

Lesson Title: Zurkles, Zaps, and Zekes

Grade: K/1<sup>st</sup>

Content Standard: K.NBT.1 Compose and decompose numbers from 11 to 19 into a group of ten ones and some further ones by using objects, then drawings and when appropriate equations: understand that these numbers are composed of a group of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: A. 10 can be thought of as a bundle of ten ones – called a “ten.” B. The numbers from 11 to 19 are composed of a ten and some additional ones. C. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, etc. tens and 0 ones.

Materials: 1” interlocking cubes. Ziplock bags. Data recording sheets (attached).

Shared experience and procedure details: This lesson will take 3 days and consists of the construction of a specified figure each day (Zurkles – 4 cubes, Zaps – 6 cubes, Zekes – 10 cubes. Pictures of each are attached) out of random numbers of detached cubes that have been preloaded into lettered ziplock bags. Load and letter enough bags so that the students can work in pairs. Load a different number of cubes in each bag. The number of cubes should range from 1-15 for Zurkles, 1-35 for Zaps, and 1-99 for Zekes. Attached are recording sheets for each day that have lettered answer blanks to match each of the lettered bags and provide lines for students to record the number of Zurkles and Zurklets (ones), Zaps and Zaplets (ones), and Zekes and Zeklets (ones) that can be constructed out of the cubes in that bag.

Generic directions to students: Show students a Zurkle and a Zurklet (a single cube). Empty the cubes out of your bag. Construct as many Zurkles (or Zaps, Zekes) as you can. Record on your answer sheet your results, the number of Zurkles constructed and the numbers of leftover Zurklets. Disassemble your cubes and put them back in the bag. Circulate bags throughout class until every pair has done all the bags.

Ask students to then draw a picture and write and explain their answer for one of the bags (Bag F which contained 13 cubes, for example). Emphasize that somewhere on their picture or words the answer to how many Zurkles and Zurklets must be clearly written.

Possible picture: Students may show original number of detached cubes and how they were snapped together to make 3 Zurkles with 1 Zurklet left over. They may show how they recorded the answer which may or may not include the words Zurkle and Zurklet. They may replace representative pictures

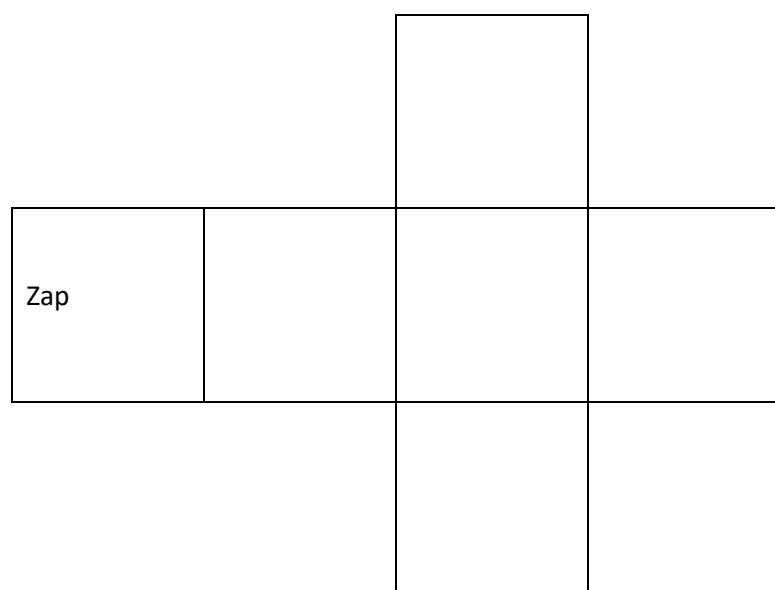
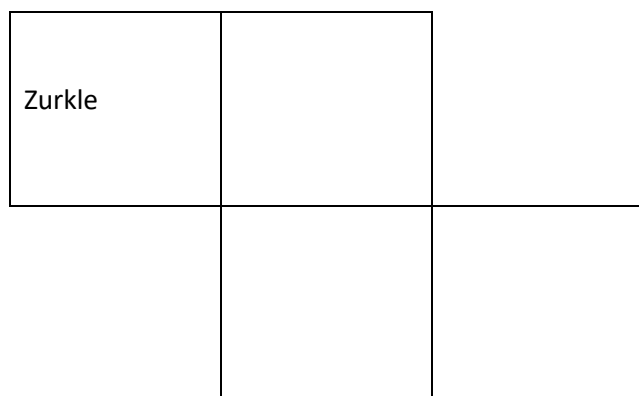
of cubes and Zurkles with numbers or tally marks.

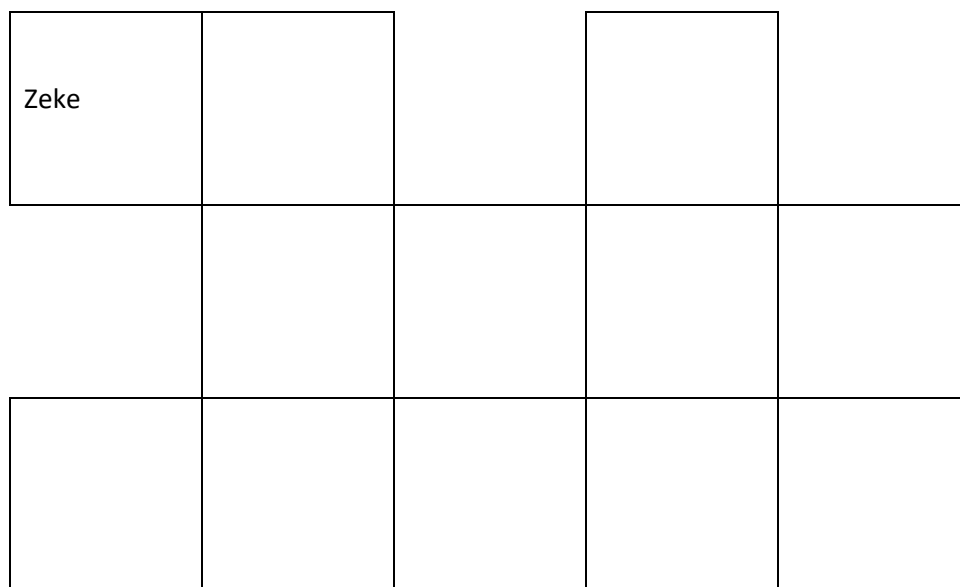
Possible people talk: Place focus of discussion on how answers are recorded and share student responses. Can a method be established for accurately and without ambiguity recording an answer with the use of just digits without the aid of the recording sheet? Show examples of how answers were recorded and ask student to use different methods to record result for different bags.

Feature talk: cubes, Zurkles, numbers, Zurklets, answer sheet, first, last

Symbolic language: This has been taken place when students wrote down their answers.

Reinthal, Proano 3/17





Zurklet

Zaplet

Zeklet

Zurkles Zurklets

A      \_\_\_\_\_

Zurkles Zurklets

B      \_\_\_\_\_

Zurkles Zurklets

C      \_\_\_\_\_

Zurkles Zurklets

D      \_\_\_\_\_

Zurkles Zurklets

E      \_\_\_\_\_

Zurkles Zurklets

F      \_\_\_\_\_

Zurkles Zurklets

G

\_\_\_\_\_

Zurkles Zurklets

H

\_\_\_\_\_

Zurkles Zurklets

I

\_\_\_\_\_

Zurkles Zurklets

J

\_\_\_\_\_

Zurkles Zurklets

K

\_\_\_\_\_

	Zaps	Zaplets
A	_____	_____

	Zaps	Zaplets
B	_____	_____

	Zaps	Zaplets
C	_____	_____

	Zaps	Zaplets
D	_____	_____

	Zaps	Zaplets
E	_____	_____

	Zaps	Zaplets
F	_____	_____

	Zaps	Zaplets
G	_____	_____

	Zaps	Zaplets
H	_____	_____

	Zaps	Zaplets
I	_____	_____

	Zaps	Zaplets
J	_____	_____

	Zaps	Zaplets
K	_____	_____



A       Zekes   Zeklets  
      \_\_\_\_\_

B       Zekes   Zeklets  
      \_\_\_\_\_

C       Zekes   Zeklets  
      \_\_\_\_\_

D       Zekes   Zekelets  
      \_\_\_\_\_

E       Zekes   Zeklets  
      \_\_\_\_\_

F       Zekes   Zeklets  
      \_\_\_\_\_

	Zekes	Zeklets
G	_____	_____

	Zekes	Zeklets
H	_____	_____

	Zekes	Zeklets
I	_____	_____

	Zekes	Zeklets
J	_____	_____

	Zekes	Zeklets
K	_____	_____