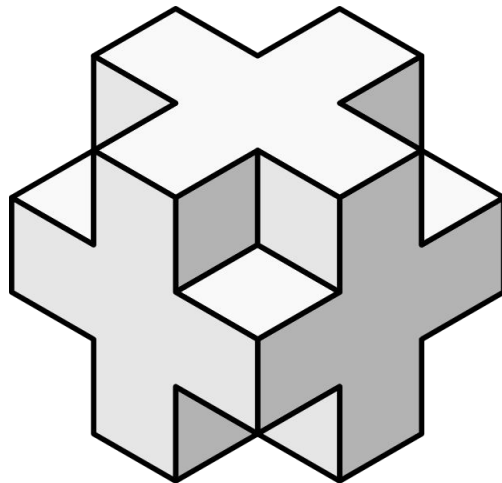


PLTW: Design and Modeling
Lesson: 1 (April 6)

Learning Target:

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

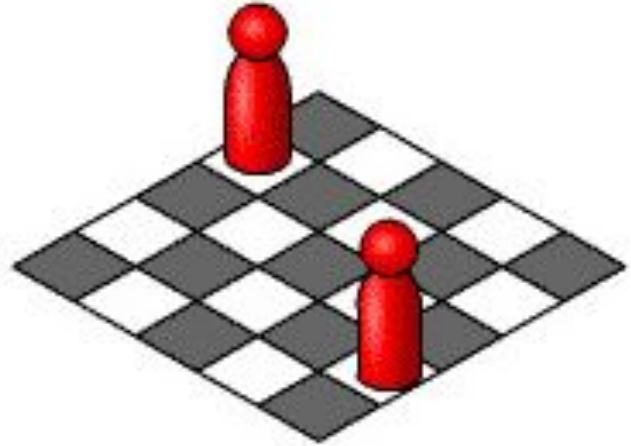
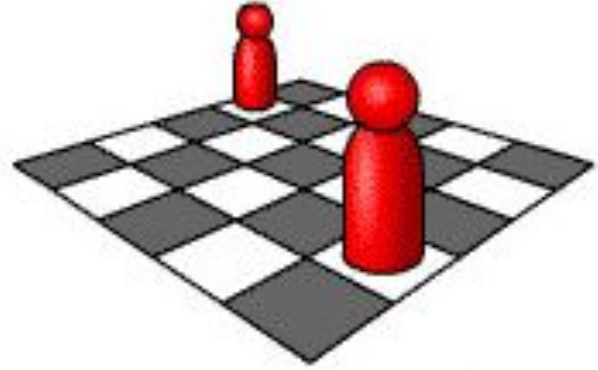


Warm-Up

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

How are they different?

What do you think is causing the difference?

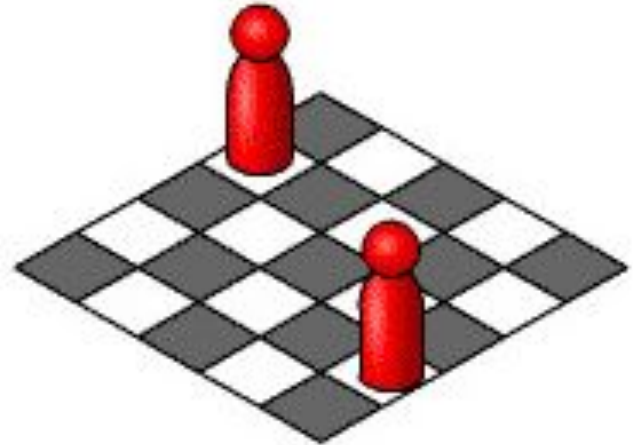


Warm-Up

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

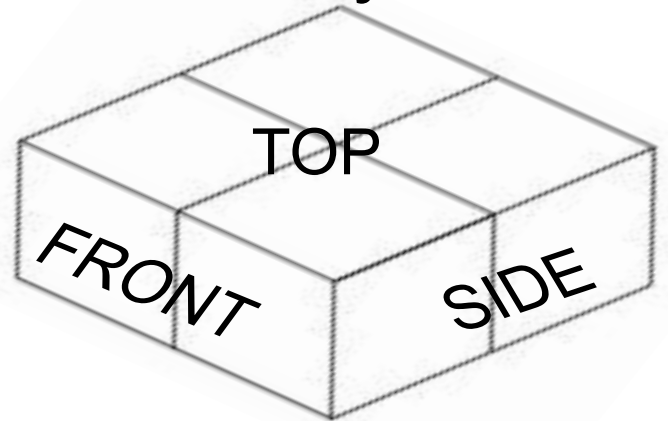
Let's Get Started..

We are going to focus on Isometric Drawing this week.

Isometric

Used to draw a 3 dimensional object on a 2 dimensional surface.

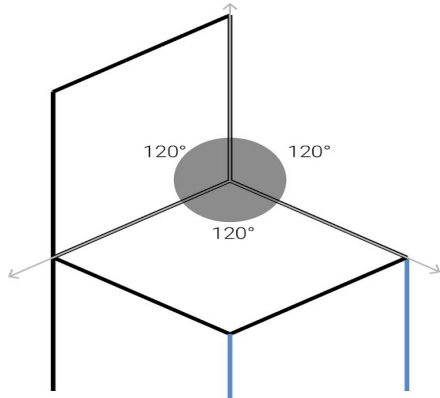
Objects are drawn at an angle so that you can see three sides at once.



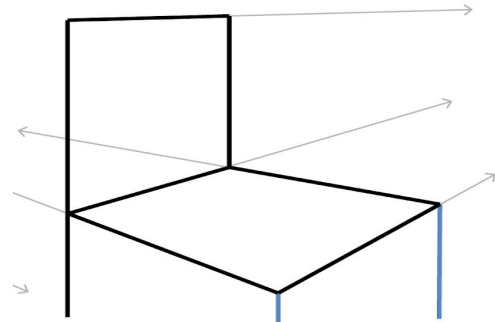
Isometric

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



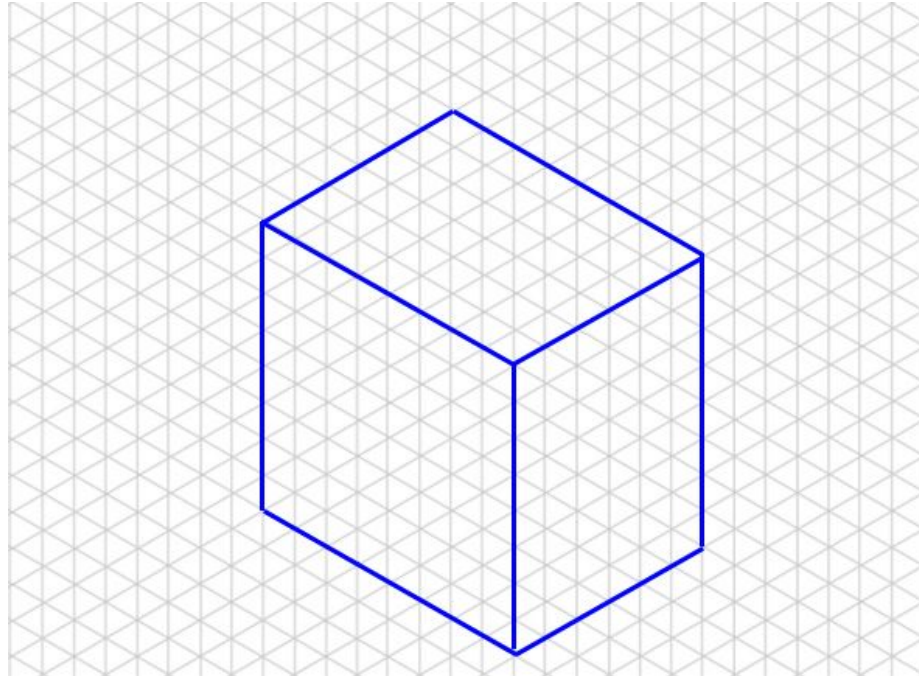
Isometric



Perspective

Isometric

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.

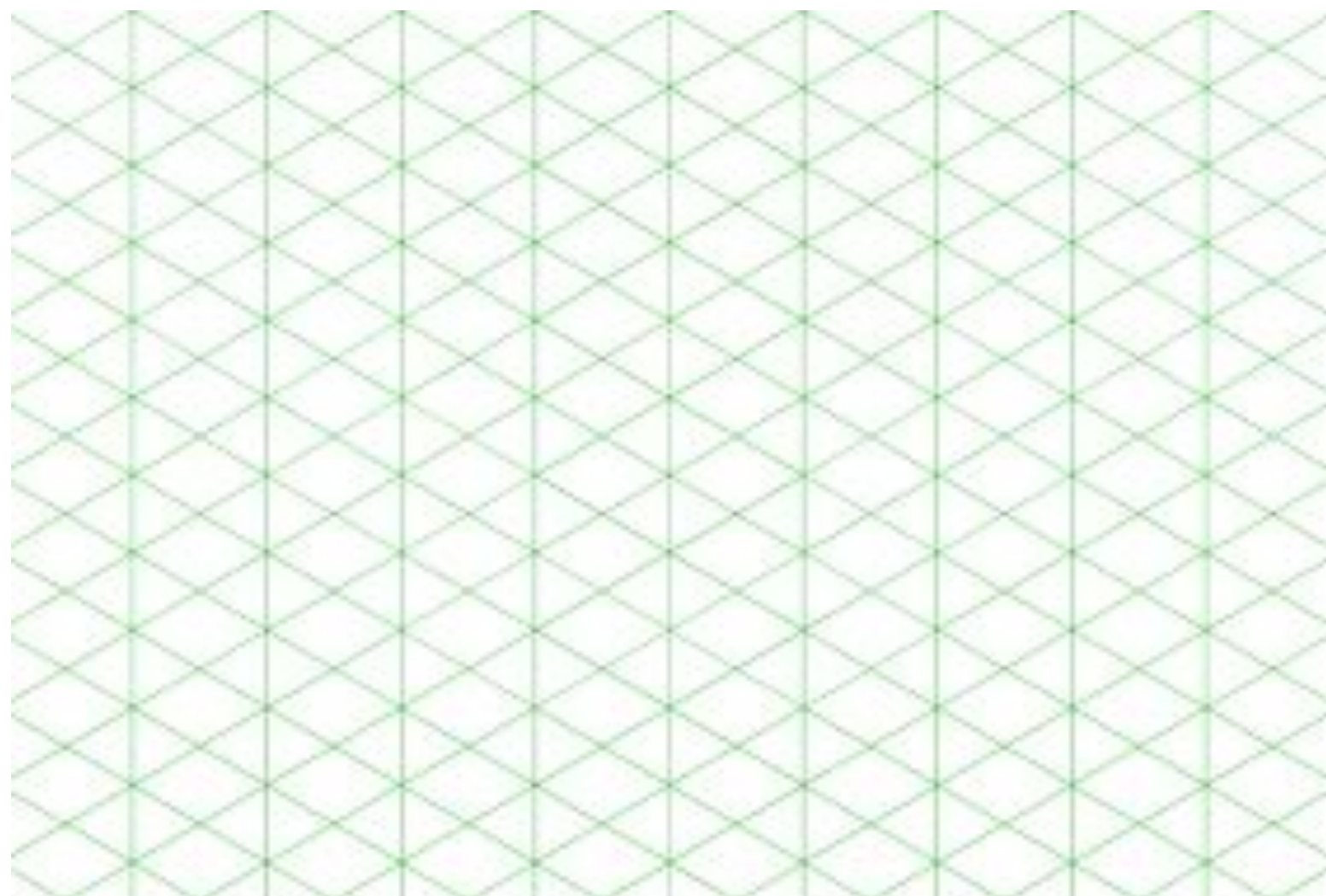
Hand drawing would be best, you can print off a piece of isometric grid paper.

[Link to Isometric Grid Paper](#)

Or you can use an online isometric drawing software.

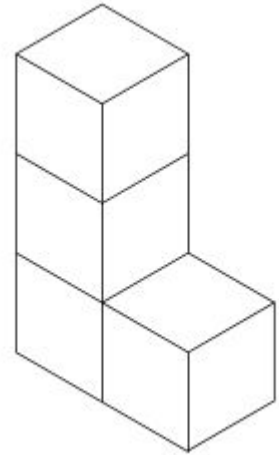
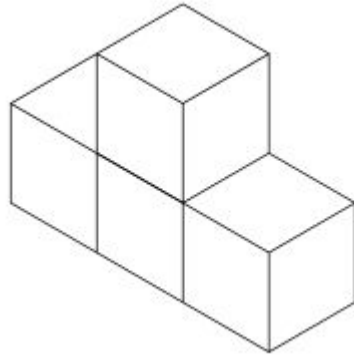
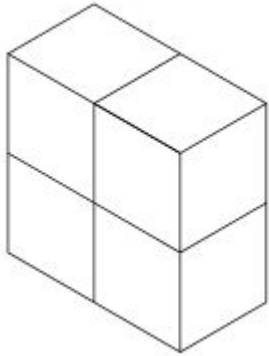
[Link to Online Isometric Drawing](#)

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 draw 3 dimensional blocks before?

Additional Resources:

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

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

[What is Isometric?](#)