

Choice Boards

Tic-Tac-Toe

Menu Boards

Tic-Tac-Toe

Tic-Tac-Toe choice boards give students the opportunity to participate in multiple tasks that allow them to practice skills they've learned in class or to demonstrate and extend their understanding of concepts. From the board, students either choose or are assigned three adjacent or diagonal tasks to complete.

Choice boards address student readiness, interest, or learning preferences. They are easily adapted to a subject area.

Steps:

1. Identify the outcomes and instructional focus of a unit of study.
2. Use assessment data and student profiles to determine student readiness, learning styles, or interests.
3. Design nine different tasks.
4. Arrange the tasks on a choice board.
5. Select one required task for all students. Place it in the center of the board.
6. Students complete three tasks, one of which must be the task in the middle square.
The three tasks should complete a Tic-Tac-Toe row.

Adaptations:

- Allow students to complete any three tasks—even if the completed tasks don't make a Tic-Tac-Toe.
- Assign students tasks based on readiness.
- Create different choice boards based on readiness. (Struggling students work with the options on one choice board while more advanced students have different options.)
- Create choice board options based on learning styles or learning preferences. For example, a choice board could include three kinesthetic tasks, three auditory tasks, three visual tasks.
- Author Rick Wormeli offers the following Tic-Tac-Toe board based on Gardner's (1991) multiple intelligences.

Interpersonal Task	Kinesthetic Task	Naturalist Task
Logical Task	Student Choice	Intrapersonal Task
Interpersonal Verbal Task	Musical Task	Verbal Task

Sources:

- Heacox, Diane. "Promoting Student Independence and Responsibility in Academically Diverse Classrooms." *2005 ASCD Annual Conference*. Orlando, FL. April 2005.
- Wormeli, Rick. *Fair Isn't Always Equal: Assessing & Grading in the Differentiated Classroom*. Portland, ME: Stenhouse, 2006, pages 65-66.

Tic-Tac-Toe

Tic-Tac-Toe Examples

Larisa Bailey, Lead-Deadwood Middle School, created the following Tic-Tac-Toe Choice Board for a 6th grade math unit on fractions, decimals, and percents. (See page 7 for Bailey's KUD elements.)

Define fraction, decimal, and percent. Draw a picture to illustrate each word.	Complete a chart of conversions for fractions, decimals, and percents.	Play the game Request or Request Challenge. (The game is like Go Fish, but you need to match up fractions, decimals, and percents.)
Complete lesson using equivalent fraction, decimal, and percent dominoes.	All Notetaking Guide 5.7 5.8 8.5	Illustrate ways in which fractions, decimals, and percents are used in everyday life. You need two examples for each.
Color equivalent squares to reveal a hidden picture of an endangered species!	Play the game Recall or Recall Challenge. (The game is like Concentration, but you need to match up fractions, decimals, and percents.)	Complete the Hidden Name Puzzle and then create a puzzle of your own.

Lead-Deadwood High School teachers Kim Fundaun, Laura Shuck, and Brook Kilian developed a choice board for a 9th grade general science unit on heredity and genetics. (See page 7 for their KUD elements.)

Summarize Facts or ideas which are important in determining genetics	Classify Dominant and recessive traits as they relate to Mendel's Pea Plants	Draw Meiosis and mitosis
Predict What a person might look like using the Punnett square	Unit Test	Show A model of a DNA strand with a key
Survey Genetics – hair color, eye color – graph your findings in a chart of your choice (Pie, bar, line, etc.)	Interview A person whose career or hobby deals with genetic/reproduction	Judge 3 websites on genetics and heredity

Tic-tac-toe

Tic-tac-toe, also known as Think-tac-toe, is a differentiation tool that offers collection of activities from which students can choose to do to demonstrate their understanding. It is presented in the form of a nine square grid similar to a tic-tac-toe board and students may be expected to complete from one to “three in a row”. The activities vary in content, process, and product and can be tailored to address different levels of student readiness, interests, and learning styles. The center square may be left open for the student to select an activity of their own. Tic-tac-toe activities may be given to every student in the class, higher ability students for extension activities, or lower students for review and practice. Involvement in this strategy encourages independent learning. Teachers should check in with students periodically and require students to keep a log of their progress.

In place of lengthy activities, the tic-tac-toe board may also be used with shorter, open-ended questions posed at varying levels of Blooms Taxonomy.

Example Tic-tac-toe board for reviewing a math unit:

Write clear directions for performing the math computation skills from this unit	Solve two of the five challenge problems	Create a math rap or rhyme that will help someone remember a concept from this unit
Create three word problems from information learned in this unit	Student Choice Activity (with teacher approval)	Define the unit’s vocabulary words with sketches or drawings
Complete the review problems in the text book	Develop a game using skills learned in this unit	Identify four ways the concepts in this unit are used in the real world

For additional sample Tic-tac-toe boards, please see the following resources, available in the PACE department at Derry Village School.

Coil, C. (2004). *Standards-Based Activities and Assessments for the Differentiated Classroom*. Pieces of Learning.

Winebrenner, S. (2001). *Teaching Gifted Kids in the Regular Classroom*. Minneapolis, MN: Free Spirit Publishing Inc.

Novel Think-Tac-Toe

Another choice board which is a variation of the Tic-tac-toe board is called Novel Think-Tac-Toe developed by Carol Ann Tomlinson. In addition to offering nine choice activities, Novel Think-Tac-Toe is a differentiation strategy designed for students to explore character, setting, and theme in novels of their choice. Two versions of the grid are used to make this a tiered strategy in order to address students at different readiness levels. To view samples of this choice board, please consult the following book, available in the PACE department at Derry Village School.

Tomlinson, C. (2003). *Fulfilling the Promise of the Differentiated Classroom*. Alexandria, VA: Association for Supervision and Curriculum Development, (ASCD).

Tic-Tac-Toe Menu

1.	2.	3.
4.	5.	6.
7.	8.	9.

Directions: Choose activities in a tic-tac-toe design. When you have completed the activities in a row—horizontally, vertically, or diagonally—you may decide to be finished. Or you may decide to keep going and complete more activities.

I choose activities # _____, # _____, # _____, # _____

Do you have ideas for alternate activities you'd like to do instead? Talk them over with your teacher.

I prefer to do the following alternate activities: _____

Name: _____

Date Received: _____ Date Due: _____

Date Completed: _____







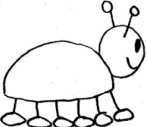

Name: _____

“Think-Tac-Toe”

Select and complete activities from the choice board in a tic-tac-toe design. When you complete the activities in a row you may decide to be finished. Or you may decide to keep going and complete more activities.

<p>Can you design and draw a building using only squares? What about using only triangles? Circles? Try it!</p>	<p>Use a Venn Diagram to compare and contrast two monuments of your choice.</p>	<p>Design and draw an original monument celebrating a person, place, or event of your choice.</p>
<p>Is there one monument that means more to you than the others? In your writer’s notebook, write about it and how it makes you feel.</p>	<p>Pretend you and a friend are visiting the Washington Monument. What would you say to each other? Write a skit about your conversation. Act it out using puppets.</p>	<p>Select your favorite person who designed a monument. Draw a picture of him or her next to the monument he or she designed. Write why this person is your favorite.</p>
<p>Design a building using a rectangle, square, triangle and circle in KidPix. You may use more than one of any shape. Name your building. Print your design.</p>	<p>Using the shapes template on your computer desktop, draw something you spy in your classroom that is a circle, square, rectangle or triangle. Write the name of the object, if you can.</p>	<p>Play the Patterns game in Logic Blocks.</p>

















CHOICE BOARD FOR MULTIPLE INTELLIGENCES

<p style="text-align: center;">Verbal/Linguistic</p> <ul style="list-style-type: none"> • Write instructions • Keep a personal journal • Create a poem • Create TV ads • Read stories to others • Retell in your own words • Teach concept mapping • Create crossword puzzle 	<p style="text-align: center;">Logical/Mathematical</p> <ul style="list-style-type: none"> • Create a time line • Compare/contrast ideas • Create an outline for a story • Design a map • Decipher codes • Create patterns • Design a game to show... 	<p style="text-align: center;">Visual/Spatial</p> <ul style="list-style-type: none"> • Create a poster • Draw a map • Create visual diagrams • Draw from different perspectives • Create a comic strip • Graph results of a survey 
<p style="text-align: center;">Interpersonal</p> <ul style="list-style-type: none"> • Tell stories • Teach a cooperative game • Role play a situation • Discuss and come to a conclusion • Survey or interview others 	<h1 style="font-size: 4em;">Free Choice</h1>	<p style="text-align: center;">Body Kinesthetic</p> <ul style="list-style-type: none"> • Make up a cooperative game • Practice physical exercise • Conduct hands-on experiments • Construct a model or representation 
<p style="text-align: center;">Musical Rhythmic</p> <ul style="list-style-type: none"> • Create raps • Play musical instruments • Write to music • Teach dance steps • Make up sounds and sound effects • Write a jingle • Create rhymes that... 	<p style="text-align: center;">Naturalist</p> <ul style="list-style-type: none"> • Collect and categorize data, materials, or ideas • Discover or experiment • Take a field trip • Study means of survival • Adapt materials to a new use • Label and classify 	<p style="text-align: center;">Intrapersonal</p> <ul style="list-style-type: none"> • Keep a personal journal • Write about personal experiences • Think about and plan... • Review or visualize • How would it feel to... • Imagine and write about the future 

Name _____

Figurative Language Choices Board

Directions: Choose two activities from the choices below. Make sure your choices correspond with the two symbols your teacher assigned you.

<p>Perform a 30-second radio advertisement to encourage people to use oxymorons when they talk.</p> 	<p>Perform a one-minute puppet show that teaches about apostrophes.</p> 	<p>Make a WANTED poster using at least two metaphors. Include a picture.</p> 	<p>Write a letter to a friend using at least five different kinds of figurative language in the text.</p> 
<p>Interview an idiom of your choosing and write the transcript of the interview.</p> 	<p>Create at least four newspaper headlines using an oxymoron in each.</p> 	<p>Create a picture dictionary for these terms: <i>idiom, simile, metaphor, paradox, personification, oxymoron, and apostrophe.</i></p> 	<p>Write at least three jokes or puns using one kind of figurative language in each.</p> 
<p>Make a comic strip with three characters using different kinds of figurative language.</p> 	<p>Write a short story about a homework machine. Include one simile, one personification, and one metaphor.</p> 	<p>Make a Venn diagram that compares and contrasts metaphors and similes. Write at least three sentences to summarize the diagram.</p> 	<p>Create a set of six idiom flash cards. Be sure to include the answers on the backs of the cards.</p> 
<p>Write one scene of a play that shows personification for at least three characters.</p> 	<p>Act out four figurative language terms for a friend. Have your friend guess the terms you are acting out.</p> 	<p>Create your own crossword puzzle that includes these terms: <i>idiom, simile, oxymoron, metaphor, personification, paradox, and apostrophe.</i></p> 	<p>Create three mathematics story problems for others to solve using a different figurative language descriptor in each problem.</p> 

Menus

A menu offers students a way to make decisions about what they will do in order to meet class requirements. A menu could be for a single lesson, a week-long lesson, or even a month-long period of study. Once the teacher has decided on what the essential understandings and/or skills are, she/he can begin to create a menu.

Steps:

1. Identify the most important elements of a lesson or unit.
2. Create an imperative or required assignment or project that reflects the minimum understanding you expect all students to achieve.
3. Create negotiables which expand upon the main dish or imperative assignment or project. These negotiables often require students to go beyond the basic levels of Bloom's Taxonomy. For example, they often include activities that require synthesis, analysis, or evaluation.
4. Create a final optional section that offers students the opportunity for enrichment. The optional section often reflects activities that students can use for extra credit.

Author Rick Wormeli suggests placing the menu options in a restaurant menu style (see below) that could include appetizers, a main dish, side dishes, and even desserts. He suggests the following format.

Appetizers (Negotiables)

- A list of assignments or projects
- Students select one item to complete

The Main Dish (Imperatives)

- An assignment or project that everyone must complete

Side Dishes (Negotiables)

- A list of assignments or projects
- Students select two items to complete

Desserts (Options)

- Optional but irresistible assignments or projects
- Options should be high interest and challenging
- Students choose one of these enrichment options



Sources:

- Wormeli, Rick. *Fair Isn't Always Equal: Assessing & Grading in the Differentiated Classroom*. Portland, ME: Stenhouse, 2006, pages 62-65.
- . Workshop Presentation. *2nd Annual SDE National Conference on Differentiated Instruction: Theory Into Practice*. Las Vegas, NV. 18 July 04.

Menus

Todd County teacher, Deanna Brodkorb, adapted Wormeli's menu suggestions to fit the needs of her high school journalism class. Brodkorb included aspects of the Layered Curriculum® approach (see page 7) into her project menu choices. By completing just the Main Dish items students could earn a C. The Main Dish includes the basic information Brodkorb wanted all students to know, understand, and do. Brodkorb adapted the dessert portion and made it a requirement for an A grade.

The Journalism Café'

Complete all items to earn a C grade.

- 1 newspaper story that includes a photograph, graphic, or video clip
- Your newspaper story converted into a broadcast story
- 2 PhotoShops, either a continuance of tutorials or original projects
- 4 journals (equal to ½ typed page)
- Participation in the production of all news videos

Side Dishes

Choose at least two side dishes to earn a B grade.

If you wish to earn an A grade, you must complete five different side dishes.

- Additional PhotoShop
- Additional newspaper story
- Additional broadcast story
- Editorial
- Editorial cartoon
- Advertisement design
- Photograph/graphic



Dessert

Complete one for an A grade.

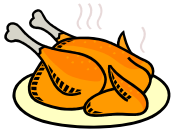
- Video tape an event
- PowerPoint (either stand alone or to be used in a video)
- Redesign of a newspaper masthead
- Sell advertisements
- Lay out two newspaper pages
- Write a script
- Create a personal video production

MENU PLANNER



Menu for: _____ **Due:** _____

All items in the main dish and the specified number of side dishes must be complete by the due date. You may select among the side dishes and you may decide to do some of the desserts items, as well.



Main Dishes (complete all)

1

2

3

4



Side Dishes (Select _____)

1

2

3

4



Desserts (Optional)

1

2

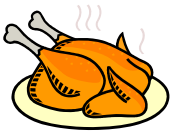
3

MENU CONTRACT

“Probability”

Due: _____

All items in the main dish and the specified number of side dishes must be complete by the due date. You may select among the side dishes and you may decide to do some of the desserts items, as well.



Main Dishes (complete all)

- 1 Complete the “meteorology simulation” on p. 88-89 of your textbook.
- 2 Create a list of 10 pairs of events. 5 pairs should contain events that are *dependent*; 5 pairs should contain events that are *independent*. Explain each classification.
- 3 Complete the “frequency table” assignment on p. 506-507 of your textbook.
- 4 Examine the attached list of functions and determine which functions represent probability distributions.



Side Dishes (Select 2)

- 1 Work with a partner to analyze the game of “Primarily Odd.” See your teacher for game cubes and further instructions.
- 2 Design a “game spinner” that has this probability distribution: $P(\text{red}) = 0.1$; $P(\text{green}) = 0.2$; $P(\text{blue}) = 0.3$; $P(\text{yellow}) = 0.4$.
- 3 Suppose a dart lands on a dartboard made up of four concentric circles. For the center of the board (the “bull’s eye”), $r = 1.5$; the remaining rings have widths of 1.5. Use your understanding of area and probability to determine the probability of 1) hitting a “bull’s eye” and 2) landing in the outermost ring.



Desserts (Select 1)

- 1 Figure the probability of “Murphy’s Law” and make a case for whether or not it should indeed be a “law.”
- 2 Use a frequency table to chart the colors that your classmates wear for a week. Then, use probability to predict how many students will wear a certain color on a given day.

Name _____

Quadrilaterals Menu of Options

Directions: Below you will find choices for projects as well as the points you may earn for successful completion of those projects. Choose enough projects for a possible grade of 100. You may also propose alternate projects or adjustments to the projects that are listed.

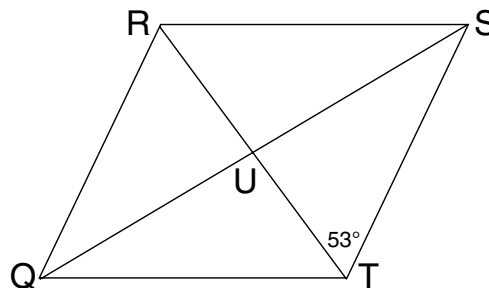
Full credit will only be given for outstanding work. Each project will be checked for accuracy, completion, adherence to directions, content, presentation (as in, how it looks or the quality of an oral presentation), neatness, and creativity.

Projects are due: _____

Project Choices

50 points each

- ▶ Draw a rhombus QRST with diagonals of lengths 12 units and 16 units. Calculate the perimeter of the rhombus. Determine the lengths of the diagonals of a square that has the same perimeter as the original rhombus. Assume that the measure of $\angle RTS$ in the original rhombus is 53° . Find the value of as many angles and segments as possible. Write a study guide regarding the definitions and theorems regarding rhombi and squares. Use the values you determined as examples in your study guide.



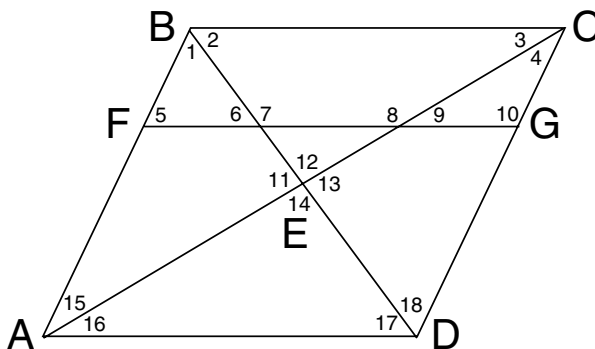
- ▶ Create a poster with the figures formed by the coordinates given. For figure 1 use (3, 0), (8, 1), (9, 4), and (4, -5). For figure 2 use (0, 2), (8, 1), (12, -6), and (4, -5). For figure 3 use (0, 2), (5.6, 5.2), (12, -6), and (6.4, -9.2). Then, write a description of each figure in which you identify the type or types of quadrilateral you are describing as well as how you came to your conclusions.
- ▶ On graph paper, create a constellation that includes a rhombus and a parallelogram. The sides of either figure cannot be parallel to the x- or y-axis. Identify the coordinates of the vertices of each figure (do not use sets of coordinates found anywhere else on this menu of choices). Use the definitions and/or theorems about each figure, along with analysis of those figures' coordinates to prove that you do in fact have a rhombus and a parallelogram. Consider finding the distance between coordinates or determining if the lines that go through the coordinates are parallel or perpendicular.

Quadrilaterals Menu of Options *(cont.)*

Project Choices *(cont.)*

40 points each

- ▶ Write a proof in the form of a poem to show that the diagonals of a rectangle are congruent.
- ▶ Create a picture that includes a rhombus and a bisected isosceles trapezoid. Identify the coordinates of the vertices of each figure. Also, identify the coordinates of the endpoints of the bisector of the trapezoid. None of the sides of either figure may be parallel to the x - or y -axis.
- ▶ Consider the figure to the right. $ABCD$ is a rhombus. \overline{BF} is congruent with \overline{CG} . The measure of $\angle CBA$ is equal to 124° . Find the measure of every numbered angle. Thoroughly explain your reasoning for each measurement you find.



30 points each

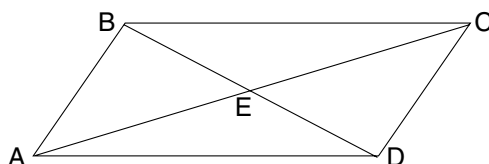
- ▶ Write a story in which the characters are the diagonals of a parallelogram, a rectangle, a rhombus, and a square. Have the diagonals talk with each other. In their discussion they should talk about, compare, and contrast their properties. For example, the diagonals of the parallelogram will explain that they do not have to be congruent while the diagonals of the square will explain that they must always be congruent. Four properties must be discussed by the diagonals of each type of quadrilateral. Hint—it may help to first make a chart showing the types of quadrilaterals in columns and the properties of the diagonals in rows.
- ▶ Fasten four congruent strips of paper with brads. Make sure that when you measure the distance between brads, a square is formed. Identify the measurements of the sides, diagonals, and angles of the square. Without unfastening the brads, move your strips so that one angle measures 70° . What are the two names of the second figure you formed? What are the measurements of the sides, diagonals, and angles? Draw the square that was formed. Identify properties of a square and give the measurements of your square with the appropriate properties. Draw the other figure that was formed. Identify one name for this second figure, its properties and the corresponding measurements. Identify a second name for this second figure, its properties and its measurements.
- ▶ Write a dialogue between two people discussing trapezoids. Include the definition of a trapezoid, an isosceles trapezoid, the parts of a trapezoid, and the median of a trapezoid. Also, include each theorem you have learned about trapezoids as well as four examples with sample measurements that show your understanding of the definitions and theorems.

Quadrilaterals Menu of Options *(cont.)*

Project Choices *(cont.)*

30 points each *(cont.)*

- ▶ Write a play, song, or rap about the relationships of the segments and of the angles of parallelogram ABCD with diagonals AC and BD, which intersect at point E. For example, include information such as the segment that is parallel to \overline{AB} (with the explanation that opposite sides are congruent), the angle congruent with $\angle BAC$ (with the explanation of how you know that), the measure of \overline{AE} compared with the measure of \overline{AC} (with the explanation of what you know about the diagonals of a quadrilateral), and pairs of angles that are supplementary (with the explanation of how you know that). Include at least 15 relationships and make sure you use the definition of a parallelogram as well as any theorems you have learned about parallelograms.



20 points each

- ▶ Create a design using parallelograms, rectangles, rhombi, squares, and isosceles trapezoids. Have the figures be adjacent to one another as if they were tiles on a floor. Color the figures so that each type of figure has its own color. On a separate sheet of paper, list each color, the figure that was shaded in the color listed, and the properties of that color.
- ▶ Create a *PowerPoint* presentation introducing parallelograms, rectangles, rhombi, squares, and trapezoids. For each figure include drawings, an introduction (definition) and further information (each theorem you have studied regarding that quadrilateral). Include any additional interesting facts.
- ▶ Find 10 examples of objects around you that are rhombi, rectangles, or squares. For each parallelogram, describe where you found the figure and why you think that figure was used instead of a different shape.
- ▶ Rework 10 problems that you have worked in your study of quadrilaterals. You must work at least one problem for each type of figure studied. For each problem, explain each property used and explain all steps you took to arrive at your answer(s).

10 points each

- ▶ Create a skit showing the classifications of the types of quadrilaterals.
- ▶ Create a multi-panel cartoon in which five parallelograms explain how they know that they are parallelograms. Include the five different ways to show that a given quadrilateral under certain conditions is a parallelogram.
- ▶ Create a picture book which includes the construction (compass and straightedge) of a parallelogram, rectangle, square, rhombus, and isosceles trapezoid. Use one construction per page but tell some sort of story with your book.