NATIONAL MATHEMATICS PROGRAMME

RESOURCE DOCUMENT

FOR GRADE ONE TEACHERS

Objective: Use concrete materials to investigate the relationship between the size of a unit and the number of units needed to measure length.

Topic: Snake Measurement Activity

Show students the pictures labeled snake A, Snake B and Snake C. Explain that the pictures represent snakes in a zoo. Explain the following:

"A zookeeper was given instructions on how to feed the three snakes. He was told to feed the longest snake first and the shortest snake last. The zookeeper doesn't know which snake to feed first, second, or third."

Arrange students in groups and provide each group of students with nonstandard units (eg. Counters, paper pins, cubes). Tell students to imagine that they are the zookeeper and are to use their selected nonstandard unit to order the snakes from longest to shortest. For example group 1 may choose to use paper clips, they will measure each snake and record how many paper clips long is snake A, Snake B and Snake C.

After students have made their presentation, record their findings in a chart such as the one below:

Kind of Unit	Length of Snake A	Length of Snake B	Length of Snake C
Paper clips	9 units	14 units	21 units
Cubes			
Counters			

Have students refer to information in the chart as they answer questions such as the following:

• "How do you know that the snakes are different lengths?"

• "Which snake is the longest? The next longest? The shortest? How do you know?"

• "Why are there different numbers of units for the length of Snake A? For example, why is the length of Snake A both 9 paper clips and 14 cubes?"

• "Why are there more counters than paper clips for Snake A? Why are there fewer paper clips than cubes for Snake B?"

• "Why is it important to use the same unit when comparing the lengths of different objects?"

• "What must you do to ensure that you measure accurately?"

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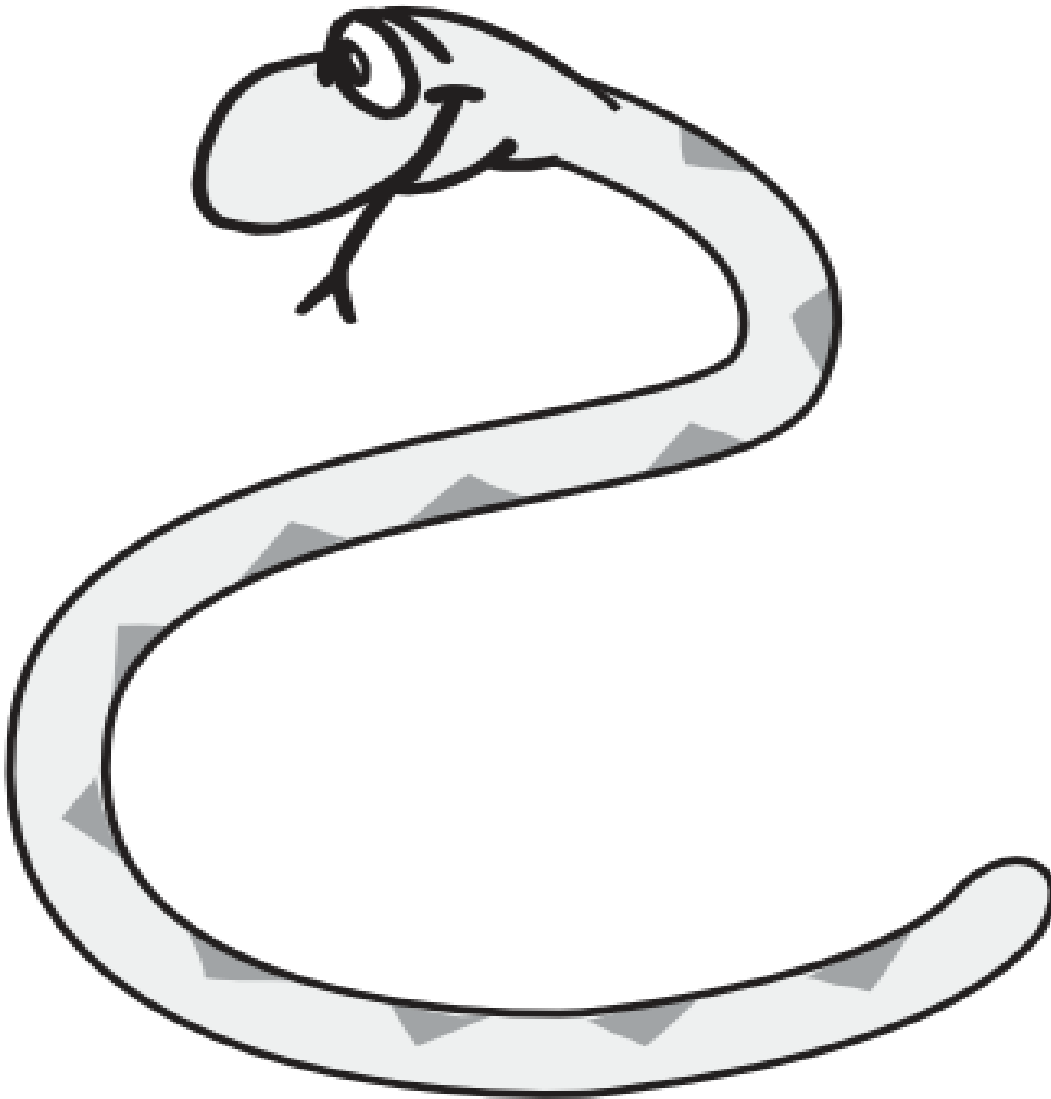
Topic: Snake

Snakes

Snake A

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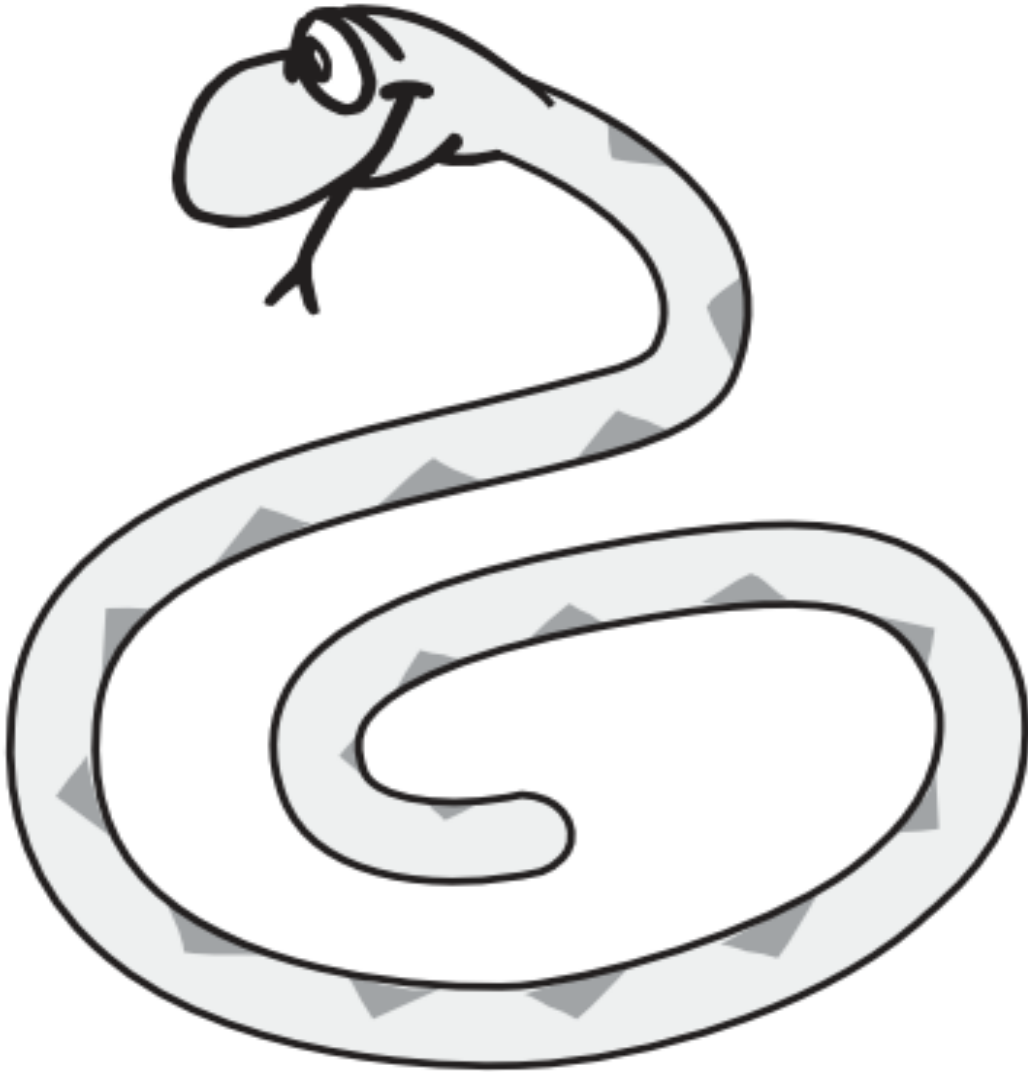
Topic: Snake

Snakes

Snake B

Snakes

Snake C

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Task _Observe students to assess how well they:_	Yes	No	Comments
▪ compare the lengths of objects directly (e.g., place two objects side by side to determine which is longer)			
▪ use non-standard units to measure length;			
▪ measure accurately (e.g., place non-standard units end to end, without gaps and overlays; count the units correctly)			
▪ use non-standard units to compare the lengths of objects (e.g., recognize that an object that is 12 paper clips long is longer than an object that is 9 paper clips long);			
▪ understand the relationship between the size of the unit and the number of units that are needed to measure a length (e.g., measuring the length of an object involves using more paper clips than new pencils, because a paperclip is shorter than a pencil).			