

# TEACHER NOTES

Firstly, a big THANK YOU for purchasing this product. Please check out my store for more products and follow me for updates.

These CSI projects are a great way to capture your students' interest in math. This activity is also great to use as a fun Saint Patrick's Day math activity.

## Included in this activity you will find:

**Four math clues which your students will need to solve in order to uncover who stole the leprechaun's gold . The clues are:**

**Hidden Message:** Students use their basic facts, mainly multiplication, in order to uncover a hidden message left by the thief.

**The Getaway:** Students calculate the speed of each suspect's mode of transport.

**Room for Gold?** – Students calculate the volume of each suspect's safe to determine if they would have had room for the gold.

**Who Needs the Money?** – Students add numbers with decimals to determine how much money each suspect has.

After the students have found out who stole the gold pot they can complete the last activity to find out where the next rainbow will form. To make this activity shorter you don't have to include this sheet.

Two early finisher activities are also included. Keep these on hand to give to your students who finish early. One of the extra activities is a short writing activity and the other is a multiplication maze.










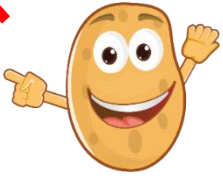
# CRIME SCENE INVESTIGATION

Once upon a time in the great land of Ireland there lived a lucky leprechaun named Larry.

Lucky Larry lived a lovely life, laughing often with the loud but loveable children and laymen of Lismore, which was the nearby Irish village. One day as Larry was laying lazily near a lake, a lovely large rainbow appeared. He ran to the end of the rainbow and found a large pot of gold. He excitedly ran back the village to share the news with everyone. However, when he arrived he was instead greeted with a grim discovery: the local town hall had burned down!

Larry went home feeling sad for the people of Lismore. When he got home, he locked his pot of gold away in his safe. During the night he decided he would use his pot of gold to fund the building of a new town hall for the people of Lismore. In the morning he ran to his safe so he could get the pot of gold and give it to the people. When he got to his safe, however, he couldn't find his gold; someone had stolen it!

The village and nearby forest were searched and many suspects were gathered up and are shown below. Use the evidence on the following pages to find out who stole the gold.

			
<p><b>Magic Shamrock</b> A shamrock is a young sprig of clover and is the national symbol of Ireland.</p>	<p><b>Irish Maiden</b> The beautiful Irish maidens are said to be smart, lively, happy and cunning.</p>	<p><b>Druid</b> In pre-Christian times the Druids were members of the high-ranking professional class.</p>	<p><b>Saint Patrick</b> Saint Patrick lived in the 5th Century and is the patron saint of Ireland. He is regarded by many as the founder of Christianity in Ireland.</p>
			
<p><b>Irish Dragon</b> There are stories of mythical dragons in Ireland both during and before it became a Christian country.</p>	<p><b>Clurichaun</b> A Clurichaun was an Irish elf who looked like a tiny old man and loved to play practical jokes.</p>	<p><b>Harpist</b> The Harpist was an important part of Ireland's past. Ireland's national code of arms is a golden harp.</p>	<p><b>Potato Head</b> The potato has long been a staple food in Ireland. In the 1850s a blight affected the growth of the potatoes and caused a great famine.</p>

**FOUR CLUES HAVE BEEN FOUND, WHICH ARE ON THE FOLLOWING PAGES.**

AFTER YOU HAVE SOLVED EACH CLUE, COME BACK HERE TO CROSS SUSPECTS OFF UNTIL YOU HAVE FOUND OUT WHO STOLE THE POT OF GOLD.

# HIDDEN MESSAGE

A note was found left hidden in the safe with an encrypted code written on it. Once cracked, this message will allow you to eliminate one person from the suspect list.

**Solve the problems, then fill in the message spaces with the letters that match the correct answers to read the secret message.**

**Hint:** When a number is not known it can be replaced with a letter.

**For example.** There were 3 lollipops, now there is only one.

In an equation it looks like this:  $1+L = 3 \longrightarrow 1+2 = 3 \longrightarrow L=2$

$\nwarrow$  L can be used to show the unknown number lollipops that are gone.

**Another example.**  $2 \times C = 10 \longrightarrow 2 \times 5 = 10 \longrightarrow C=5$

<b>A</b> $3 \times 5 = A$ A =	<b>B</b> $3 \times B = 6$ B =	<b>C</b> $C + 20 = 33$ C =	<b>D</b> $22 - D = 15$ D =	<b>E</b> $5 \times 5 = E$ E =	<b>F</b> $7 \times F = 54$ F =	<b>G</b> $3 \times G = 9$ G =
<b>H</b> $11 + 15 = H$ H =	<b>I</b> $34 - I = 24$ I =	<b>J</b> $9 \times 9 = J$ J =	<b>K</b> $13 + J = K$ K =	<b>L</b> $4 \times 4 = L$ L =	<b>M</b> $7 = M$ M =	<b>N</b> $42 + N = 56$ N =
<b>O</b> $7 \times 5 = O$ O =	<b>P</b> $8 \times P = 40$ P =	<b>Q</b> $12 + Q = 52$ Q =	<b>R</b> $R = 2$ R =	<b>S</b> $4 \times 3 = S$ S =	<b>T</b> $8 \times 7 = T$ T =	<b>U</b> $9 \times 3 = U$ U =
<b>V</b> $24 + 42 = V$ V =	<b>W</b> $4 \times W = 34$ W =	<b>X</b> $21 = X$ X =	<b>Y</b> $8 \times 6 = Y$ Y =	<b>Z</b> $31 + Z = 53$ Z =		

PREVIEW THANKS FOR LOOKING!

10    26    15    6    25    12    56    3    16    25    41    48    35    27    11

3    35    16    7    12    25    1    11    48    3    16    25    15    12    25

9    35    11    3    10    66    25    28    25    5    16    25    15    12    25

56    25    16    16    12    15    10    14    56    5    15    56    11    10    13    29

56    35    9    35    11    3    10    66    25    28    48    12    10    14

You read the deciphered note to the leprechaun and he sighed. "I'm not sure yet if I can forgive him. At least the thief let us know of one person who we can cross off the suspect list."

**CROSS THIS PERSON OFF YOUR SUSPECT LIST.**

# THE GETAWAY

A witness was found and said that he saw an object, perhaps a vehicle or animal, moving at a very high speed away from the leprechaun's house on the night of the robbery. It was a dark foggy night, however, so he didn't get a good look at what it was; he just knew it was fast. All the suspects were questioned about how they travelled. The two suspects whose modes of transport are the slowest can be crossed off the suspect list.



The speed of a vehicle, animal, or object can be calculated by dividing how far it travelled by how much time it took to travel the distance.

Distance = 50 meters  
 Time = 5 seconds

Speed = Distance ÷ Time  
 Speed = 50 ÷ 5  
 Speed = 10 m (meters per second)

Calculate the speed of each suspect's mode of transport.  
 Cross the TWO suspects with the SLOWEST mode of transport off the suspect list.

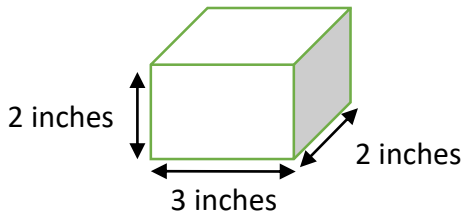
Magic Shamrock	Irish Maiden	Druid	Saint Patrick
			
Distance travelled = 100m Time: 20 seconds Speed = $100 \div 20$ Speed =	Distance travelled = 24m Time: 3 seconds Speed = $24 \div 3$ Speed =	Distance travelled = 63m Time: 9 seconds Speed = $63 \div 9$ Speed =	Distance travelled = 36m Time: 4 seconds Speed = $36 \div 4$ Speed =
Irish Dragon	Clurichaun	Harpist	Potato Head
			
Distance travelled = 120m Time: 10 seconds Speed = $120 \div 10$ Speed =	Distance travelled = 45m Time: 9 seconds Speed = $45 \div 9$ Speed =	Distance travelled = 56m Time: 8 seconds Speed = $56 \div 8$ Speed =	Distance travelled = 40m Time: 2 seconds Speed = $40 \div 2$ Speed =

Cross the TWO suspects with the slowest cars off the suspect list

# ROOM FOR THE GOLD?

A tip-off was received that said that after the gold was stolen it was placed in the thief's safe. The safes of all the suspects were searched but the gold was not found, so the thief must have moved it somewhere else. The large amount of gold would have taken up a lot of space, however, and the smallest safes wouldn't have been able to fit all the gold.

Calculate the volume of each suspect's safe and cross the TWO suspects who have the safes with the SMALLEST volume off the suspect list.



To Calculate Volume = height x width x length  
e.g., 2 inches x 3 inches x 2 inches  
= 12 inches<sup>3</sup>

Magic Shamrock	Irish Maiden	Druid	Saint Patrick
Volume = height x width x length Volume = 3 x 5 x 2 Volume =	Volume = height x width x length Volume = 4 x 6 x 2 Volume =	Volume = Volume = Volume =	Volume = Volume = Volume =
Irish Dragon	Clurichaun	Harpist	Potato Head
Volume = Volume = Volume =	Volume = Volume = Volume =	Volume = Volume = Volume =	Volume = Volume = Volume =

CROSS THE TWO SUSPECTS WITH THE SMALLEST SAFES OFF THE SUSPECT LIST.

# WHO NEEDS THE MONEY?

The night before the pot of gold was stolen, a man reported hearing hushed whispers in a dark alleyway. One of the voices said, "I really need some money; some gold coins would be nice. I don't have much and would be willing to steal to get some. Do you know of someone who has a big pot of gold I could take?"

This means that whoever stole the gold couldn't have had much money. The **TWO** suspects who have the **MOST** amount of money can be crossed off the suspect list, as they would not have needed to steal the gold.

Work out the total amount of money each suspect has.  
Cross off the **TWO** suspects who have the **MOST** amount of money.

	Gold coins in Pot	Money in Bank	Money in Safe	Total money
Magic Shamrock	\$23	\$12.50	\$36.00	
Irish Maiden	\$42	\$9.00	\$15.00	
Druid	\$36	\$10.00	\$32.60	
Saint Patrick	\$6	\$32.30	\$22.40	
Celtic Shaman	\$5	\$23.70	\$21.10	
Clurichaun	\$33	\$21.20	\$32.50	
Harpist	\$31	\$44.50	\$22.20	
Potato Head	\$21	\$24.60	\$40.10	

Once solved, this should only leave one person on your suspect list.





The thief was the: \_\_\_\_\_



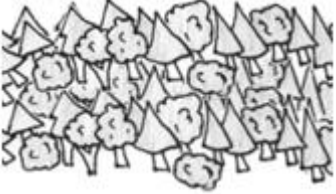





# RAINBOW MAGIC

Great job in helping Larry find the pot of gold! He now needs to return it to the end of the rainbow, so it can be returned to the other side and be refilled with gold for someone else.

The leprechaun has a special power which can help him find the end of the rainbow. Leprechauns look for magic Irish symbols hidden throughout the land. Each symbol has a given amount of rainbow magic. The place which has the largest amount of rainbow magic will be where the next rainbow will form. Help Larry find out where the next rainbow will form so he can take the pot there.

Tri Star	Quad Star	Quint Star	Celtic Charm
 3 Rainbow Points	 4 Rainbow Points	 5 Rainbow Points	 6 Rainbow Points

Calculate how many rainbow points each region of the land has. The place with the largest amount of points is where the next rainbow will form.  
E.g., 5 Tri Stars = 3 points x 5 = 15 rainbow points

 <p><b>Forest:</b></p> <p>4 Tri Stars     <math>4 \times 3 =</math>            6 Quint Stars   <math>6 \times 5 =</math></p> <p>Total =</p>	 <p><b>Village:</b></p> <p>5 Quint Stars            3 Celtic Charms</p> <p>Total =</p>	 <p><b>Lake:</b></p> <p>3 Tri Stars            3 Quad Stars            2 Celtic Charms</p> <p>Total =</p>
 <p><b>Mountain Caves:</b></p> <p>7 Quad Stars            3 Quint Stars            1 Celtic Charm</p> <p>Total =</p>	 <p><b>Farm:</b></p> <p>8 Tri Stars            1 Quad Star            7 Celtic Charms</p> <p>Total =</p>	 <p><b>Sea:</b></p> <p>2 Tri Stars            3 Quad Stars            4 Quint Stars            5 Celtic Charms</p> <p>Total =</p>

Place where the next rainbow will form: \_\_\_\_\_

