

TSST 2015-16

Improving Learning in Mathematics: the Standards Box

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Our Maths APPs

Spire Maths

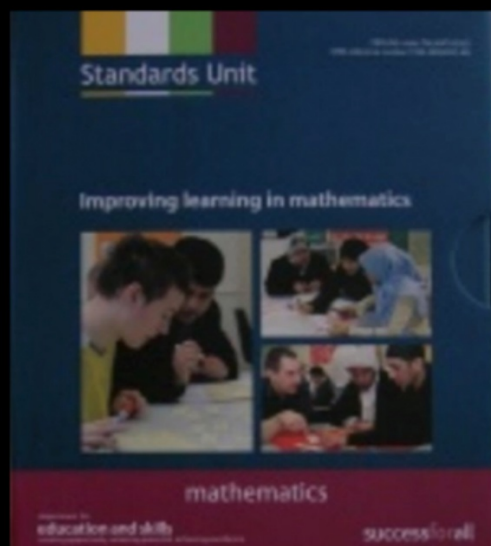
MathsTube for
maths videos

 jamtec
(Stoke) Ltd

Improving Learning in Mathematics: the Standards Box

All resources associated with Improving Learning in Mathematics can be found at:

<https://spiremaths.co.uk/lim/>



Our Maths APPs

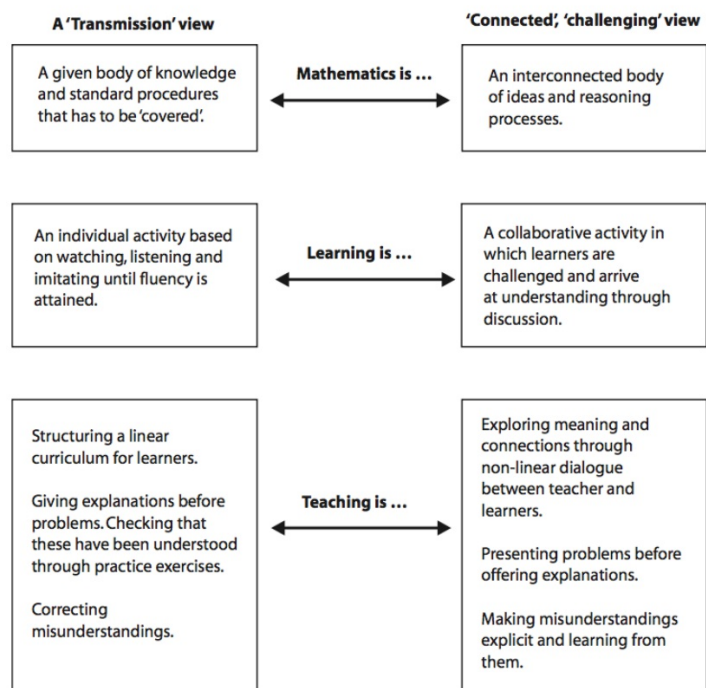
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Some underlying principles

- (i) **Build on the knowledge learners bring to sessions**
- (ii) **Expose and discuss common misconceptions**
- (iii) **Develop effective questioning**
- (iv) **Use cooperative small group work**
- (v) **Emphasise methods rather than answers**
- (vi) **Use rich collaborative tasks**
- (vii) **Create connections between mathematical topics**
- (viii) **Use technology in appropriate ways**



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A1 Interpreting Algebraic Expressions

N1 Ordering fractions and decimals

S1 Ordering probabilities

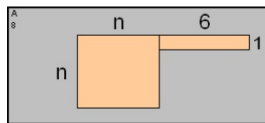
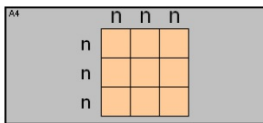
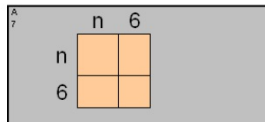
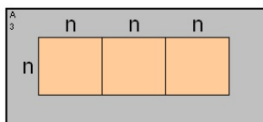
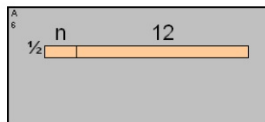
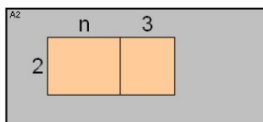
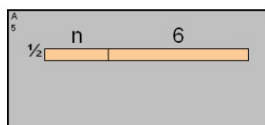
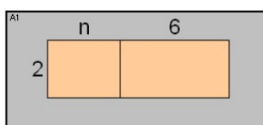
SS1 Classifying shapes

[Improving learning in mathematics: challenges and strategies](#)

A1 Interpreting Algebraic Expressions

A1InterpretingAlgebraicExpressions.flp

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T11	n	1	2	3	4
Ans	14	16	18	20	
T12	n	1	2	3	4
Ans			81	144	
T13	n	1	2	3	4
Ans		10	15	22	
T14	n	1	2	3	4
Ans	3		27	48	

T15	n	1	2	3	4
Ans			81	100	
T16	n	1	2	3	4
Ans		10	12	14	
T17	n	1	2	3	4
Ans		4		5	
T18	n	1	2	3	4
Ans	6.5	7	7.5	8	

E1 $\frac{n+6}{2}$

E7 $(3n)^2$

E2 $3n^2$

E8 $(n+6)^2$

E3 $2n+12$

E9 $n^2+12n+36$

E4 $2n+6$

E10 $\frac{n}{2}+3$

E5 $2(n+3)$

E11 n^2+6

E6 $\frac{n}{2}+6$

E12 n^2+6^2

V1 Multiply n by two, then add six.

V6 Add three to n, then square the answer.

V2 Multiply n by three, then square the answer.

V7 Multiply n by two, then add twelve.

V3 Add six to n, then multiply by two.

V8 Divide n by two, then add six.

V4 Add six to n, then divide by two.

V9 Square n, then add six.

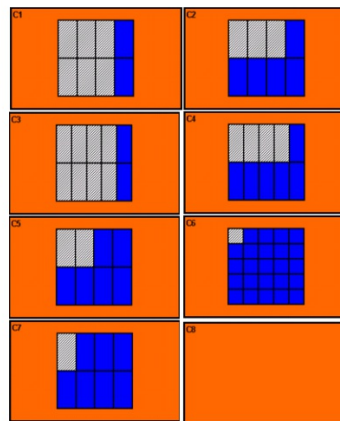
V5 Add three to n, then multiply by two.

V10 Square n, then multiply by nine.

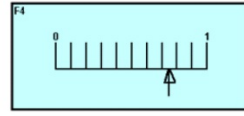
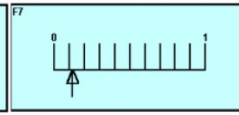
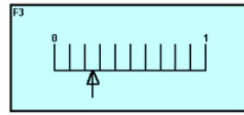
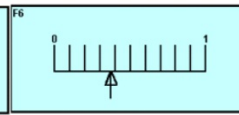
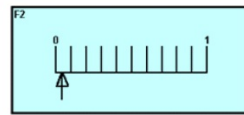
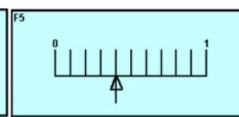
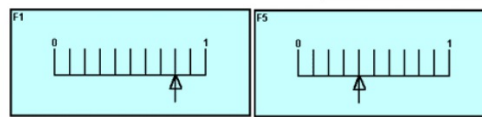
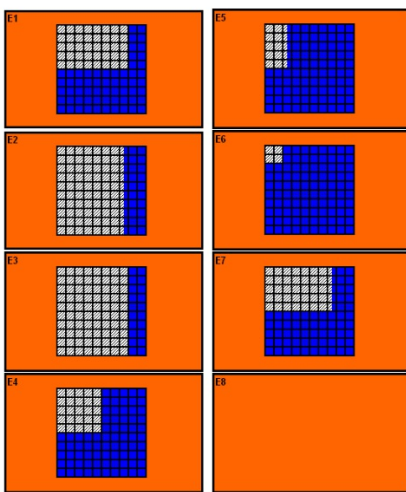
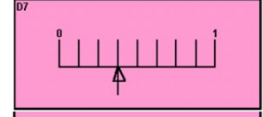
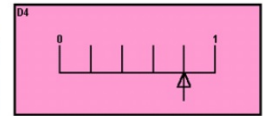
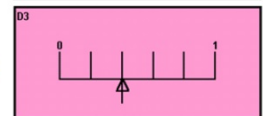
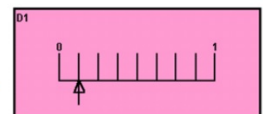
N1 Ordering fractions and decimals

0.8	$\frac{3}{8}$
0.04	$\frac{2}{5}$
0.375	$\frac{3}{4}$
0.125	$\frac{1}{25}$

N1OrderFractDecs.flp



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S1 Ordering probabilities

S1OrderingProbabilities.flp

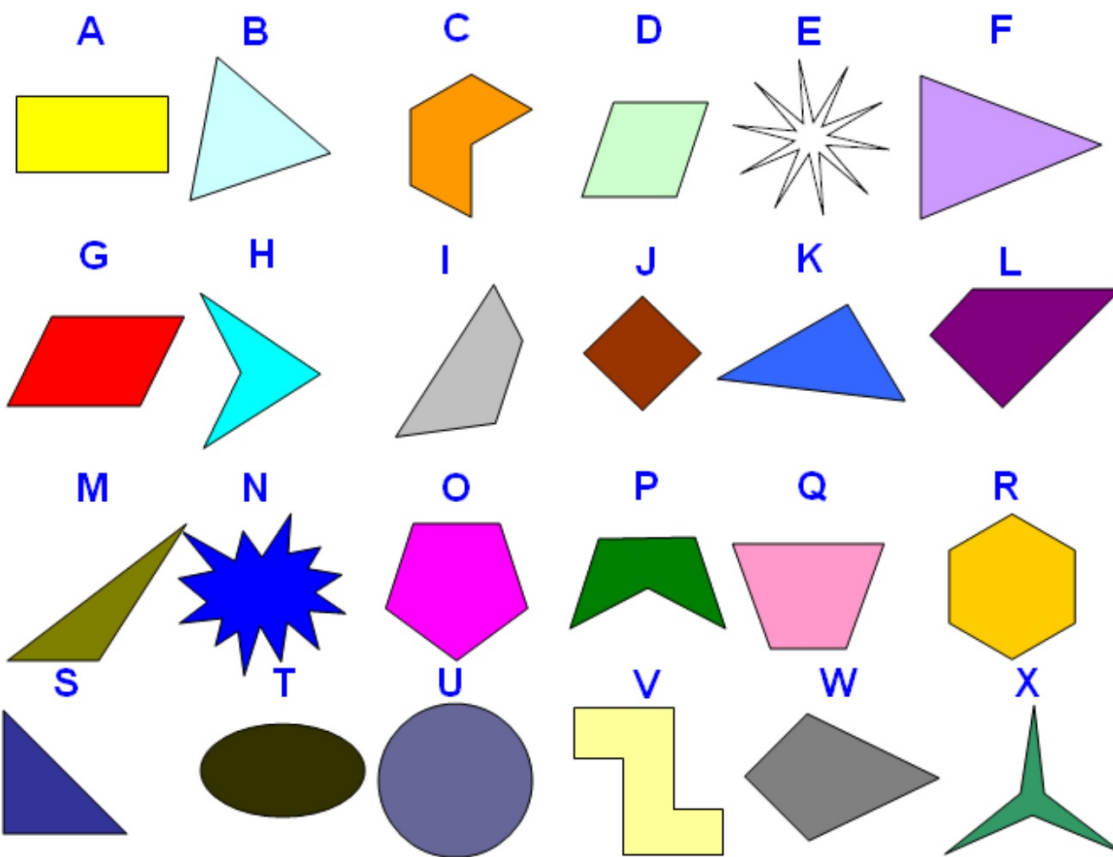
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Certain	Stoke will win the championship this season	Scotland will win the next Football World Cup	I will arrive home tonight before 7pm.	0.33	0
Impossible	If I flick a coin I will get a heads	England will win the next Football World Cup	All the pupils will attend today's lesson	0.8	0.25
Fairly likely	Ian will arrive on time today	I will see a flying pig on the way home tonight	All the pupils will remain silent during this lesson	0.9	1
Equally likely	Manchester United will win the Champions League	I will become Prime Minister of England	Petrol will reach £1 a litre within the next 2 months	0.45	0.88
Not very likely	Liverpool will do the Treble	Ryan will do his homework all next week		0.75	0.5
Very likely	An English space rocket will land on the moon in the next 5 years	I will go on holiday abroad this year			

SS1 Classifying shapes

SS1ClassifyingShapes.flp

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