# Brave Knights

# We Bid Thee Welcome to the Great Encampment and Trials of Skill and Daring

To be held in the Meadows of the Park beyond the Towne of Brecksville

May 13, 14, 15 - 2005

### ATTENTION KNIGHTS OF THE ROUNDTABLE...(SCOUTS):

The Cuyahoga Valley and Crooked Creek Districts have planned a combined Spring Camporee to be held Friday, Saturday, and Sunday May 13-15, 2005, at the Meadows in the Cleveland Metro Parks, Brecksville Reservation. The following pages will give you the basic information you and your fellow Knights will need to help get you started. Your Scoutmaster will keep you up-to-date on further developments.

Just what is a Camporee? Well, it's like this. The Camporee is a fun-filled activity that will challenge your Scouting skills. This year the theme is patterned after the Knights of King Arthur's Roundtable. Patrols may build gateways to resemble a medieval castle. From your "castle", the Knights of your Roundtable will embark on several quests to complete a crusade of fun and learning. Your Knights will be faced with a number of challenges along their journey, each having a simulated medieval theme. At each challenge, your Knights will be confronted with a problem requiring a Scout skill to solve, or maybe to lay siege to a castle. There might even be a jousting style tournament! Depending on how well your Knights work out the challenges, your Knights will receive a number of points.

#### **HERE'S HOW IT WORKS:**

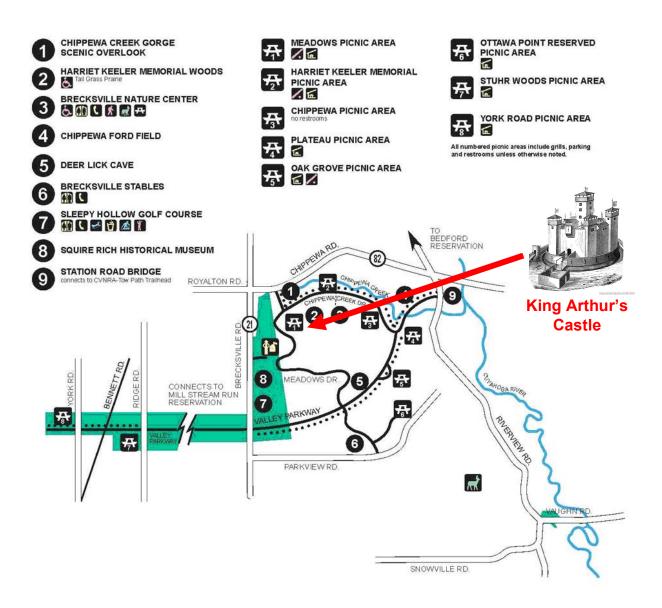
- 1. Patrols enter by sending in one copy of the enclosed roster sheets with names of your patrol members.
- Pre-registration fee is \$5.00 per attendee (include Adults, SPL and ASPL). Preregistration is before May 1, 2005. After the 1<sup>st</sup>, the fee will be \$5.50 per attendee (including adults, SPL and ASPL)
- 3. Build a catapult using the enclosed drawings as guides.
- 4. Brush up on your Scout skills.

When the Knights of your Roundtable (patrol) have entered, you will register your Knights and have your catapult and equipment checked for readiness at King Arthur's Castle (headquarters). All Quests will start at the same time on Saturday. Before the quests begin, your Senior Knight (SPL) will be given a secret scroll to send your Knights in the right direction with their instructions for the day. When you have completed your crusade, your Senior Knight will appear before King Arthur's Court (headquarters), and have your Crusade scores tallied. Scoring will be based on the number of points earned on the Crusade.

**Don't forget**---if your Knights of the Roundtable are to take part, fill out the enclosed roster and mail it in right away!! The **deadline** for pre-registration is **May 1, 2005**.

See you and your Knights on the 13th of May, 2005!

The Meadows is located east of Rt. 21 and south of Route 82 in the Brecksville Reservation of the Cleveland Metro Parks. On the map below, you can not see the road to the Meadows picnic area. It's a little short road next to the ball field. King Arthur's Castle is located down that road to the Meadows field.



## CROOKED CREEK/CUYAHOGA VALLEY DISTRICT CAMPOREE

#### **PATROL ROSTER**

### SUBMIT ONE COPY PER PATROL BY May 1, 2005 TO:

Greater Cleveland Council Boy Scouts of America 2241 Woodland Ave. Cleveland, Ohio 44115 Attn: Ryan Shoemaker.

#### PLEASE KEEP ONE COPY FOR USE UPON CHECK-IN AT THE KLONDIKE DERBY.

TROOP #	PATROL NAME: _			
ROSTER OF PATROL MEMBERS:				
PATROL LEADER:		_ Age:	_ Rank:	
ASST. PTL LEADER: _		_ Age:	_Rank:	
MEMBER:		Age:	_ Rank:	
MEMBER:		Age:	_ Rank:	
MEMBER:		Age:	_ Rank:	
MEMBER:		_ Age:	_ Rank:	
MEMBER:		_ Age:	_ Rank:	
MEMBER:		Age:	_ Rank:	
Participants: \$ 5.00 X (number participating including adults) = \$				
Patch only: \$ 1.50 X	tch only: \$ 1.50 X (number of patches) = \$		oatches) = \$	
		GRAND T	OTAL· \$	



## Crooked Creek/Cuyahoga Valley Districts Camporee Brecksville Metro Park Meadows Area May 13, 14, 15 - 2005

#### **GENERAL INSTRUCTIONS**

- 1. The basic rules for this encampment are the Scout Oath and Scout Law. If you have received an orange colored pamphlet entitled "Beaumont Scout Reservation-Year Round Guide" issued by Headquarters, please review the regulations pertaining to Scout camping. Specifically, but not all-inclusive, please note items 3, 5, 6, 7, 8, 9, 10, 19, 25, 27, 28, and 31.
- 2. There will be several PORT-O-POTTIES on site. Please instruct your Scouts to keep the PORT-O-POTTIES clean. Patrols should plan to bring their own toilet paper and disinfectant soap.
- 3. A city water tap is available. However, if you can bring water it is highly recommended. Please bring water carriers with Unit number marked on them. There will be NO personal washing or washing of dishes at the water tap.
- 4. Unit (troop) campsite gateways will be judged, but INDIVIDUALLY from the patrol activity scores. SEE INCLUDED SHEET.
- 5. Cars and trucks will not be permitted beyond the parking lot curbs. If the weather and ground conditions permit, you may be able to transport your trailers (by manpower) to the rear of your campsite. Before doing so, you must verify permission with the Campmaster. You may unload your equipment upon arriving at any location available. PLEASE BE BRIEF AND COMPLETE IT QUICKLY to avoid a traffic jam. You may park your vehicles in any of the designated parking areas, EXCEPT in the row adjacent to the campsites. The ONLY exception will be the vehicle containing the PA system. Please be attentive to this. We dislike having to have your vehicles towed away.
- 6. Each Troop will be responsible for its own first aid and medical problems. H.Q. will assist with directions and transportation to doctors and hospitals and will have a small amount of minor first aid equipment. We cannot be responsible for treatment. However, for insurance purposes, the Campmaster must be informed of any and all injuries for the record.
- 7. No ditching around tents will be permitted.
- 8. No fire pits or fires may be laid upon the ground. All fires must be above ground on approved equipment. Propane stoves may be used. Ashes and unburned wood must be cleaned up and disposed of. Gasoline stoves and/or lanterns must be used only with specific adult supervision.
- Put all garbage and trash into plastic bag that troop will provide. MetroPark personnel will allot a designated area for pickup. DO NOT burn any plastic or garbage.

- 10. Sheath knives are PROHIBITED. Axes are not allowed to be carried except for use at skill events and they must be properly sheathed.
- 11. No pits may be dug for refrigeration, garbage, or dishwater disposal.
- 12. The Camporee will be conducted on a PATROL Basis. Emphasize this and plan accordingly. Patrol sites will be JUDGED (see point scale in this booklet).
- 13. Park rules expressly forbid taking any vegetation from its original location, regardless of whether it's alive, dead, standing, or fallen. Plan to bring in all your own firewood.
- 14. Cub Scouts (including Webelos) will not take part in any of the events of the Camporee, except as observers. Webelos may not camp overnight in the confines of your Troop site either Friday or Saturday nights. Cub Scout attending for daytime observation will not be charged a fee nor will they receive a patch, but they must be registered with Council.
- 15. The fee for Adults and Scouts will be \$5.50 each, payable at registration. Extra patches may be for sale depending on quantity available.
- 16. Headquarters Staff will patrol the area after taps, and any Patrol (or Troop), which does not observe reasonable quiet and minimum lights, may be asked to leave. Park Rangers will also be patrolling the area throughout the weekend.
- 17. No flames of any kind will be permitted in the tents at any time. NO food should be kept in tents or packs, as it will invite raids by raccoons and skunks.
- 18. Ribbons will be awarded to every participating Patrol, based on its overall score. The top three Patrols will receive prizes.
- 19. Police your campsite thoroughly before requesting checkout from Headquarters. No unit may leave the Camporee nor receive its patches until checked out by H.Q. personnel. Scout campers always leave an area in better condition than they found it. Please help us to remain welcome in the Park.
- 20. Patrols competing in the various contests should be NATURAL PATROLS wherever possible. JR. Leader (except Jr. Assistant Scoutmasters) MAY COMPETE with Patrol, but there must not be more than two Jr. Leaders in any one Patrol.
- 21. EACH AND EVERY TROOP MUST PROVIDE AT LEAST TWO PEOPLE WHO ARE AT LEAST 18 TO HELP JUDGE AT THE CONTESTS and, as needed, assist in running the events.
- 22. Every Patrol will need a Patrol Flag, which is relatively weatherproof and permanent. About 12 x 18 inches is a good size. The flag is to be displayed at the patrol site.

### 23. An acceptable PATROL first kit should contain the following minimum:

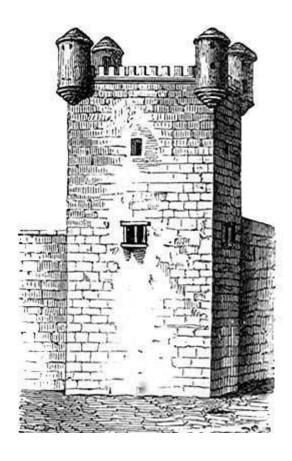
Triangular bandage Disinfectant Adhesive tape Band-Aids

Gauze pads Matches (in waterproof container)
Needle Baking soda (in waterproof container)

Gauze Plastic gloves

Soap Mouth to mouth breather

## ALL TO BE IN A PROPERLY MARKED CONTAINER You may bring more if you wish.



#### **CAMPOREE SCHEDULE**

FRIDAY, May 13	
5:00 - 9:00 PM	Check-in, Troop Site assignments, Set-up camp
9:30 PM	Scoutmaster Cracker Barrel (HQ). At least one adult per troop.
11:00 PM	TAPS – All noise and bright lights to be gone by 11:00 PM.
SATURDAY, May 14	
7:30 AM	Reveille.
7:45 AM	Assemble in front of Troop sites and prepare to post unit flags when
7.45 AW	Camporee flag is raised.
7:50 AM	TO THE COLORS ~ All Scouts come to attention and salute as all flags
8:00 - 9:30 AM	Breakfast and Clean up.
9:00 AM	All event Judges arrive at your event area. Please be on time.
9:30 - 12:00 PM	CAMPOREE EVENT STATIONS OPEN (SEE NEXT PAGE)
12:00 - 1:30 PM	Lunch and Clean up.
1:30 - 4:00 PM	Afternoon Events.
4:00 - 5:00 PM	Patrol skit audition (Campfire area).
5:15 PM	Non-denominational religious services (area to be announced).
5:30 - 7:30 PM	FEAST and Clean up.
7:30 PM	Assemble in front of campsite for RETREAT (full uniform).
8:00 PM	CAMPOREE CAMPFIRE.
9:30 PM	Scoutmaster Cracker Barrel (HQ area).
11:00 PM	TAPS
SUNDAY, May 15	
7:30 AM	Reveille
7:45 AM	ASSEMBLE for flag raising (See Saturday AM).
7:50 AM	TO THE COLORS (See Saturday AM).
7:50 – 9:00 AM	Breakfast and clean up.
9:15 AM	ASSEMBLE at Camporee Flagpole for Awards and Closing Ceremony.
10:00 AM	Break camp and clean up area.
10.00 / 1111	Broak damp and diodit up arou.

TROOPS MAY PREPARE FOR DEPARTURE PRIOR TO 10:00 AM BUT CANNOT DROP CANVAS OR REMOVE GEAR FROM THE CAMPSITE PRIOR TO THE CLOSING CEREMONY.

#### ALL SITES MUST BE INSPECTED BY HQ PERSONNEL BEFORE DEPARTURE:

Please advise HQ when your unit is fully cleared of the area and ready for inspection. Patches will be distributed on your way out in exchange for your inspection slip approval.

Picture taking is encouraged for your future archives. If you know any media person—newspapers, TV, or similar – please invite them to come and take a look. We are sure that they will find it worth reporting. We all know only too well that Scouting is in need of favorable publicity.

#### **SUMMARY OF QUESTS**

The following Quests will be presented on Saturday:

- 1) Assault the Castle (Catapult) 2) Mystery Event (Jousting Tournament)
- 3) Merlin's Magic (Fire Building) 4) Over the Wall (Siege Ladder)
- 5) A Dragon is Loose (First Aid) 6) Search for the Grail (Map Building)
- 7) Cross the Moat (Skill & Teamwork)

On Saturday after the Crusades have been completed, will be the evening meal. If your Knights are adventurous, you may want to try your hand at medieval cooking. Several recipes that were derived from authentic medieval cook books are attached to the end of this packet.

The Quests will start at 9:30 AM Saturday. The Knights will spend 30 minutes at each Quest and will have 10 minutes to move to the next station. The Knights **MUST STAY** at the Quest site until they hear the signal to move to the next site. See each Quest's instructions for any additional equipment requirements.

#### SUMMARY OF SCORING

1. Saturday Patrol competition	700 points per patrol
2. Patrol Site inspection	100 points per patrol
3. Patrol Flag	30 points per patrol

#### TROOP GATEWAYS - MEDIEVAL THEME

Troop Gateways are an essential part of a colorful and grand Camporee. These should not exceed 16 feet in height nor use material larger than 4 inches in diameter. Components of the gateway must be held together with proper lashings. Mechanical fasteners, such as nails, are not to be used. Wood, if used, may be natural or milled lumber. The entrance width should accommodate 3 Scouts walking abreast. Maximum width is the width of your campsite. No gateway shall require Scouts to be more than 6 feet (6') above ground in the erection and/or construction of the gateway. (Violation of this restriction shall be cause of disqualification of gateway). A troop flag, banner, or other insignia must be in evidence on the gateway noting the troop number. Any other flags pennants, or insignia in good taste may be a part of the gateway. All material attached should be done with proper Scout lashing (no nails, please). All dug holes must be refilled and tamped upon removal of your gateway at the end of the Camporee. The scouts should do the construction – adults may supervise. In order to permit setup time for campsites on Friday evening, it is permissible to complete the gateway on Saturday morning. Judging will commence about noon on Saturday. Remember, the theme of the "encampment" is King Arthur's Court. Judges will take into account your patrol's adherence to the theme.

PLEASE NOTE: Gateway scoring will **NOT** be part of the Patrol scoring. Instead we will have a separate category for troop gateway. There will be three prizes for troop gateways according to the judge's evaluation and scoring. The prizes will be awarded to the Troop Senior Patrol Leader at the closing ceremonies for his Troop or Patrol use, at his discretion.

### RULES TO BE SAFE BY..... Your Knights and their catapult

You will be allowed to build your catapult in advance of the Camporee. You may bring it partially assembled if it will be easier to transport and finish the assembly on the grounds.

There are several different technologies that fall into the "catapult" category. They include the **catapult**, the **ballista** and the **trebuchet**. The catapult is a single arm with a bucket at the end that people normally think about when they hear the word "catapult". In most cases, the catapult would employ a winch to bend the arm down. This provided the stored energy to fling the object in the bucket forward. We will not be using a stored energy catapult. Your Knights will provide the energy. A ballista is a very large crossbow. A trebuchet is a weighted beam that swings a sling carrying the projectile.

**NOTE:** You must build a catapult in the style suggested in the attached photos and instructions. If you arrive with a device that is not similar, it will not be permitted. If you have any questions on the difference, please contact your Activities Chairman.

The projectiles for the catapults will be furnished by the judge. They will consist of beanbags 4"x4" square and filled with 8 oz. of beans. The event is an accuracy challenge, not a distance event.

As with all games a set of rules will help keep the excitement under control. Here are some simple rules:

- 1. No beanbags will be thrown except during the competition
- 2. No beanbags will be thrown by hand.
- 3. Only beanbags can be thrown by the catapult.

During the competition, you will assign Knights to pull the launching ropes. Depending on their strength and size, you can assign several on each rope. Before the catapult is loaded, a safety control Knight will notify the judge that the catapult is ready. When the beanbag is in the catapult and everyone is clear of the arm, the safety control Knight will yell "CLEAR". Once the safety control Knight is confident that everyone is in the clear, he will yell "FIRE" and both ropes will be pulled. If the throwing arm is heavy then the safety control Knight may want to assist the throw by pushing down on the throwing arm extension. This safety control Knight will control the descent of the arm after the beanbag has been thrown.

## ASSAULT THE CASTLE Catapult

#### PROBLEM:

Using your catapult, you must score as many "hits" on the opposing castle walls during the allotted time. You will be supplied with "rocks" (bean bags) to hurl at the castle wall. For your own practice, you may use a beanbag that will be 4"x4" square and filled with 8oz. of beans.

#### **INSTRUCTIONS:**

You will be supplied with twelve (12) "rocks" (beanbags) to use with your catapult. The castle you are assaulting is located 75 feet away. Your score will be recorded on how accurate you can hit the castle wall. If your "rock" hits the castle wall, you will be awarded 10 points. If your rock goes over the wall, is short of the wall or "bounces' into the wall, it will not be classified as a hit. When the judge indicates that you may begin, you will be allowed three practice attempts to "sight" in your catapult. When you are ready, your Senior Knight must tell the judges. Scoring will be based solely on how accurately you hit the target. Remember – your rock (bean bag) must hit the wall to score.

**REMEMBER:** One Knight must be charge of Safety Control. This Knight will notify the judge before the catapult is loaded that all is ready. This Knight must yell **CLEAR** once the catapult is loaded. Once this Knight is assured that everyone is clear **this Knight and only this Knight** will yell **FIRE** and only then can the catapult be fired. This Knight will then grab the control arm and make sure it is lowered safely.

SCORING: Participation and Deportment ... 10 points

Accuracy points:

Hitting the wall Add 10 points each hit

Over the wall Add 0 points
Short of the wall Add 0 points
Bouncing into the wall Add 0 points

\_\_\_\_

Total possible score 100 points

## MYSTERY EVENT Jousting Tournament?

#### PROBLEM:

The Black Knight has come to town to challenge your Knights to a test of skills. He did not say what skills, so you must be prepared for anything.

#### **INSTRUCTIONS:**

All instructions will be given on the field of challenge.

SCORING: Participation and Deportment ... 10 points

Unknown 90 points

Total possible score 100 points

#### **EQUIPMENT:**

You will either have all of the needed equipment with you, or it will be provided by the Black Knight.

## MERLIN'S MAGIC (Fire Building Medieval style – no match)

#### PROBLEM:

Correctly lay three of the following fire lays – Tepee, Lean-To, Log Cabin, Criss-Cross, and Fire Stick (see examples on next page). As you are building your fire lays, choose the one that you will be lighting and place it on the ground protection as provided by the judge as you build your fire lays. Only one fire lay will be placed on the ground protection.

#### **INSTRUCTIONS:**

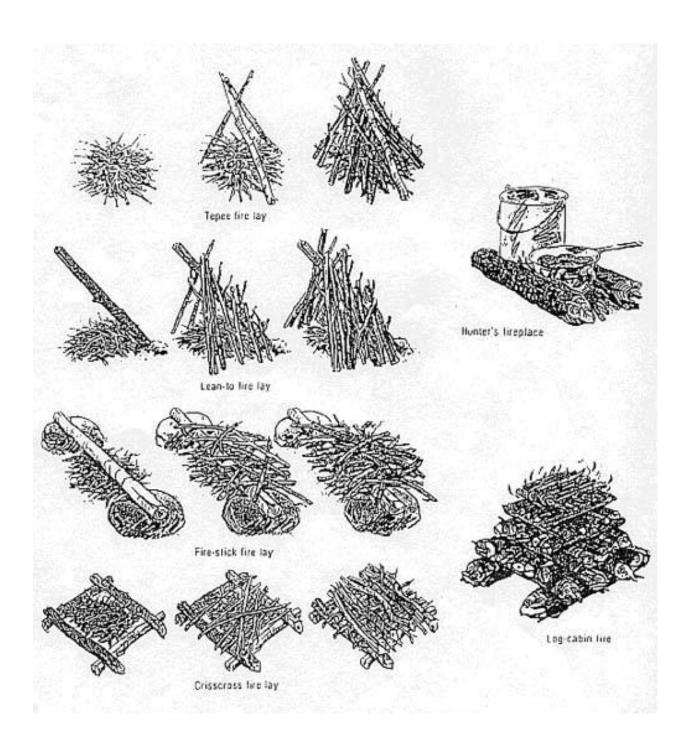
Ignite your designated fire lay without the use of matches. Hot spark, stove lighters or similar devices may not be used. You may only use flint and steel, friction (bow or stick), or a magnifying glass. Although there was an awareness of electricity during the Medieval period, a practical application was not available. As a result, you may not use a battery. You may, however, bring your own fire-breathing dragon provided that it is a true **live** fire-breathing dragon and that it is carefully leashed.

SCORING:	Participation and Deportment	10 points
	Each correct fire lay (10 points per fire lay)	30 points
	Ignition of the choose fire lay	
	Total possible score	100 points

#### **EQUIPMENT NEEDED:**

All equipment is to be supplied by the Knights and no restrictions will be imposed upon those materials EXCEPT that the wood may not be treated in any way and that each piece may not exceed 18" in length. Supplied materials may either be recovered by the Knights as may be possible, or donated to the Evening Campfire.

## FIRELAY EXAMPLES



## OVER THE WALL Siege Ladder

#### PROBLEM:

Even though you breached the outer walls of the castle, you must get into the castle keep, the innermost sanctum. In order to do that, you must construct a siege ladder to scale the walls of the castle keep.

#### **INSTRUCTIONS:**

Using four poles that the Knights of your Roundtable have brought with you (1 ½" to 1 ½" round, or natural poles, 6 feet long) and four pieces of wood provided by the judge you and your Knights must construct a siege ladder with two rungs on each side. One rung is to be one foot off the ground and the second rung is to be two feet off the ground on each side. Standard lashings (square, diagonal, sheer, round, tripod, etc.) of the Knight's choice are to be used in the ladder construction.

After construction, eight Knights of your Roundtable must climb up one side and down the other side of the ladder to demonstrate breaching the castle wall. Those Knights not climbing the ladder must support the ladder, but they cannot hold or support the rungs. If there are not eight Knights in your Roundtable, you will rotate your Knights until eight Knights have climbed over the ladder.

If any lashing gives way, the Knights will repair that lashing before any further Knights are to be permitted to climb the ladder.

SCORING: Participation and Deportment ... 10 points

Total possible score 100 points

#### **EQUIPMENT NEEDED:**

Four (4) poles (round or natural) 1  $\frac{1}{4}$ " to 1  $\frac{1}{2}$ " diameter, 6 feet long and rope or twine for lashing.

#### **EQUIPMENT TO BE PROVIDED BY JUDGE:**

Four (4) pieces of wood approximately two (2) feet long and 1  $\frac{1}{4}$ " round to be used as rungs or steps.

## A DRAGON IS LOOSE First Aid

#### PROBLEM:

A Dragon is loose in the kingdom. He's a nasty one too. Not only does he have breath so bad that he can set a house afire (literally), but he has sharp claws and teeth. He's also quite clumsy and has been known to accidentally stomp on any wayward Knight in his path – that is when his isn't trying to do it on purpose! As you come upon the scene you see what he has done lately.

#### **INSTRUCTIONS:**

The judge will give you a first aid problem to solve.

SCORING: Participation and Deportment ... 10 points

Correctly treating the dragon's latest victim ...... 90 points

Total possible score 100 points

#### **EQUIPMENT NEEDED:**

Your skills in treating whatever the dragon has done to his latest victim.

## SEARCH FOR THE GRAIL MAPPING EVENT

#### PROBLEM:

Your band of Knights, The Loyal Order of Scouts are about to embark on a quest for one of the most sought after objects in history .... The Grail.

#### **INSTRUCTIONS:**

You must map a series of objects (12) and then by answering a question about your map, you will be able to ascertain and show the location of The Grail.

You will be given a map sheet with a starting point shown and information indicating which objects you are to map and the scale you are to use in drawing your map. The question about the Grail's location will also be included. This event will be completed over **2 sessions**, **one A.M. and one P.M.** You <u>MUST</u> turn in the map sheet given.

**Note**: Only pacing will be allowed to measure distances.

#### **EQUIPMENT NEEDED:**

At least one compass, notebook and a pencil.

#### **OPTIONAL ITEMS:**

A straight edge (ruler), graph paper (to prepare a rough draft) and a hard surfaced flat object (to more easily write out your map).

#### SCORING:

	<u>Each</u>	<u>Total</u>
Each map point accurately plotted	6	72
Grail location accurately plotted	16	16
Participation and Deportment	12	12
Possible Total:		100

## CROSS THE MOAT Teamwork

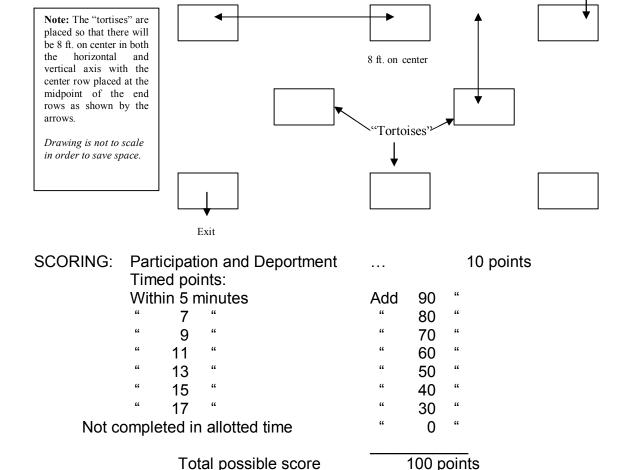
#### PROBLEM:

You must get all of the Knights of your Roundtable across the "moat" in the shortest amount of time without losing equipment or having a Knight get "wet".

#### **INSTRUCTIONS:**

You will be given four (4) 4"x4"x8' eight foot "beams" to use in crossing the moat. Merlin has cast a spell on eight (8) tortoises (blocks 7"x4"x16") in the moat upon which you can place the beams. The first beam will already be positioned at the place where you must begin your crossing. You must walk on the beams and/or the tortoises to cross. You will exit from the moat at the marked tortoise on the other side of the moat. This is a timed event. If a knight's foot touches the "water" (ground) at any time during the event, the judge will subtract 2 points from your score. If you drop one of the beams, the judge will subtract 5 points from your score. It is not necessary for you to have all of the beams with you on the other side of the moat. The objective is to get all the Knights of your Roundtable to the other side.

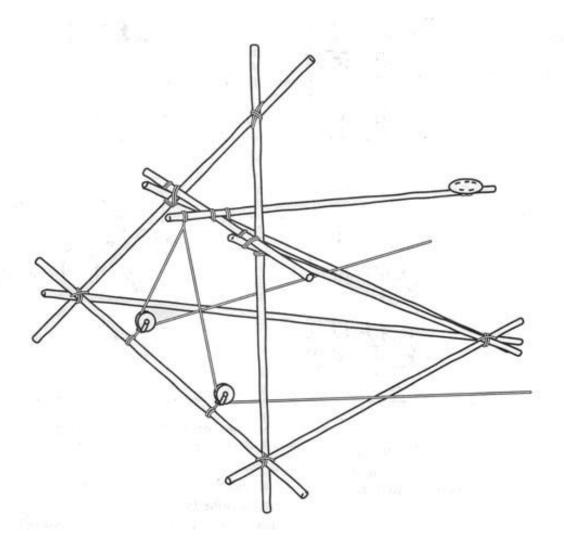
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### **Building a Catapult**

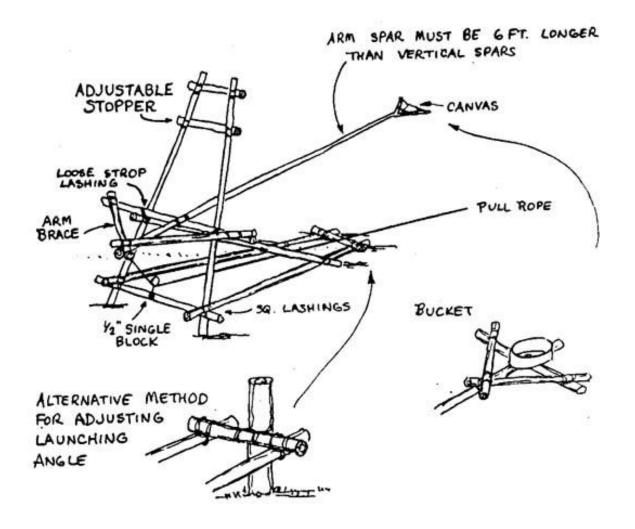
#### Catapult Example #1

The catapult described below can be built using only Scout staves. However, for added strength, it is recommended that you consider using 1  $\frac{1}{4}$ " to 1  $\frac{1}{2}$ " dowelling. The catapult that is described here will throw an 8oz. object several feet depending on the length of the throwing arm. For a rule of thumb to calculate the throwing distance: Distance = SQ of length of throwing arm. If your throwing arm is 9 ft, the square = 81ft., you may need to lash two staves together to get to the proper throwing distance.



### **Building a Catapult**

## Catapult Example #2



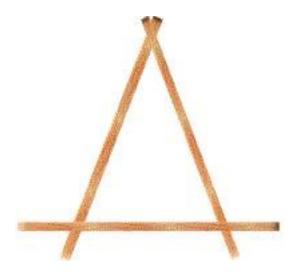
## **Building a Catapult**

## Catapult Example #3

## **Equipment List**

Quantity	Item	Comments
3	8 ft spars (front face)	All spars must be good quality. DO NOT use dowelling.
3	15 ft spars (back brace)	
1	15 ft spar (throwing arm)	Best results will come from a good but relatively thin spar.
1	3.5 ft spar (throwing arm cross piece)	Must be strong
50ft	1/4 n or thicker rope	Launching rope
7 x 12ft	1/4 n rope	These are for lashing.
1	double pulley or 2 single pulleys	Must fit the launching rope above.
1	throwing tin	(see diagram below)
2 X 20 in	1/4 in rope	to attach pulley(s) and throwing tin

Step 1 - Build front face triangle



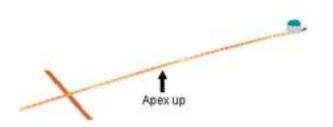
Lay out the 8 ft. spars as shown in the diagram and lash the spars together with a square lashing where they cross.

#### Step 2 - Attach the back supports

Lash the back brace spars to the front face triangle as shown in the diagram. Note: The two side spars should be lashed to the inside of the triangle about 2/3 of the way up from the bottom. The bottom spar should be attached on the outside.



Step 3 - Build the throwing arm

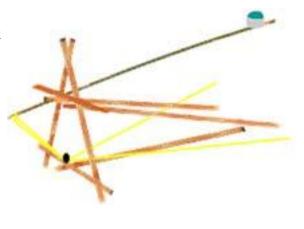


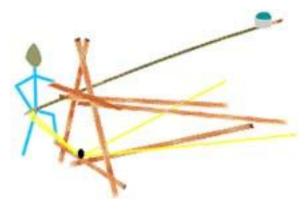
- Lash the throwing arm cross piece to the bottom side of the throwing arm about 3.5 ft back from the thickest end. If the throwing arm has a curve in it make sure the apex of the curve is up (see diagram).
- Attach the throwing tin to the tip of the throwing arm.

### **Step 4 - Assemble the catapult**

- 1. Set the completed throwing arm into the catapult as shown.
- 2. Attach the pulley(s) to the end of the lower back support.
- 3. Attach the middle of the launching rope with a clove hitch to the large end of the throwing arm.
- Run the two ends of the launching rope through the pulley(s) and lay them back beside the two back supports.

NOTE: For added strength and stability, lash a cross brace between the back brace spars. You may also want a couple of youth to hold the back brace spars during launching.





### **Throwing Tin**

The throwing tin is made from a large coffee tin. The side is cut down to a 3 in. height and the edge is turned over. Two slots .5 in wide 4 in long, about 1 in apart. (See diagram). Tape the edges with duct tape. (Note: If the tin is to be used on several occasions then add a stiffener that fits inside the tin between the two slots and extends out to the sides. Hold it in place with more tape!)

