

TAKE & MAKERSPACE

DESIGN ART CIRCUITS ENGINEERING TAKE LEARN SCIENCE CREATE PROJECTS CREATIVITY MAKE STEM HOME
CRAFT DESIGN ART CIRCUITS ENGINEERING TAKE LEARN SCIENCE CREATE PROJECTS CREATIVITY MAKE STEM
HOME CRAFT DESIGN ART CIRCUITS ENGINEERING TAKE LEARN SCIENCE CREATE PROJECTS CREATIVITY MAKE

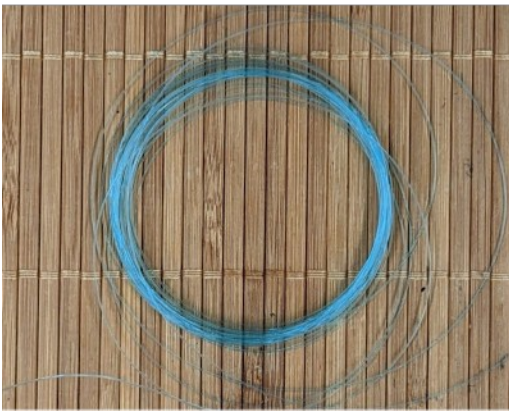
WHAT YOU'LL NEED



CARDBOARD BOAT PARTS



A POOL NOODLE



FISHING LINE



COFFEE STIRRERS



CUTTING TEMPLATES



A FEW SHEETS OF PAPER



A PEN OR SHARPIE



A HOT GLUE GUN



A MEASURING DEVICE



A PAIR OF SCISSORS

LET'S MAKE
A CARDBOARD BOAT!

TURN THE PAGE
TO GET STARTED!

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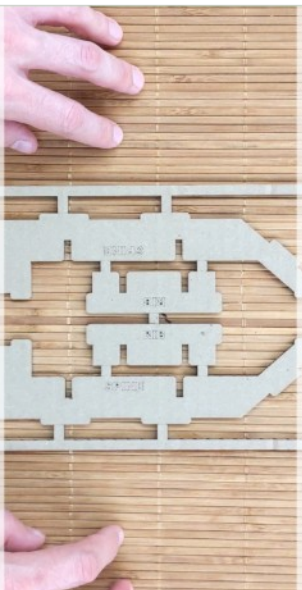
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BUILDING THE BOAT FRAME

A SOLID BOAT STARTS
WITH A SOLID FRAME!

ALL THE COMPONENTS FOR
THE FRAME ARE ON YOUR
FIRST SPRUCE. LET'S
GET TO WORK!

1. LET'S GRAB SPRUCE #1 FROM
YOUR TAKE AND MAKE KIT



THAT SPRUCE HAS TWO SPINE PARTS
AND TWO RIBS PARTS

2. GRAB YOUR SCISSORS AND CUT
OFF ALL THE PARTS FOR THE SPRUCE



3. GRAB ONE OF THE SPINE PARTS
YOU JUST CUT OFF...

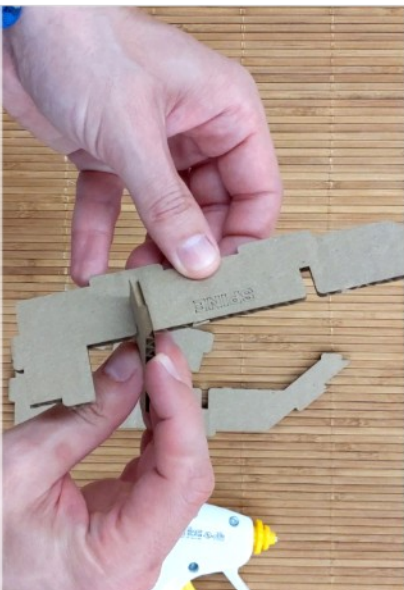


...AND SQUEEZE SOME HOT GLUE
DOWN ONE OF THE SLOTS

6. FINALLY, SQUEEZE SOME GLUE IN
BOTH OPEN SLOTS ON THE RIBS...



4. SLIDE ONE OF THE RIB PARTS INTO
THAT SAME SLOT AND HOLD!



7...THEN SLIDE THE SECOND SPINE
INTO THE RIB SLOTS AND HOLD!



5. REPEAT FOR THE OTHER RIB PART
WITH THE SPINE'S OTHER SLOT



AGAIN, HOLD THE RIB PART AS THE
HOT GLUE COOLS DOWN!

DOES YOUR FRAME NEED
A HOT GLUE TOUCH UP
HERE AND THERE? NOW WOULD
BE A GOOD TIME TO
ADD THEM!

NOW THAT THE SKELETON
OF YOUR BOAT IS COMPLETE,
LET'S GIVE IT A SHELL!

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BUILDING THE BOAT SHELL - 1

THE SHELL FOR YOUR BOAT
COMES IN TWO SPRUCES.

ALL THE PARTS SLOT RIGHT
IN, BUT DIRECTION SOMETIMES
MATTER SO BE CAREFUL
BEFORE GLUING THINGS IN!

1. LET'S WORK WITH SPRUCE #2
FROM YOUR KIT!

THIS SPRUCE HAS THE BOTTOM,
BACK AND SIDE SHELLS

2. JUST LIKE THE OTHER SPRUCE,
CUT OFF AND TRIM ALL THE PARTS

3. SQUEEZE HOT GLUE ON THE
BOTTOM OF YOUR BOAT FRAME...

6. ...THEN WITH THE RIGHT SIDE OF
THE FRAME AND THE SIDE SHELL!

4. ...THEN SLIDE THE BOTTOM TABS
INTO THE BOTTOM SHELL SLOTS

MAKE SURE THE OPEN TAB POINTS
TO THE BACK OF YOUR BOAT!

7. NOW IS A GOOD TIME TO ADD HOT
GLUE TO TABS THAT NEED IT!

5. REPEAT WITH THE BACK PART OF
THE FRAME AND THE BACK SHELL...

CONGRATULATIONS, THE FIRST
PART OF THE SHELL IS COMPLETE!



BUILDING THE BOAT SHELL - 2

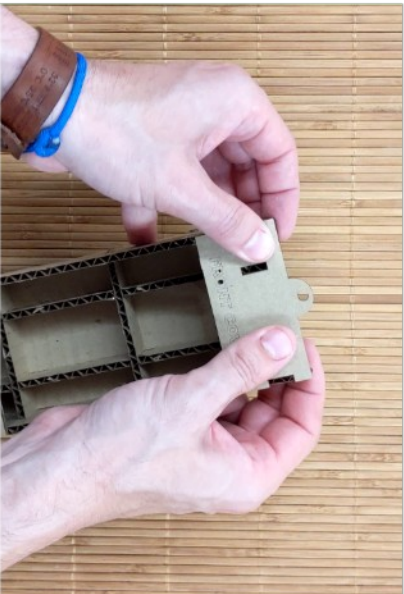
JUST LIKE FOR THE FRAME,
IF YOUR BOAT SHELL NEEDS
HOT GLUE TOUCH UPS,
NOT IS A GOOD TIME FOR THAT!

LET'S FINISH YOUR
BOAT SHELL!

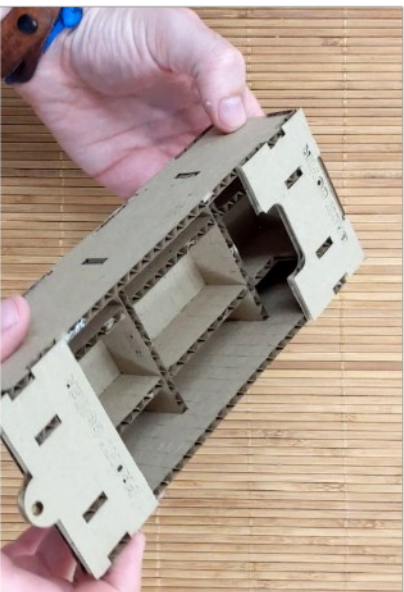
3. ADD GLUE TO THE EMPTY SIDE
OF THE BOAT FRAME...



...AND SLIDE THE SECOND SIDE TABS
INTO THE SLOTS ON THE SIDE SHELL



6....AND FINALLY, HOT GLUE THE
FRONT COVER IN PLACE, RING OUT!



7. CONGRATS, THE STRUCTURE OF
YOUR BOAT IS FINISHED!

1. LET'S GRAB THE LAST SPRUCE
FROM YOUR TAKE AND MAKE KIT!



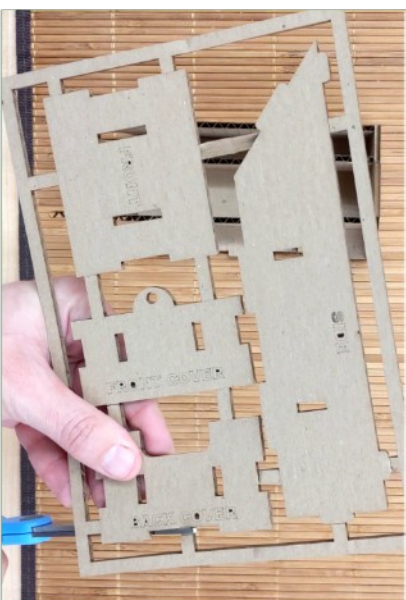
IT HAS ANOTHER SIDE SHELL, A
FRONT SHELL AND TWO COVERS

4. ADD GLUE TO THE FRONT OF THE
FRAME AND (YOU GUESSED IT)...

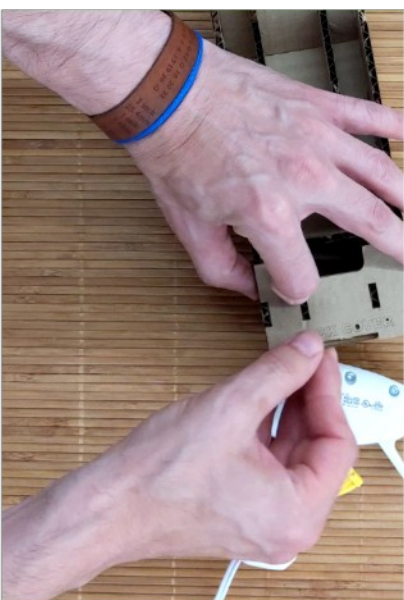


...PRESS THE FRONT SHELL ON TOP
OF THE FRONT TABS

2. CUT OFF AND TRIM ALL THE PARTS
FROM THE SPRUCE



5. HOT GLUE THE BACK COVER IN
PLACE AT THE BACK OF THE BOAT...



CONGRATULATIONS,
THE SHELL OF YOUR BOAT
IS COMPLETE!

BUT IT LOOKS A LITTLE
BLAND...LET'S GIVE IT A
PAPER WRAP AND DECORATE IT
NEXT!

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PAPER WRAP AND STICKERS

FOR THIS STEP,
WE WILL USE THE CUTTING
TEMPLATES IN YOUR KIT,
A REGULAR SHEET OF PAPER
AND YOUR STICKER SHEET
TO SPRUCE UP YOUR BOAT!

1. GRAB YOUR CUTTING TEMPLATES
AND A SHEET OF PAPER

2. TRACE YOUR CUTTING TEMPLATES
ON THE SHEET OF PAPER...

3. YOU SHOULD HAVE ONE TRACE
FOR THE FRONT AND BACK...

...AND TWO TRACES FOR THE
SIDES OF YOUR BOAT!

4. CUT OFF ALL OF YOUR TRACES
(IT DOESN'T HAVE TO BE PERFECT)

5. ADD A VERY THIN LINE OF HOT
GLUE TO THE SIDE OF YOUR BOAT...

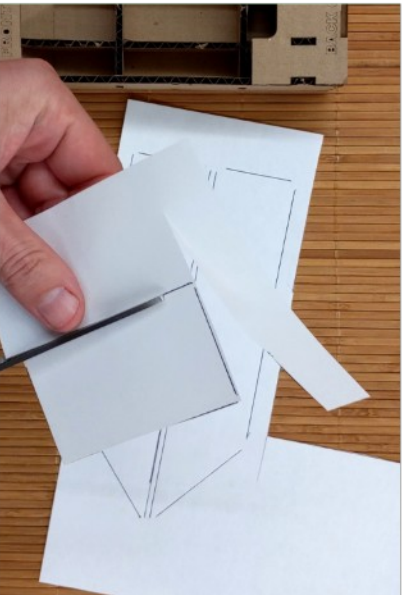
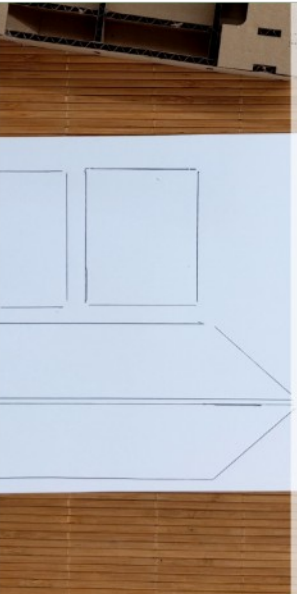
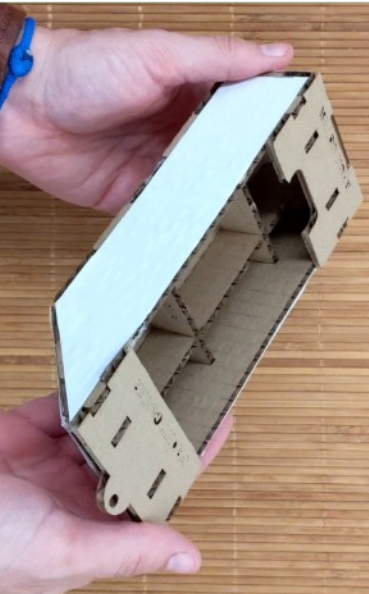
...AND SMOOTH THE SIDE TRACE IN
PLACE ON TOP OF THE HOT GLUE!

6. REPEAT FOR THE OTHER SIDE,
THE BACK AND FRONT OF THE BOAT

7. GRAB YOUR STICKERS SHEET AND
CUSTOMIZE YOUR BOAT!

WE HAVE USED PAPER
AND STICKERS TO CUSTOMIZE
YOUR BOAT, BUT YOU CAN
ALSO ADD YOUR OWN
SHARPIE DRAWINGS

THE ONLY LIMIT IS YOUR
IMAGINATION!



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BUILDING THE MAST AND SAIL

NOW THAT WE HAVE
A NICE BOAT, WE NEED
TO HELP IT MOVE!

THAT'S WHERE
YOUR SAIL AND MAST
COME IN. LET'S PUT THEM
TOGETHER!



1. WE'LL BE WORKING WITH YOUR
COFFEE STIRRERS AND SOME PAPER



2. YOUR MAST WILL BE MADE UP OF
4 PIECES: 2 COFFEE STIRRERS, AND...

...2 STIRRER CUTOUTS. THESE
SHOULD BE ABOUT 3.5" LONG



3. YOUR SAIL IS A SIMPLE TRIANGLE
FROM YOUR SHEET OF PAPER!



4. GLUE YOUR 3.5" CUTOUT IN
THE TOP CORNER OF YOUR SAIL...



5. FLIP YOUR SAIL AND REPEAT ON
THE OTHER SIDE! BUT THIS TIME...

IT SHOULD BE ABOUT 7.5" TALL
BY AT LEAST 8" WIDE!

...THEN GLUE A COFFEE STIRRER
UNDER IT, ALONG THE EDGE

...COFFEE STIRRER FIRST, STARTING
AT THE TOP, THEN 3.5" MAST PIECE!

6. GLUE A STIRRER CUTOUT ALONG
THE BOTTOM EDGE OF THE SAIL

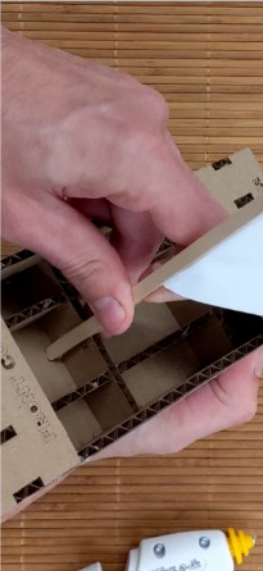
7. FINALLY, GLUE YOUR MAST FRONT
AND CENTER OF YOUR FRAME!

CONGRATULATIONS.
YOUR SAIL AND MAST
ARE COMPLETE!

NEXT LET'S MAKE
SURE YOUR BOAT
WILL FLOAT WHEN
HITTING THE WATER!



IT NEEDS TO BE AT LEAST 4" LONG
TO HELP THE SAIL CATCH THE WIND!



FOLD THE SAIL ALONG THE MAST
TO LINE IT UP WITH THE BOAT'S

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POOL NOODLE AND FISH LINE

IN THIS STEP, WE'LL USE
POOL NOODLES TO ADD
FLotation TO YOUR
BOAT...

WE WILL ALSO USE FISHING
LINE TO MAKE SURE WE CAN
RECOVER YOUR BOAT ANYTIME!

3... THEN GLUE THE POOL NOODLE
UP TO THE BOTTOM OF THE BOAT



LINE UP ITS EDGE JUST OFF
THE CENTER LINE OF THE BOAT

6. LET'S NOT FORGET TO TIE YOUR
FISHING LINE TO YOUR BOAT!



CHECK YOUR KNOTS, SO WE CAN
ALWAYS RECOVER YOUR BOAT!

1. GRAB YOUR POOL NOODLE AND
CUT IT IN HALF ALONG THE SEAM



4. SQUEEZE GLUE ON THE OTHER
HALF OF THE POOL NOODLE...



IF YOU LIKE, TEST YOUR BOAT IN A
PLASTIC TUB OR SINK!



2. SQUEEZE HOT GLUE ON THE
EDGE OF A POOL NOODLE HALF...



5... AND GLUE IT NEXT TO THE
OTHER POOL NOODLE HALF!



CONGRATULATIONS.
YOUR BOAT IS FINISHED!

NOW PUT IT IN THE WATER AND
SEE HOW IT DOES! YOU CAN
ALSO CHECK YOUR PARKS
AND REC MAP TO TEST IT
ON A LOCAL LAKE!