

## ***Lorrie Heagy's Golden Nuggets of Best Teaching Practices***

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1. All lessons should have these 3 ingredients: Relevance, Movement & Emotion (Head, Hands & Heart).
2. Emotion drives attention, and attention drives learning, problem-solving behavior, and just about everything else.
3. Brain's Rewards: The brain is "perfectly happy to pursue novelty, curiosity, embrace relevance and bathe in feedback from successes." (Jensen)
4. Experience first, intellectualize later. We are motivated by curiosity. If we tell them, this is the way it is without any room for flexible thinking or exploration, there's nothing more they can do with it.
5. If possible, let your children sleep on it, to give them a chance to personalize new information.
6. Allow your lessons to "breathe." Before students can take in new information, they need to "breathe out" or physically manipulate previous learning so that they can make room to "breathe in" the new.
7. Oral language is a precursor to reading and writing skills. Let them speak!
8. Integrating the arts is one of the most brain compatible strategies you can use in your teaching.
9. Create episodes of learning for your students by using location, emotion, movement and relevance. Remember the Power of Story!
10. Remember the Balance of Pattern and Novelty: New Process and Familiar Content OR Familiar Process and New Content



*Teaching with the Brain in Mind*  
by Eric Jensen

**Key Concepts**

*Reducing Stress*

*Getting the Brain's Attention*

*Intrinsic Motivation*

*Memory and Recall through  
Enriched Environment*

*"Arts education facilitates language development, enhances creativity, boosts reading readiness, helps social development, general intellectual achievement, and fosters positive attitudes towards school." – Norman Weinberger, UC, Irvine*

*"Emotions are a distillation of learned wisdom." Eric Jensen, Teaching with the Brain in Mind*

### **Factors the Help Reduce Stress:**

- Predictability – class rituals (song, chants, celebrations, poetry)
- Physical activity – games, exercise and drama
- Transition time – dance, music, games, group discussions or journal writing
- Storytelling and humor
- Mobilize in face of threat – team & sport activities, drama public performance\

### **Factors that Influence Attention for Learning**

- Choices – content, timing, work partners, projects, process, environment or resources
- Relevant – personal and contextual
- Engaging – emotional & physical
- Balance of novelty and ritual

### **Factors that Intrinsically Motivate**

- Eliminate threat – uncovering problems, adding transitions
- Goals – meaningful context for learning by priming with teasers or stories
- Create appositive climate – affirmations, teamwork, rituals, acknowledge success
- Activate and engage positive emotions – drama, movement, music, art, games, community service, celebrations
- Provide feedback- projects, group work, checklists, drama, peers & rubrics
- Purposely engaging emotions
- Importance of context patterns (hands-on, experiential, and relevant)
- Relevance (use of personal stories, journaling, discussion, cooperative learning and metaphors.)

### **Memory and Recall**

- Embed emotions in the learning
- Include movement
- Provide meaningful context (make up a story using the key items)
- Wholes taught before parts are recalled better
- Change in location or circumstances
- Keep chunks to a minimum
- Strong activation with rhymes, visualization, mnemonics, music and discussion.

Jensen, E. 1998. *Teaching with the Brain in Mind*. Alexandria, VA: Association for Supervision and Curriculum Development.

## **Lorrie Heagy's Powerpoint Notes**

### **1. Academic Mindsets Lead to Academic Success**

- Purpose
- Belonging
- Confidence/Competence
- Effort

### **2. Multi-Sensory Learning:**

- *Multisensory presentations are greater than the sum of their parts.*
- *Extra information given at the moment of learning makes learning better. Multisensory experiences are more elaborate (Medina, 2010)*

### **3. Attention-Getting Hook:**

- *Your ability to create a compelling introduction may be the most important single factor in the later success of your mission. In fact, the first 2 minutes is crucial! (Medina, 2010)*

### **4. Vision Trumps Them All:**

- *If information is presented orally, people remember about 10 percent, tested 72 hours after exposure. That figure goes up to 65 percent if you add a picture. (Medina, 2010).*

### **5. Prime and Provide Feedback**

- Provide the Big Picture to establish PURPOSE
- Be sure that the Big Picture is RELEVANT
- To motivate and build success, use LEVELS
- Whenever possible, make goals VISIBLE
- At each step, provide clear FEEDBACK

### **6. Lessons in Manageable Chunks**

- *Present information in manageable chunks, balancing familiarity with novelty. Build-in "mini-celebration" to recognize accomplishment at each step.*

### **7. Exercise Boosts Brain Power**

- *Children and adolescents who are fit allocate more cognitive resources to a task and do so for longer periods of time. (Medina, 2010)*

### **8. Factors that Reduce Stress**

- PREDICTABILITY class rituals
- PHYSICAL ACTIVITY singing games, movement
- FLUID TRANSITIONS are connected, purposeful
- STORYTELLING, CHOICE and HUMOR
- TEAM ACTIVITIES Mobilize in face of threat (another reason why team-teaching is so powerful and transformative)

**9. Five Ingredients for Getting the Brain's Attention and Keeping it:**

- RELEVANCE
- MOVEMENT
- EMOTION
- PATTERN
- NOVELTY
- This is why story is so powerful: it embodies all of them!

**10. Create Episodes:** *Episodic memory has unlimited capacity, forms quickly, is easily updated, requires no practice, is effortless, and is used naturally by everyone. (Jensen, 1998)*

- Experience First, Intellectualize Later
- Use Location to Make Clear Distinctions between Activities
- Build Lessons that Breathe In and Out
- Use Story, Rhythm and Movement Whenever Possible
- Emotional and Relevant Hook
- This is why story is so powerful: it embodies all of them!

**11. Repeat to Remember**

- *People usually forget 90 percent of what they learn in a class within 30 days... the majority of this forgetting occurs within the first few hours after class. (Medina, 2010)*

**12. Discovery and Exploration**

- *Like an addictive drug, exploration creates the need for more discovery so that more joy can be experienced. It is a straight-up reward system. (Medina, 2010)*

**13. Remember to Repeat:**

- *Repeated exposure to information in specifically timed intervals provides the most powerful way to fix memory into the brain. Information is remembered best when it is elaborate, meaningful and contextual. (Medina, 2010)*

**References**

Jensen, E. 1998. Teaching with the Brain in Mind. Alexandria, VA: Association for Supervision and Curriculum Development.

Medina, John. *Brain Rules: Twelve Principles for Surviving and Thriving at Work, Home, and School*. Seattle: Pear Press, 2010

## *Summary of Brain-Compatible Learning Strategies*

### **Not Brain-Compatible**

Low emotional impact  
Fragmented, sequential only  
Concern with being "on task"  
Standard boring illustrations  
Suppressing learner energy  
Lecture, more didactic  
Emphasis on content only  
Resigned to the learner's state  
Mistakes recognized directly  
Learner association with failure  
Emphasis on quiet learning  
Assessment by standardized tests  
Belief that learning is difficult  
Create tension & stress to learn  
Learning as only mental/cognitive  
Central focused stimuli  
Extended presenter lecture time  
Assumes authority from role  
Finish when time's up  
Subtle or obvious threats, helplessness  
Focus on learning in classrooms  
Institutional boring rituals  
Infer, threaten, demand  
Watered down micro-chunk curriculum  
Insistent focus on conscious learning  
Minimal open & closing time  
Delayed, indefinite & vague feedback  
Teach for the test, with stress  
Sit at desks & limit interactions  
Abrupt exposure to content  
Introduce topic, forget it  
Outcome-based learning  
Constant use of negatives; "don'ts"  
Artificial, contrived textbook learning  
Use of bribes, rewards, gimmicks  
Starve the brain for stimulation  
Disciplined, ordered, quiet, repressive  
Single topic only by teacher choice  
Standardized "objective" assessment

### **YES: Brain-Compatible**

Appropriately high emotional arousal  
Global, unified, holistic, thematic  
Alternating focus-diffusion learning  
Colorful abundant memory maps  
Utilizing & expressing energy  
Multiple intelligences served  
Emphasis on context, meaning & value  
Positively conditions the learner & states  
Mistakes noted indirectly or re-framed  
Use of alter-ego, other fun characters  
Often rich with talking, music, activity  
Feedback quality & quantity is increased  
Attitude is: it's easy, fun & creative  
Keeps stress low and enjoyment high  
Learning also emotive, action, movement  
Use of significant peripheral stimuli  
Alternate focus & diffusion activities  
Creates constant respect & credibility  
Finish with celebration  
Remove threats; focus on support  
Real world, simulations, trips  
Positive, purposeful rituals  
Suggest, ask & tell, suggest, ask & tell  
Year-long real-life thematic curriculum  
Use of strong non-conscious learning  
Longer open & close, shorter middle  
Immediate, positive & dramatic feedback  
Learn for the joy of learning & real-life  
Mobility, face each other, partners, groups  
Purposeful & consistent pre-exposure  
Multiple exposure & activation at 1-3 days  
Learning is often a by-product of play  
Use of totally positive language  
Using real-life problems in the real world  
Intrinsic motivation elicited  
Enriched: music, sights, aromas, movement  
Expressive, changing, noisy  
Learner input on topics, directions & depth  
Multiple brain-based assessment strategies

## ✓ *Self-Check: Teacher's Guidelines*

### *Instructional Strategies*

- ☐ Ability to get attention when appropriate
- ☐ Purposeful & productive activation of emotions
- ☐ Management & empowerment of learner states
- ☐ Strong learner choices offered
- ☐ Role-modeling joy and love of learning
- ☐ Balance of novelty, rituals and challenge
- ☐ Use of natural memory (contextual, motor & sensory)
- ☐ More immediate & consistent learner feedback
- ☐ Emphasis on preventative and invisible discipline
- ☐ Use of a non-hostile non-threatening discipline system
- ☐ Learning is safe, relevant & interesting
- ☐ Use of music, video, guest speakers & computers
- ☐ Appropriate use of nonverbals
- ☐ Understanding & use of learner-constructed meaning

### *The Learning Environment*

- ☐ Provides a secure, safe environment with an absence of threat
- ☐ Consistent use of collaborative learning (teams, partners, mixed groupings)
- ☐ Teacher-to-student & (student-to-student) quality, trusting relationships
- ☐ Room is physically comfortable, learners have choices
- ☐ Classroom is rich with posters, peripherals; it's real-life and multi-sensory
- ☐ Greater time flexibility on work projects

### *Use of Curriculum*

- ☐ Use of integrated, multi-disciplinary thematic content
- ☐ Relies on more relevant, real-life learning
- ☐ Provides greater learner choice for topics
- ☐ Teacher invests longer time on fewer, more complex topics

### *Feedback, Assessment & Evaluation*

- ☐ Emphasis on continuous daily feedback, de-emphasis on testing
- ☐ Demonstration of content mastery in 4-5 of the seven intelligences
- ☐ Learners can make an appropriate defense of their personal biases
- ☐ Students can show learning in context of the interdisciplinary relationships
- ☐ Learners demonstrate mastery of the process of learning as well as content
- ☐ Students give evidence of corresponding mental models learned
- ☐ Learners can show personal relevance or local, national or global relevance
- ☐ Specific "how-to" strategies are learned and demonstrated
- ☐ Teacher keeps logs or portfolios on student's observable behavior changes
- ☐ Learners have input & dialogue into the evaluation process



## Multiple Intelligences Instructional Techniques and Activities

<b>Verbal-Linguistic “word smart”</b>	<b>Logical-Mathematical “number smart”</b>	<b>Body-Kinesthetic “body smart”</b>	<b>Visual-Spatial “picture smart”</b>
Students who demonstrate a mastery of language and strength in the language arts -- speaking, writing, reading, listening.	Students who display an aptitude for numbers, detecting patterns, thinking logically, reasoning, and problem solving.	Students who use the body to express their ideas and feelings, and learn best through physical activity -- games, movement, hands-on tasks, dancing, building	Students who learn best visually and organizing things spatially by creating and manipulating mental images to solve problems.
<ul style="list-style-type: none"> <li>• Culminating essay that reviews project accomplishment</li> <li>• Journals</li> <li>• Logs</li> <li>• Portfolios of written work</li> <li>• Word processor products</li> <li>• Newspaper articles</li> <li>• Discussions</li> <li>• Debates</li> <li>• Storytelling</li> <li>• Write poem, myth, legend, short play</li> <li>• Relate a short play or novel to...</li> <li>• Give presentation on...</li> <li>• Lead a class discussion on...</li> <li>• Create a talk show radio program</li> <li>• Write a newsletter, booklet, or dictionary</li> <li>• Invent slogans</li> <li>• Create an audio tape</li> <li>• Conduct an interview</li> <li>• Write a letter</li> <li>• Use technology to write a letter</li> <li>• Use Internet for e-mail</li> <li>• Story or poetry contests</li> <li>• Buddy reading</li> <li>• Dialogue journal</li> <li>• School newspaper</li> <li>• Use storytelling to explain _____</li> <li>• Conduct a debate on _____</li> <li>• Create a talk show radio program about _____</li> <li>• Conduct an interview of _____ on _____</li> </ul>	<ul style="list-style-type: none"> <li>• Scoring sheets</li> <li>• Out-loud problem solving</li> <li>• Puzzles</li> <li>• Games</li> <li>• Outlining</li> <li>• Strategizing</li> <li>• Translate into mathematical formula</li> <li>• Timeline</li> <li>• Design and conduct an experiment</li> <li>• Make strategy game</li> <li>• Make a calendar</li> <li>• Interpret data</li> <li>• Hypothesize about...</li> <li>• Create story problem</li> <li>• Write a computer program</li> <li>• Categorize facts and information</li> <li>• Set up a lab project</li> <li>• Describe symmetry of...</li> <li>• Use inductive or deductive reasoning</li> <li>• Select/use technology</li> <li>• Measure body or room</li> <li>• Cut out geometric shapes</li> <li>• Use maps for direction</li> <li>• Graphing activities</li> <li>• Brain teasers</li> <li>• Translate a _____ into a mathematical formula</li> <li>• Make up syllogisms to demonstrate _____</li> <li>• Describe the patterns of symmetry in _____</li> <li>• Make up analogies to explain _____</li> <li>• Design and conduct an experiment on _____</li> </ul>	<ul style="list-style-type: none"> <li>• Exhibitions - public demonstration of knowledge gained from books, videotapes, experiments, art work, models, or skits</li> <li>• Manipulatives</li> <li>• Products</li> <li>• Simulations</li> <li>• Mime</li> <li>• Role plays</li> <li>• Creative movement</li> <li>• Exercise in seats</li> <li>• Scavenger hunts</li> <li>• Marching</li> <li>• Field days</li> <li>• Rehearse and perform a play</li> <li>• Create a movement or sequence of movements to explain...</li> <li>• Choreograph a dance</li> <li>• Do a reader's theater</li> <li>• Invent a board floor or adventure game</li> <li>• Make task or puzzle cards</li> <li>• Interactive spelling</li> <li>• Plan and attend a field trip</li> <li>• Use qualities of a physically educated person</li> <li>• Devise a scavenger hunt</li> <li>• Make a model</li> <li>• Design a product</li> <li>• Select/use technology</li> <li>• Create sequence of movements to explain _____</li> <li>• Build or construct a _____</li> <li>• Use hands-on materials to demonstrate _____</li> </ul>	<ul style="list-style-type: none"> <li>• Pictorials - chart or graph of student progress in study unit</li> <li>• Mind maps</li> <li>• Timelines</li> <li>• Models</li> <li>• Photographic essays</li> <li>• Videotapes</li> <li>• Collages</li> <li>• Art work</li> <li>• Clusters, graphs</li> <li>• Create videotape, slide show, or photo album</li> <li>• Design a poster, bulletin board, or mural</li> <li>• Visualize</li> <li>• Use memory system</li> <li>• Create a demonstration piece</li> <li>• Develop architectural drawings</li> <li>• Make a film or an advertisement</li> <li>• Vary color, size, and shape</li> <li>• Color-code a process</li> <li>• Invent a board or card game</li> <li>• Illustrate, draw, color paint, sketch, sculpt, construct</li> <li>• Make a diagram</li> <li>• Play board games</li> <li>• Use overhead projector</li> <li>• Use technology</li> <li>• Chart, map, cluster, or graph _____</li> <li>• Create slide show, video, or photo album of _____</li> <li>• Create a piece of art that demonstrates _____</li> <li>• Use game to demonstrate _____</li> </ul>

## Multiple Intelligences Instructional Techniques and Activities

<b>Naturalistic “nature smart”</b>	<b>Musical-Rhythmic “music smart”</b>	<b>Interpersonal “people smart”</b>	<b>Intrapersonal “self smart”</b>
Students who love the outdoors, animals, plants, field trips, and nature in general and have the ability to identify and classify patterns in nature.	Students who are sensitive to rhythm, pitch, melody, and tone of music and learn through songs, patterns, rhythms, instruments, and musical expression.	Students who are sensitive to other people, noticeably people oriented and outgoing, and learn cooperatively in groups or with a partner.	Students who are especially in touch with their own desires, feelings, moods, motivations, values, and ideas and learn best by reflection or by themselves.
<ul style="list-style-type: none"> <li>• Create observation notebooks of _____</li> <li>• Describe changes in local or global environment</li> <li>• Care for pets, wildlife, garden, or parks</li> <li>• Use microscopes, magnifiers binoculars, or telescopes to _____</li> <li>• Draw natural objects</li> <li>• Photograph natural objects</li> <li>• Video natural objects</li> <li>• Nature walk</li> <li>• Science experiment</li> <li>• Go to the zoo, animal preserve, or game park</li> <li>• Classify animals or plants</li> <li>• Visit botanical garden</li> <li>• Visit a flower shop</li> <li>• Plant a garden</li> <li>• Write a flora journal</li> <li>• Bird watching</li> <li>• Going to the beach or mountains</li> <li>• Nature object lessons</li> <li>• Teaching out-of-doors</li> <li>• Book reading outside</li> <li>• Cloud watching</li> <li>• Leaf or insect collecting</li> <li>• Building habitats</li> <li>• Dissections</li> <li>• Create own animal</li> <li>• Listen to the rain or wind</li> <li>• Tree rubbings</li> <li>• Spider web art</li> <li>• Rock collections</li> <li>• Camping trip</li> <li>• Pond ecology</li> <li>• Identify plants/animals</li> </ul>	<ul style="list-style-type: none"> <li>• Original songs - write lyrics, compose music</li> <li>• Dances that illustrate a concept</li> <li>• Explore sounds</li> <li>• Explore vibrations</li> <li>• Song or musical collage</li> <li>• Musical mnemonics</li> <li>• Rhythmical patterns</li> <li>• Aerobics</li> <li>• Parades</li> <li>• Attend a musical/concert</li> <li>• Indicate the rhythmical patterns</li> <li>• Give presentation using musical accompaniment</li> <li>• Sing patriotic or historical songs</li> <li>• Present a short class musical</li> <li>• Make an instrument and demonstrate it</li> <li>• Use music to enhance skill building</li> <li>• Create musical game</li> <li>• Collect and present songs</li> <li>• Write a new ending to a song</li> <li>• Use musical technology</li> <li>• Mathematics or vocabulary rap song</li> <li>• Sing a rap or song that explains _____</li> <li>• Indicate the rhythmical patterns in _____</li> <li>• Explain how the music of a song is similar to ____</li> <li>• Make musical instrument</li> <li>• Give presentation with musical accompaniment</li> </ul>	<ul style="list-style-type: none"> <li>• Peer review - students decide together on skills and criteria to evaluate</li> <li>• Collaborative learning or service projects</li> <li>• Teaching others, peer or younger student tutoring</li> <li>• Leadership skills</li> <li>• Create and implement group rules</li> <li>• Classroom government</li> <li>• Identify/assume a role</li> <li>• Puppet shows</li> <li>• Organize or participate in a group</li> <li>• Use conflict management strategy</li> <li>• Accommodate learning differences</li> <li>• Mentoring, tutoring, or apprenticeship programs</li> <li>• Culturegrams/Pen pals</li> <li>• Multiple perspectives</li> <li>• Scavenger hunt teams</li> <li>• Simulations</li> <li>• Debate teams</li> <li>• Help resolve local or global problem</li> <li>• Multi-ethnic perspective</li> <li>• Use telecommunications</li> <li>• International issues</li> <li>• Conduct a meeting to address _____</li> <li>• Intentionally use social skills to learn about _____</li> <li>• Participate in a service project</li> <li>• Teach someone about _____</li> <li>• Practice giving and receiving feedback</li> <li>• Use technology to _____</li> </ul>	<ul style="list-style-type: none"> <li>• Reflective journal track process and learning, daily or weekly goals, learning method, or results</li> <li>• Self assessment activities</li> <li>• Describe feelings about learning, setting, achieving goals</li> <li>• Managing self-directed projects</li> <li>• Describe qualities you possess that will help you be successful</li> <li>• Create personal analog</li> <li>• Explain your personal philosophy</li> <li>• Process emotions</li> <li>• Describe personal values</li> <li>• Use self-directed learning</li> <li>• Explain the purpose in studying</li> <li>• Explain intuitive hunches</li> <li>• Receive feedback</li> <li>• Pen pals</li> <li>• Select/use technology</li> <li>• Dialogue journals</li> <li>• Design own models</li> <li>• Make personal books</li> <li>• Conduct research</li> <li>• Individual instruction</li> <li>• Describe qualities you possess to help you successfully complete _____</li> <li>• Set and pursue a goal to</li> <li>• Describe one of your personal values about _____</li> <li>• Write a journal entry on</li> <li>• Assess your own work in _____</li> </ul>

# **KIPP Character Growth Card and Supporting Materials<sup>1</sup>**

**OPTIMISM** -- *expecting the best in the future and working to achieve it*

Gets over frustrations and setbacks quickly

Believes that effort will improve his or her future

**ZEST** -- *approaching life with excitement and energy; feeling alive and activated*

Actively participates

Shows enthusiasm

Invigorates others

**GRIT** -- *finishing what one starts; completing something despite obstacles; a combination of persistence and resilience.*

Finishes whatever he or she begins

Tries very hard even after experiencing failure

Works independently with focus

**CURIOSITY** -- *taking an interest in experience and learning new things for its own sake; finding things fascinating*

Is eager to explore new things

Asks and answers questions to deepen understanding

Actively listens to others

**SOCIAL INTELLIGENCE** -- *being aware of motives and feelings of other people and oneself; including the ability to reason within large and small groups.*

Able to find solutions during conflicts with others

Demonstrates respect for feelings of others

Knows when and how to include others

**GRATITUDE** -- *being aware of and thankful for opportunities that one has and for good things that happen*

Recognizes and shows appreciation for others

Recognizes and shows appreciation for his/her opportunities

**SELF-CONTROL** -- *regulating what one feels and does; being self-disciplined*

## **SELF-CONTROL – SCHOOL WORK**

Comes to class prepared

Pays attention and resists distractions

Remembers and follows directions

Gets to work right away rather than procrastinating

## **SELF-CONTROL – INTERPERSONAL**

Remains calm even when criticized or otherwise provoked

Allows others to speak without interruption

Is polite to adults and peers

Keeps temper in check

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<sup>1</sup> These behaviors were developed through a collaborative process that involved remarkable educators from KIPP and Riverdale Country School along with pioneering psychologists at the University of Pennsylvania and University of Michigan. Particular thanks are due to KIPP teachers -- Mitch Brenner, Tom Brunzell, David Levin, Christine Vasconez, and Mike Witter; from Riverdale -- KC Cohen, Karen Fierst, and Dominic Randolph; from University of Pennsylvania -- Angela Duckworth and Martin Seligman; from University of Michigan -- Chris Peterson.

### The 24 Character Strengths<sup>2</sup>

1. **Zest:** approaching life with excitement and energy; feeling alive and activated
2. **Grit:** finishing what one starts; completing something despite obstacles; a combination of persistence and resilience.
3. **Self-control:** regulating what one feels and does; being self-disciplined
4. **Social intelligence:** being aware of motives and feelings of other people and oneself
5. **Gratitude:** being aware of and thankful for the good things that happen
6. **Love:** valuing close relationships with others; being close to people
7. **Hope:** expecting the best in the future and working to achieve it
8. **Humor:** liking to laugh; bringing smiles to other people; seeing a light side
9. **Creativity:** coming up with new and productive ways to think about and do things
10. **Curiosity:** taking an interest in experience for its own sake; finding things fascinating
11. **Open-mindedness:** examining things from all sides and not jumping to conclusions
12. **Love of learning:** mastering new skills and topics on one's own or in school
13. **Wisdom:** being able to provide good advice to others
14. **Bravery:** not running from threat, challenge, or pain; speaking up for what's right
15. **Integrity:** speaking the truth and presenting oneself sincerely and genuinely
16. **Kindness:** doing favors and good deeds for others; helping them; taking care of them
17. **Citizenship:** working well as a member of a group or team; being loyal to the group
18. **Fairness:** treating all people the same; giving everyone a fair chance
19. **Leadership:** encouraging a group of which one is a valued member to accomplish
20. **Forgiveness:** forgiving those who've done wrong; accepting people's shortcomings
21. **Modesty:** letting one's victories speak for themselves; *not* seeking the spotlights
22. **Prudence/Discretion:** being careful about one's choices; not taking undue risks
23. **Appreciation of beauty:** noticing and appreciating all kinds of beauty and excellence
24. **Spirituality:** having beliefs about the higher purpose and meaning of the universe

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<sup>2</sup> Peterson, C. and Seligman, M. E. P. (2004). *Character strengths and virtues*. Oxford: Oxford UP.

## What is a Character Growth Card?

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The CGC is a school-based assessment developed to help middle school teachers provide students with formative feedback on skills that researchers and teachers alike have linked with success. We believe these questions are a useful springboard for teaching and learning activities related to a young person's development of character skills. It is not appropriate for diagnosing or comparing children. We do not yet have evidence that it is a valid tool for evaluating programs or schools.

The skills on this card fall into three major categories: social character, which facilitates harmonious relationships with other people and is exemplified by social intelligence and gratitude; achievement character, sometimes termed performance character, which facilitates the achievement of personal goals and is exemplified by grit; and intellectual character, which facilitates learning and is exemplified by curiosity. Some skills relate to two categories. For example, self-control is both interpersonal and an achievement strength; zest is both interpersonal and a learning strength; and, finally, optimism relates both to achievement and learning.

## Why these skills?

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The skills and behaviors on this card have been shown either to contribute to success in school and life, or are important ends in themselves in the context of K–12 education.

For each of these skills, there is at least some evidence that they can be cultivated, thus making them an especially important target for families and educators interested in supporting student growth and development.

## How should I use this card?

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When working with children, adults who use this tool find it helpful to:

- Discuss the differences and similarities between their scores and a child's self-ratings for each skill area.
- Return to this card on a quarterly basis as a way to emphasize that over time, these skills can grow and change.
- Discuss whether scores have changed over time and a child's perceptions about the source of this change. Has the child's behavior changed? Or perhaps have the child's personal standards changed? For example, children who become more aware of self-control skills may wish to change their self-control rating after several months of personal observation and reflection, even if their behavior itself has not changed much.
- Discuss different situations or environments when ratings might be different than the norm. For example, a child might say that he or she is normally a 5 on self control, but when it comes to playing on the baseball team, he or she would give herself a 1 or 2 in this area.

Again, please note that this card should **not** be used to diagnose or compare children, nor to compare schools or programs. Rather please use it to help children focus on their own growth and development in these areas, and as a conversation starter.

# CHARACTER GROWTH CARD

Q1

Q2

Q3

Q4

STUDENT NAME

GRADE

SCHOOL

DATE

1 = Almost Never · 2 = Very Rarely · 3 = Rarely · 4 = Sometimes · 5 = Often · 6 = Very Often · 7 = Almost Always

	SELF-ASSESSMENT	AVERAGE TEACHER SCORE	TEACHER 1	TEACHER 2	TEACHER 3	TEACHER 4	TEACHER 5
<b>GRIT</b> Finished whatever s/he began Stuck with a project or activity for more than a few weeks Tried very hard even after experiencing failure Stayed committed to goals Kept working hard even when s/he felt like quitting							
<b>OPTIMISM</b> Believed that effort would improve his/her future When bad things happened, s/he thought about things they could do to make it better next time Stayed motivated, even when things didn't go well Believed that s/he could improve on things they weren't good at							
<b>SELF CONTROL</b> ( <i>school work</i> ) Came to class prepared Remembered and followed directions Got to work right away instead of waiting until the last minute Paid attention and resisted distractions							
<b>SELF CONTROL</b> ( <i>interpersonal</i> ) Remained calm even when criticized or otherwise provoked Allowed others to speak without interrupting Was polite to adults and peers Kept temper in check							
<b>GRATITUDE</b> Recognized what other people did for them Showed appreciation for opportunities Expressed appreciation by saying thank you Did something nice for someone else as a way of saying thank you							
<b>SOCIAL INTELLIGENCE</b> Was able to find solutions during conflicts with others Showed that s/he cared about the feelings of others Adapted to different social situations							
<b>CURIOSITY</b> Was eager to explore new things Asked questions to help s/he learn better Took an active interest in learning							
<b>ZEST</b> Actively participated Showed enthusiasm Approached new situations with excitement and energy							

# How to Write Vocabulary Rhymes

From Flocabulary: Hip-Hop in the Classroom

[http://www.flocabulary.com/teacher\\_writing\\_lesson\\_plan.html](http://www.flocabulary.com/teacher_writing_lesson_plan.html)

Many students say that memorizing vocabulary words is a struggle, so we designed a simple lesson plan to help students learn, master and retain difficult vocabulary by writing a rhyme. This exercise can be done while a beat is playing

Here are some free beats: <http://www.flocabulary.com/instrumentals.html>.

## **Step 1. Choose Your Vocab Word and Pre-teach**

In this case, let's use the word **vain** – an SAT-level vocabulary word that students might have to grapple with as early as middle school.

- A. Teach the word and the definition: Vain (adj.) too proud, into oneself
- B. Use the word in a sentence: (e.g.) "Vain people always carry a mirror in their pocket so they can check themselves out."

## **Step 2. The First Line**

The formula:

\_\_\_\_\_ (Definition) \_\_\_\_\_ (Vocabulary Word),  
\_\_\_\_\_ (Context) \_\_\_\_\_ (Rhyme).

We know that our first line will end with **vain**. To be an effective learning tool, the first line also needs to contain the word's definition. Here's a sample first line: "Lisa was so into herself, you know, she was so **vain**,"

*If you're working with a group of students who have never done this before, it may be a good idea to provide the first line. Once students get used to the exercise, they'll be able to write it on their own.*

## **Step 3: The Rhyming Word Bank**

We know that our first line ends with vain, so our next step will be to create a list of words that rhyme with that sound: luckily, many English words do. For this exercise, have students raise their hands and call out words that rhyme. Make a list on the board like this:

### Vain – perfect rhymes

Pain  
Gain  
Brain  
Plane  
Vein (homonym!)  
Insane  
Disdain  
Entertain

### Vain – slant rhymes

Day  
Play  
Wage  
Take  
Sale  
Sayin'  
Money

As you can see, the slant rhymes get further and further away from the root word, but they're all close enough (pronounced with a little poetic license) to rhyme with vain.

#### **Step 4: Complete the Rhyme**

Now that you have a rhyming word bank, your students will have to choose one of the rhyming words and use it to complete the rhyme.

You'll notice in the formula that we ask students to think about context in their second line. This is a key point and can really separate great writers from writers who simply complete the assignment. In this case, writing with good context means that the second line supports the meaning of the vocabulary word you are defining, through action or theme.

For example, here is a second line that doesn't use context:

"Lisa was so into herself, you know, she was so **vain**,  
She likes rain."

While this is a perfectly fine rhyme, we are relying on the first line's definition as a context clue but not really getting another exposure to the word's meaning.

Here's a better example that uses context.

"Lisa was so into herself, you know, she was so **vain**,  
She looks in the mirror so much it drives me insane."

#### **Step 5: Perform**

Each student should now have at least two lines written. At this point, you can offer students that chance to perform their rhymes for the class (over a beat or a cappella). This is always a fun way to end the lesson and it's always great when you (the teacher) share as well.

#### **Step 6: Repeat**

Now that students get the idea, they shouldn't have a problem repeating this process with other vocabulary words that you chose. Provide students with a list of 8 words and have them write an entire verse on a specific topic!

Get your students everything they need to write, perform and record their own educational raps with the Writing Academic Rhymes Package:

[http://www.flocabulary.com/warp\\_order.html](http://www.flocabulary.com/warp_order.html)



**INTEGRATED MOVEMENT LESSON: *The Grammar Kingdom***  
**Lorrie Heagy, Glacier Valley Music teacher & Librarian**  
(I learned this technique as part of my Waldorf teacher training)

Each part of speech has the following:

- A character in the kingdom who has a particular role
- A movement
- A symbol
- A color

Each character should be introduced in the order that parts of speech are taught in the curriculum (i.e. noun, verb, adjective, adverb, article, preposition, conjunction).

Here are the characters and their descriptions:

Part of Speech	Character	Movement	Symbol	Color
Noun	King	Crowning Head	Crown	Blue
Verb	Workers	Hammering	Hammer	Red
Adjective	Queen	Smelling a Flower	Flower	Green
Adverb	Foreman	Pointing a finger	Pointed finger	Orange
Article	Herald	Blowing a Trumpet	Trumpet	Yellow
Preposition	Archer	Pulling back the arrow	Arrow	Pink
Conjunction	Draw Bridge	Forming an arch with arm	Bridge	Purple

**Their roles or jobs in the kingdom are:**

- **King:** goes around naming person, places and things: *rabbit, tree*, etc.
- **Workers:** make the nouns do things: *hops, grows*
- **Queen:** describes what the things look, smell, taste, sound and feel like: *soft* rabbit, *white* oak tree
- **Foreman:** tells the workers where, when and how much the things do: rabbit hops *quickly*, oak tree grows *slowly*
- **Herald:** announces when the king arrives (*a, an, the*) for every time you see a herald, you know the king (noun) will surely follow.
- **Archer:** shows the position of an object. Rabbit hops *over* the fence, white oak grows slowly *in* the forest.
- **Conjunction:** joins the other members of the kingdom. A rabbit hops *and* jumps over the fence. The white oak *and* hemlocks grow slowly in the forest.

**Practice sentences visually or kinesthetically:**

- Visually have the students draw the corresponding symbol above each word. You can incorporate color if you'd like.
- Kinesthetically, ask the students to stand up and act out each movement as the words are spoken in unison.

**Punctuation and Capitalization:**

- A capital letter is done by “dressing up” the sentence and pretending like you’re putting on a tie. So before the sentence is spoken, have everyone “dress up” by putting on a tie.
- Period is placing your index finger on the palm of the other hand.
- Exclamation point is stamping your foot.
- Question mark is raising both shoulders and hands, looking perplexed. . Check out the video clip for a better view.

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Memorize in Minutes

# The Times Tables

By Alan Walker

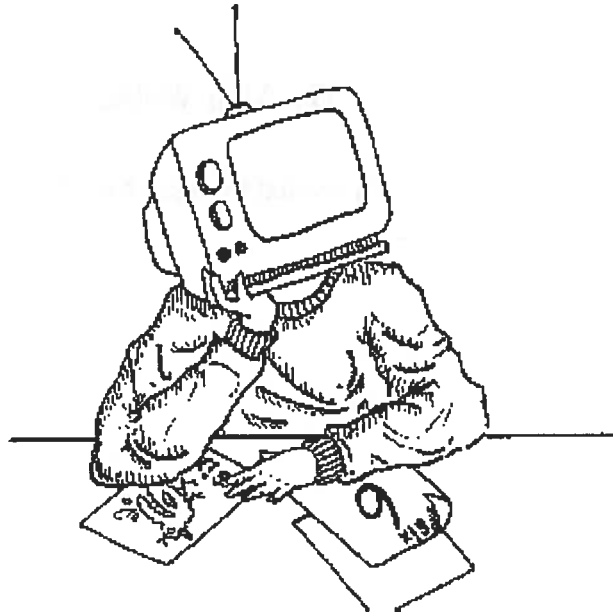
Illustrated by Jesus Murillo

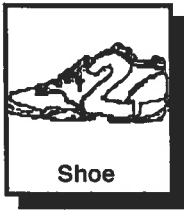
Krimsten Publishing, Washington

Memorize in Minutes

# Remembering

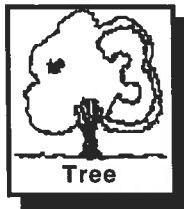
## With Pictures





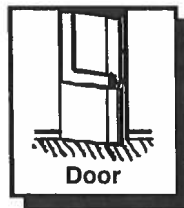
**2 = Shoe**

Shoe rhymes with shoe.



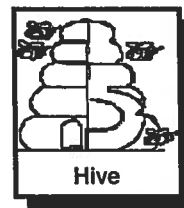
**3 = Tree**

Three rhymes with tree. See the three in the tree.



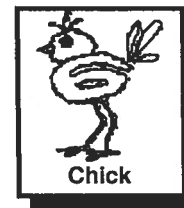
**4 = Door**

Four rhymes with door. Look at the picture of the door. Do you see the four?



**5 = Hive**

Five rhymes with hive.



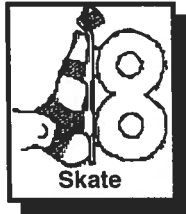
**6 = Chick**

Six sounds like chick.



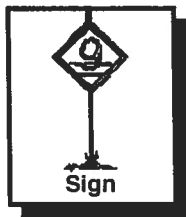
## **7 = Surfin'**

Seven sounds like surfin'. The wave looks like the number seven.



## **8 = Skate**

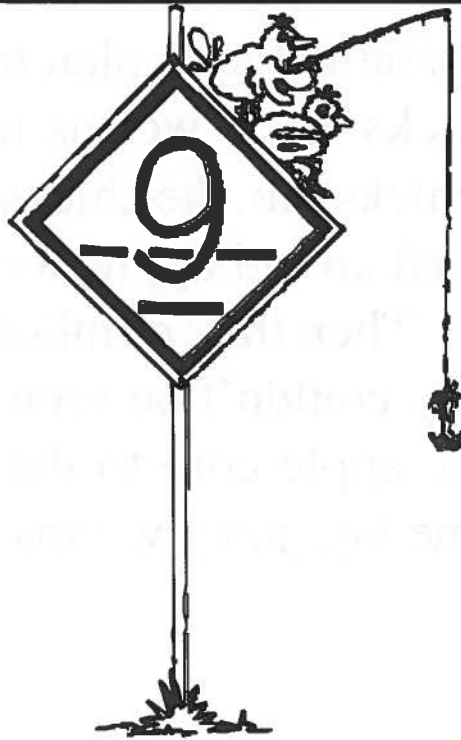
Eight rhymes with skate. The wheels of a skate form an eight when it is standing straight up.



## **9 = Sign**

Nine rhymes with sign. The sign also has the number 9 on it.

$$6 \times 9 = 54$$



**Chicks x Sign =  
Fishing with Core**

Some chicks had a great idea for catching tasty worms. They dreamed up a plan to go fishing for worms. The chicks knew worms liked apples but were afraid of chicks. So, the chicks found a fishing pole and attached an old apple core to the end of the fishing line. Then they climbed to the top of a stop sign so they couldn't be seen by the worms, and lowered the apple core to the ground. Yum, they caught some big, juicy worms!



# THE NERVOUS SYSTEM

(To the tune of "Old Joe Clark")

Here's an old-time melody from the Appalachian Mountains.

Ner - vous sys - tem's made up of two, nerves are the pe -  
 riph - eral. Brain and al - so spi - nal cord  
 they make up the cen - tral. Sen - so - ry and  
 mo - tor nerves are in the pe - riph - eral,  
 twelve are called the cra - ni - al thir - ty one are  
 spi - nal. Chorus: Sen - ding cur - rents from your brain  
 what your bo - dy's need - ing. To mus - cles, org - ans,  
 sen - ses, skin, ev - en helps your breath - ing.

Forebrain's hypothalamus and  
 thalamus and cerebrum  
 Hindbrain has medulla and  
 pons and cerebellum  
 Forebrain is for conscious thought  
 mid- and hind- make brain stem  
 With the nerves and spinal cord  
 for communication  
 Chorus

Fibers in the cells are the  
 dendrites and the axons  
 Covered with a myelin sheath  
 help the current pass on  
 Jumping gaps at the synapse  
 dendrite from the axon  
 With nucleus, cell bodies are  
 all part of your neuron  
 Chorus

Doesn't even use the brain  
 the system autonomic  
 Messages to innards are  
 Rather automatic  
 Changes when you're angry are  
 from the sympathetic  
 Changes when you're calming down  
 from parasympathetic  
 Chorus

## THE DIGESTIVE SYSTEM

(to the tune of "The Coffee in the Army")

Here's a melody to an old song about the terrors of army food. Some original verses you might hear at summer camp include gems such as:

"Oh, the coffee in the army they say is mighty fine,  
It's good for cuts and bruises and tastes like iodine."  
and

"Oh the biscuits in the army they say are mighty fine,  
One fell off of the table and killed a friend of mine."

The musical score is written on a single treble clef staff in 4/4 time. It consists of six lines of music. Chord symbols (F, C, Bb) are placed above the staff at various points. The lyrics are written below the staff, aligned with the notes. The melody is simple and repetitive, using mostly quarter and eighth notes.

Chord symbols: F, C, B<sup>b</sup>, F, C, F, C, F, C.

Lyrics:  
In your mouth there is sa - li - va it's  
a di - ges - tive juice. It mix - es as your eat - ing with  
par - ti - cles you chew. Then the food will tra - vel down a  
nar - row tube called your e - so - pha - gus con -  
tin - ues the pro - cess in the di - ges - tion of  
food.

Oh, the stomach has a pear shape,  
the size of your two fists  
The walls are made of muscle  
creating, peristalsis  
There's pepsin,  
hydrochloric acid, too  
Gastric juice makes the chyme  
Within five hours' time  
In the digestion of food

And in the small intestine,  
there's pancreatic juice  
The liver makes the bile,  
intestine makes more juice  
For food to be absorbed  
and used as fuel  
It passes through the villi  
Cells it will satisfy  
Cells need digestion of food

And in the large intestine,  
there's feces as it's called  
The waste then leaves your body,  
and now you've heard it all  
The four main parts  
for total digestion  
Mouth and small intestine  
Stomach, large intestine  
For the digestion of food

## **Why Do We Do Form Drawing**

Through the activity of creating and shaping forms, we form ourselves.

### **Form Drawing Develops:**

1. Small motor skills: dexterity of hand and beautiful handwriting.
2. The sense of self movement, balance, touch and life.
3. Inner visualization.
4. Thoughtful Observation.
5. Flexibility.
6. Harmonious breathing – rhythm of forms helps healthy breathing.
7. Growth of the healthy intellect through image making.
8. A balancing of Temperaments.
9. A relationship to space and form.
10. The social-moral forces of balance; insight and devotion.

## **Types of Form Drawing**

1. Running Forms
2. Symmetry Forms
3. Geometric Forms
4. Metamorphic, Transformation Forms
5. Completion Forms
6. Negative Space Forms
7. Weaving Forms
8. Spiral Forms
9. Double-running Forms

## CLASSROOM ACTIVITIES WHICH STRENGTHEN VISUAL CAPACITIES:

Compiled by Ingun Schneider

**I. Form drawing** with a sequence of **eye movements** along with tracing the form in the air as below 1) - 12). The form can be presented as usual with an imagination (and a verse); the teacher may choose to draw the form on the board, then erase it after 1) has been completed or may trace it in the air several times while the students watch closely, or may choose to do both.

The children then:

1) Trace the form up in the air with the whole writing hand while the eyes watch the hand - 1 to 3 times. It is important that the children's eyes move as they closely follow the tracing hand; if the head tends to move as the child looks, have the child hold his/her chin with the non-dominant hand.

2) Trace the form in the air with the index finger of the writing hand while the eyes closely watch the finger - 1 to 3 times. To encourage the children to look closely at the finger, the teacher can suggest to the younger children that an imaginary 'friend' is sitting on the index finger, the older children can color their index finger nail with a beeswax crayon or tie a red piece of yarn on the tip of the finger, or the children can look at the white of the finger nail.

3) Trace the form in the air as in 2) with the eye of the dominant side closely following the finger as in 2) - 1 to 3 times; the non-dominant eye can be held closed with the non-dominant hand - this holding can also help keep the head still so the eyes move as much as possible.

4) Trace the form in the air as in 2) with both eyes closed yet following the tracing finger as if the eyes had 'magic vision' and could see through the closed eyelids - 1 to 3 times.

5) Move the form with the eyes as if they could 'draw' the form on the inside of the eyelids.

6) Trace the form large (with the thumb, index and long fingers positioned as if holding a pencil) on the cleared-off desk - 1 to 3 times.

7) Take out the paper and trace the form on the paper as in 6) - 1 to 3 times; the teacher can move around the class and make sure everyone is spacing the form properly on the paper.

8) Take out the colored pencils, hold the writing hand up in the air with the pencil grasped with the tips of the thumb and index finger next to each other and the long finger underneath the pencil shaft; the teacher can then check that each student is holding the pencil properly. Next, each student places the pencil where the form should begin on the paper and the teacher can verify with a glance across the room that each one is ready to draw the form (or re-position starting points as needed).

9) Draw the form on the paper; it is a good idea to use a light color first, then go over this with a darker color, adjusting as needed. Some forms can have a second, third or more parallel line(s) drawn with (a) different color(s) next to the first; this gives the eyes and hand even more opportunity to develop coordination and accuracy.

As possible variations, skip one or two of the above steps and substitute one of the next suggestions:

10) Have the children trace (1 to 3 times), then draw the form with the foot of the dominant side (usually the same side as the writing hand) on paper on the floor (partners can hold each other's paper until the children are able to hold it by themselves with the opposite foot).

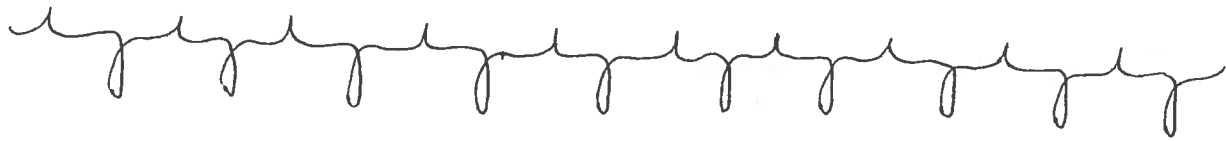
11) As a variation to tracing the form with the whole hand (1 above), the children can trace the form with a feather held in the writing hand - the eyes watch the feather closely.

12) As a variation to looking at the index finger (2 above), the children can watch a bead held between the tips of the index finger and thumb of the writing hand.

The teacher can walk around the classroom and check that the children move their eyes as they follow the form during each step above. The teacher may also have the children trace it on their partners' backs, or have some come forward to walk the form on the floor or to draw it on the board.

# FORM DRAWING THROUGH IMAGERY

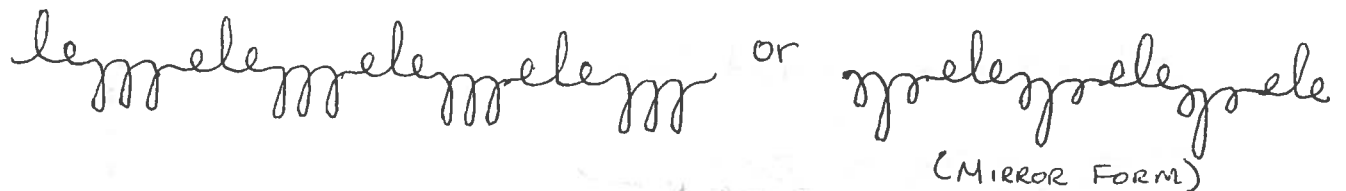
Fisherman throwing his fishing line into the sea:



Mosquitoes will also be present + fly like this:



They can change their flight pattern:



Cats on shore waiting to take the fish off the boat:



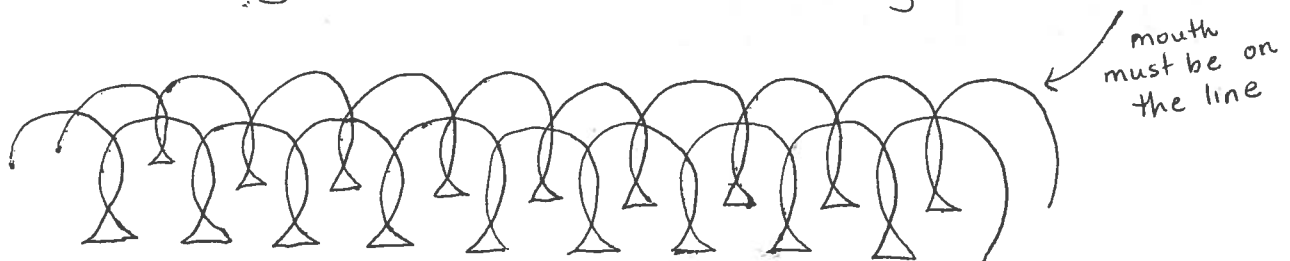
and foxes:

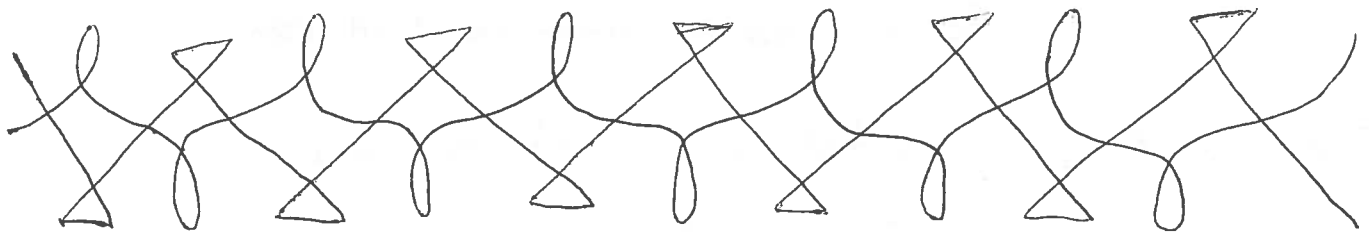


and chickens:

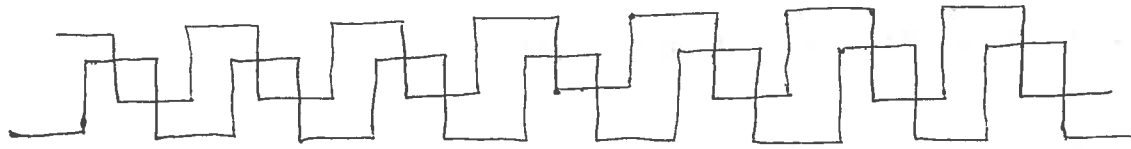


fishermen bring their fish in on a nice long line (+ minnows too):

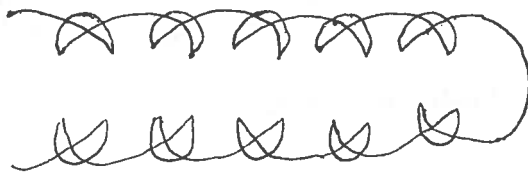




(DOUBLE RUNNING FORMS)

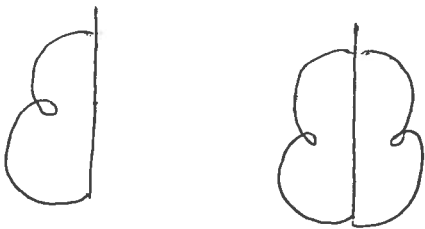


Cats + bats - mirrored form



Symmetry forms:

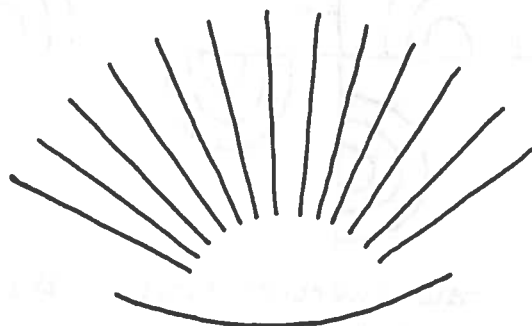
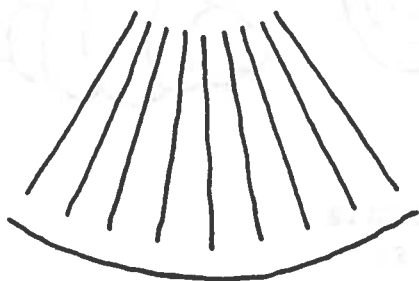
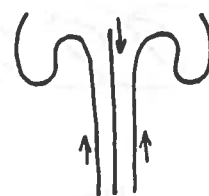
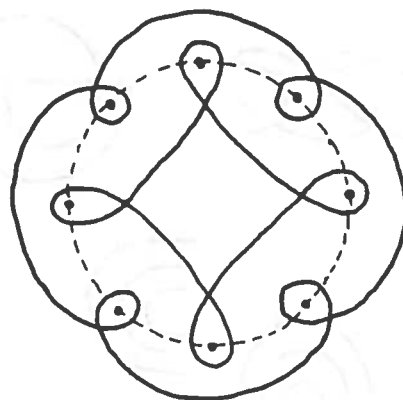
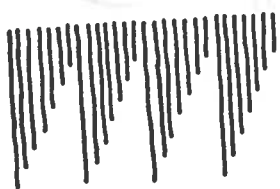
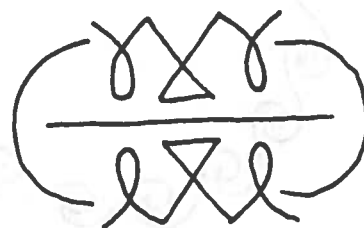
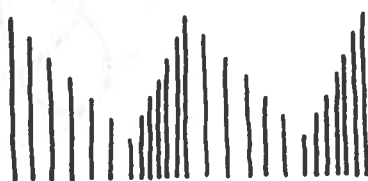
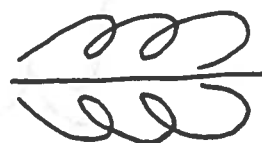
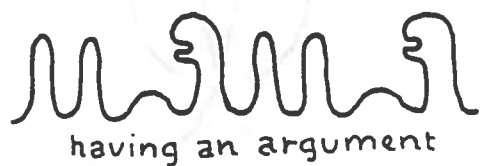
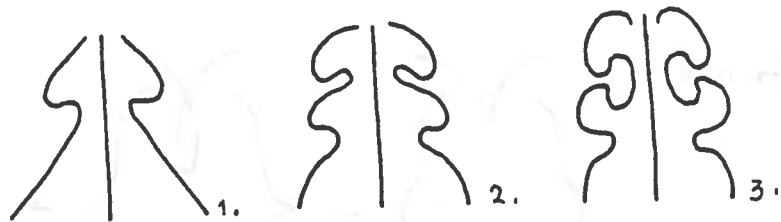
Always do the vertical symmetry (thinking plane)  
before horizontal.



Geometric form:

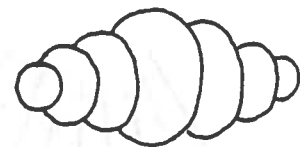
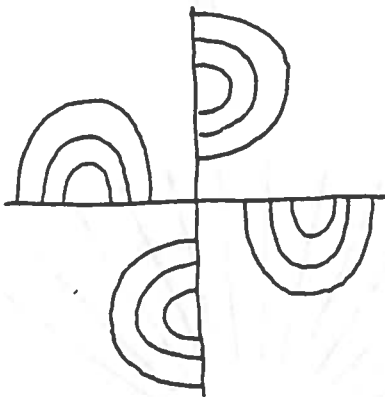
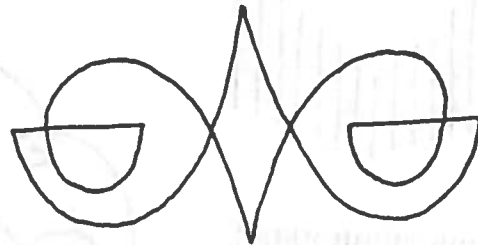
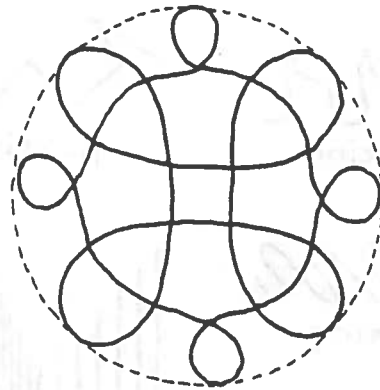
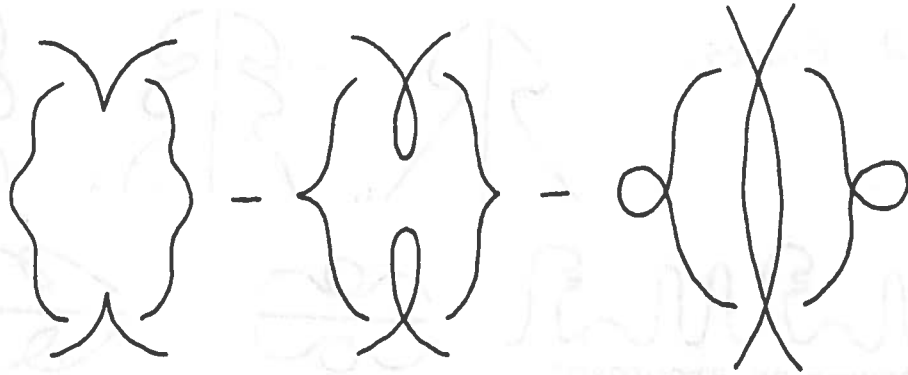


1st + 2nd Grades:



# FORM DRAWING

3rd Grade

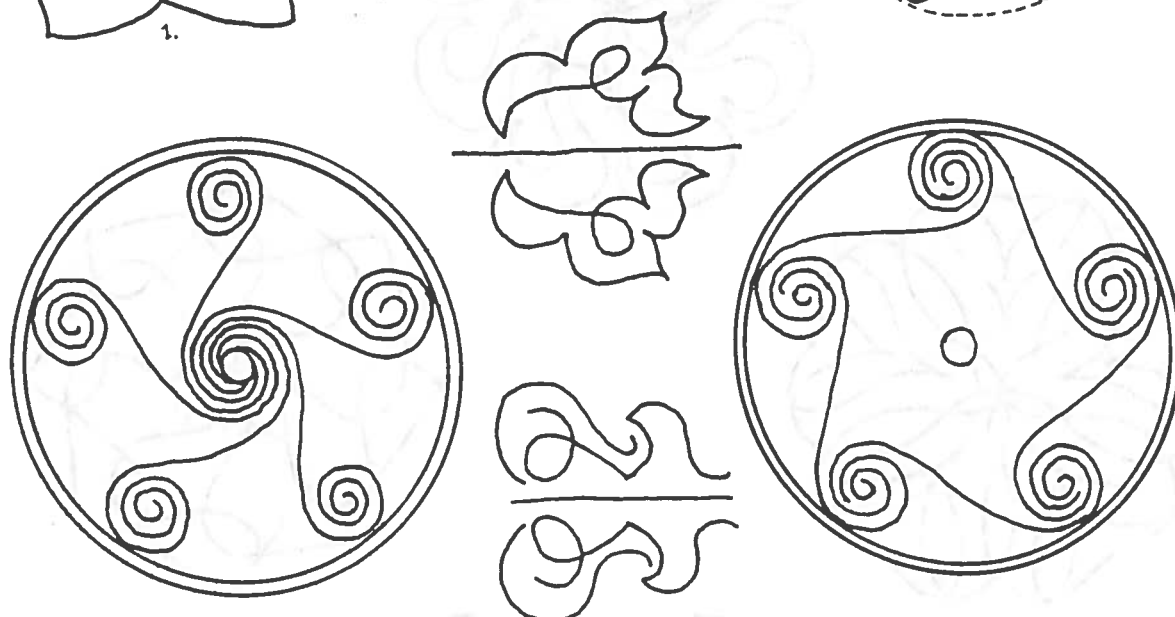
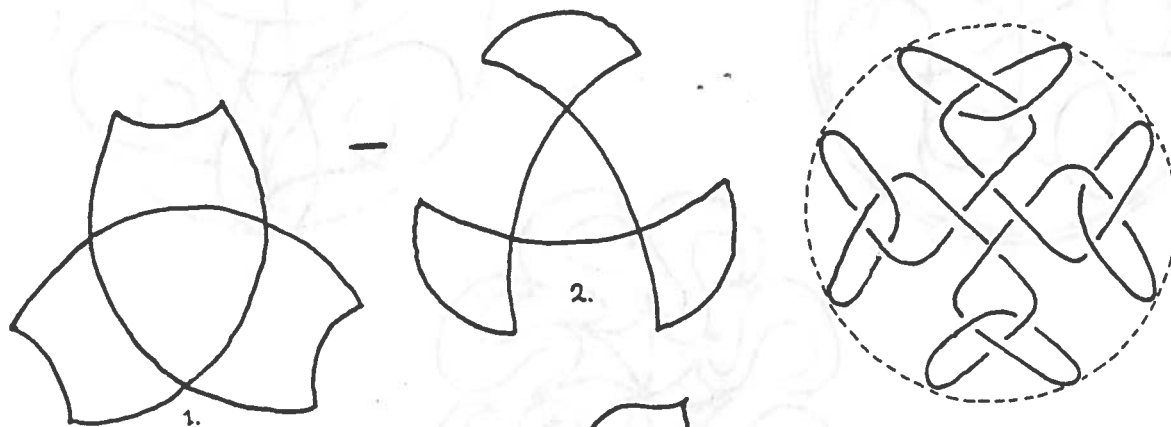
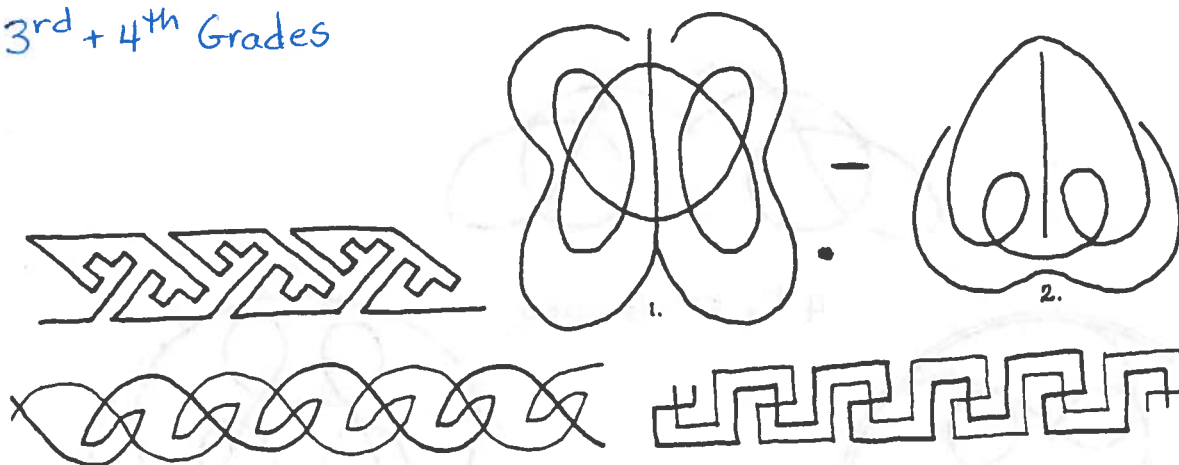


draw exercise first  
with cross.

then same exercise  
without cross.

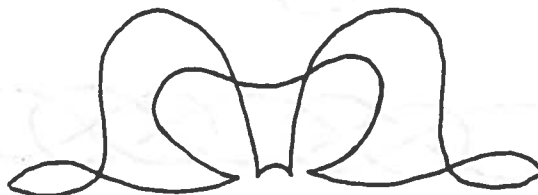
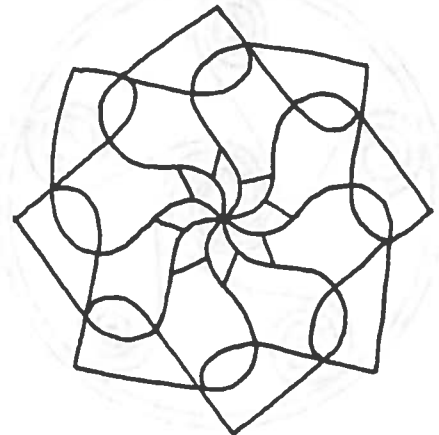
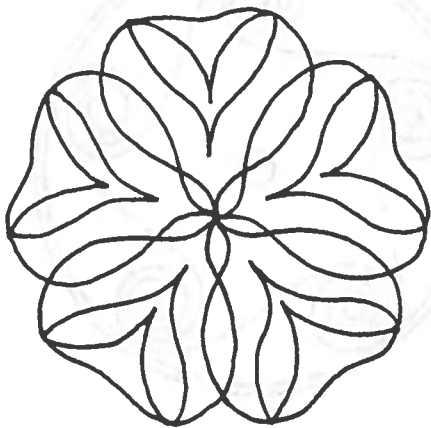
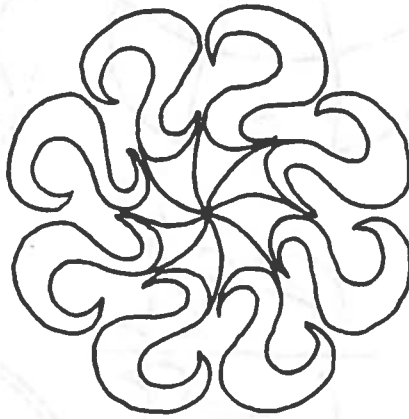
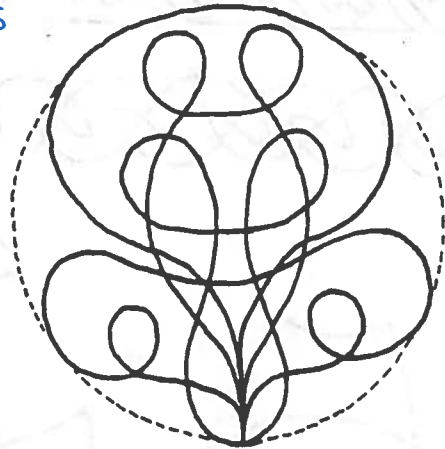
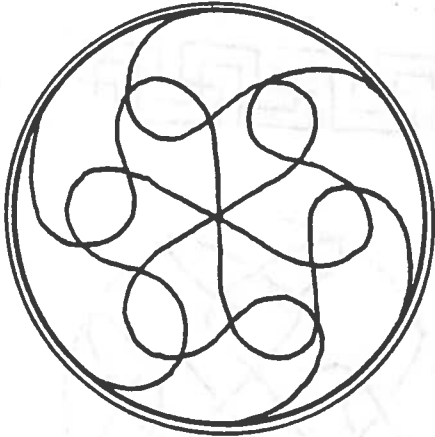


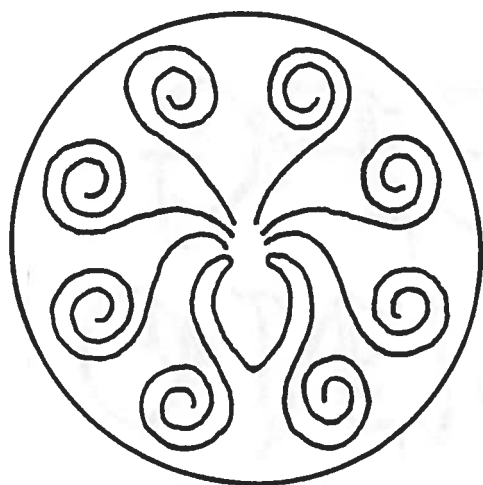
3<sup>rd</sup> + 4<sup>th</sup> Grades



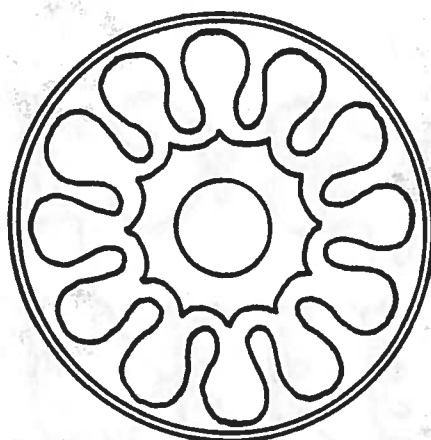


4<sup>th</sup> + 5<sup>th</sup> Grades

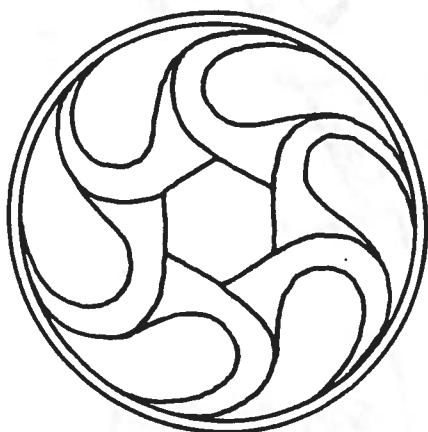




16th cent B.C. Mycenae



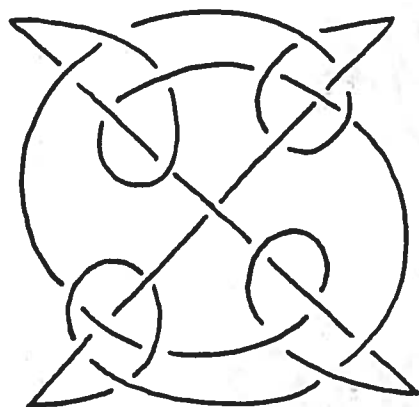
Early Greek Design



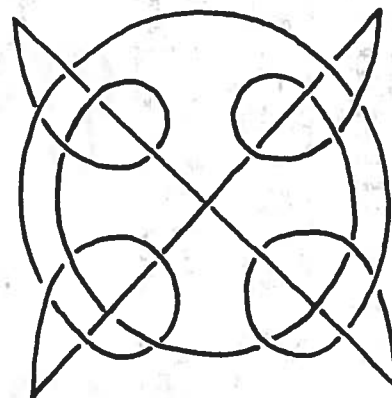
Gothic Rose Window



Early Greek Shield



5th Century Lombard



## Historical Designs

# Amoret

A B C D E F G  
H I J K L M N O  
P Q R S T U V  
W X Y Z

a b c d e f g h i j k l m n o p  
q r s t u v w x y z

\$ 1 2 3 4 5 6 7 8 9 0 &