Stop the yawns!

Put an end to indifference. Spice up reviews and practice skills with a game or two!

Students will:

- Practice grade-level appropriate math skills.
- Develop mathematical reasoning.
- Move flexibly between concrete and abstract representations of mathematical ideas in order to solve problems, model mathematical ideas, and communicate solution strategies.

Use the following games to help students practice the following [and other] grade-level appropriate math skills.

Note: Some skills are repeated in multiple age groups and grades, and so can be worked on with multiple agegroups.

2nd Graders:

- Guess the number
- Coordinate graphs
- Word problems
- Multiplication tables up to 5
- Multiplication tables up to 10
- Divisors and quotients up to 5
- Divisors and quotients up to 10

3rd Graders:

- Working on multiplication and division facts up to 12
- Coordinate graphs
- Graph points on a coordinate plane
- Guess the number
- Word Problems
- Addition, subtraction, multiplication, and division terms

4th Graders:

- Practicing multiplication and division facts to 12
- Multiply 1 digit numbers by larger numbers.



- Numeric patterns: word problems
- Graph points on a coordinate plane
- Guess two numbers based on sum, difference, product, and quotient
- Mean, median, mode, and range
- Number sequences involving decimals

5th Graders:

- Practicing multiplication and division facts to 12
- Add, subtract, multiply, and divide whole numbers
- Multi-step Word Problems
- Even and odd arithmetic patterns
- Put integers in order
- Graph points on a coordinate plane

6th Grade:

- Add, subtract, multiply, and divide whole numbers, fractions, integers, mixed numbers, money amounts, and decimals
- Word problems with multiple steps or extra or missing information
- Reduce fractions to simplest form (Ex. Write 4/10 in simplest form)
- Coordinate graphs review

7th Grade:

- Add, subtract, multiply, divide, and simplify whole numbers, rational numbers, fractions, integers, mixed numbers, money amounts, and decimals
- Word problems with multiple steps or extra or missing information

8th Grade and higher:

- Add, subtract, multiply, divide, and simplify whole numbers, rational numbers, fractions, integers, mixed numbers, money amounts, and decimals
- Word problems with multiple steps or extra or missing information

- Multiplying two digit numbers by two digit numbers.
- Divide larger numbers with one digit divisors.
- Divide by two digit numbers.
- Word Problems
- Quadrants
- Make Predictions
- Fractions
- Location and relative coordinates
- Reduce fractions to simplest form (Ex. Write 4/10 in simplest form)
- Calculate mean, median, mode, and range
- Graph points on a coordinate plane
- Coordinate graphs as maps
- Relative coordinates
- Fractions
- Calculate mean, median, mode, and range
- Relative coordinates
- Points on coordinate graphs
- Quadrants and axes
- Coordinate graphs as maps
- Calculate mean, median, mode, and range
- Relative coordinates
- Points on coordinate graphs
- Quadrants and axes
- Coordinate graphs as maps

•

Matamoscas!

A fun and quick way to review math facts [aka. Kill the flies]. In this review game, students race to the board to swat the answers to questions posed by their teacher.

The game can be adapted for all subjects in part because all kinds of answers can be used -- numbers, shapes, and so on. The game can also be applied at all levels by adjusting the number of questions and answers, their difficulty, the degree of similarity between them.



- Two Fly Swatters
- 1. Divide the group into two teams.
- 2. Prior to the beginning of the game have all of the answers you are going to use written up on the board [scattered randomly across your board]. The number of questions will vary according to your preferences and the grade level. You might begin with ten questions and answers, use them, and then start over with a new set of ten, and so on. Write the answers in random order on the whiteboard.
- 3. Choose one student from each team to come up to the front of the room and stand in front of the board with their fly swatters.
- 4. When you are ready to play, divide the students into two teams in lines. Read a question from your list. At your signal, the two students who are first in their lines run to the chalkboard and swat what they believe is the answer to the question. Each player must swat only one answer, and the first player to swat the correct answer earns a point for his team and erases the answer off the board.
- 5. If neither student chooses the correct answer, read the question again for the next students in line.
- 6. The students go back to their group and choose a new player to go up to the front.
- 7. The team with the most points at the completion of the game is the winner.

Variations

Add to the challenge of this game by reusing some answers!

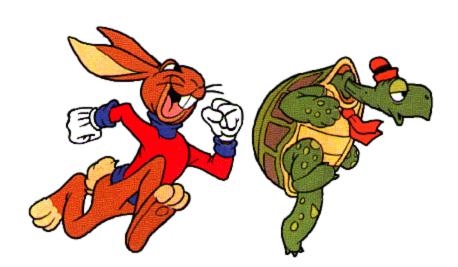
- When a student is the first to find a correct answer, you may require him or her to explain why it is the appropriate response before a point is awarded, or you could award a second point for an accurate explanation of the proper answer.
- Pose difficult questions that the students can discuss as a team, with one member of each team in turn racing to "swat" the correct answer.

Race Time!

Will slow and steady win the race, or does their team need a faster pace? Either way, better watch out for math mistakes!

Materials Needed

- Chart Paper
- Grid
- Markers/Pencils/Crayons



Before the Lesson

Create on the board or on chart paper a grid numbered across 1 to 9 and down 1 to 9. The grid's squares should be large enough for students to write a readable number in.

The Race

Arrange the class into two or more teams and provide each team with a grid sheet. Decide whether you want students to practice addition, subtraction, or multiplication facts in this game of speed. When the chart is set, say "Go!" One person on each team races to the board and fills in any square on the math facts grid. For example, if you are reinforcing addition facts, the student writes the number 6 in the square at which the 4 column and the 2 row meet (4 + 2 = 6).

Emphasize that it is important for all members of a team to watch what their teammates write. If any student on either team sees a mistake made by a teammate during the game, he or she can use his/her turn to correct that error.

If you make this a "quiet game," it will hold down the "ooooo's" that are sure to signal an error, and also further emphasize the importance of team members paying close attention to one another.

The first team to fill in all the squares on their grid is the winning team *if* all the answers on their chart are correct.

Extend the Lesson:

Use the completed charts to reinforce the concepts being taught. For example, if you use this. game to reinforce multiplication facts, you might emphasize how the charts show the pattern made by the 5 tables or 7 tables

F				

Sequence Surprise!

Will you choose...wisely?

A little luck and a lot of strategy are in play with Sequence Surprise, a game that has students place numbers in what they hope will be perfect sequential order.

Materials:

- Paper
- pencils
- the slips of paper with numbers 1-25 cut out

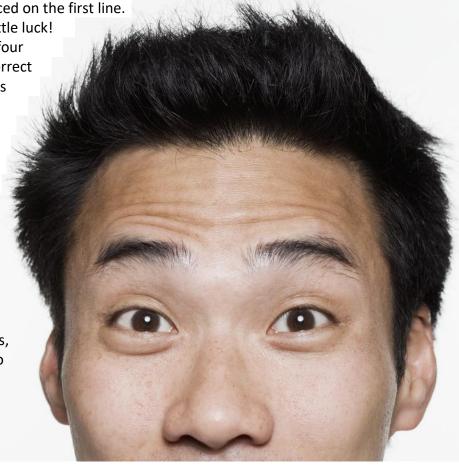
This quick game is the perfect way to make a few free minutes at the end of class both fun and educational. Start by cutting out the slips of paper labeled with the numbers 1-25. Fold and mix the papers. Place them in a container or paper bag if desired.

it on the last line, but 4 might be placed on the first line. This game involves both skill and a little luck!

Continue until you have announced four numbers. Have a student with the correct order share it with the class. Students who chose wisely and have their numbers in order may award themselves one point for this round. Play continues until time is up. The students with the most points shall be declared the winners.

Variations

For younger students, make this game simpler by using fewer numbers, like 1-10. Older students might tackle more numbers, or the game might include negative integers, fractions, or decimals. You might also read more numbers, or have the students try to list the numbers from largest to smallest.



1	1 2		4	5	
6	7	8	9	10	
11	12	13	14	15	
16	17	18	19	20	
21	22	23	24	25	

Friendly? Feud

"Friendly Feud" is an adaptation of the Family Feud game show students might see on television, or at least the teacher might have seen. The game is easy to adapt to almost any subject or curriculum topic; see the Adapt the Game section at the bottom of this activity for a handful of ideas.

Start the game by arranging students into teams of four or five players. Determine the sequence in which teams will play.

Determine the sequence in which the players on each team will play.

Have each team appoint a captain who will act as the team's final-decision

maker and spokesperson.

After the teams are organized, prepare to pose the first question of the game (or appoint a student emcee to pose questions). In the first round, the captain of each team will be the only one who can answer the question. Read aloud the first question; call on the team captain who raises his or her hand first to answer the question. To earn a point, that captain must correctly answer the question within 5 seconds. If the captain who was called on does not answer the question within the time limit or if he or she gives an incorrect answer, the next team can "steal" the question. Members of that team can talk among themselves, then they must agree on the correct answer. The captain serves as spokesperson for the team. If the captain says the correct answer, his or her team earns the point. If the answer is incorrect, the next team has a chance to steal the question and earn the point, and so on.

The team that correctly answers the question earns the first chance to answer the next question -- which is posed to the *second* player on the team. An incorrect answer passes the question to the second player on the next team. A correct answer earns another point for the team *and* the first chance to answer the next question, which is posed to the *third* player on the team. The team can keep earning points until team members get a wrong answer or do not respond within the time limit.



winner of "Friendly Feud."

Adapt the Game

This game can be adapted easily to almost any curriculum topic, subject area, or skill. For example if you are teaching math, questions might involve performing calculations, solving word problems, identifying a missing number in a number sequence, solving greater-than or less-than problems, and so on.



Heads Up! Study Up!

Students need to be more than crafty to do well in this version of the popular game for kids. In the game "Heads Up, Seven Up," they need to know their math facts or other basic information.

Materials:

math facts flash cards

In the traditional game of "Heads Up, Seven Up," seven students stand at the front of the room while all others close

their eyes and place their heads down. The standing players roam the room, and each chooses one seated student by gently tapping his or her thumb. It's very important that the children are familiar with the rules, especially the part about touching only **one** person. That might be unclear the first time you play so expect a little pandemonium at first. The kids will quickly figure it out.

Note: If they Its have trouble choosing, e.g., the Selection Phase takes too long, put a time limit on it. When the music/time stops, call heads up regardless of whether all the Its are back up front or not.

When all selections have been made, the seated students who have been tapped stand up. Each student has the opportunity to guess which of the seven at the front touched his head. If the guesser is correct, he trades places with the student who tapped him. If the guesser is wrong, he sits down.

Now take the "guesswork" out of this game and add the aspect of review. Randomly show individual students math facts flash cards until seven of them have offered a correct answer, and send these players to the front of the room. Announce that students at their seats should put their heads down and close their eyes. Have the seven players [Depending on the class size, you'll need to choose a number of people to be It. Generally a ratio of 1:4 is ideal, meaning one It for every four students] make their choices among those seated; each student should tap a seated student on the head. When the seven "tappers" have returned to their positions at the front of the class, ask the seven students who have been tapped to stand.

Instead of asking the students to make guesses about who may have tapped them, show each one a flash card. If a student answers the problem correctly, the child who tapped her sits down, and she goes to the front. If the answer is incorrect, the student remains at his seat and his chooser stays at the front. The round is completed when all of the tapped students have answered a flash card and heads are put down. Then another round begins.

Math facts aren't the only questions that can be used with this game. Try review questions in any subject, spelling words, vocabulary, and more!

Math Mania

It's merry go round math!

Materials Needed

• cards with math problems written on them, one card per student (All problems should relate to the same math skill.)

Before the Lesson

Before the lesson, prepare one index card or flash card, etc for each student in the class. Write on each card a math problem that emphasizes the skill you wish to practice -- for example, addition of two digit numbers, simple word problems, long division, percents, averages, or any other skill. (This game can be adapted to almost any math skill.) Number the cards from 1 to ___ (the number of students in the class). Create an answer key. Keep the set for future use!

The Fun Begins!

Arrange students into groups of three to six -- each group should have the same number of students. (Groups of three might be better if you plan to use the game as a five-minute "time-filler" activity at the end of a class *or* if the math skill being practiced is a more complex one.) Have each students fold a sheet of math paper into squares and number the squares from 1 to __ (the number of students in the class).

Arrange students' desks into small circles and place one math problem face down on each desk. When students have pencils and math paper ready, indicate the start of the game by calling out "Go!" or ringing a bell. At the signal, students turn over the card in front of them,



copy the problem in the appropriately numbered

square on their paper, and solve the problem. When a student has finished solving a problem, s/he flips their card back into the facedown position, put down the pencil, and waits until all members of the group have solved their problems. When the last student in the group solves his/her problem, the students stand up, rotate clockwise to the next desk, and repeat the process. The game continue until all the students in each group have solved all their group's problems. Students who finish early can use the time to check their work.

The game is not necessarily over when one group finishes. The other groups still have a chance to win the game *if* any student in the groups that finished first recorded a wrong answer. (Speed counts, but accuracy is more important.) The group that finishes last could be the winning group if somebody in each of the other groups solved a problem incorrectly. If no group correctly solves all their problems, the group with the fewest errors wins.

If time remains, groups could collect the cards on their desks, pass them to another group, and start a new game.

Tips

The active movement of this game is part of the fun. If the game starts to get out of hand, make it a silent game. If a team member talks, disqualify that person and count all his/her answers as incorrect answers when counting each team's errors.

Battleship!

Although many people are familiar with the Battleship game, math is not one of the things they usually associate with it.

Objectives:
Label points and axes on a coordinate grid.

Locate points on a coordinate grid.

Explain the steps needed to move from one point on a coordinate grid to another.

Mathematics Thinking Skills

Playing games in the classroom is especially helpful for kinesthetic and visual learners. The Battleship game requires students of all ages to practice

it is a game of memory, logic and strategy while the more experienced players will realize that they need to use probability skills.

While playing the game, students become familiar with the following:

- Grids
- Columns
- Rows
- Points
- Graphs
- Ordered pairs

Teach Algebra with Battleship Game Math

thinking and problem solving skills that are critical

to understanding mathematics. For the youngest players,

Concept(s): One of the primary concepts that are taught when playing the Battleship game is plotting and naming points on coordinate grids.

Ordered pairs represent the location of points on the coordinate plane. Knowing the x- and y-axes along with the x- and y-coordinates of an ordered pair are vital when plotting points in the coordinate plane.

This is a mathematical concept that appears frequently in daily life. They are used when giving geograph ic locations, when creating statistics charts, and to measure distance.

Playing Battleship will give students the ability to use the following techniques in a non-stressful way.

- X-axis
- Y-axis
- A point contains an x- and y- coordinate
- Origin
- Quadrants
- How to locate a point
- How to name a point

Other Types of Math Practice Using Battleship

There are other types of mathematics concepts that students can practice while playing Battleship games. Math requires the types of problem solving skills that students naturally use when playing the game.

You can also use Battleship to practice calculations that relate to coordinate geometry. These include:

- Distance
- Midpoint
- Slope/gradient

It is targeted for sixth through ninth grades, although it could be used in tutoring older or younger students. Explain to students the rules of Battleship.

Preparation:

Cut and bag sets of Vocabulary Match Cards and Vocabulary Match Instruction sheets
Make a transparency of the "4X4 coordinate Grid" and the "Battleship Grid" sheet if Elmo is unavailable
Make copies of the following:

1. "Vocabulary Match" instructions and cards

to match the term card with its appropriate illustration card.

- 2. 4 X 4 Coordinate Grid sheet
- 3. "Battleship" Activity
- 4. Battleship Grid Sheet

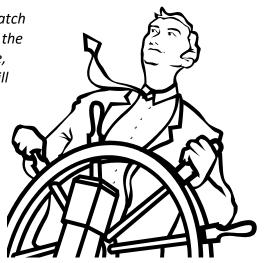
The teacher will place students in pairs to complete the Vocabulary Match activity. Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Te rm Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition

What Students will do:

Each student will join a peer to complete the Vocabulary Match activity. Every pair will receive Vocabulary Match cards and a set of instructions. Even if students are unfamiliar with the term s being presented, they should still complete this activity to the best of their ability.

Students will use the terms acquired in the Vocabulary Match activity as well as their problem solving skills to complete the next activity, a game of Battleship. Throughout the game, their understanding of the terms previously introduced will be measured. This will allow the Teacher to see what points may need to be stressed and to clear up any misconceptions that exist.

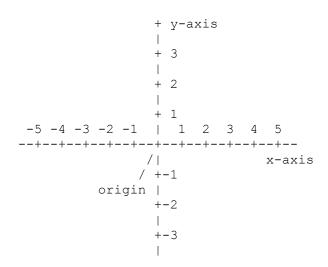
The teacher will give each student a "Battleship Grid" Card, a marker, such as Rainbow Centimeter Cube, and the "Battleship" activity sheet. The teacher will inform the students that they will be playing a game of battleship, and will have a student read the instructions for the activity.



Instructions:

Secure a blockade. Create a barrier using your math book so that your opponent can not see your ship's position.

Instruct students to fold a sheet of graph paper in half and draw 2 coordinate planes (see a sample image).



They should draw one coordinate plane above the fold and one below. Each plane should be labeled from -5 to +5 on both the x and y axes.

The Game

Note: It is a good idea to familiarize all students with the rules of the game by playing one game with the whole class trying to guess where you have placed your ships.

Students play this game in pairs. They will keep their graph papers in front of them, folded. That way, when they lift up the fold, they will see the graph with their plotted ships above the fold (for easy access

as the player answers his opponent's questions) and the blank graph flat on their desks so they can record the locations of their opponents ships as they guess the ships' coordinates.

Students take turns guessing coordinates that might be the locations of their opponent's ships. (For example, a player might ask, Have you a ship at x coordinate 4, y coordinate -2? If the opponent does have a ship at that location, he or she must respond in the affirmative. The student who asked the question notes on his or her graph that the opponent does have a ship there.) If they choose a coordinate where their opponent has placed one of his/her ships, they get to guess another coordinate. As they play the game, each player should record all his/her right and wrong coordinate guesses on the blank coordinate graph. When the player has guessed all the coordinates of a ship, his or her opponent must "give up the ship that has been sunk" by telling the opponent of his/her success.) Gradually, students narrow down the exact locations of all of the opponent's ships.

The winner of the game is the first person who guesses the locations of (sinks) each of his/her opponent's ships.

If playing with a fleet:

- 1. First you decide where to place your own fleet within your grid. On the coordinate plane graph that is above the fold, have students plot the locations of five ships. The ships must be placed vertically or horizontally (never diagonally) and must remain within +5 and -5 on both axes. The five ships will follow these specifications:
 - Aircraft carrier -- 5 points long
 - Battleship -- 4 points long
 - Submarine -- 3 points long
 - Destroyer -- 3 points long
 - PT-Boat -- 2 points long
 - Ships cannot occupy the same square.
- 2. To place a ship, check how many boxes are covered by the ship and then write the first letter of the name of the ship in the boxes it covers. For example, a Cruiser covers three boxes so you would pick any three adjacent boxes and put the letter C in each box. Keep your fleet location secret from your opponent! When each player has marked their fleet on their grid, begin play.
- 3. Take turns to "shoot" at your opponents' fleet by calling out the number of a certain box by its grid location. For example, you could call out "B4" or "D1". Your opponent must say whether the shot is a "miss" or a "hit", and, if it is a "hit", what type of ship it is. You can keep track of what you have shot on your lower grid, and the ships you have sunk by crossing off the ships at the bottom right of your print-out.
- 4. Play continues until one player wins by successfully sinking the whole of the other player's fleet.

The coordinate plane below the fold should be left blank.

If playing with a single ship:

- 1. Position your ship. Place your Battleship somewhere on your "Battleship Grid". Remember to record your ship's position (on the line below). Choose an opponent to begin calling points.
- 2. Make an initial guess of the location of your opponent's ship by randomly calling out a location on their grid.
- 3. If your initial guess is the location of your opponent's ship, then you have sunk their ship. You win!

- 4. If not, your opponent must give you a directional clue (above, below, left, or right) of where their ship is located. Record that clue in the "Clues Given" column on the table.
- 5. Record your guesses in the "Guesses" column below and plot them on the "Tracking Your Opponent's Ship" grid provided. Alternate turns and continue to call out locations until one person's ship has sunk! Teacher will stress the importance of writing down the clues given. Note: This will reduce the chances of a student giving false clues in order to mislead their opponent. It will also allow the teacher to see whether students have grasped the concept.
- 6. The teacher will do an example round with the class to ensure that students understand how the game works. The teacher will have a student volunteer be his/her opponent. The teacher will ask a different student to select the location of his/her battleship by writing an ordered pair on the board.

*Note: The ordered pair must be able to be plotted on the "Battleship Grid" Card. Once every student on the teacher's team has their ship (Rainbow Centimeter Cube) on the location, and the opponent has their ship in place, the teacher will instruct the opponent to make an initial guess.

After the example round, the teacher will have the students begin the activity.

Questions about rules:

- Can you make two consecutive guesses? [no]
- Can you ask for more than one clue at a time? [no]
- Can you move your ship from its initial location? [no]
- Can you give false clues about the location of your ship? [no]
- How do you win the game? [the first person to sink their partner's ships using the clues given will win the game]

Group Play: Two teams with an equal number of students (if possible).

- Each team will receive one sheet numbered graph paper on which to draw their battleships.
- Each team will draw five battleships. Each battleship must contain four ordered pairs on the numbered graph paper (reduce the number of battleships and/or the number of ordered pairs for classes that are working in the first quadrant only).
- Teacher collects the graph paper with battleships from each team.
- Teams take turns calling out ordered pairs to try to sink other team's battleships. (Teacher can indicate if the shot is a hit or a miss.)
- The first team to sink all opposing battleships is declared the winner.
- For an upper grades review of linear equations, the teacher might want to add in this rule: once a battleship has been hit by two or more ordered pairs, the opposing team can sink the battleship in one more shot by calling out the equation of the line that contains the battleship.

Teacher should circulate during game to see if all students are participating by keeping an accurate record of the ordered pairs on their individual pieces of graph paper.

Whole-class Activity: teacher vs. students, sink "The Captain" before she sinks you!

Each student has a graphic organizer with directions, a table for coordinates fired at me and fired at them, and a coordinate plane to keep track of their ships. On the whiteboard the Teacher/Cap'n will have the plane where everyone could keep track of when they hit or missed "the Sir". After labeling parts of the graph (x and y axes, origin and quadrants), the rest of the game remained the same. The

slightly tweaked lesson design allows you to make sure the objective was covered thoroughly because you could come back to the key points easily:

1. With each shot made, you may ask students to identify the quadrant or axis where the point was located.

2. You could also give them multiple options for the location by pointing at my coordinate plane to check that they understand how to read ordered pairs, i.e. knowing the difference between (-2, 3) vs. (3, -2) vs. (2, -3)

3. You can focus on points on the x-axis and y-axis, which the students always mix up.

4. You are able to give hints to check their understanding, i.e. "One of my ships is located along the y-axis" or "I have a ship in Quadrant II" and then see if the next student fired at the right area.

5. You may also connect the game to graphing linear equations by having your aircraft carrier located along the line y=x (a parent function), discussing how to figure out where that line would be and then aiming at points along it.

The possibilities are endless for how many directions and how much material you can cover in this activity. Since the teacher directs the activity and the students are engaged (because they love competition and love beating you even more), it's easy for you to steer them towards many different objectives. You could easily incorporate:

more linear equations

domain and range

•linear inequalities (identifying points that satisfy a linear inequality is a common question on our state standardized math test_

transformations

•quadratic and absolute value equations



For this variation, you may want to change the domain and range of the graph -4 to 4 instead of -5 to 5. The latter can be a bit too big and make it take a little longer than necessary for you to sink each other's ships. You could also adapt this to return to the student vs. student format, but you may miss out on the extension possibilities.

It also helps to look the part; pick up captain's hat from the local costume shop and tape "CAPTAIN" on your ID. You could also cue up some video or audio clips of torpedoes firing and ships exploding for dramatic effect. Have fun with it--then your students will too!

Vocabulary Match Instructions

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Instructions: Work with a partner to complete this activity. Each group has a set of cards containing "Term Cards" and "Illustration Cards". Read the term and definition on your term card. Use that definition to match the term card with its appropriate illustration card.

Vocabulary Match Cards

Term Card	Term Card	Term Card		
Ordered Pair: a pair of numbers used to locate a point on a coordinate grid	y-coordinate: The second number in an ordered pair, which the distance to move up or down from (0, 0)	y-axis: the vertical axis on the coordinate plane		
Term Card	Term Card	Term Card		
x-axis: the horizontal axis on the coordinate plane	x-coordinate: The first number in an ordered pair, which tells the distance to move right or left from (0, 0)	Coordinate Grid: a grid formed by two perpendicular number lines called axes.		
Illustration Card	Illustration Card	Illustration Card		
(2, 3)	(2, 3) The number 3	(The bold line) 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9		
Illustration Card	Illustration Card	Illustration Card		
(The bold line) 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9	(2, 3) The number 2	9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9		





Name:				

Instructions

- 1. Label the axes on your "Battleship Grid" Card
- Secure a blockade.

Create a barrier using your math book so that your opponent can not see your ship's position.

- 3. Position your ship.
 - Place your Battleship (Rainbow Centimeter Cube) somewhere on your "Battleship Grid" Card. Remember to record your ship's position on the line below.
- 4. Choose an opponent to begin calling points.
- 5. Make an initial guess of the location of your opponent's ship by randomly calling out a location on their grid.
- 6. If your initial guess is the location of your opponent's ship, then you have sunk their ship. You win!
- 7. If not, your opponent must give you a directional clue (up, down, left, or right) of where their ship is located. Record that clue in the "Clues Given" column on the table below.
- 8. Record your guesses in the "Guesses" column below and plot them on the "Tracking Your Opponent's Ship" grid provided.
- 9. Alternate turns and continue to call out locations until one person's ship has sunk!

Battleships!

My Ships



Α								
В								
С								
D								
Ε								
F								
G								
Н								
	1	2	3	4	5	6	7	8

Aircraft Carrier A A A A A

Battleship BBBB

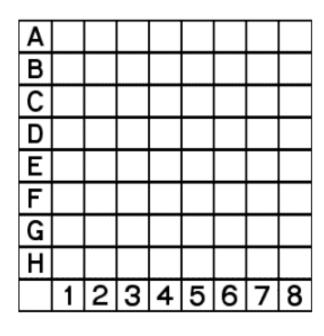


Destroyers D D D

Submarines S

Their Ships





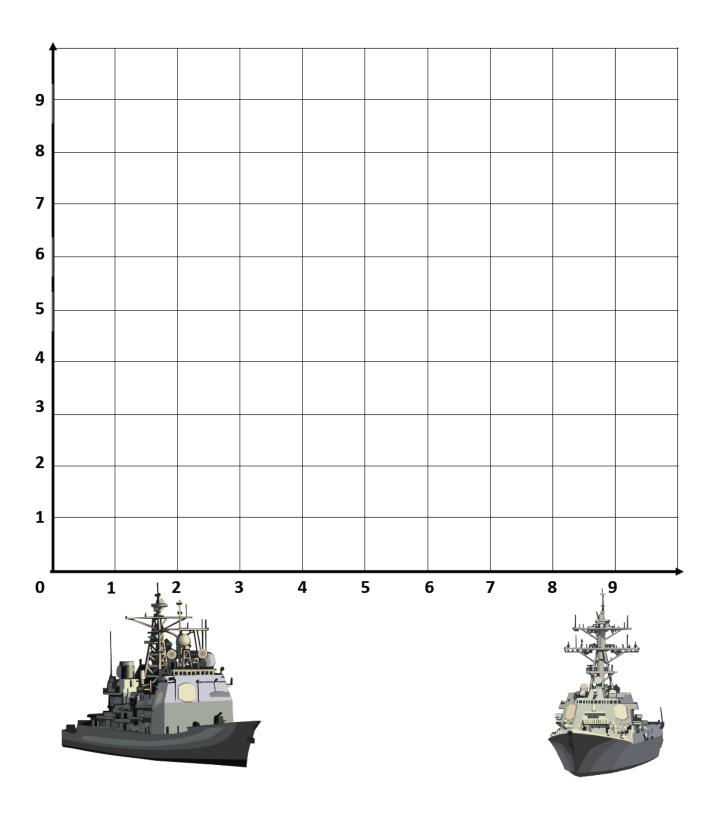
Aircraft Carrier AAAAAA

Battleship BBBBB



Destroyers DDD DD

Submarines S S



	DATE:	NAME:

SINK the CAP'N!

Sink the Captain's fleet before he sinks yours!

			Fired at Me O O O O O O O O O O O O O
Place 5 ships on your grid (LEFT): 1 aircraft carrier - 5 points long 1 battleship - 4 points 1 submarine - 3 points 1 destroyer - 3 points 1 PT boat - 2 points 		MY GRID (put your ships here)	4 3 2 -1 0 1 1 2 3
Label the coordinate planes: x-axis y-axis origin Quadrants I, II, III, IV 	DIRECTIONS	CAP'N D's GR	4
Keep track of all attacks: ✓ Mark X for hits ✓ Mark • for misses ✓ Write all coordinate points in the tables		CAP'N D's GRID (keep track of when you hit him here)	2 -1 0 1 2 3
	, ,		Fired at Cap'n D