the more powerful pieces in the game. The queen can move in any direction, straight, diagonally, forward or backwards. There is one queen to each side. The piece can go as far as it is able before being stopped by the edge of the board or until it captures a piece from the opposing side.

- **Size**: The queen is often the second largest piece on the board.
- **Imagery**: In chess this piece has been represented by a woman (but not always), queen, sorceress but also a general, head of the army, and vizier. In other types of sets (such as animals or plants) it is represented by something important (such as a lion in an animal set). Size or distinguishing props also distinguishes the piece from the king.
- **Key Words**: Regal. Tall. Smooth. Gliding. The queen is regal, purposeful, powerful, mobile and resourceful.

BISHOP
The bishop is an important piece. The bishop moves diagonally backwards or forwards on the board on its square (white or black). The piece can go as far as it is able before being stopped by the edge of the board or until it captures a piece from the opposing side. The bishop serves as a guard and also as a mobile warrior since he can strike in from any direction. There are two bishops to each side.

- **Size**: The bishop is often the third largest piece on the board.
- **Imagery**: Often the bishop is portrayed as a religious figure with a bishop’s hat; sometimes he is portrayed as a mystical figure. He or she could be a Rabbi, Priest, Bishop, Medicine Man, Magician, or a special advisor.
**Key Words**: Secretive. Eccentric. Unexpected. Mysterious. Since the bishop operates on a diagonal, he seems strange and different.

**KNIGHT** The knight moves three squares in all in any direction with a right or left turn on the final square. So two steps in one direction followed by a right or left turn and another step. His move looks like the letter "L." There are two knights on each side. His primary duty is to guard the king.

- **Size**: The knight is usually smaller than the bishop, but can also be smaller than the rook (castle).
- **Imagery**: While regularly represented by a horse figure, the knight might be a knight in shining armor, an automobile, tank, submarine, animal and more. Generally this figure is associated with the armies of the king.
- **Key Words**: Horse-like. Angled move. Guard. Warrior. This figure is the protector, soldier and guard.

**ROOK (CASTLE)** The rook moves forwards and sideways; either a short or long distance. It moves in straight lines either sideways, backwards or forwards on the board. The piece can go as far as it is able before being stopped by the edge of the board or until it captures a piece from the opposing side. There are two rooks to each side. Rook is a very old name for this piece. It is borrowed from Persian (rokh) and Sanskrit (rath) meaning “chariot.”

- **Size**: The rook can equal in size almost any piece on the board except perhaps the king.
- **Imagery**: This piece often represents the castle, fortress or home of the king and his armies. It has been represented as a tower, wall, house or hut as well as an elephant. In some sets, they are animals with towers on them.
- **Key Words**: Tall. Strong. Stiff. Immovable. The rook is mobile, but must stay to the straight and narrow. He is stiff and proper.

**PAWN** The pawn moves forward, one step at a time (except for their first move which can be two squares). This piece is the least in power but the most in numbers. The pawn is the least (and most) important piece on the board. It represents the foot soldiers or the masses. There are eight pawns on each side. They are critical to the game as they can become a queen if they make it to the other side. They are also used defensively to protect the king. They can be “road-blocks” to other pieces or can take opponents diagonally left or right. This is another old term, and comes from the Old French word paon, which comes from the Medieval Latin term for foot soldier.

- **Size**: Pawns are often the small pieces on the board.
- **Imagery**: The pawn is usually represented by foot soldiers but can also be peasants, workers, or groups of people. As animals or other things, they are usually represented by the least in stature (such as mice instead of lions) but usually something that can surprise.
- **Key Words**: Peasant. Worker. Shuffle. Limited. Surprising. They have a plodding, but effective defense. The pawn is modest and humble. These pieces represent the everyday person.
THE DESIGN AND PRODUCTION OF CHESS SETS

It is not necessary for students to have advanced skills in art to create a chess set. Sets can be made very simply from a wide variety of materials. Any student can create a great set given supplies and ample room to experiment. Nor is there a lack of subject matter. Students’ lives today are filled with all sorts of material they can draw on to create a chess set. Stories, books and television will provide plenty of inspiration. In truth, students will have a hard time limiting their subject matter.

TEAMING UP OR NOT TO TEAM UP  Students can design and make a set of their own or work in a team of 3-4 other students to create a set. The one teaches self-discipline to carry the project through to completion. The other teaches cooperation and encourages the development of communication skills.

DESIGN CHALLENGES There are three basic challenges that your students will need to meet in designing and making a chess set:

- They need to create pieces that look distinct from each other. In other words, the king, queen, bishop, knight, rook and pawns must be easily recognizable from each other.
- The student must devise a way to make the pieces balance and stand on their own.
- Creating all 32 these pieces of the set can be repetitive work (especially in the case of the pawns). So the challenge here is perseverance.

Obviously, there are other sorts of challenges depending upon the materials students use or whether they work as individuals or as teams. Individuals bear the brunt of the design and production, but have total control over the design part of the project. Teams on the other hand are able to pull their resources, but must be able to work as a group.

MATERIALS The variety of materials that can be used to create chess sets is endless. Chess pieces in the collection at Maryhill Museum of Art are made of ivory, bone, wood, clay, porcelain, plastic, paper, sea shells, horn, metal, papier-mâché, glass, nuts and bolts and wire. Student sets can be easily created from a wide assortment of materials which are readily found (recycled) or use a variety of art media.

PAPER

- Students can fold, tear, punch or cut paper.
- Paper can be glued, sewn, stapled or students can use tabs and slots to hold bits and pieces together. Stickers can be used to hold things together or to decorate. (Don’t forget office supply stickers such as hole-reinforcers, dots, and labels that come in a variety of sizes and colors.)
- Depending on the quality of the paper, it can be colored or painted.
- Students can create bases out of thin cardboard or even recycled file folders (cut into any shape) into which paper chess men can be glued, inserted (tab and slot).
Origami (the Japanese technique of folded paper shapes) could be used to create a set of animals or other forms.

OTHER

- Wood blocks, pieces or old spools of varying sizes (representing the king down to the pawn) can be glued together. Balsa wood or various commercially available carving foams can be used to carve. It can also be cut and glued into interesting shapes. Surfaces can be decorated with a variety of media.
- Chess sets could be easily modeled from clay or other commercially available modeling compounds. Clay can be fired or students can also coat dried clay works in white (school) glue for some durability.
- Wire can be bent into shapes to create highly unusual chess pieces. These can be embellished with beads or other bits of found objects.
- Chess sets could be made from recycled materials—artists sometimes say “found objects.” Beads, small cardboard cartons, coins, egg cartons, buttons, nuts/bolts, ribbons, fabrics, and anything else you might be able to find can be used.

A WORD ABOUT ATTACHING BITS AND PIECES If a chess piece is made up of various components or has added embellishments, take some time with your students to explore techniques on how pieces or embellishments can be attached.

- White (school) glue is the best for gluing most materials. It sets well and dries clear. This does take some time for the glue to set. Patience is required. Large paperclips or rubber bands can hold some pieces together until glue sets.
- Tab and slot systems can be easily made in a variety of materials—the tab created on the piece to be added and the slot made in the piece that receives the tab. Long tabs with two or more cut slots hold better but do take a little more time. Tab and slot systems can be used in tandem with glue.
- Wire, yarn, bits and pieces of fabric can be tied or poked through materials (hole-punches can be used to make holes) to attached elements together. Some of these can also be beaded.
- Needle and thread can be effective.
- Hot glue and rubber cement: While the immediate results are satisfying, pieces made with hot glue or rubber cement do not hold up well to handling. This can be especially frustrating experience for students planning on playing the game with the set they make.
CURRICULUM APPLICATIONS

Taking time out in the classroom to make chess sets is not only a valid and exciting art experience for students but can enhance and add to other discipline studies. The following are only a few ways of incorporating this activity in other disciplines in the classroom. There are probably many others.

GEOGRAPHY Clearly, chess sets lend themselves very well to studies of geography. Looking at sets and finding out where they came from in the world can be a good way to introduce the use of maps and explore other cultures.

HISTORY AND SOCIAL STUDIES Chess sets are made by people from all over the world. Just about every culture makes sets and many of them play as well. For instance, in Maryhill’s permanent collection there are chess pieces which reflect material culture (African sets show traditional dress and buildings) and historic events (American Civil War or Nixon vs. McGovern sets). Students can be encouraged to make sets of some particular aspect of world culture or history that they are studying at the time.

MATH Chess sets can be useful in teaching math skills, especially counting and multiplication skills. For example, on one side of a chess set there are 16 pieces: 1 king and queen, 2 bishops, 2 knights, 2 rooks and 8 pawns. Double them and create the other side. Problem: If all of your pawns are identical on both sides of the set, how many do the students need to make? To create a chess board for the set, students will need to determine how many squares are in a board (8 x 8 = 64). Squares as shapes can also be demonstrated with chess. Not only can students discover that a chess board is made up of small squares, but that together they make one larger square. Creating a chess board can provide an experience in measuring since rulers are needed to make the squares.

NATURAL HISTORY/SCIENCE The natural world is a very traditional subject matter for chess sets. Sets in the collection at Maryhill Museum have dogs, cats, cattle, horses, elephants, walrus, seals, giraffes, lions, etc. There are sets of insects, sea creatures, and plants. Additionally, many sets are carved or made of natural materials that include stone, bone, horn and ivory. Students could discuss the issues related to the conservation of the world’s wildlife species and the use of material that can only be gathered by the destruction of the animal. For example the use of elephant ivory has been banned in the United States since 1989.

LITERATURE There are rich mythologies and stories associated with chess sets to explore. For example, in the collection at Maryhill Museum of Art, the East Indian sets often depict the stories of Prince Rama and his battles against evil, as told in the epic 3rd century B.C. poem the Ramayana. European folk tales are represented by sets showing the characters from Reynard the Fox (a European trickster figure) in the collection at the museum. Sets are often designed and made based classic fiction or movies. The museum has two different kinds of Alice in Wonderland sets in the collection. It is interesting that some of the original illustrations by Sir John Tenniel for Lewis Carroll’s book Through the Looking-Glass, and What Alice Found There are based on traditional 19th century British playing sets.

WRITING Consider writing poetry or stories based on chess with your students. The game of chess has a rich language imbued with symbolism that can result in very expressive poems or stories.
ART TERMS AND VOCABULARY

ART HISTORY The study of art within a cultural and historical context as well the study of the artistic contributions which individual artists make to their society and culture.

COLOR Hue is the color itself – red, green, blue etc. Primary colors—red, yellow and blue make up the primary colors. Theoretically all other colors can be made from them. Secondary colors are those made from the primary colors – green, purple, and orange. Cool colors are those hues associated with cold – blue and green. Warm colors are those associated with heat – red and orange. Intensity is the brightness or dullness of a color. Complementary colors are those that are opposite of each other on the color wheel – orange and purple.

COMPOSITION The organization of art forms and elements within a work of art.

CONTRAST The opposition or juxtaposition of different forms, lines, or colors in a work of art to intensify each element's properties and produce a more dynamic expression. Examples: light and dark; rough and smooth.

MEDIA AND TECHNIQUE The materials and related techniques that are used to make a work of art. For example, clay would be the media and modeling the technique.

SCULPTURE Three-dimensional (in-the-round) or two-dimensional (as in a relief). Sculpting is the act of processing (either by carving, modeling, welding or gluing) soft or hard materials into a work of art. Subtractive sculpture is the process whereby an artist creates a work of art by removing material. In working with materials that can be carved—such as ivory, bone and wood—material is removed. Additive sculpture is the process whereby an artist creates a work of art by adding material. In working with clay, welding, gluing or assemblage—material is added. Found object sculpture is a piece of sculpture created from items literally “found” by the artist. This might include recycled materials, objects found in second hand shops, or hardware from the garage or basement. An example might be a chess set made from different types and sizes of salt and pepper shakers.

SPACE Volume that is available for occupation by a shape or form. It can be a negative or positive space. Negative space is that space surrounding an object in a work of art. A positive space is the area where an object exists.

SUBJECT MATTER The thing or things being depicted. It can be about the thing seen or the thing what is seen represents. The content or idea behind the work of art.

TEXTURE The tactile quality or appearance of the surface of a work of art. Textures can be smooth, rough, glossy, crinkled, embossed, etc.

THREE-DIMENSIONAL The state of any object which exists in real space. A piece of sculpture is three-dimensional, as is a chess piece or a human being.
BIBLIOGRAPHY

The following books provide some good information on chess pieces as well as the history of chess. There are many excellent photographs as well. A great deal of information and photographs on chess and chess playing pieces can be found online.


PowerPoints: *Chess Sets a Brief History* and *Student Designed Chess Sets*, 2013, Maryhill Museum of Art, www.maryhillmuseum.org

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This Educator’s Guide was produced in conjunction with the upcoming exhibition *Cardboard, Clay and Crayons: Chess Sets by Young Northwest Artists* and its related programs that is generously supported by the CHARLOTTE Y. MARTIN FOUNDATION. The exhibition is from May 1 to July 31, 2014 in the M.J. Murdock Charitable Trust Education Center, Maryhill Museum of Art. For more information see http://www.maryhillmuseum.org/2013/call-for-entry-chess-sets-by-young-northwest-artists