



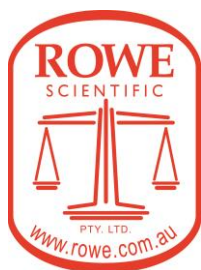
Prize Winner

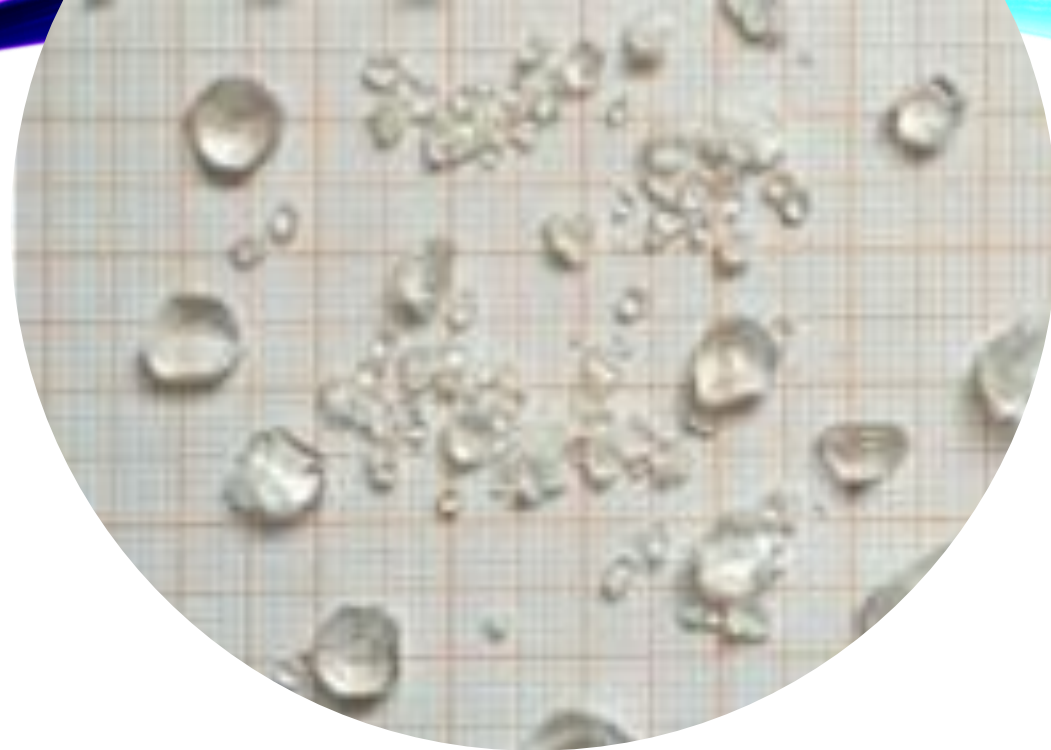
Crystal Investigation

Year 7-8

Michelle Kyrylenko
Thiele Hart
Destiny Hart

Brighton Secondary School





ALUM POTASH CRYSTALS

Destiny, Michelle and Thiele

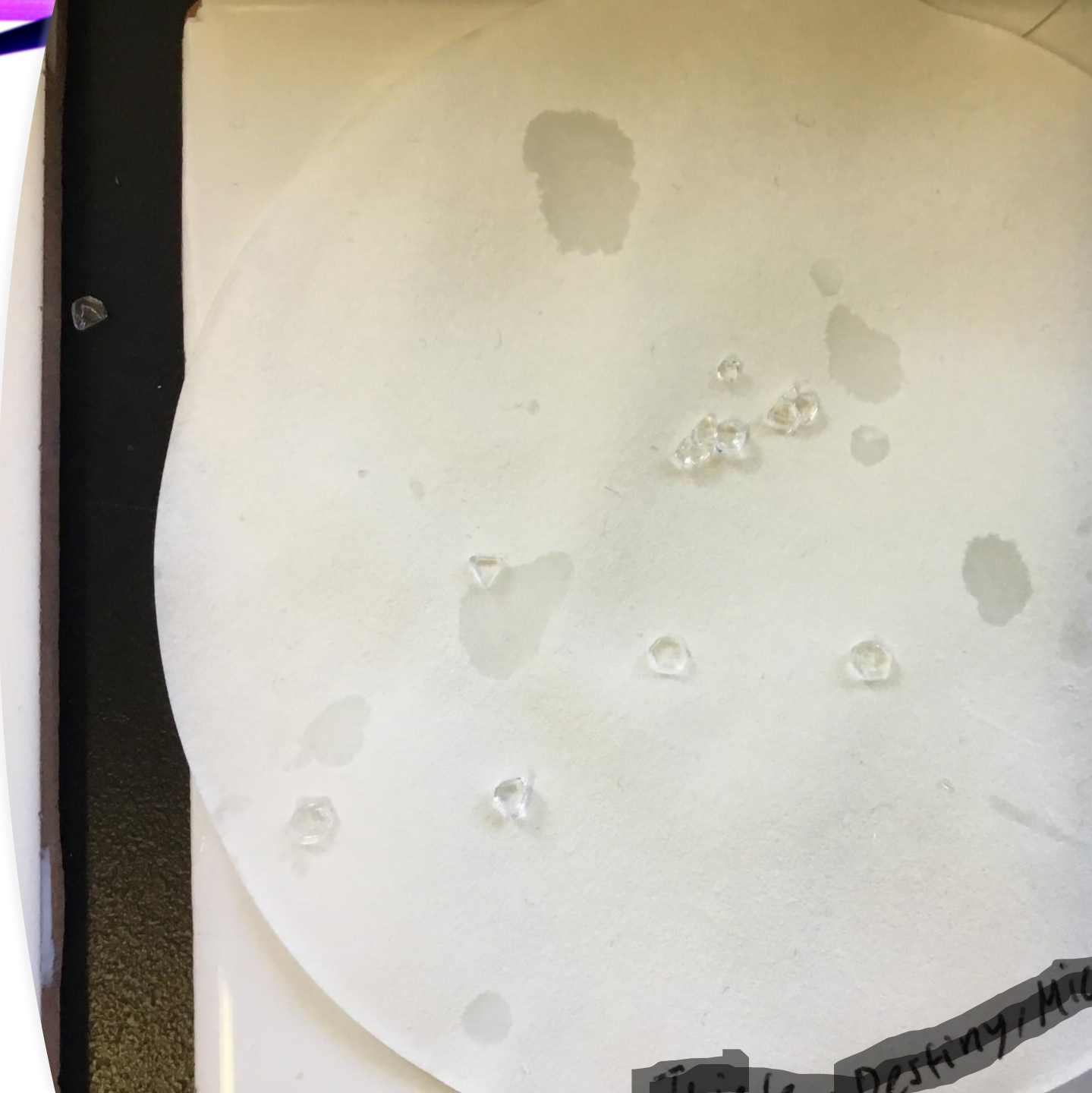
CREATING SEED CRYSTALS

- **FILL A BEAKER WITH ABOUT 50 MILLS OF WATER AND HEAT UP TO ABOUT 60 DEGREES PLACE STIRRING MAGNET IN BEAKER AND USE A HEATING PLATE TO HEAT IT UP**
- **WHILE THE WATER IS HEATING ADD ALUM POTASH POWDER 1 SPATULA FULL AT A TIME (UNTIL STOPS DISSOLVING)**
- **MAKE SURE YOU KEEP AN EYE ON THE HEAT OF THE BEAKER BY CHECKING IT WITH A THERMOMOTOR**
- **WHEN AT 60 DEGREES TAKE OF HEATING PLATE AND TAKE OUT STIRRING MAGNET**
- **GRAB A FEW PETRI DISHES AND LABEL THEM**
- **THEN POUR SOLUTION INTO THEM MAKE SURE TO ONLY USE ENOUGH SOLUTION TO JUST COVER BOTTOM OF THE PETRI DISHES. IF THERE ISN'T ENOUGH SOLUTION TO COVER ONE OF THE PETRI DISHES THEN ADD A BIT OF WATER TO COVER.**



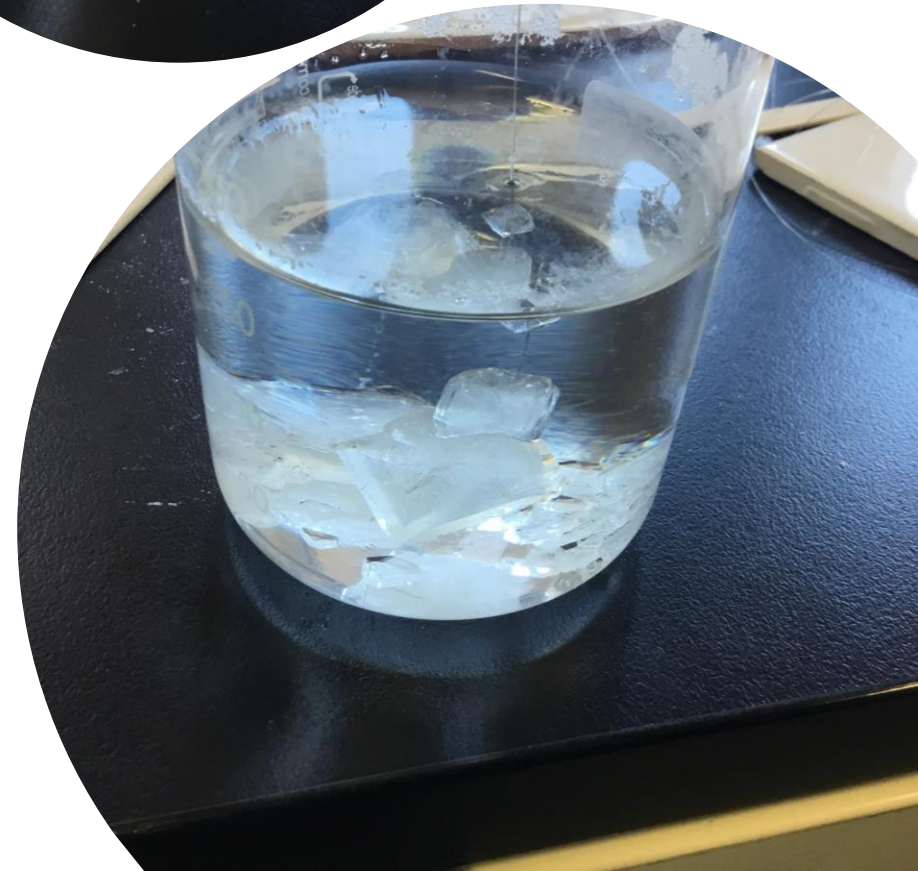
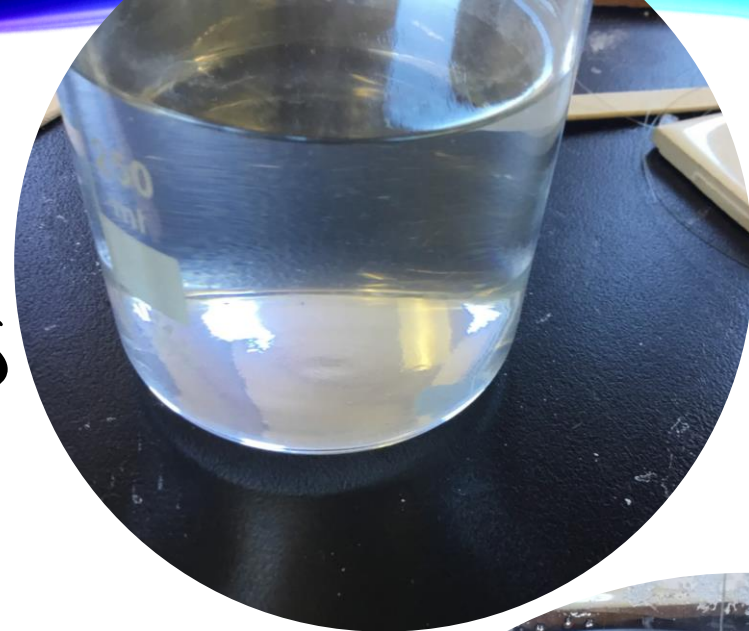
NEXT STEP OF SEED CRYSTALS.

- TAKE THE BEST BUT CLEAREST LOOKING CRYSTALS AND ADD THEM TO A FILTER PAPER TO DRY. COME BACK IN 24 TO 48H.
- NOW THAT THE SEED CRYSTALS WILL BE DRY YOU ARE GOING TO ADD THEM TO FISHING LINE.
- PUT THE SMALLEST THINNEST LAYER OF SUPER GLUE ON THE SURFACE OF YOUR CRYSTAL AND STICK SOME FISHING LINE TO IT, MAKE SURE IT IS A LONG PIECE.
- PUT SOMETHING HEAVY ON EACH SIDE OF THE FISHING LINE SO IT STICKS.
- NOW YOU WAIT A DAY OR TWO FOR THE SUPER GLUE TO DRY



GROWING INTO CRYSTALS

- NOW THE SUPER GLUE IS DRY YOU WILL GRAB SOME POP STICKS AND TAPE, YOU WILL TAPE THE END OF THE FISHING LINE THAT DOESN'T HAVE A CRYSTAL TO THE POP STICK.
- HEAT UP THE LEFT-OVER SOLUTION AND ADD MORE ALUM POTASH UNTIL NO MORE WILL DISSOLVE, LET'S COOL DOWN UNTIL ABOUT 50 DEGREES.
- GRAB ABOUT 3-4 BEAKERS AND LABEL THEM, NOW POUR 200MM OF SOLUTION INTO EACH.
- NOW SUBMERGE THE CRYSTAL THAT IS ON THE POP STICK INTO THE SOLUTION AND IN A FEW DAYS YOUR CRYSTALS WILL BE FORMED, AND THEY WILL MOST LIKELY BE CLEAR WITH SHARP DEFINED EDGES.



AFTER CRYSTAL GROWN BATCH ONE

- **WE DECIDED TO CONTINUE THE SAME STEPS OVER AGAIN BUT WITH OVER SATURATING THE SOLUTION BUT WE FOUND THAT THIS ONLY MADE IT WORSE.**
- **WE HAD A FEW CRYSTALS GROWING AT ONCE BUT IN DIFFERENT ENVIRONMENTS, FOR EXAMPLE WE HAD ONE GROWING IN A DARK ENVIRONMENT WHICH WOULD LEAD THE TEMPERATURE TO BE THE MOST CONTROLLED, AND WE HAD ONE IN INDIRECT SUNLIGHT WHICH WOULD HAVE THE SECOND MOST CONTROLLED TEMPERATURE AND THEN THE DIRECT SUNLIGHT WHICH HAD THE LEAST CONTROLLED TEMPERATURE AS IT REALLY DEPENDED ON THE WEATHER OUTSIDE.**
- **THE BEST SHAPED ONE WAS THE ONE THAT GREW IN THE DARK AND WE BELIEVE THIS OCCURRED BECAUSE IT HAD THE MOST CONTROLLED TEMPERATURE AND MOST LIKELY THE TEMPERATURE STAYED THE SAME THE WHOLE TIME.**