

How to run a Maths Circle

Teacher Development Opportunity
2 March 2019

Glasgow
Mathematical
Journal
Trust

Rathbones
Look forward



THE UNIVERSITY of EDINBURGH
School of Mathematics

What is a Maths Circle

- Cambridge Maths Circle, started by Dr Vicky Neale
- 4 times a year
- 3 hour events, free structure
- Problems designed to encourage students to:
 - Explore
 - Discuss
 - Conjecture
 - Explain, and
 - Convince
- Most problems come from NRICH



The Edinburgh Maths Circle

- 10 events since 2016, ~200 parents and children per event



The photos were taken by Benedetta Mussati during one of our Maths Circles

Maths Circle Problems

- Problems are named
- Stage number (1 to 5) and difficulty level (* to ***)

Stage 1, lower primary, ages 5-7

Stage 2, upper primary, ages 7-11

Stage 3, lower secondary, ages 11-14

Stages 4 and 5, upper secondary, ages 14-18

- Labelled plastic pocket: 2 laminated A4 copies of the problem, any resources (eg, dice)
- Solutions *not* provided or needed
- See handout for suggestions for table and problem layout

Programme for Today

- **25 minute sessions concerning 2 themes**
- **Conjecturing**
 - Magic Vs, Stage 2 **
 - Seven Flipped, Stage 2 ***
 - What Numbers Can We Make, Stage 3/4 *
- **Representing mathematical ideas**
 - Noah, Stage 1 **
 - Three by Three, Stage 1-2 **
 - Peaches Today, Peaches Tomorrow, Stage 3 **
 - Crossing the Bridge, Stage 3 **
- **No need to try *all* the problems**
- **Strategy (over lunch)**
 - Nim 7, Stage 1-3 *
 - Stop the Clock, Stage 1 ***
 - Twinkle Twinkle Stage 2-3 *

Plan for the future

Spread Maths Circles around Edinburgh and beyond, by:

- Presenting it to teachers and lending resources to schools
- Running Maths circles in local areas and community rooms

Conclusion

- Contact the Mathematics Engagement Officer Dr Francesca Iezzi to borrow our resources
francesca.iezzi@ed.ac.uk
- Sign up to the Maths Circle mailing list and our general Maths Outreach mailing list
- See handout for further information or chat to us now!
- Come watch part/all of the Maths Circle on today from 1-4pm

Thank you for coming!