Tuesday, November 27, 2018

Your Learning Goal:

Students will use mathematical skills, measuring angles to create a laser maze investigating the properties of light when it interacts with matter.

Table of Contents: Reflections- 21L + R

Catalyst (21L):

How might you describe the difference between a mechanical wave (we learned about in the last class) and an electromagnetic wave?

Homework:

Final Exam

Dec 13/14

Agenda:

1. Catalyst
2. Laser Maze!
3. Reflection

Table of Contents

Date	Assignment	Pg #
10/25/18	Atomic Jeopardy	16 L + R
11/6/18	Star Bright	17 L + R
11/8/18	Heartbeat Frequency	18 L + R
11/13/18	Spring Into Waves	19 L + R
11/26/18	EM Spectrum Hero	20L + R
11/27/18	Reflections	21L + R

8R

11/27/18

Catalyst:

How might you describe the difference between a mechanical wave (slinky transverse/compression waves) and an electromagnetic wave?

21L

Reflections

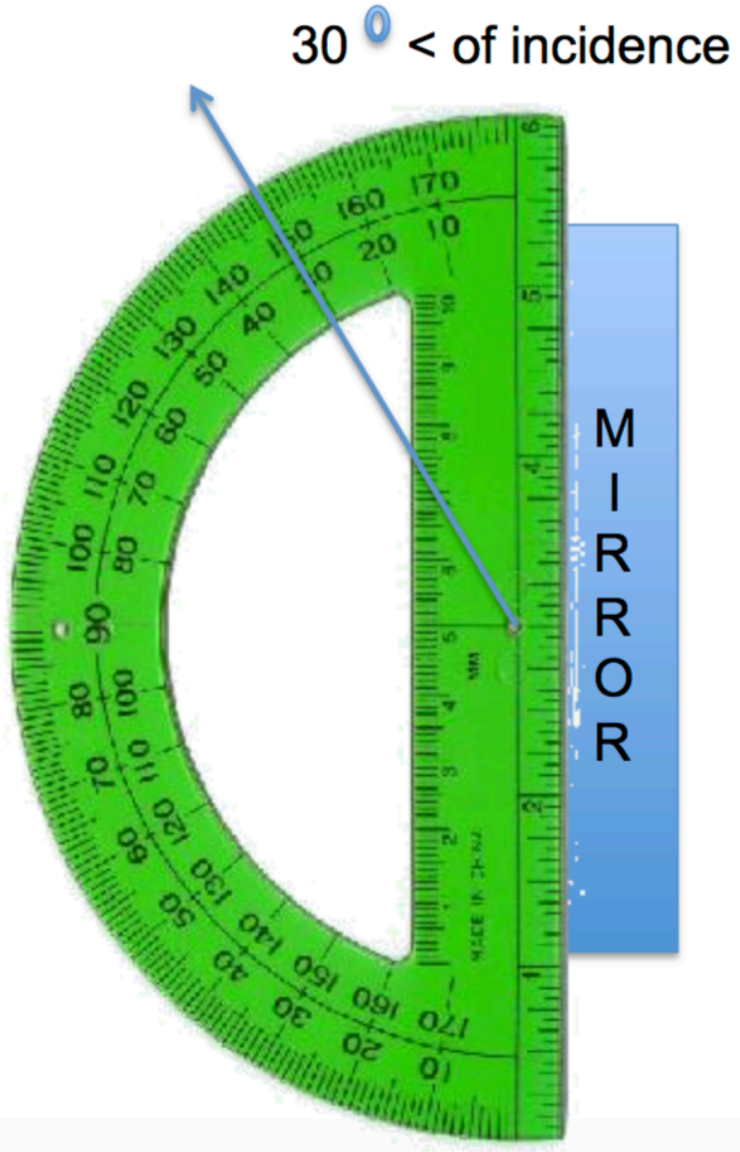
Angle Of Incidence	Angle of Reflection
30º	
45º	
60º	
You choose!	

21R

1. Draw a straight line where you want your mirror to be on the page

2. Measure 30 degrees with the protractor and draw a line.

3. Label it your angle of incidence



1. Shine the laser down the angle of incidence line into the mirror

2. Trace over the reflected line that the laser creates

3. Measure the angle of reflection and record the number in your table 13L

11/27/18

Catalyst:

How might you describe the difference between a mechanical wave (slinky transverse/compression waves) and an electromagnetic wave?

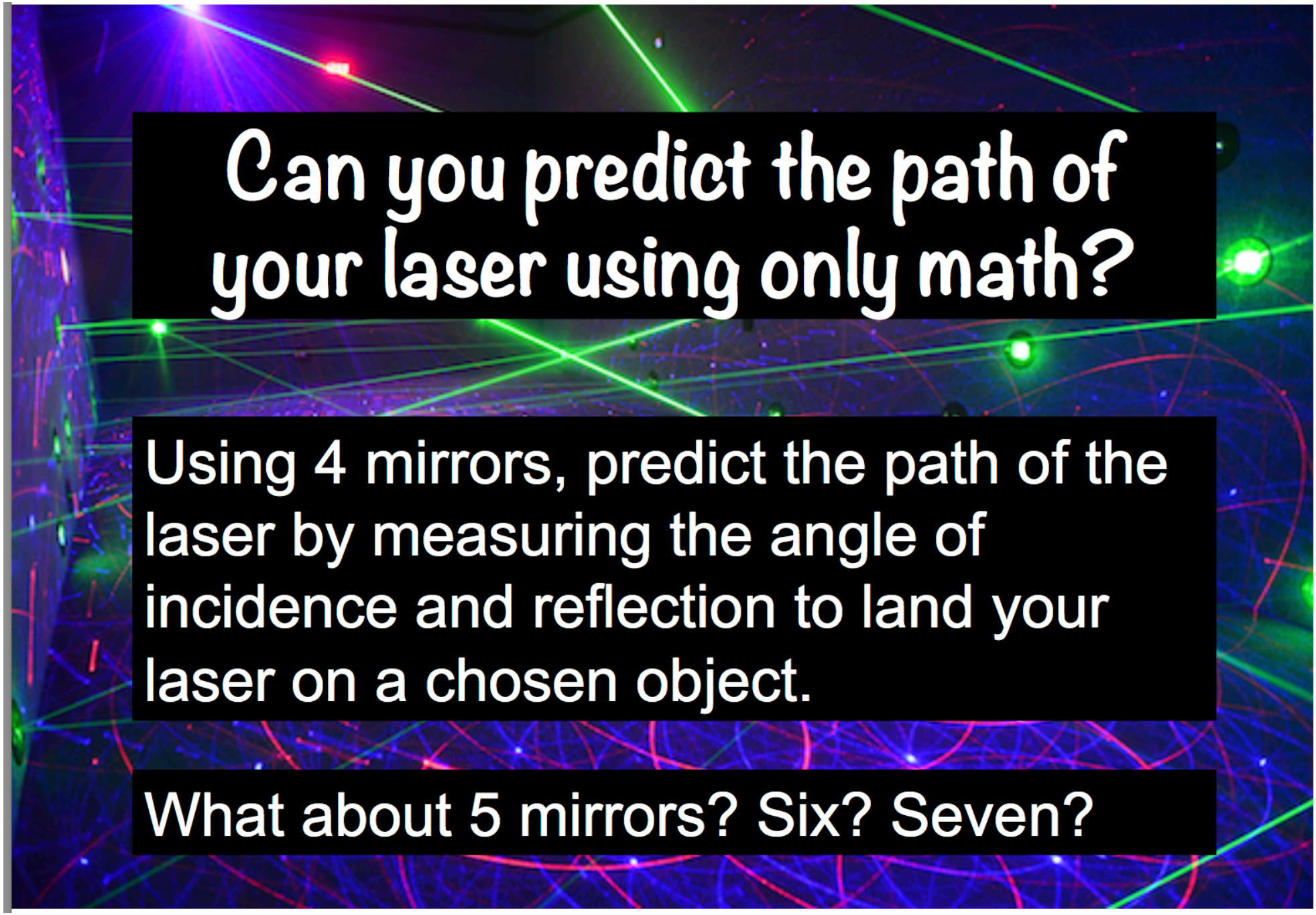
21L

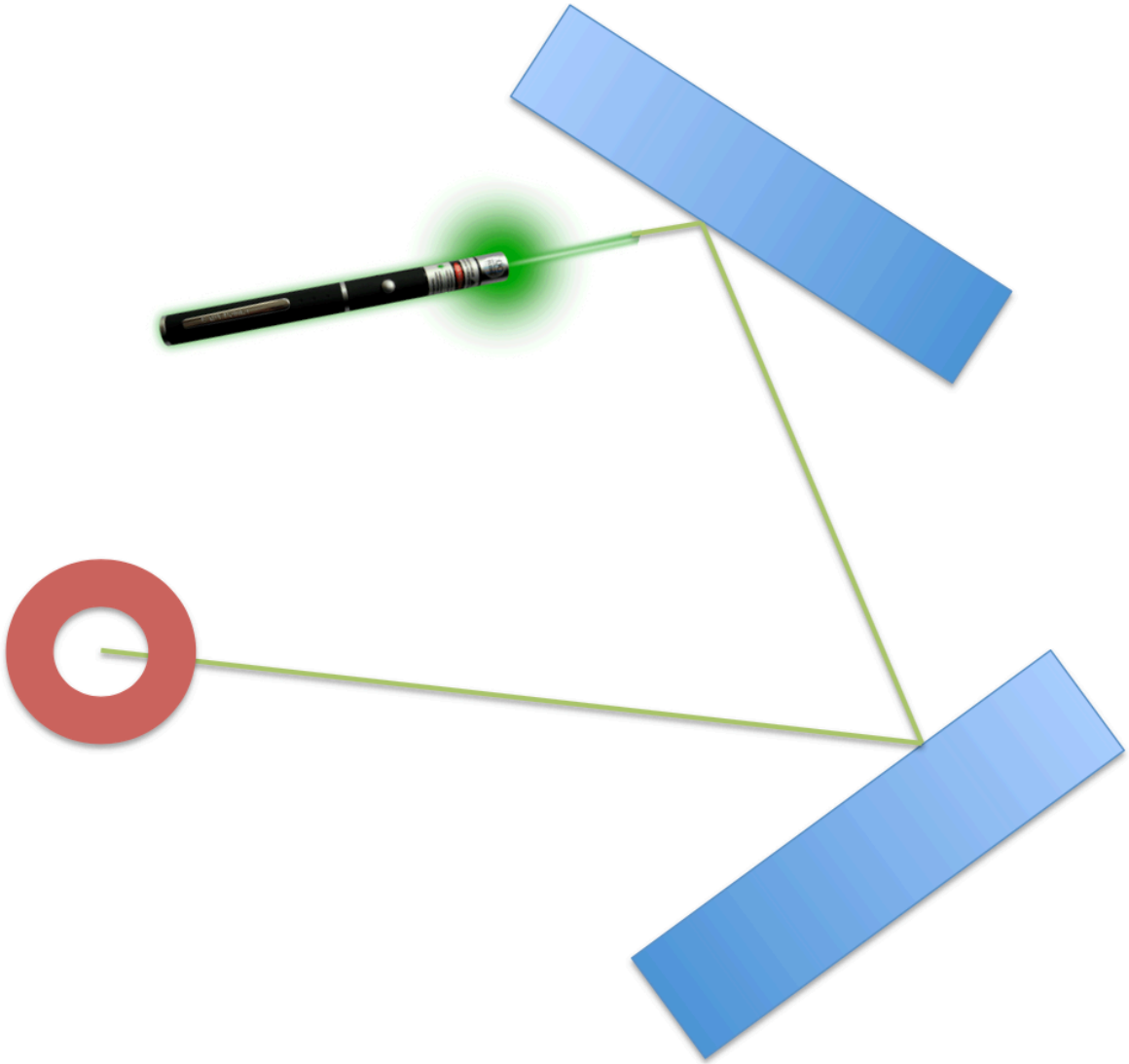
Reflections

Angle Of Incidence	Angle of Reflection
30º	
45º	
60º	
You choose!	

The relationship between angle of incidence and angle of reflection is…

21R


Can you predict the path of your laser using only math?
Using 4 mirrors, predict the path of the laser by measuring the angle of incidence and reflection to land your laser on a chosen object.
What about 5 mirrors? Six? Seven?



By measuring the angles of incidence and reflection can you get a laser to bounce off two mirrors and hit a target?

11/27/18

Catalyst:

How might you describe the difference between a mechanical wave (slinky transverse/compression waves) and an electromagnetic wave?

LEAF:

Did your group predict the outcome of the laser maze accurately? Use mathematical evidence.

21L

Reflections

Angle Of Incidence	Angle of Reflection
30°	
45°	
60°	
You choose!	

The relationship between angle of incidence and angle of reflection is…

21R