

How To Make a Broomball Stick:

An Introductory Guide


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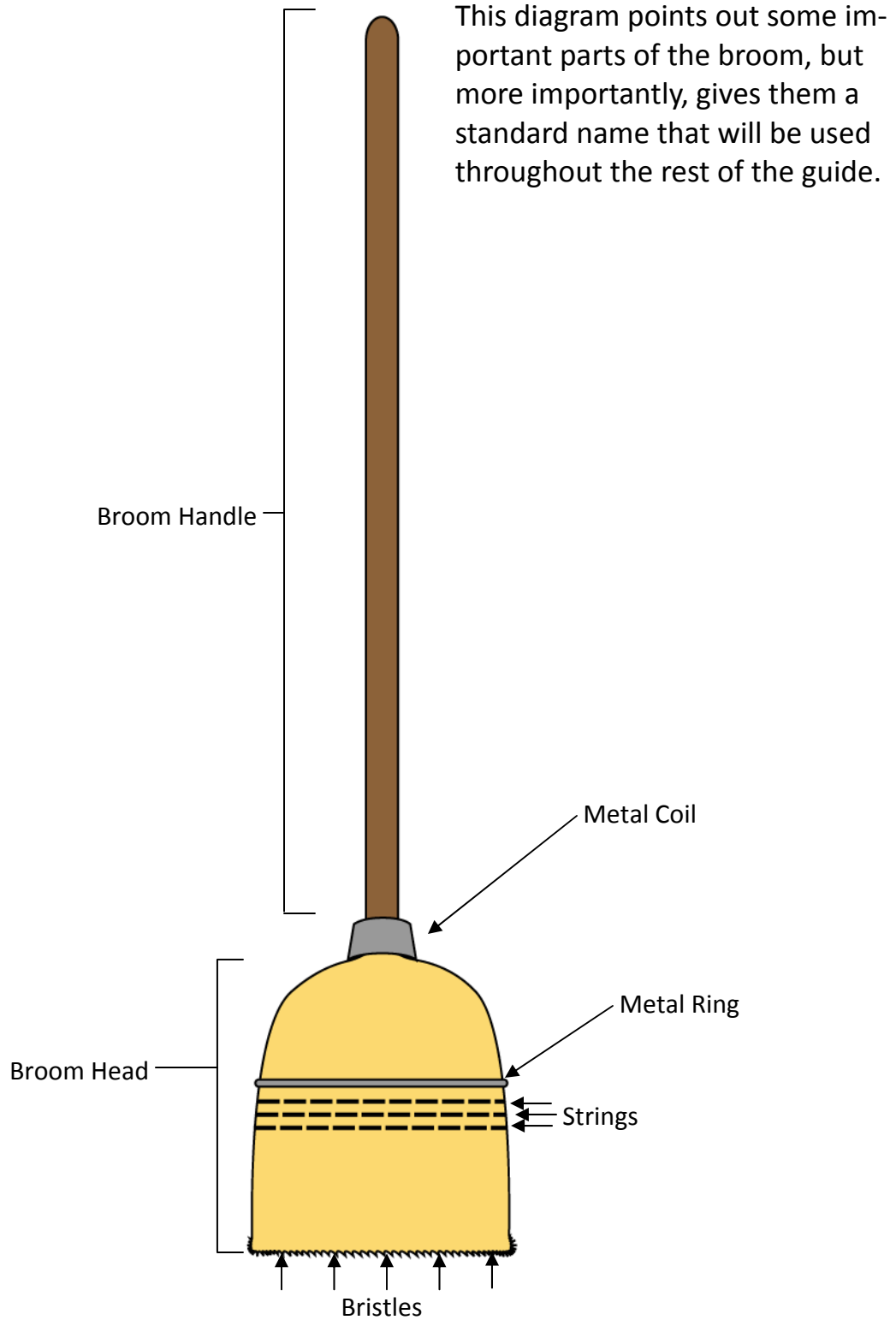
Introduction


Broomball has become a tradition for many Michigan Tech students during the long winter months in Houghton, Michigan. The following guide provides step-by-step instructions on how to make a broomball stick for IRHC Broomball at Michigan Technological University. It is best suited for individuals who have never constructed a broomball stick before. It can also be used as an instructional resource for those teaching others how a broomball stick is constructed.

The guide will lay out the general procedure for constructing a broomball stick. The guide will also discuss different styles of broomball sticks that can be made and the IRHC rules and regulations that pertain to the construction of broomball sticks. Remember that this guide is intended only for those individual who going to be competing in IRHC Broomball at Michigan Tech.



Broom Diagram (Yes, this *is* a diagram of a broom!)





IRHC Rules and Regulations

Page 6 of the IRHC Broomball Rules and Details packet states the following:

- Only the broom's original handle may be attached to the original broom head (i.e. no homemade brooms).
- Brooms must have a wooden handle.
- No official Broomball brooms will be allowed (hard plastic brooms).
- A minimum of six (6) inches of bristle must extend below the broom's handle.
- Tape is the only foreign material allowed on a broom.
- The external metal rings put on by the manufacturer **MUST BE REMOVED**.
- The broom's head **MUST RETAIN IT'S GENERAL SHAPE** and **SLANT** of the broom must not exceed 30 degrees.
- Excessive tape (that does not allow the bristles ANY give with applied force) or foreign materials will not be allowed on a broom.
- There are **ABSOLUTELY NO** bristles exposed.
- **NO** scoop/lacrosse style brooms will be allowed that allow the ball to be cradled (this includes no openings in the broom.)
- Specifications are enforced at the discretion of the game officials.

Regulation and Construction Tips

Throughout the guide you may find boxes similar to those depicted on the right that reiterate or introduce an IRHC Regulation or a Construction Tip.



Regulation Tip:

This is a Regulation!



Construction Tip:

This is something you might want to watch for, try, or do.

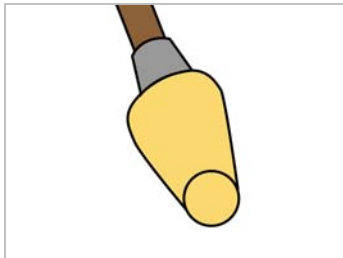
Broomball Stick Styles

The following are some different styles you may want to consider when following this guide:



Defensive Flat:

The broom head is made flat, wide and narrow in order to provide a large surface area for blocking.



Offensive Bat:

The broom head is made small and straight to allow for maximum shooting capacity.



Offensive Spoon:

The broom head is made with a slight indentation to allow for the ball to be launched up. It **must not allow the ball to be cradled**.



Regulation Tips:

The broom head must maintain its general shape and slant.

No scoops are allowed. This includes broom heads with holes in them.

The broom head may not slant more than 30 degrees from its original, factory, orientation.

1

Gathering the Supplies

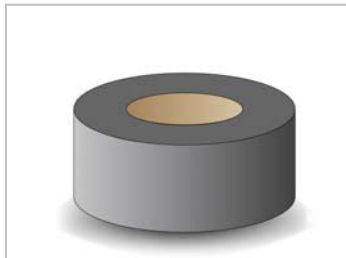
In order to properly construct a broomball stick, the following tools and supplies will be needed:



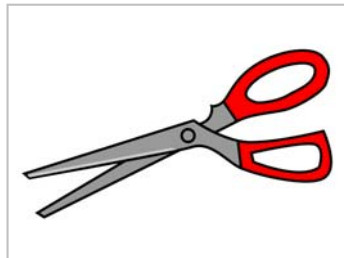
(1) Broom



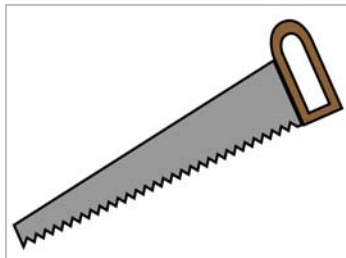
(1) Hammer



(1) Roll of Duct Tape



(1) Pair of Scissors



(1) Hand Saw

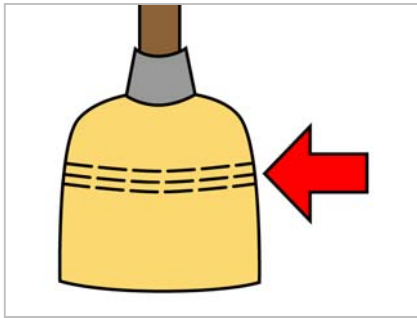


(2+) Rolls of Cloth
Athletic Tape.
(Assorted Colors of Personal
Preference)

2

Removing The Strings

Tools and Supplies:



There are two methods for removing the strings from the broom.

Method One:

Using the scissors, cut away the string in small sections, such as at the middle of each visible stitch (the dotted lines in the figure). The string can then be removed by pulling it away in small pieces and cutting as necessary to remove it all.

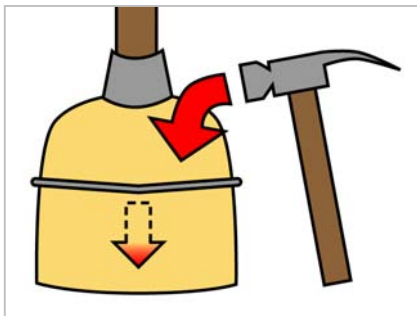
Method Two:

Also using the scissors, cut the strings once, and carefully unravel/unweave the string from the broom bristles.

3

Removing The Metal Ring

Tools and Supplies:



To remove the metal ring from the broom, hold the broom firmly against a solid rugged surface. Then use the hammer to pry, pull and pound the metal ring toward the bottom of the broom until it may be removed.

Trying to remove the metal ring in the direction of the broom handle is not recommended, as it is extremely difficult.



Construction Tip:

The metal coil should NOT be removed, as it holds the bristles to the handle.



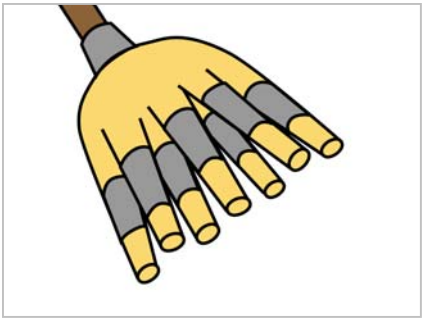
Regulation Tip:

Beyond the metal coil that holds the bristles to the handle, no other metal objects are allowed in the construction of a broomball stick.

4

Bundle the Bristles

Tools and Supplies:



Gather the broom bristles in $\frac{3}{4}$ inch diameter bundles. Wrap each bundle at the top, middle, and bottom with duct tape **very tightly**.

Note: The picture shows only one wrapping of duct tape per bundle. This should be done at the top and bottom as well to ensure that each bundle maintains it's diameter along the length of the bundle.



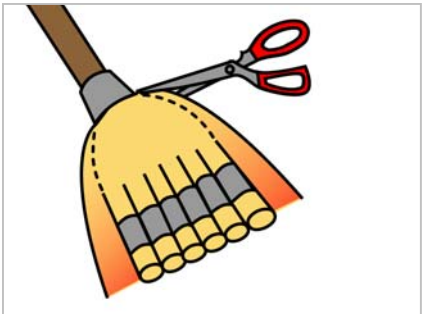
Construction Tip:

These bundles will later be used to define the shape of the broom. You may choose the number, diameter and length of the bundles to better suit the chosen style of broom.

5

Cut Off the Excess Bristles

Tools and Supplies:

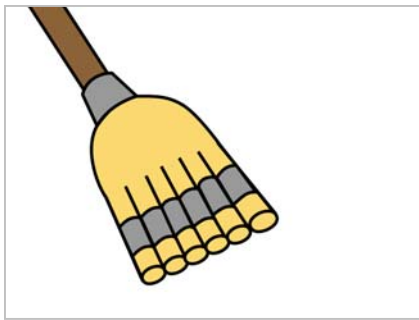


Using the scissors, find and remove any bristles that aren't part of the bundles created in step 4. The cut should be made close to the metal coil at the top to ensure that most of the bristle is removed. Be careful to not remove any of the bristles that are part of a bundle.

6

Shaping the Broom Head

Tools and Supplies:



To form the final shape, start by taping two bundles together. Then tape another bundle to the two taped together. Continue taping on bundles until you achieve the desired shape. At this step, it helps to weave the duct tape between bundles using as many continuous pieces of duct tape as possible, all while keeping the duct tape **very tight**. This helps achieve the correct/desired strength.

Finally, tape around all of the bundles **very tightly**. The tape should be further down the broom head than where the final cut is made.



Regulation Tip:

No angle of the broom head can exceed 30 degrees beyond it's original, factory, angle.



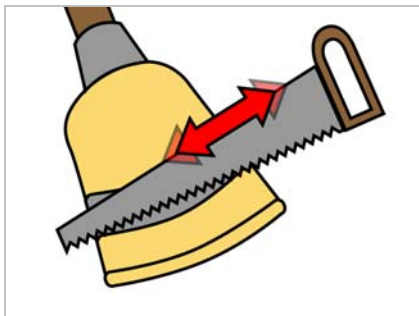
Construction Tip:

Take care at this step to ensure that the shape that was selected is solidly formed.

7

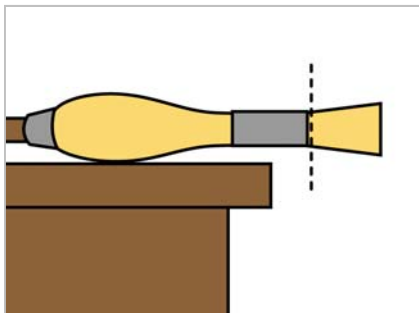
Cut the Broom Head to It's Final Length

Tools and Supplies:



Place all but the length of the broom head that should be removed over the edge of a sturdy surface such as a table. Using the saw, cut the unwanted length of bristles off. This cut should be made at an angle that allows the broom edge to be parallel to the ice when the stick is held, but under the maximum 30 degrees that is stated by the rules.

After the cut is made, use the scissors to cut off any extraneous bristles that were missed by the saw.



Regulation Tips:

A minimum of 6 inches of bristle must extend past the metal coil of the broom.

No angle of the broom head can exceed 30 degrees beyond it's original, factory, angle.

8

Final Taping

Tools and Supplies:



The final goal is to cover all bristles from visibility using duct tape. Start by covering the edges of the freshly cut bristles. Continue by wrapping the broom head **tightly** in duct tape. **All bristles must be covered.**



Regulation Tips:

No bristles may be exposed.

The broom head must give to firm external pressure. Be careful with the amount of tape used.

9

Decorate!

Tools and Supplies:



At this point the broomball stick is essentially complete, but kind of plain looking. It's now that decorative touches should be made.

Using the multi-colored athletic tape, wrap the broomball stick from bottom to top however you choose. The following are such ideas:

- Use duct tape to create a hockey-stick style knob at the end of the broom handle, and make sure to cover this with athletic tape.
- Be creative and design your team's insignia, or your player number into the stick.



Regulation Tips:


No bristles may be exposed.

The broom head must give to firm external pressure. Be careful with the amount of tape used.



More Regulation Tips:

Besides tape, no foreign objects are allowed in broom construction.



Summary

Repairs and maintenance may be necessary over the life of the broomball stick. During play, the tape over the bristles may rip or become frayed. This area should be re-taped to prevent further damage to the broom. Also, in the off-season, the duct tape may dry out and lose its adhesiveness. The dry duct tape may need to be replaced using the taping procedures outlined in this guide.

Any questions regarding this document, its contents, or suggestions for improvement should be forwarded to Tyler Schwartz at tlschwar@mtu.edu.