### **Schedule for Week 1**

Mathematics as a Second Language

Note that the information below is for planning purposes only. It may be necessary to expand some material and cut other material short.

**Topics to be covered** 

Unit 1: Foundations	Monday
Unit 2: Perspectives on Addition	Monday
Unit 3: Subtraction: The Art of Unadding	Tuesday
Unit 4: Perspectives on Multiplication	Tuesday/Wednesday
Unit 5: The Many Faces of Division	Thursday
Unit 6: Fractions	Thursday/Friday

# **Daily Schedule**

#### Monday, July 11

8:15 – 9am Registration. Welcome breakfast.

9am Welcome, Opening Remarks, Introductions

9:15 – 10:30 The Kayak Problem; Discussion of Problem Solving;

Break

10:40 – Noon Mastery Inventory (Pre-Test)

Noon – 1pm Lunch

1 – 2 "Smarter than you think" Discussion

Break

2:15 - 3:45 The adjective-noun theme

3:45 – 4 Summary; Conclusion; Daily Evaluation

Homework: Math Problems:

Pedagogy Reading:

#### Tuesday, July 12

9:00 – 9:20 Discussion of previous day's questions, evaluations, and homework

9:20 – 10:20 Properties of Addition; Geometry of numbers

Break

10:30 – Noon Subtraction Fundamentals

Noon – 1pm Lunch

1 – 2:30 Signed numbers

Break

2:45 – 3:45 Pedagogy Discussion

3:45 – 4 Summary; Conclusion; Daily Evaluation

Homework: Math Problems:

Based on materials from the Vermont Mathematics Initiative. ©Ken Gross 1999 – 2016. Used with permission.

# Pennsylvania Mathematics Initiative Summer 2016 Brandywine Workshops

# Pedagogy Reading:

# Wednesday, July 13

9 - 9:30	Discussion of previous day's questions, evaluations, and homework
9:30 - 10:20	Multiplication Fundamentals
	Break
10:30 – Noon	Multiplication Fundamentals
Noon – 1pm	Lunch
1 - 2:15	The Distributive Property
	Break
2:30 - 3:45	Pedagogy Discussion
3:45 - 4	Summary; Conclusion; Exit Questions and Daily Evaluation

#### Thursday, July 14

	<b></b>
9 - 9:20	Discussion of previous day's questions, evaluations, and homework
9:20 - 10:20	Division Fundamentals
	Break
10:30 – Noon	Models of Division
Noon – 1pm	Lunch
1 - 2:30	Fraction Fundamentals
	Break
2:45 - 3:45	Pedagogy Discussion
3:45 - 4	Summary; Conclusion; Daily Evaluation
*Those participation	ag in only Wook t should receive their Workshop Engligation

\*Those participating in only Week 1 should receive their Workshop Evaluation.

Friday, July 15	
9 – 9:20	Discussion of previous day's questions, evaluations, and homework
9:20 - 10:20	Arithmetic of Fractions
	Break
10:30 - Noon	Evaluating Fractions
Noon – 1pm	Lunch
1 - 2:30	TBD (Either catch-up, or problem-writing session)
	Break
2:45 - 3:45	Pedagogy Discussion
3:45 - 4	Summary; Conclusion; Daily Evaluation
*Those participatii	ng in only Week 1 should submit their Workshop Evaluation.

Based on materials from the Vermont Mathematics Initiative. ©Ken Gross 1999 – 2016. Used with permission.

# **Schedule for Week 2**

Functions and Algebra

Note that the information below is for planning purposes only. It may be necessary to expand some material and cut other material short.

# **Overall Schedule**

Unit FA-1: Processes	Monday
Unit FA-2: Proportional Reasoning	Monday, Tuesday
Unit FA-3: Linear Relationships	Tuesday, Wednesday
Unit FA-4: Functions	Wednesday, Thursday
Unit FA-5: Problem Solving	Thursday
Capstone	Friday

# **Day-by-Day Schedule**

#### Monday, July 18

Welcome, Opening Remarks
FA-1: Processes
Break
FA-2: Proportional Reasoning through examples
Lunch
FA-2: Proportional Reasoning, continued
Pedagogy Discussion
Summary; Conclusion; Daily Evaluation

# Tuesday, July 19

9:00 – 9:30	Discussion of previous day's questions, evaluations, and homework
9:30 - 10:15	FA-2: Proportions, Inverse Relations, Converting rates
	Break
10:30 – Noon	FA-3: Linear relationships: via exchange fees
Noon – 1pm	Lunch
1 - 2:30	FA-3: Graphing Linear Relationships, Slope, Intercepts
	Break
2:45 - 3:45	Pedagogy Discussion
3:45 - 4	Summary; Conclusion; Daily Evaluation

### Wednesday, July 20

Based on materials from the Vermont Mathematics Initiative. ©Ken Gross 1999 – 2016. Used with permission.

Pennsylvania Mathematics Initiative Summer 2016 Brandywine Workshops

	D	C	•	1 1		1	11 1
9 - 9:30	1 1100110010	nn of nr	PULLUTA	USALC.	dijections	evaluations	and homework
9 9.,50	Discussic	m or pr	CVIOUS	uay s	questions,	Cvaruations,	and nomework
, , ,				-	1 /	,	

9:30 – 10:15 FA-3: Equations of Lines

Break

10:30 – Noon FA-4: Function fundamentals

Noon – 1pm Lunch

1 – 2:30 FA-4: Properties of functions

Break

2:45 – 3:45 Pedagogy Discussion

3:45 – 4 Summary; Conclusion; Daily Evaluation

# Thursday, July 21

9 – 9:30	Discussion of previous day's questions, evaluations, and homework
	n 1 n''

9:30 – 10:20 Pedagogy Discussion

Break

10:30 – Noon FA-5: Problem Solving

Noon – 1pm Lunch

1 – 2:30 FA-5: Problem Solving

Break

2:45 – 3:45 FA-5: Problem Solving

3:45 – 4 Summary; Conclusion; Exit Questions and Daily Evaluation

#### Friday, July 22

9 - 10:15	Mastery Inventory (Post-Test)

Break

10:30 – Noon To be determined by interests of the participants

Noon – 1pm Lunch

1 – 2:30 Capstone Activity

Break

2:45 – 3:45 Looking back, Looking forward

3:45 – 4 Summary; Conclusion; Daily Evaluation