

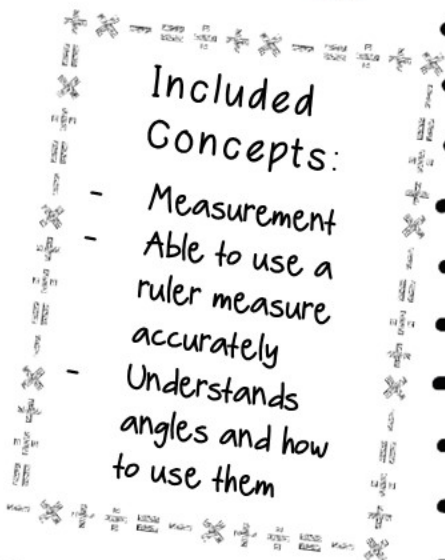


Marble Run



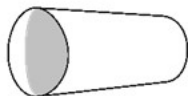
The Task:

To design and build a marble run that lasts a certain duration



Included Concepts:

- Measurement
- Able to use a ruler measure accurately
- Understands angles and how to use them



Requirements:

You will need to design and create a marble run that can last for longer than 30 seconds.

It can be made with cardboard and paper (any other materials need to be negotiated).

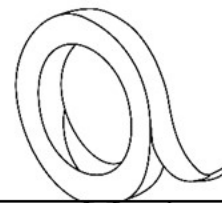
The marble run needs to have at least one type of each angle; acute, right, obtuse and reflex.

Challenge: Can you make a marble run that lasts for one minute?

Real World Mini Math Project

Steps to Take:

1. Sketch out a range of possible designs
2. Label the materials and angles used
3. Test out your run with a timer
4. Modify as needed
5. Record the each angle type and degrees used in your final design
6. Share with the class



Assessment:

Concepts accurately covered	/5
All sections completed to a high standard	/5
On task work ethic	/5
Clearly shows mathematical thinking/working out	/5
Comment:	/20

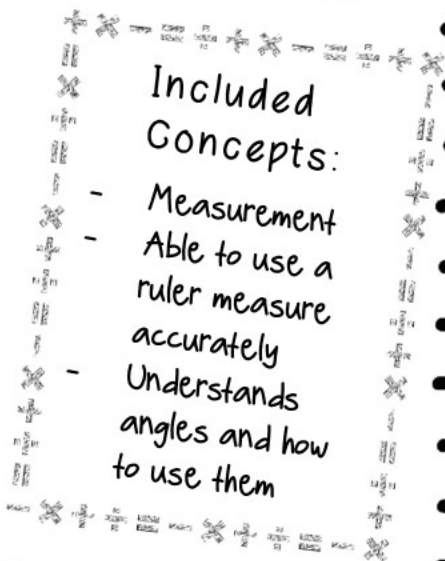


Marble Run



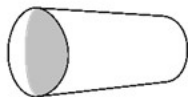
The Task:

To design and build a marble run that lasts a certain duration



Included Concepts:

- Measurement
- Able to use a ruler measure accurately
- Understands angles and how to use them



Requirements:

You will need to design and create a marble run that can last for longer than 30 seconds.

It can be made with cardboard and paper (any other materials need to be negotiated).

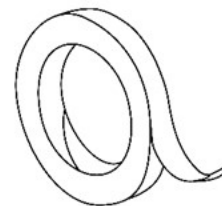
The marble run needs to have at least one type of each angle; acute, right, obtuse and reflex.

Challenge: Can you make a marble run that lasts for one minute?

Real World Mini Math Project

Steps to Take:

1. Sketch out a range of possible designs
2. Label the materials and angles used
3. Test out your run with a timer
4. Modify as needed
5. Record the each angle type and degrees used in your final design
6. Share with the class



Assessment:

Can measure with a ruler	/5
Can correctly label each angle type	/5
Can accurately use a protractor to measure and record each angle	/5
Can modify angles to help with time duration	/5
Clearly shows mathematical thinking/ working out	/5
Comment:	/20

Assessment

Mini Math Project: Marble Run

Concepts accurately covered	/5
All sections completed to a high standard	/5
Clearly shows mathematical thinking/ working out	/5
On task work ethic	/5
Total:	/20

Comment:

$$1+2=3 \quad 9-4=5 \quad 10-6=4 \quad 8-2=6$$

$$2+8=10$$

$$3+7=10$$

$$4+6=10$$

$$5+5=10$$

Self/ Peer Assessment: Mini Math Project: Marble Run

Shows mathematical thinking	/5
Easy to follow/ understand	/5
Mathematical concepts are completed accurately	/5
On task work ethic during lessons/ task assignment	/5
Total:	/20

Best part of the project	Ideas for improvement

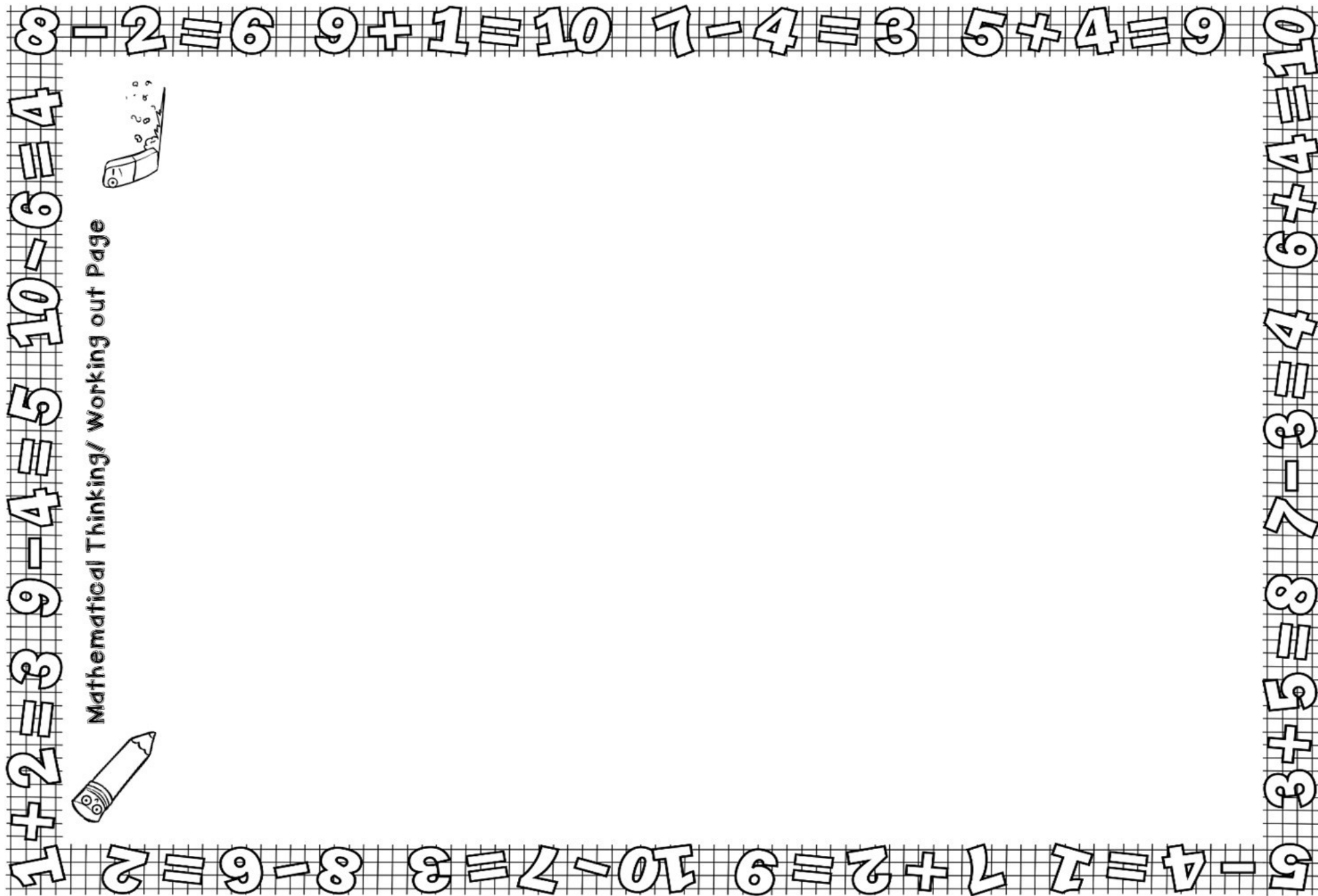
$$2+8=10$$

$$3+7=10$$

$$4+6=10$$

$$5+5=10$$

$$3+5=8 \quad 7-3=4 \quad 6+4=10$$



Mathematical Thinking/ Working out Page



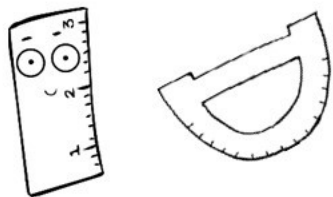
$$\begin{array}{l}
 1+2=3 \quad 9-4=5 \quad 10-6=4 \quad 8-2=6 \quad 9+1=10 \quad 7-4=3 \quad 5+4=9 \\
 5-4=1 \quad 7+2=9 \quad 10-7=3 \quad 8-6=2 \\
 3+5=8 \quad 7-3=4 \quad 6+4=10
 \end{array}$$



Marble Run Design/ Sketch Page

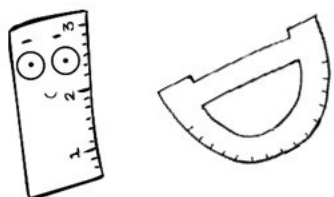


Marble Run – Angles used



Angle Name/ Type	Degrees Measured

Marble Run – Angles used



Angle Name/ Type	Degrees Measured