

# Prime Time Teaching Notes

Make sure to introduce the unit project early. You may want students to make a journal entry about two possible numbers between 10 and 99. They need two in case one is too hard to use. Students can write facts about their number as they do each new investigation.

It's important to keep to the vocabulary as you do the unit. Students need to keep the words and definitions in their binders.

It is helpful to read the mathematical Reflections (at the end of each investigation) before you start the investigation.

Mathematical Reflections can be used as a group assessment (assign each group a different question and then have them present their solution to the class) or as an individual assessment, or journal entries.

## **Investigation 1 – Factor Game**

Materials: Factor game transparency, Labsheets 1.1 and 1.2, calculators, game markers.

Make sure you are sure of the rules and practice the game a few times on the overhead projector with your students before you let them play each other. Play two games at home for homework. Parents or siblings can sign it or make a comment about the game.

## **Investigation 2 – Product Game**

Materials: Product game transparency, calculators, colored chips, colored pens, paper clips, labsheets 2.1, 2.2.

Investigation 2.2 making a product board can be a difficult assignment. It is important that students understand the need to consider the relationship between the number of products and the size of the product board. It helps if you practice making product boards before students do one. Included in the supplementary materials for this unit you will find practice boards from Factors and Multiples, part of the Middle Grades Mathematics Project. When students make their product board they can be laminated and students can play with classmates and family members. This is a good Open House activity.

Investigation 2.3 classifying numbers involves practice with Venn diagrams. Further practice is found in Application #12.

## **Investigation 3 – Factor Pairs**

Materials: Tiles, grid paper, markers, calculators, scissors, tape.

Students may have some experience with this activity since it is in Everyday Math Counts, and Visual Math.

Summarize (page 35a) explains ways to determine whether students understand that squares are rectangles and also points out that it is not important to bring this idea to closure now.

It's a good idea to put the rectangles around the room so students can see them for the rest of the unit.

Quiz A is suggested at this time. Quizzes are designed to be completed by pairs of students with opportunity for revision based on teacher feedback.

Check-up 1 also is given at this time. The check-up is designed to be used as quick individual quiz or as a warm-up.

3.3 Use tile models and graph paper.

## **Investigation 4 – Common Factors and Multiples**

Materials: calculators and transparencies for teacher.

4.1 You need to spend some time analyzing this activity with the class. When you get to 4.2 remind students of the strategies used in the previous lesson.

Additional practice on factors and multiples is in supplemental packet.

### **Investigation 5 – Factorizations**

Materials: calculators, labsheet 5.1, and teacher transparencies.

5.1 – Searching for Factor Strings is very popular with students. This lesson provides help for you to guide students to develop systematic ways for writing factor strings.

When you get to 5.3, Using Prime Factorizations, it is helpful to practice with a few numbers yourself before doing with students.

You can use Quiz B and Check-up 2 at this time. Also colored pens and transparencies and assign an equal number to each table group and list all factors for 1-100. Have students make individual lists.

### **Investigation 6 – The Locker Problem**

Materials: calculators.

Do ACE questions in class and locker problem for extra credit.

If you are spending more time than you wanted on this unit this investigation can be omitted.

Unit test/Unit project.

## Prime Time – Unit Planning Overview 6<sup>th</sup> Grade

Investigations & Assessments	Days Aprx	Materials for Students	Materials for Teachers	Transparencies	Copies for Students	ACE Questions	Miscellaneous
1. The Factor Game <i>Read TE p. 16 a-e</i>	3	Colored pencils or pens	2 colors of over-head pens	1.1, 1.2A, 1.2B	Notebook checklist p. 76 Labsheets 1.1,1.2 p. 96-97	1.1: #1-9,14 1.2: #10-13, 15-21	Introduce unit project. Continue student picture dictionary.
2. The Product Game <i>Read TE p.25 a-e</i>	5	Paper clips (2/pair) Colored chips or colored pencils/pens	Colored over-head pens or colored chips for overhead	2.1–2.3,	Labsheet 2.1, p. 98	2.1: #1-8, 13, 17-20 2.2: #9, 10, 14 2.3: #11, 12, 15, 16	Sample Product Game Boards with scores and comments on p. 82-86.
3. Factor Pairs <i>Read TE p. 35 a-g</i>	4	1” square tiles 1” grid paper cm or 1/4” grid paper (optional)		3.1–3.3,		3.1: #9, 16 3.2: #1-8, 17-19 3.3: #10-15, 21-25	
Quiz A	1				p. 69		Answers on page 78.
Check-Up 1	1/2				p. 68		Answers on page 78.
4. Common Factors and Multiples <i>Read TE p. 45 a-c</i>	3	Calculators		4.1–4.3		4.1: #1-4 4.2: #5-7, 14-16 4.3: #17, 18, 21, 22	
5. Factorizations <i>Read TE p.57a-g</i>	4	Calculators		5.1, 5.2, 5.3	Labsheet 5.1 p. 99	5.1: #16, 17, 19 5.2: #1-12, 21, 22 5.3: #13-15, 20, 23, 24	
Quiz B	1				p. 71		Answers on page 78.
Check Up 2	1/2				p. 70		Answers on page 78-79.
6. The Locker Problem <i>Read TE p. 64 a-b</i>	2	Calculators	12 signs to show open and closed lockers (optional) p. 119-120	6.1		See note in miscellaneous section	This activity by be skipped if you find yourself behind schedule. Do the ACE problems in class and use the actual locker problem for extra credit.
Self-Assessment	Take home				p. 77		
Unit Test	1				p. 74-75		Answers on p. 81
Unit Project	Take home						Guide to the Unit Project, p. 87-93.