

# **Motivating the Unmotivated Learner through Activities and Games**

Activity Based –  
“Hands-On” – Classroom

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## **Activities Create The MAGIC: You Make It Happen!!**

Exciting, hands-on, and interactive are words that describe this one-hour program. Several engaging activities and games you will have the opportunity to experience.

Active participation and increased on-task behaviors are outcomes of "**meaningful**" classroom activities. Passive learning assigns responsibility for learning to the teacher, not the learner.

**"Learning is not a spectator sport."** Students should have the opportunity to make what they learn a part of them. The teacher's number one job is to "Light the Fire." This program offers new ideas to get the flame roaring.

## Research: Teaching Through Activities

**Research shows** today's classroom is still predominantly characterized by the teacher talking in front of a group of approximately 30 students (Barnes, 2005; Spence, 2002). The teacher is often the dispenser of knowledge; students are the passive recipients (Fisher, 2005). There is little evidence that lessons requiring problem-solving, group planning, or carrying out projects are used widely in America's schools (Strenger, 2002). The norm is for teachers to ask questions with only one correct answer which the teacher already knows (Myhill & Dunkin, 2005). Passive learning assigns the responsibility of learning to the teacher, not the learner. This creates learners who are dependent on the teacher for feedback and guidance, and limits learners' confidence in their own abilities, thus stifling students' initiative (Berryman, 1993).

**Research shows** students spend approximately 50 percent of their school day engaged in academic activities (Partin, 2005). One study of elementary-school students found that 42 percent of their school time was spent passively looking at the teacher or waiting (Greenwood, Horton, & Utley, 2002). Students reported being highly engaged when learning activities challenge their current skill level, the instruction was relevant, and they had some control over their learning environment (Shernoff et al., 2003). Students also reported higher levels of engagement when actively engaged in individual or group work rather than listening to lectures, taking tests, or watching videos.

Structuring the school's curriculum through the exploration of authentic problems and active work on projects is not a new idea (Dewey, 1938; Kilpatrick, 1918). When students engage in such authentic-learning experiences, Fried (2005) suggested, "Nobody knows in advance what will emerge. Their role as students is to *speculate* about the unknown, to *seek* and to *synthesize* knowledge, and then to *share* it" (p. 5). Starko (2001) defined authentic problems as those for which there are no predetermined answers, that are interesting and challenging to the student, and that can be solved by tools and procedures taught in one of the student's classes. Advocates of authentic learning argue that meaningful, activity-based learning is more transferable to what students really need in their world beyond the classroom (Gulikers, Bastiaens, & Martens, 2005; Michael, 2006). Through experiential learning, students engage in real activities with real consequences (Murphy, Lunn, & Jones, 2006). McCain (2005) concluded, "We need an instructional approach that will equip students with real-world, problem-solving skills plus teach them the content they must master to be an educated person ... This requires educators to question some long-held ideas about what teaching should look like" (p. 15).

## **Activities for Motivating the Unmotivated Learner**

### **1. Research: What it says about "active" classrooms.**

### **2. Introductory Activities**

- Why use Brain Teasers?
- Seek, Share and Sign
- Rebus or Think A Gram
- Old Sayings
- Math
- Journal

### **3. Curriculum Games**

#### **A. Informational**

- Egg Scramble

#### **B. Review or Practice**

- Baseball Hit Baseball
- Bean Bag
- Dice Game

### **4. Energizers/Celebrations**

- Music – Green Onions
- Music -- Connections to Lesson Plans
- Music Energizers – Showtime, Mission Impossible, Jeopardy
- Movements Energizers – Double This That, Wright Family

### **5. 40 Ways to Boost Motivation**

### **6. Final Journal Thoughts**

# Why Solve Brain Teasers?

Brain teasers and puzzles have been and continue to be a source of entertainment for individuals of all ages. The youngest child who successfully completes a jigsaw puzzle and the adult who solves a word scramble or crossword puzzle both feel satisfaction and pride in accomplishing their tasks. And, for the most part, they enjoyed themselves

So, how can something fun and entertaining be of importance, especially in learning math? Since a great number of puzzles and brain teasers are mathematical tasks and require logical thinking, the first point we are making is that math is (or can be) fun! Your child will develop enthusiasm toward math if he or she perceives it as entertaining. In turn, the enthusiasm for the subject will help improve your child's math skills.

Math skills are more than calculating answers on a test or in your checkbook, or budgeting your money, or finding the area of your walls for wall paper. Math skills involve thinking skills -- how you approach a problem or situation, how you analyze it, how you decide to tackle it. If your approach doesn't get you a solution, you try another way. Then, when you think you have an answer, you look back to see if the route you took was a good one, and you are convinced you found a solution. These processes, in a nutshell, are considered both critical thinking and logical reasoning skills, and are an essential part of math.

Brain teasers and puzzles also lend themselves to group efforts. Solving them with others promotes verbal communication about ideas, and brings out creativity. More often than not, a group can come up with ideas that the individuals would not have thought of. Talking about math processes and trying them together is an excellent way to improve mathematical thinking.

Now that we have given you some idea of how brain teasers and puzzles relate to math and why they play an important role in developing math thinking, we invite you to return to our selections. Enjoy the puzzles and the math!

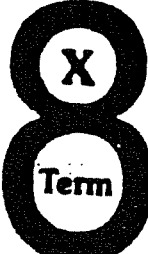

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## Seek ~ Share ~ Sign

$X + 10 - 8 = 37$ What is x?	Who wrote <i>Romeo and Juliet</i> ?	What does the abbreviation "tsp." mean?
Draw a "crosswalk" sign	What is one famous painting by Monet?	What is HCl?
Which president had a home named Monticello?	During a high school basketball game, a quarter consists of how many minutes?	Draw a treble clef.

# I.Q. TEST

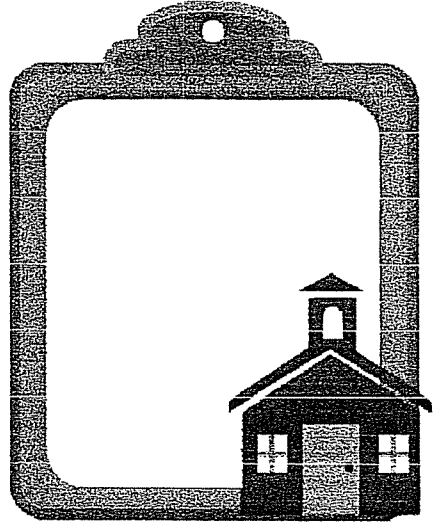
Here are some real puzzlers for you! Decipher the hidden meaning of each set of words.

<p>1</p> <p>noon Sunday</p>	<p>2</p> <p style="text-align: center;">s n i a e i c</p> <p>Kid Kid</p>	<p>3</p> <p style="text-align: center;">LB. LB. LB. LB. LB.</p> <hr style="width: 50%; margin: auto;"/> <p style="text-align: center;">WEIGHT</p>	<p>4</p> <p>CA SE CASE</p>
<p>5</p> <p>A E I O -</p>	<p>6</p> <p>shoot shoot</p>	<p>7</p> <p>QUACK QUACK CLUCK CLUCK</p>	<p>8</p> <p>BRO1</p>
<p>9</p> <p>A M Town N</p>	<p>10</p> <p>dknir krinds rknids</p>	<p>11</p> 	<p>12</p> 
<p>13</p> <p>Right = Right</p>	<p>14</p> <p style="text-align: center;">22 ARIZONA</p>	<p>15</p> <p style="text-align: center;">G W N E I D D</p>	<p>16</p> <p style="text-align: center;">R R R R D O O O O N U U U U U N N N N O D D D D R</p>

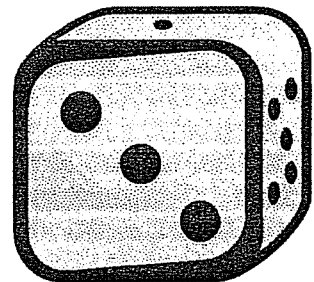


# Journal





# Curriculum Games



# The Planets

If you could watch the planets from far beyond the solar system, you would notice that all the planets travel around the sun in the same direction. The inner planets (Mercury, Venus, Earth, Mars) seem to race around the sun. For example the earth travels around the sun at a rate of 110,079 kilometers (68,400 miles) per hour. The outer planets (Jupiter, Saturn, Uranus, Neptune, Pluto) seem to move more majestically in their orbit. Neptune, for example, travels at the rate of 19,698 kilometers (12,240 miles) per hour.

Like the earth, all the planets rotate on their axis. The axis of each of the planets tilts at an angle. This causes an uneven heating of the northern and the southern hemispheres of the planets during the year.

The overall temperature on each of the planets is affected by the planet's distance from the sun, its atmosphere, and its rotation. A planet that is closer to the sun receives more heat than one farther away. Heavy clouds in the atmosphere can prevent some of the sun's heat from reaching the surface of the planet. But on the other hand, the atmosphere of a planet can help retain some of the heat that does not reach the surface. A planet with faster rotation has shorter days and nights. Short days and nights give a more-even temperature to a planet than it would have if its days and nights were very long.

## *Inner Planets*

All the inner planets are small and rocky, like the earth. *Mercury*, the planet closest to the sun, is the smallest planet. Because of its nearness to the sun, Mercury has been difficult to study. However, the spacecraft Mariner 10 passed within a few kilometers of Mercury in 1974. Mariner 10 sent back photos that made people realize that Mercury is much like the earth's moon. Mercury's surface is covered with craters. Also like the moon, Mercury has no atmosphere.

The second planet from the sun is *Venus*. At one time scientists thought that perhaps Venus was very much like the earth. It does resemble the earth in size and mass. But Venus's very hot temperature makes it far different from the earth. The thick clouds in the atmosphere have made it impossible to see the planet's surface. Venus rotates on its axis in the opposite direction from

all the other planets except Uranus. It is believed that some giant object in space may have struck Venus, causing it to rotate in reverse.

**Mars** has always interested people on the earth. This is because many of its features are easily seen from the earth. Besides, it has been thought that of all the planets, Mars might possibly support some form of life.

Photographs from Mars show that it has a pink sky and blue sunsets. Large amounts of water may once have existed on Mars. Tests for signs of life have given puzzling results. But these results seem to rule out life in the areas tested. Much more is yet to be understood about Mars.

### ***Outer Planets***

You have seen that the outer planets (Jupiter, Saturn, Uranus, Neptune) travel more slowly in their orbits around the sun than the inner planets do. But when it comes to rotation on their axis, the large outer planets are demons. The outer planets seem to have rocky interior, surrounded by a shell of ice. Their exterior is mostly liquid hydrogen.

**Jupiter** is the giant among the planets. When viewed through a telescope, Jupiter's Great Red Spot can be seen. From a distance Jupiter looks like a small solar system, since it has fourteen moons revolving around it.

**Saturn** is known for its beautiful rings. The rings are thought to consist of tiny ice particles. The rings orbit the planet's equator and reflect sunlight.

**Uranus** appears as a greenish disk from the earth. Like Venus, it rotates in reverse. Uranus was not discovered until 1781. Over sixty years later, when scientists noted that something beyond Uranus was affecting its motion, **Neptune** was discovered. Over seventy years after that, it was noted that a body was pulling on Neptune. That led to the discovery of **Pluto** in 1930. Not much is known for certain about Pluto except that it is small and like the inner planets in composition.

## Egg Scramble

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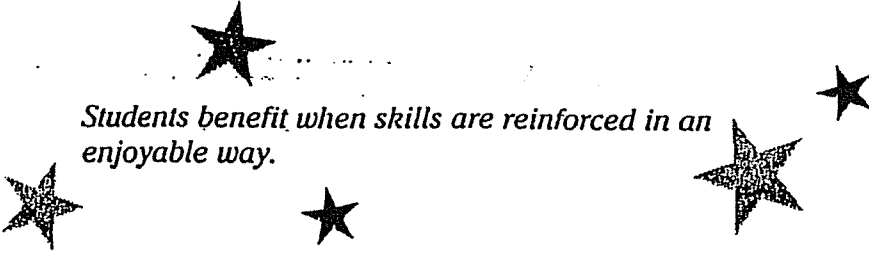
12.

13.

14.

15.

## Practice Activities: Educational Games



*Students benefit when skills are reinforced in an enjoyable way.*

The use of games for educational purposes in the classroom has many benefits for both students and teacher. One obvious benefit is the ability of these games to motivate students. Using games to practice skills and utilize knowledge can also be a change of pace from regular school activities, something students will look forward to and think is fun.

You may want to set aside a particular time of the day, week, or month for games, or use them randomly throughout the year.

The five main categories for games that teachers can use for activities are:

- Commercial games (board games such as *Mastermind*® and television game shows such as *Jeopardy*®), used "as is."
- Games made specifically for educational purposes.
- Teacher-made games.
- The concepts in store-bought games or television game shows, converted for specific classroom uses.
- Sports and athletic events.

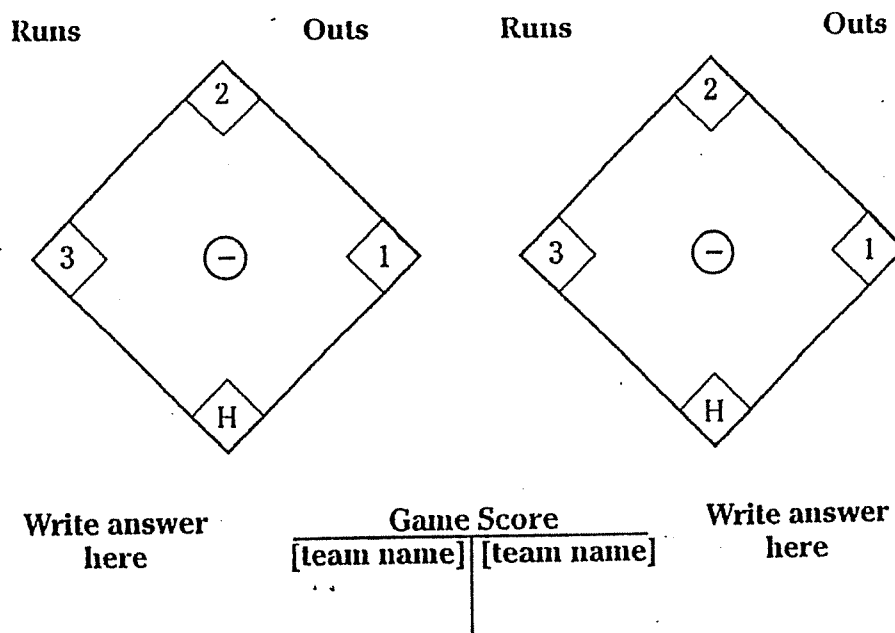
The amount of time available is one consideration when deciding which type of game to use. If a game is worthwhile to your students, it is worth spending some time redesigning it. Remember, your students' learning doubles if you let them design the games.

### Activity: Base-Hit Baseball

#### Activity Uses

- Introductory
- Informational
- Practice
- Review
- Culminating

We will now participate in a game, based on the sport of baseball, called "Base-Hit Baseball." On the board are two replicas of a baseball diamond, plus a place to list runs, outs, and the game score, as well as a place for each batter to write his or her answer.



The class will be divided into two teams. To begin, each team will send its first batter to the "plate." (In other words, both teams are playing at the same time with their own playing field.) The teacher will ask them both the same question, and they will write their individual answers on the board so that no one can see it. Each person in each team's "dugout" (the rest of the team) will also write down an answer.

If either batter gets the answer right, he or she will pick a Hit Card that will tell how far to advance on the playing field. The Hit Cards allow for a single, a double, a triple, or a home run. Base Markers will be placed on the board on each team's playing field, indicating which base the batter has advanced to. If an answer is wrong, the team gets an out.

To keep all team members accountable and paying attention, the teacher will ask one team member in each dugout if he or she got the answer right. If either player did, that person's team gets to advance the Base Marker of one player on base, essentially stealing that base (if they have anyone on base). (This action could drive a runner home if the bases are loaded.) If the answer is wrong, that team gets an out,

as if the runner were caught stealing. (This means that a team can advance several bases or get two outs by answering the same question correctly or incorrectly — one by the batter and one by the person in the dugout.)

Then the next two people come to bat — one from each team. If either one answers correctly, he or she picks a card and moves to a base according to the instructions on the Hit Card. The runners already on base (indicated by Base Markers on the board) also advance. If either of their answers is wrong, it is again counted as an out and. Again, two dugout players are then asked how they answered.

When a team gets three outs, the inning is over, all base runners are removed, and the game is over or you can play another inning. The total runs for each inning are written on the game scoring area on the board.

## Energizer: The Wright Family

### Directions:

1. The instructor will read the story of the Wright family.
2. When you hear the word *right*, you will step with your **right** foot going in any direction, bringing the left to meet.
3. When you hear the word *left*, you will step with your **left** foot going in any direction, bringing the right to meet.

### The Wright Family Goes to the Ballgame

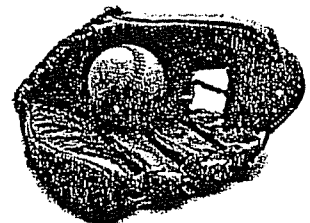
After returning home from an exhausting vacation, Mr. Wright decided the Wright family should stay **right** where they are, at home, for the weekend. Mrs. Wright felt a little **left** out of the decision, but she finally decided Mr. Wright was **right**.

Looking in the newspaper that had been **left** in the driveway, Mrs. Wright told Mr. Wright that the baseball team was in town that night. The Wrights discussed this idea and decided the decision would be **left** up to the Wright children. Mrs. Wright yelled for Timmy Wright, Susie Wright, Shelley Wright, and Tommy Wright to come to the family room. Mr. Wright told them of the decision to stay at home for the weekend. Mrs. Wright realized that they had once again **left** Grandma Left out, so she **left** the family room to go call Grandma Left. Grandma Left came **right** over, and initially was a bit grumpy about being **left** out yet again.

Once Grandma Left found out about the baseball game she straightened **right** up and **left** her bad mood at the door! The Wright children decided the baseball game was the **right** thing to do, so the family **left** at 5:00 to go to the ballpark. They bought tickets in the **left** field bleachers. There was some discussion with Grandma Left whether the **left** or **right** field seats were better, but the Wright family decided they liked the **left** field better than the **right**.

The game started when a **right**-handed batter launched a long fly ball into **left** field. The **left**-fielder ran back, back, back to catch the ball, but it sailed over the **left** fielder's head into the **left** field bleachers and **right** into the outstretched hands of Grandma Left. Boy was Grandma Left happy they didn't sit in the **right** field instead.

The game seemed over too quickly. The Wright family had a great time in those **left**-field bleachers, and was glad the **left**-handed pitcher threw a shut-out. They found the Wright car **right** where they had **left** it. The GPS navigated the way back home—**left**, **left**, **right**, **left**, **right**. They **left** Grandma Left off at her house and pulled **right** into the Wright driveway. The Wright family decided they had many more exciting adventures **left** to do.





## **40 Ways to Boost Motivation in a Brain-Compatible Way**

Immediate Success	Role-Model Motivation
Personal Relevant	Music
Hands-On Learning	Demonstrations
Novelty	Make It OK to Make Mistakes
Cross Lateral Movements	Learners Share Successes
Celebrations	Accountability
Physical Movements	Strong Reasons Why
Success Stories	More Choices
Greater Chance for Success	Lower Stress
Context Beliefs Improved	Know You Make a Difference
Challenges	Confusion
Right Learning Styles	Model Joy of Learning
Better Classroom Environment	Reduce the Pain of Failure
Set Passionate Goals	Make the Learning Fun
Capability Beliefs	Build Rapport First
Health/Fitness to Learn	Address Fears and Barriers
Increase Feedback	Set Learners Up to Win
Positive Peer Pressure	Teacher Learners How They Learn
Curiosity	Surprise
Access to Resources	Teach Life Skills