Problem #1 – Elementary Level Preliminary – Bird Mask/Costume c.2004 Thinker's Ink

Instructions to the Team:

- ✓ You will have six minutes to create bird masks or bird costumes and three minutes to tell the judges about your masks or costumes.
- ✓ Your challenge is to create masks or costumes for three of your team members to change them into some type of bird. Each bird should be different, and the masks or costumes must be worn by the team members. Your team will have three minutes to tell the judges about your birds. You may present this to the judges in any way the team chooses.
- ✓ You may ask the judges questions during the six minutes you are building and creating.
- \checkmark The scoring will be as follows:
 - A. 15 points for each bird mask or bird costume created
 - B. 0-10 points each for creativity of the mask or costume
 - C. 1-10 points for quality of presentation
 - D. 1-20 points for how well the team works together

Notes for the judge:

- ✓ Allow six minutes for creating the masks/costumes.
- ✓ Allow three minutes for the presentation of the masks/costumes.
- ✓ Answer questions during the building time. Do not ask questions or answer questions during the presentation time.
- \checkmark The team may create a skit for the presentation.
- \checkmark Provide each team with the following materials:
 - 6 straws 2 paper plates black crayon brown crayon 8 labels 2 paper clips 5 sheets 8 ½" x 11" paper 5 sheets (different colors) construction paper
- ✓ Provide the team with a copy of "Instructions to the Team."

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Problem #1 – Elementary Level Preliminary – Bird Mask/Costume, continued c.2004 Thinker's Ink

Score Sheet Bird Masks/Costumes

Bird masks/costumes created x 15 = _ (45 point maximum)	
*creativity of bird mask/costume #1 (0-10) *creativity of bird mask/costume #2 (0-10) *creativity of bird mask/costume #3 (0-10)	
*quality of presentation (1-10)	
*How well the team works together (1-20)	
Total	

*Each judge should score independently and then an average will be taken for the final score.

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Problem #2 – Elementary Level Preliminary – Cat Party

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Instructions to the Team:

- ✓ You will have six minutes to create a party for a cat and three minutes to show the judges your party for a cat.
- ✓ Your challenge is to create a party for a cat. The party should be to celebrate a special occasion. Some examples of a special occasion might be a birthday, a holiday, or a welcome home time. You should plan a food and a game for your party. Your team will have three minutes to show the judges your party for a cat, complete with food and a game. You may present this to the judges in any way the team chooses.
- ✓ You may ask the judges questions during the six minutes you are building and creating.
- \checkmark The scoring will be as follows:
 - A. 15 points each for the game and the food presented
 - B. 0-10 points each for creativity of the game and the food
 - C. 0-10 points for overall creativity of the party idea
 - D. 1-10 points for quality of presentation
 - E. 1-20 points for how well the team works together

Notes for the judge:

- \checkmark Allow six minutes for creating the party with a game and a food.
- \checkmark Allow three minutes for the presentation of the party with a game and a food.
- ✓ Answer questions during the building time. Do not ask questions or answer questions during the presentation time.
- \checkmark The team may create a skit for the presentation.
- ✓ Provide each team with the following materials:
 - 4 straws 2 paper plates black crayon 2 paper cups 1 balloon 1 ping pong ball 8 labels 2 paper clips 3 sheets 8 ½" x 11" paper 4 sheets (different colors) construction paper
- ✓ Provide the team with a copy of "Instructions to the Team."

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Problem #2 – Elementary Level Preliminary – Cat Party c.2004 Thinker's Ink

Score Sheet Cat Party

A game/a food presented (30 point maximum)	_x 15 =	
*creativity of the game *creativity of the food	(0-10) (0-10)	
*overall creativity of party idea	(0-10)	
*quality of presentation (1-10)		
*How well the team works together (1-20)		
	Total	

*Each judge should score independently and then an average will be taken for the final score.

Problem #3 - Elementary Level Final - Centipede

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Instructions to the Team:

- ✓ Your challenge is to build a creature of straws, toothpicks, paper clips, and marshmallows. The creature will be measured horizontally for length.
- ✓ This creature will be made from the straws, toothpicks, paper clips, and marshmallows that appear on the first table here in front of you. However, the creature must be assembled on the next table.
- ✓ To get the materials needed to build your creature, you must "buy" the materials by giving verbal responses to another challenge. For each response that a team member gives, the team may select one item from the table.
- ✓ You will have one minute to think, to ask the judges questions, and to talk to team members. At the end of one minute, you will have two minutes to give your verbal responses and to "buy" your materials for building.
- ✓ Each verbal response will be scored. Common responses will receive one point, creative responses will receive three points, and highly creative responses will receive five points.
- ✓ You will give your answers in order from one to five (six) (seven), and then start again with one, two, three, and so on. With each response given, a team member may select one marshmallow, or one toothpick, or one paper clip, or one straw from the table.
- ✓ If a team member is stuck, the entire team is stuck. You may not talk during the twominute response time.
- ✓ At the end of the two-minute response time, the judges will call "time" and your team may then move to the next table to build the creature. No more verbal responses may be given. Your build time starts immediately after the verbal response time.
- ✓ The judges will answer questions during the building time and you may talk to each other while you build.
- ✓ The team will have five minutes to build. At the end of five minutes, the creature will be scored.
- ✓ You will receive three points for each inch of length and two points for each leg of the creature that touches the table.
- ✓ Here is your verbal challenge. Name things that have legs. For example, a spider has legs. Name things that have legs.
- \checkmark Your minute think time begins now.

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Problem #3 – Elementary Level Final – Centipede, continued c.2003 Thinker's Ink

Notes for the judge:

- ✓ Place sheets of paper numbered 1 through 7 on one of the tables to identify the students. This is the order in which each will respond to the verbal challenge. The other table should be empty to be used for a work space when building.
- Place the following items on the table with the numbers 5 straws
 - 5 toothpicks 5 small paper clips 10 small marshmallows
- \checkmark Allow only one minute to think, ask questions, and discuss for the verbal response.
- \checkmark Allow two minutes for verbal responses.
- \checkmark Allow five minutes for the team to build and ask questions about the creature.
- ✓ Award one point for common responses, three points for creative responses, and five points for highly creative responses.
- \checkmark Be consistent in scoring of responses.
- \checkmark Be consistent in answers given to each team.
- \checkmark Be sure to explain horizontal length.
- ✓ If the creature curves or is not straight, a measurement should be taken as if the creature were straight or stretched out.

Problem #3 – Elementary Level Final – Centipede, continued c.2003 Thinker's Ink

Score Sheet **Centipede Creature**

Common responses	x1 =	
Creative responses	x 3 =	
Highly creative responses	x 5 =	
	Total verbal score *	
Horizontal creature length in inch	nes x 3 = _	
Number of legs touching the tab	lex 2 =	
	Total creature score	
Total team score		

*verbal score should be an average of all judges' scores.

Problem #4 – Elementary Level Final – Straw Tower

c.2003 Thinker's Ink

Instructions to the Team:

- ✓ Your challenge is to create a tower of straws and marshmallows. The tower will be measured vertically for height.
- ✓ This tower will be made from the straws and marshmallows that appear on the first table here in front of you. However, the tower must be assembled on the next table.
- ✓ To get the materials needed to build your tower, you must "buy" the materials by giving verbal responses to another challenge. For each response that a team member gives, the team may select one item from the table.
- ✓ You will have one minute to think, to ask the judges questions, and to talk to team members. At the end of one minute, you will have two minutes to give your verbal responses and to "buy" your materials for building.
- ✓ Each verbal response will be scored. Common responses will receive one point, creative responses will receive three points, and highly creative responses will receive five points.
- ✓ You will give your answers in order from one to five (six) (seven), and then start again with one, two, three, and so on. With each response given, a team member may select one marshmallow or one straw from the table.
- ✓ If a team member is stuck, the entire team is stuck. You may not talk during the twominute response time.
- ✓ At the end of the two-minute response time, the judges will call "time" and your team may then move to the next table to build the tower. No more verbal responses may be given. Your build time starts immediately after the verbal response time.
- ✓ The judges will answer questions during the building time and you may talk to each other while you build.
- ✓ The team will have five minutes to build. At the end of five minutes, the tower will be scored.
- ✓ You will receive three points for each inch of height and two points for each straw used in the tower.
- ✓ Here is your verbal challenge. Name things that have steps. For example, a twostory house has steps. Name things that have steps.
- \checkmark Your minute think time begins now.

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Problem #4 – Elementary Level Final – Straw Tower, continued c.2003 Thinker's Ink

Notes for the judge:

- ✓ Place sheets of paper numbered 1 through 7 on one of the tables to identify the students. This is the order in which each will respond to the verbal challenge. The other table should be empty to be used for a work space when building.
- Place the following items on the table with the numbers 15 straws
 10 small marshmallows
- \checkmark Allow only one minute to think, ask questions, and discuss for the verbal response.
- ✓ Allow two minutes for verbal responses.
- \checkmark Allow five minutes for the team to build and ask questions about the tower.
- ✓ Award one point for common responses, three points for creative responses, and five points for highly creative responses.
- ✓ Be consistent in scoring of responses.
- \checkmark Be consistent in answers given to each team.
- \checkmark Be sure to explain vertical height.

Problem #4 – Elementary Level Final – Straw Tower, continued c.2003 Thinker's Ink

Score Sheet Straw Tower

Common responses	x l =	
Creative responses	x 3 =	
Highly creative responses	x 5 =	
	Total verbal score *	
Vertical tower height in inches _	x 3 =	
Number of straws used		

*verbal score should be an average of all judges' scores.

Problem #5 - Middle School Preliminary – Magic Act

c.2003 Thinker's Ink

Instructions to the Team:

- ✓ You will have six minutes to build and create and three minutes to present your creation to the judges.
- ✓ Your challenge is to create six new magic acts. You may use the items on the table to create or to use in your presentation. These items are yours to use in any way you wish.
- ✓ You may ask questions during the first minute of the building/creating time.
- \checkmark Scoring will be as follows:
 - A. 1-20 points for the creativity of presentation
 - B. 1-10 points each for creativity of the new magic acts
 - C. 2 points for each of the items from the table used in the solution
 - D. 1-20 points for how well the team works together

Notes for the judges:

- ✓ Allow six minutes for creating.
- \checkmark Allow three minutes for the presentation.
- ✓ Answer questions during the first minute of the building/creating time.
- \checkmark Place the following items on the table in front of the team:
 - large white poster board
 sheets 8 ¹/₂" x 11" white paper
 different colored sheets of construction paper
 one long envelope
 straws
 marshmallows
 paper clips
 one sharpened pencil
 labels

Provide the team with a copy of "Instructions to the Team."

Problem #5 – Middle School Preliminary – Magic Act, continued c.2003 Thinker's Ink

	Score Sheet Magic Acts		
items used in this solution	x 2 =		
*creativity of each new magic act #1 (1-10 points)			
#2 (1-10 points)			
#3 (1-10 points)			
#4 (1-10 points)			
#5 (1-10 points)			
#6 (1-10 points)			
*creativity of presentation (1-10 poin *how well team works together (1-2		 Total	

*Each judge should score independently and then an average will be taken for the final score.

Problem #6 – Middle School Preliminary – Cat Clothes c.2003 Thinker's Ink

Instructions to the Team:

- ✓ You will have six minutes to build and create and three minutes to present your creation to the judges.
- ✓ Your challenge is to create six new fashion items appropriate for a cat. You may use the items on the table to create or to use in your presentation. These items are yours to use in any way you wish.
- ✓ You may ask questions during the first minute of the building/creating time.
- \checkmark Scoring will be as follows:
 - A. 1-20 points for the creativity of presentation
 - B. 1-10 points each for creativity of the fashion items for a cat
 - C. 2 points for each of the items from the table used in the solution
 - D. 1-20 points for how well the team works together

Notes for the judges:

- \checkmark Allow six minutes for creating.
- ✓ Allow three minutes for the presentation.
- ✓ Answer questions during the first minute of the building/creating time.
- \checkmark Place the following items on the table in front of the team:
 - 3 sheets 8 1/2" x 11" white paper 3 different colored sheets of construction paper one long envelope 4 straws 3 marshmallows 3 paper clips one sharpened pencil 4 mailing labels
- ✓ Provide the team with a copy of "Instructions to the Team."

Problem #6 – Middle School Preliminary – Cat Clothes, continued c.2003 Thinker's Ink

Score Sheet Cat's Clothes

Items used in this solutionx	<u> </u>
*creativity of each fashion item for a cat #1 (1-10 points)	
#2 (1-10 points)	
#3 (1-10 points)	
#4 (1-10 points)	
#5 (1-10 points)	
#6 (1-10 points)	
*creativity of presentation (1-10 points)	
*how well team works together (1-20 points)	 Total

*Each judge should score independently and then an average will be taken for the final score.

Problem #7 – High School Level – Friendly Fence

c.2003 Thinker's Ink

Instructions to the Team:

- ✓ Your challenge is to create the longest possible fence touching the table in ten spots or less.
- ✓ The fence will be made from paper clips, toothpicks, and dimes that appear on the table here in front of you. However, the fence must be assembled on the construction table next to the response table.
- ✓ To obtain the paper clips, toothpicks, and dimes needed to construct your fence, you must "buy" the materials by giving verbal responses to another challenge. For each response that a team member gives, the team may select a material from the table. As the materials are "bought," the materials may be moved to the construction table and the construction group may begin building.
- ✓ Your team must divide into two groups as equal in number of members as possible.
 One group will give verbal responses while the other group builds.
- ✓ Each verbal response will be scored. Common responses will receive one point, creative responses will receive three points, and highly creative responses will receive five points.
- ✓ You will give your answers in order from one to three (four) and then start again with one, two, three, and so on. The members of the verbal response group should stand behind the numbers that appear on the table. With each response given, a team member from the construction group may take materials that are "bought" with verbal responses.
- ✓ If a verbal response group member is stuck, the entire team is stuck. No team members may talk to each other while verbal responses are given. Verbal responses may be given until all the materials have been selected. No more verbal responses may be given after all the materials have been used.
- ✓ After the verbal response group stops giving responses, all team members may move to the construction table and team members may then talk to each other.
- The team will have nine minutes to complete the challenge, including the minute think and planning time. Team members may talk to each other and ask the judges questions during the minute of planning time. At the end of nine minutes, the fence will be scored.

Problem #7 – High School Level – Friendly Fence, continued

c.2003 Thinker's Ink

- ✓ Your fence must sit on the dimes without touching the table. The dimes may not touch each other. The fence must have a beginning and an ending point. The team may point the beginning and ending points out to the judges prior to the scoring. Ten points will be given for each inch of length of the fence. Five points will be deducted for each dime that the fence sits on. If the fence touches the table at any place, fifty points will be deducted. Three points for each unused dime left on the assembly table will be given to the team. A team copy of the scoring and a team copy of the construction portion of the challenge is on the construction table for you to refer to during the nine minutes.
- ✓ Here is your verbal challenge. Name as many places where a fence may be found and what purpose the fence serves. For example, a garden fence keeps deer away from the vegetables. Name as may places where a fence may be found and what purpose the fence serves.
- \checkmark Your minute think and planning time begins now.

Notes for the judge:

- ✓ Place sheets of paper numbered 1 through 4 on one of the tables to identify the students. This is the order in which each will respond to the verbal challenge. The other table should be empty to be used for a work space when building. Label the table with the numbers as the "response table" and the other table as the "construction table."
- Place the following items on the response table: Ten dimes twenty small paper clips
 - twenty toothpicks
- Allow only one minute to think, ask questions, and discuss for the verbal response. Stop the team and then give them the remaining eight minutes to complete the challenge.
- ✓ Stop the verbal response time when all items have been selected; however, the team may stop verbal responses at any time they choose.
- ✓ Award one point for common responses, three points for creative responses, and five points for highly creative responses.
- \checkmark Be consistent in answers given to each team.

Problem #7 – High School Level – Friendly Fence, continued c.2003 Thinker's Ink

- Award the following points:
 10 points per inch of fence
 3 points per dime not used in the construction
- Deduct the following points:
 50 points if the fence touches the table at any place
 5 points for each dime upon which the fence sits
- ✓ Place "Instructions for the Team" on the construction table.

Instructions for the Team High School Level Final Round Friendly Fence

You are to build the longest fence touching the table in no more than ten places. Points will be awarded for length. Points will be deducted for each dime the fence sits on. Points will be deducted for the fence touching the table. Points will be awarded for dimes not used in the construction.

Award the following points:

10 points per each inch of length from the beginning point to the ending point. No portion of the fence may be measured more than once. 3 points for each dime not used in the construction

Deduct the following points:

- 50 points if the fence touches the table in any place
- 5 points for each dime upon which the fence sits

Problem #7 – High School Level – Friendly Fence, continued

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Score Sheet High School Level Final Round Friendly Fence

Team name		
Judge		
Common responses Creative responses Highly creative responses	x 1 = x 3 = x 5 = Total verbal score*	
Add: length of fence in inches	x 10**	+
dimes not used in construc	ction x 3**	+
Deduct: fence touches the table	(50)**	
dimes upon which fence s	its x 5**	
	Total fence score	
Total team score		

*Verbal score should be an average of all the judges' scores. Judges should score independently and then recap with an average.

**These scores are objective and must be the same for each judge.

Problem #8 – High School Level – Card House

c.2003 Thinker's Ink

Instructions to the Team:

- ✓ Your challenge is to create the tallest possible card house with multiple floors or levels.
- The card house will be made from the index cards that appear on the table here in front of you. However, the house must be assembled on the construction table next to the response table.
- ✓ To obtain the index cards needed to construct your house, you must "buy" the index cards by giving verbal responses to another challenge. For each response that a team member gives, the team may keep the index card used for the verbal response. As index cards are "bought," the cards may be moved to the construction table and the construction group may begin building.
- ✓ Your team must divide into two groups as equal in number of members as possible.
 One group will give verbal responses while the other group builds.
- ✓ Each verbal response will be scored. Common responses will receive one point, creative responses will receive three points, and highly creative responses will receive five points.
- ✓ You will give your answers in order from one to three (four) and then start again with one, two, three, and so on. The members of the verbal response group should stand behind the numbers that appear on the table. With each response given, a team member from the construction group may take the index card that was used in the verbal response.
- ✓ If a verbal response group member is stuck, the entire team is stuck. No team members may talk to each other while verbal responses are given. Verbal responses may be given until all the index cards have been selected. No more verbal responses may be given after all the index cards have been used.
- ✓ After the verbal response group stops giving responses, all team members may move to the construction table and team members may then talk to each other.

Problem #8 – High School Level – Card House, continued

c.2003 Thinker's Ink

- ✓ The team will have nine minutes to complete the challenge, including the minute think and planning time. Team members may talk to each other and ask the judges questions during the minute of planning time. AT the end of nine minutes, the card house will be scored.
- ✓ You will receive twenty points if no index cards of the same color touch. Five points for the first level, ten points for the second level, fifteen points for the third level, twenty points for the fourth level, and ten points for each additional level above four levels will be given. Two points for each inch of height and three points for each unaltered index card will be added to your score. A team copy of the scoring and a team copy of the construction portion of the challenge is on the construction table for you to refer to during the nine minutes.
- Here is your verbal challenge. On each of the twenty index cards, there is the name of an animal. Give a response using the animal in some manner. For example, if the name "cat" appears on the index card, you might say, "I have a cat for a pet." Give a response using the animal that appears on the index card. You may turn the cards over during your minute of think and planning time. The index cards do not have to be used in any particular order.
- \checkmark Your minute think and planning time begins now.

Notes for the judge:

- ✓ Place sheets of paper numbered 1 through 4 on one of the tables to identify the students. This is the order in which each will respond to the verbal challenge. The other table should be empty to be used for a work space when building. Label the table with the numbers as the "response table" and the other table as the "construction table."
- Place the following items on the response table:
 20 index cards with the name of an animal printed on each There should be 5 yellow, 5 green, 5 pink, and 5 orange. Place them face down so the team cannot see the words until the planning time begins.
- ✓ Animal names for the cards: wolf, cow, hog, cat, mustang, rat, chicken, rabbit, unicorn, bat, hippo, lion, bear, moose, deer, duck, pelican, snake, whale, shark
- Allow only one minute to think, ask questions, and discuss for the verbal response. Stop the team and then give them the remaining eight minutes to complete the challenge.
- ✓ Stop the verbal response time when all items have been selected; however, the team may stop verbal responses at any time they choose.

Problem #8 – High School Level – Card House, continued

c.2003 Thinker's Ink

- ✓ Award one point for common responses, three points for creative responses, and five points for highly creative responses.
- \checkmark Be consistent in answers given to each team.
- Award the following points:
 20 points if no cards of the same color touch 5 points for the first level
 10 points for the second level
 15 points for the third level
 20 points for the fourth level
 10 points each for each level above four
 2 points for each inch of height
 3 points for each unaltered card
- ✓ Place "Instructions for the Team" on the construction table.

Instructions for the Team High School Level Final Round

You are to build a card house with as many levels or floors as possible. A level or a floor is considered a roof or ceiling with walls. Notice the room you are in. This room has a top with walls. This would be considered a level or a floor. Space must exist between the tops of each floor/level. You should alter as few cards as possible. You should build your card house with as few of the same colored cards touching as possible. More points will be given for unaltered index cards, a taller house, more levels, and same colored cards not touching. The index cards must be used as part of the house's structure to be scored.

Award the following points:

20 points if no cards of the same color touch

5 points for the first level

10 points for the second level

15 points for the third level

20 points for the fourth level

10 points each for each level above four

2 points for each inch of height

3 points for each unaltered card

Problem #8 – High School Level – Card House, continued c.2003 Thinker's Ink

Score Sheet

High School Level **Final Round**

Team name		
Judge		
Common responses	x1=	
Creative responses	x 3 =	
Highly creative responses	x 5 =	
	Total verbal score*	
No cards of the same cold	or touch (0 or 20)**	
First level	(0 or 5)**	
Second level	(0 or 10)**	
Third level	(0 or 15)**	
Fourth level	(0 or 20)**	
Levels above four	x 10** =	
Height in inches		
Number of unaltered card	s used	
in the house x	3** =	
	Total house score	

Total team score

*Verbal score should be an average of all the judges' scores. Judges should score independently and then recap with an average.

**These scores are objective and must be the same for each judge.