

Learning Activity: Improving Linking During Revision

Learning Behaviours: *Seeks links, Checks for understanding, Mind mapping*

Teacher: BLK

DATE: 19/4/05

Class: 7G Maths

Aim: To improve students' big picture of a topic and consolidate links between ideas. To prepare students well for assessment.

The topic is number patterns. Rather than come in cold from holidays, I thought that I would start with a usual short selection of questions from each area with an example at the top. Eg. The factors of 12 are 1, 2, 3, 4, 6 or 12. Find the factors of (a) 15 (b) 32

Brief Number Revision

Name: _____

1. Prime numbers were the machines left in the licorice factory. They had only 1 and themselves as factors. Composite numbers were all the machines crossed out(except 1) that had more than two factors.

Split the following numbers into Prime or Composite:

23, 10, 16, 27, 17, 5, 8, 25, 31, 68, 51, 72, 1020, 37, 211, 46, 80, 29

Prime: _____

Composite: _____

2. Fill in the blanks for these divisibility tests:

(a) 2 – Check if the number ends in _____

(b) 3 – Add up the _____. The sum has to divide by _____

(c) 4 – Check if the last _____ digits divide by _____

(d) 9 - _____ up the digits. The sum has to _____ by 9.

3. The factors of 15 are 1, 3, 5, 15. List the factors of:

(a) 20 _____ (b) 18 _____

4. To find the common factors of 24 and 32

24 – 1, 2, 3, 4, 6, 8, 12, 24

32 – 1, 2, 4, 8, 16, 32

Common factors
are 1, 2, 4 & 8

Find the common factors of

(a) 30

(b) 36

45

44

5. To find the highest common factor of 24 and 32.....Common factors were 1, 2, 4 & 8. The HCF is 8.

Find the highest common factor for:

(a) 15 and 20

(b) 24 and 16

(c) 36, 48 and 60

6. The multiples of 6 are 6, 12, 18, 24, 30, 36, 42,

Find the first five multiples of (a) 7 _____ (b) 13 _____

7. To find the common multiples
of 4 and 6

4 – 4,8,12,16,20,24,28,32,36,40,44,48

6 – 6,12,18,24,30,36,42,48

Common multiples
are 12, 24, 36, 48,

Find the common multiples of

(a) 5

(b) 3

4

9

8. To find the lowest common multiple of 4 and 6....Common multiples were 12, 24, 36, 48,
LCM is 12.

Find the lowest common multiple for:

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(a) 6 and 5

(b) 4 and 8

(c) 4, 6 and 9

9. What number is not a prime and not a composite? _____

10. What number is always a common factor? _____

After this, I thought that we would then use the "Revision linking" sheet shown below. Students are to cut out all the squares and connect 7 sets of a key word with a definition and an example. These will then be checked for correctness.

Prime	A different amount of one number
Factor	The factors of a number that are primes.
Multiple	A number that divides evenly into both numbers.
Common Multiple	A number that divides by more than 1 and itself.
Common Factor	A number that only divides by one and itself
Composite	The numbers that divide exactly into a number.
Prime Factors	A number that is an amount of two numbers.
Eg. 7 is a _____ as its only factors are 1 and 7	Divisibility tests
Eg. $20 = 2 \times 2 \times 5$ so 2 and 5 are the _____	Factor Trees
Eg. 5, 10, 15, 20, 25 are the _____ of 5	Clapping in rows
Eg. 1, 2, 3, 4, 6 and 12 are the _____ of 12	Hot Spot

Eg. 3, 6, 9, 12, 15, 18, 21, 24, 27, 4, 8, 12, 16, 20, 24, 28, 12 and 24 are the _____ of 3 and 4	Factorgrams
Eg. For 10 and 20 the _____ are 1, 2, 5 and 10.	✓ and X tables
Eg. 15 is a _____ as it divides by 1, 3, 5 and 15.	Licorice Factory

- * students cut out boxes
- * Match a Key word with a definition and an example(group of 3)
- * Glue these, in groups of 3, together on a piece of cardboard
- * Connect the activities(shaded boxes) to the key words

These were then set out on an A3 sheet and glued down roughly in a circle. No particular order. The last 7 squares that are shaded contain activities that we have done. I am trying to get students to connect activities they've done to concepts they've learnt. I then got the students to place each of the activities near which of the key word(s)(concept(s)) that they think that they were learning from this activity. Students will be encouraged to work with their tablegroup to place the activity.

When they are happy with the positioning, they pencilled in a line(s) to the key words they think the activities belong to. After this, all tablegroups left their A3 sheets on the table and moved around to check what other groups have for 5 minutes.

When they returned to their table, they were given a little time to finalise their placings and glue them down complete with connecting lines. These were then be collected and pinned on the wall. We added a few more key words, definitions, examples and activities as we finished the topic. These were then be added to their concept maps.

The concept maps were used during the test.

Discussion Tool: Journal writing

To encourage Year 7s to write something is tricky, so I kept it simple and put on the board.
Mrs Blacksell was trying to

Good *

*

Bad *

*

Students were then to fill in the blank and give two good and bad points about the revision exercises we did.

Student Comments

Mrs Blacksell was trying to

- “remind us of what to do”
- “do maths an easier way”
- “teach us about what we’ve learnt in games”

Good

- “It helps us understand our maths”
- “I learnt something”
- “It reminded me”
- “Interesting, sort of”
- “By matching up the number patterns, it made it stick in our heads what they mean”

Bad

- “You can not really read it because it is a bit complicated” (Poster paper was too small)
- “It was hard keeping up and there was too many things to do”
- “Cutting and Pasting”

Teacher Journal

What was my role?

- Stand back and let them do it. Allow them to struggle. This will be easier in later ones.

What feelings and senses surround the event?

- Many students need to be started along the line of being independent learners. Most are very dependent on the teacher for guidance and answers.

What were the important elements of the event?

- Great for revision and a record.
- Taught me that students do remember the activity, but not what it is called necessarily
- Literacy is a real handicap, especially in the feedback. Must work around it or think of strategies to help students.
- Use a bigger bit of cardboard for the map. Several students had that as the bad point in their journal.