



Highly Commended

# Crystal Investigation

## Year R-2

### Yuriy Paslavskyy

### Grange Primary School



0218 029



Crystal Growing Competition  
Watch your crystal grow

# OLIPHANT SCIENCE AWARDS

CATEGORY: CRYSTAL GROWING

**0218 - 029**

**Student(s):**  
Yuriy Paslavskyy

Grange Primary School

**Coordinator:**  
**School Phone:**

Susan Wilson  
08 8353 2688

**Gender:**  
M

**Patent Sought**  
N

**Year Level:** R-2

**Group Entry:** N

**Students:** 1

**Category:** Crystal Investigation

**Project Title:**

**App code:**  
6523919



## LOG BOOK

**STUDENT NAME(S):** Yuriy Paslavskyy

**YEAR LEVEL:** 1

**SCHOOL:** Grange Primary

Please note: the use of this version of a log book is not mandatory.  
There will be no penalty for not using it.

However the student(s) who are preparing a crystal will need to provide evidence of their ongoing efforts by comments related to the criteria suggested in this log book model.

The competition instructions suggest that the crystal growers formulate an hypothesis that they can test while growing the crystal(s)

Examples of questions that could be expressed as a prediction or hypothesis are:

- Can my crystal grow to the required 9 mm in 3 weeks?
- Does leaving my crystal in a dark place help it to grow better?
- Does more or less attention help my crystal to be more clear and well-formed?
- Does an incubator help grow bigger crystals in a given time period?

**MY HYPOTHESIS:** Can my crystal grow to 10mm in 10 weeks?

The log book in this form is only advisory but students should try to document the following:

- Date and time for each handling of the crystal procedure
- Describe exactly what they did on each occasion (should include measurements of volume and temperature made at any time)
- What has happened to the selected crystal on each viewing (changes)
- Description of the crystal characteristics – clarity, regularity (smooth faces, sharp edges), and size (can be assisted by sketches or digital photos)
- What problems were encountered and how they were solved – may include summaries of discussions with teachers/mentors
- Acknowledgment of manual assistance by others e.g. for competitors from the R-2, 3-5 age groups, what teachers or parents did.
- Acknowledgement of any crystal growing advice from books or websites

Date/Time	Descriptions of what the student(s) did, problems encountered and solved	Crystal characteristics	signed
6-6-20	Prepared the seed crystal: 30g of alum and 200g of boiling water	no visible crystal	Prof
16-6-20	Selected best crystals for seeding. Warmed the rest of solution and stirred it. Poured over the crystals	crystal started forming, are transparent	Prof
15-08-20	Removed crystals from the solution	crystal is clear size of 15mm	Prof

## REPORT FORM

### GROWING ALUM CRYSTALS

Name Yuriy Paslavskyy Course/Section \_\_\_\_\_  
Date 15-08-20

#### DATA AND RESULTS

Record your operations in preparing and growing your alum crystal(s). Include a description of the stages of the crystal growth. (Use additional paper as needed.)

I prepared the seed crystal on 6/6/20. I used 30g of alum and 200g of boiling water. Next day the crystals haven't formed so I waited till 10/6/20, then I picked best looking crystals for seeding. I warmed up the rest of solution, stirred it and poured it over my crystals. I let it grow till 15/08/20 and then removed the crystals from solution. I let it dry out and then put it in a press-seal bag. My best looking crystal grew to the size of 15mm. My hypothesis confirmed.

Draw a diagram of your crystal (or one of the smaller crystals if you do not have one large one.)



Mass of final alum crystal(s)

2 g