

Sample Tic-Tac-Toe Boards

Example A: Solar System		
<p>Calculate how much you would weigh on each of the planets. Graph your results.</p>	<p>Facilitate a class discussion to set the criteria for deciding which classmates should be allowed to go on a voyage to the moon.</p>	<p>Compare and contrast characteristics of Earth and Venus using a Venn diagram. For an extra challenge, choose one other planet and make the comparison three-way.</p>
<p>Take analog or digital picture of constellations you see in the night sky. Use the pictures in an illustration that demonstrates the location and relative size of each constellation.</p>	<p>Imagine that you are on a voyage to the planet Mars. Write a play that would reflect what you might see, hear, and be thinking about on your way.</p>	<p>Create a short melody based on at least three different pitches for each of the planets and explain why it is representative of that planet.</p>
<p>Write a poem about why humans yearn to explore space.</p>	<p>Design a rocket that will suit you in space travel and explain why you chose the specifications you did.</p>	<p>Make a model or poster presentation that demonstrates what the greenhouse effect on a planet is.</p>

Example B: Geometry

<p>(B)</p> <p>Select objects from the classroom that could represent a point, a line, a line segment, a ray, and a plane. Create a poster showing these objects, and label them correctly.</p>	<p>(B)</p> <p>Form a group of at least 12 students. Make a circle. Use additional students to “act out” the following concepts within the circle: a radius, a diameter, a chord, and a central angle. Choose at least two other geometric concepts to act out.</p>	<p>(A)</p> <p>Using one or more geometric shapes, design a fabric pattern for a bedspread, curtains, couch fabric, or shirt.</p>
<p>(A)</p> <p>By flipping through math books, work sheets, newspapers, or magazines, locate at least ten quadrilaterals. Cut them out (or copy them), and create a chart that displays them. Use a protractor to measure each angle, and label each quadrilateral. Try to determine what rule about angles is true for all quadrilaterals.</p>	<p>(B)</p> <p>Make up a rap, song, jingle, or chant that clarifies the differences between the terms “similarity” and “congruence,” or select two other terms you find difficult to distinguish, and use them instead.</p>	<p>(A)</p> <p>Watch at least ten music videos. Your objective is to rank the videos according to their visual appeal and according to their use of symmetry in the “choreographing” of the video. Turn the sound off and focus solely on visual elements of each song. Make a chart to keep track of appeal and symmetry. Display your results. Evaluate if there is a correlation between symmetry and eye appeal.</p>
<p>(B)</p> <p>Use the clock face to determine the degrees in the angles between the minute hand and the hour hand at 10 different times of your choice. Test your estimate with a protractor. Try to create as many different angles as you can.</p>	<p>(A)</p> <p>Using a large protractor (the kind a teacher uses on the blackboard), measure the angle at which branches are growing from ten tree trunks in a wooded area. Measure branches from ten different trees in a sunny, open area. Find the mean and mode of the angle measurements of each set of branches. Write a paragraph explaining what you found when you compared the mean and mode of “sunny” branches to “shaded” branches.</p>	<p>(A)</p> <p>Write a limerick or poem about an unusual geometric shape or geometric object you have identified. Include at least two correct facts about the object.</p>

Note: The labels of (A) for at grade level and (B) for below grade level are **for planning purposes only!** A DI teacher would never include such labels in an actual Tic-Tac-Toe Board.

Example C: Rain Forests

(A) Pretend that you are a scientist living and working in a rain forest. Write a journal describing why you are there, what you are doing, and why it's important to science.	(A) Research to find out how high the canopy of the rainforest grows. Compare it to other structures in your own world (your own house, trees in your yard, tall buildings in town, etc.). Draw a chart showing the relative differences in height.	(A) Predict people's reactions to a law being passed that would halt all of the destruction of the rainforest, and discuss some of the major arguments you might hear from both sides of the debate.
(B) Describe the different components or levels that make up the rainforest (floor, understory, canopy, etc.). Create a poster that demonstrates this information.	ALL Find five products in the grocery store that originated in the rain forest.	(B) Make a booklet that includes a picture and description about one rain forest animal from each class: (1) insects, (2) arthropods, (3) fish, (4) reptiles, (5) birds, and (6) mammals.
(A) Invent a new creature that would be able to adapt to the changes happening in the rainforest. Classify it as a reptile, amphibian, mammal, or bird, and explain how its characteristics compare with existing endangered species.	(B) Based on an Internet search, discuss different dances done by at least one group of people who are indigenous to the rain forest. Explain what these dances communicate and why they are culturally important.	(A) Research what scientists and activists are doing to save the rain forest. Devise your own program to save the rain forests, and make a flyer to promote your plan.

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References:

- Hendrickson, J., & Hendrickson, R. (2003). Solar System. In A. C. Rule & L. H. Lord (Eds.), *Activities for Differentiated Instruction Addressing All Levels of Bloom's Taxonomy and Eight Multiple Intelligences* (pp. 9-12). Oswego, NY: State University of New York at Oswego.
- King-Shaver, B., & Hunter, A. (2003). *Differentiated Instruction in the English Classroom: Content, Process, Product, and Assessment* (pp. 74-76). Portsmouth, NH: Heinemann.
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