



PLTW Virtual Learning

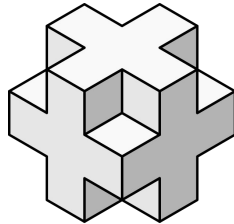
6th Grade Intro to Gateway

April 27, 2020

6th Grade Intro to Gateway
Lesson: April 27 (Part 1 of 5)

Objective/Learning Target:

Students will understand the properties of isometric drawings and be able to draw shapes in isometric view.

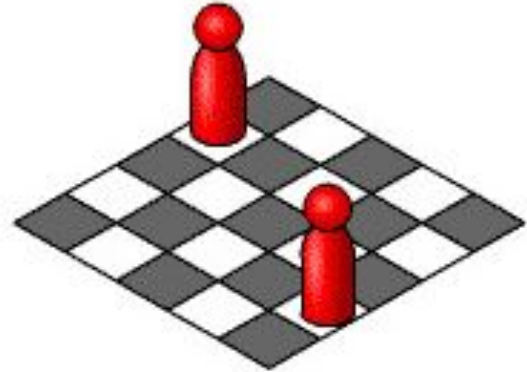


Warm-Ups:

Look at the 2 images and think about the following questions.

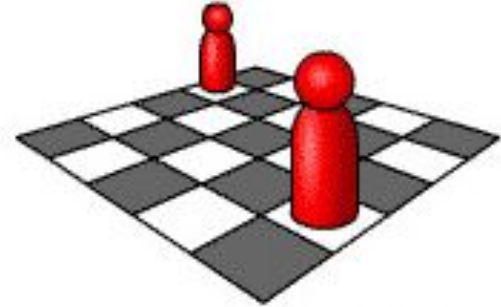
How are they different?

What do you think is causing the difference?

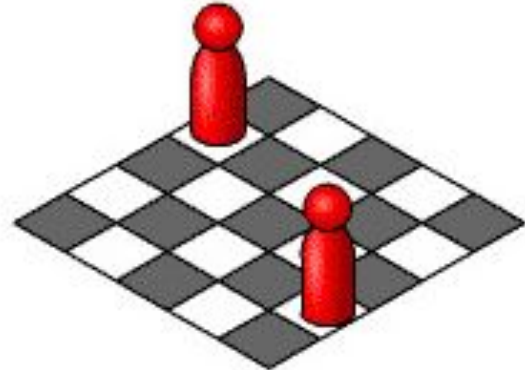


Warm-Ups:

Now that you know what type of image they are, do you have an explanation for why they look the way they do?



True Perspective

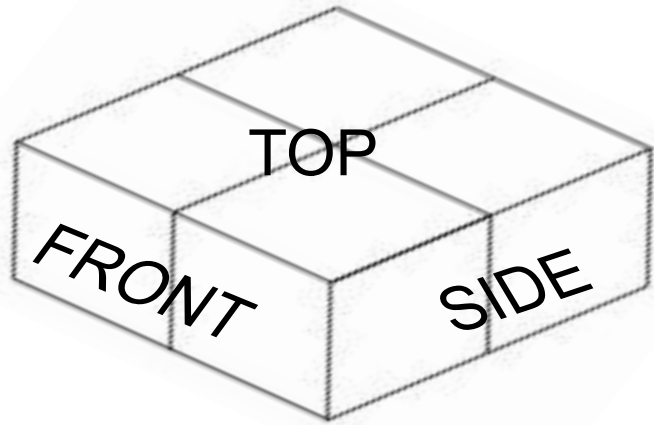


Isometric Perspective

Lesson Introduction/Background Information:

We are going to focus on **Isometric Drawing** this week, something you will work on in much more detail if you take Design and Modeling next year.

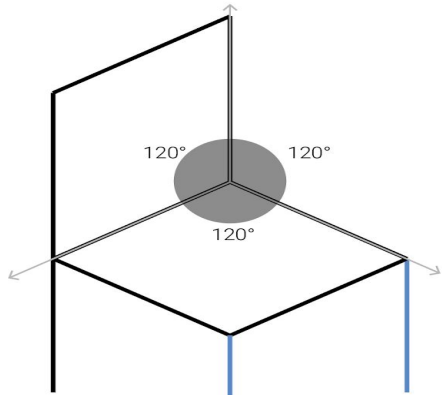
- Used to draw a 3 dimensional object on a 2 dimensional surface.
- Objects are drawn at an angle so that you can see three sides at once.



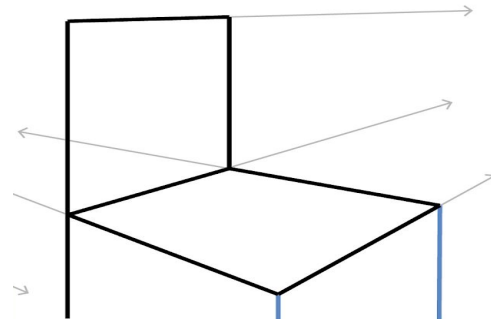
Lesson Introduction/Background Information:

Shapes are drawn with parallel lines and corner angles are measured at 120° .

Because of this, the shapes are not how we actually see them.



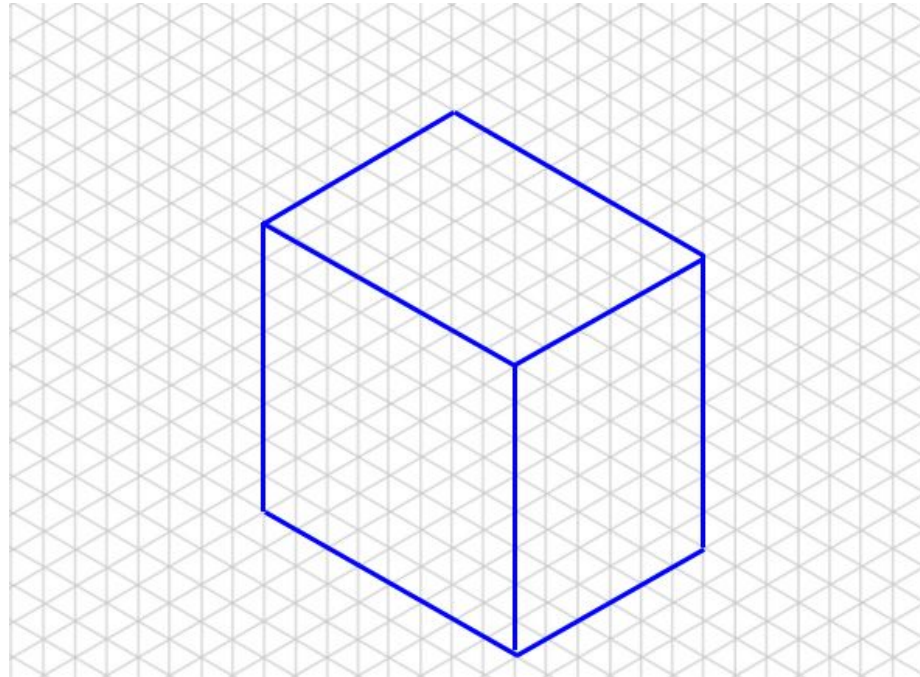
Isometric



Perspective

Lesson Introduction/Background Information:

Engineers use a special grid paper to help them draw shapes isometrically.



Practice:

It's your turn to draw an isometric shape. Follow along with the video to draw a single cube in isometric view.

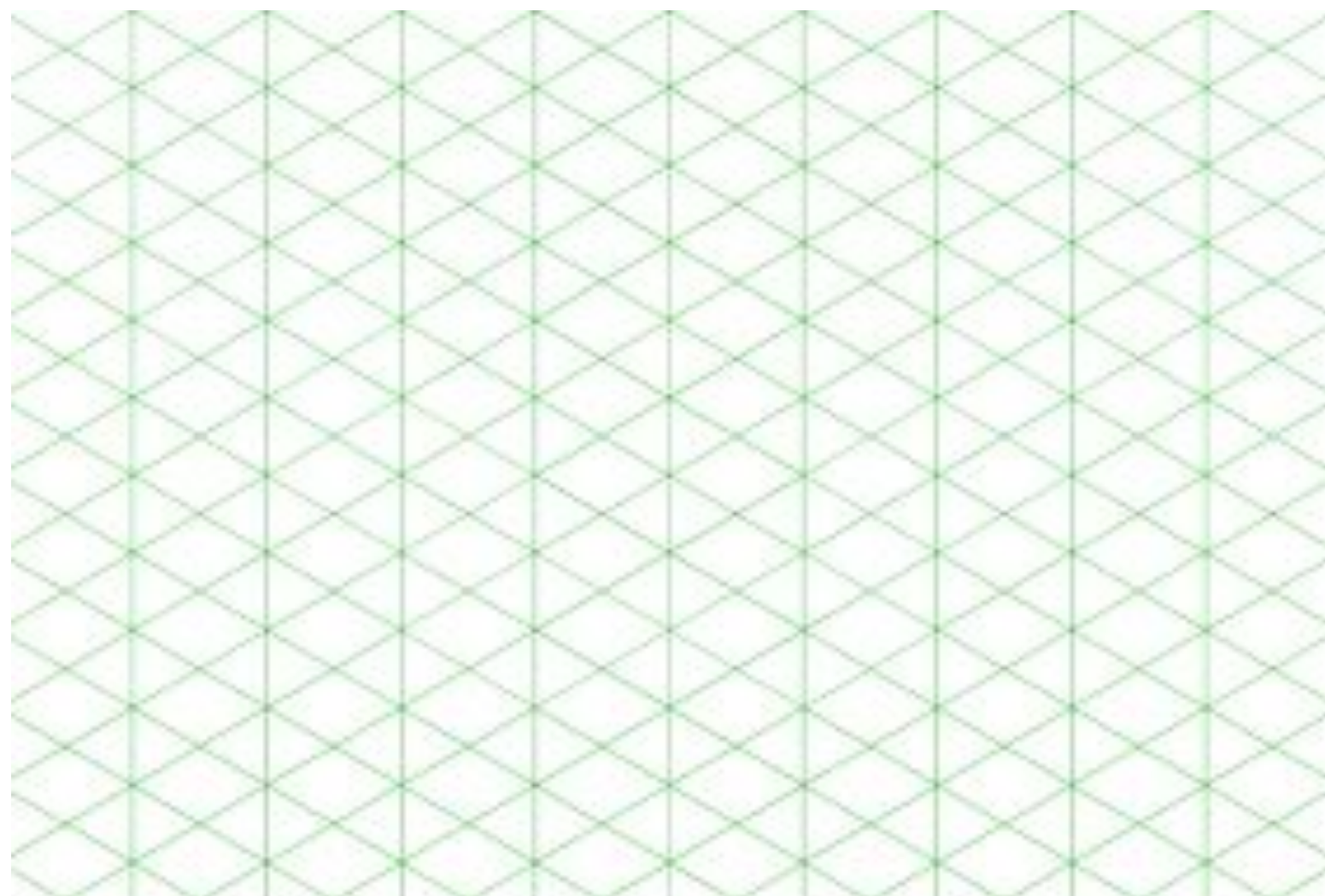
Hand drawing would be best, you can print off a piece of isometric grid paper.

[Link to Isometric Grid Paper](#)

Or you can use an online isometric drawing software.

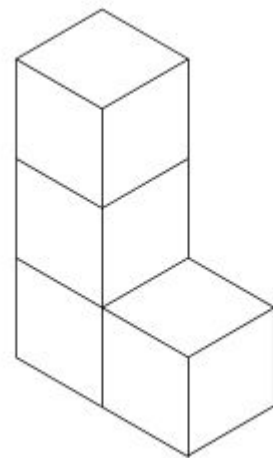
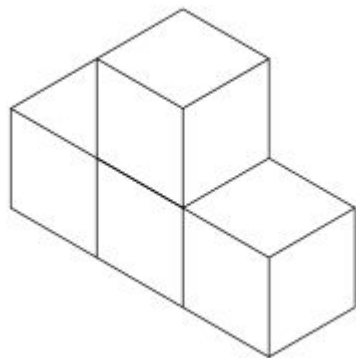
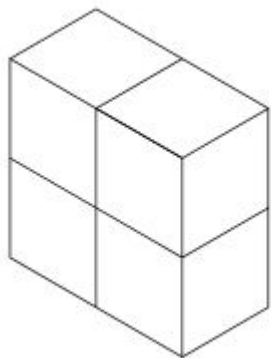
[Link to Online Isometric Drawing](#)

Watch Video Here: [How to draw a cube in isometric view](#)



Practice:

Now try to add more cubes to your drawing to create more shapes.



Self-Assessment:

How is this similar to and different than how you have drawn things that are 3-dimensional before, maybe in art class or for fun?

Extend Your Learning/Continued Practice:

Click on the links below to get additional practice and to check your understanding!

[Isometric Drawing: A Beginner's Guide](#)

[What is Isometric?](#)