

# Ohio Mathematics Correlation (Grade 11)

Reference: [Academic Content Standards \(PDF\)](#)

## Introduction

This document correlates Yenka Mathematics software to the content performance indicators of the Ohio mathematics core curriculum. It highlights specific areas of the curriculum that are covered by Yenka Mathematics and points to resources that will be useful when teaching the material.

The terminology we have used in this document is as follows:

- **Product:** this is the relevant Yenka Mathematics product, either [Yenka 3D Shapes](#) or [Yenka Statistics](#). More information about these products can be found on the Yenka web page by following the links.
- **Model:** a pre-made Yenka simulation with step-by-step instructions, which will either teach the pupils part of the curriculum, or give them opportunity to apply the knowledge they already have. These models are found under *Content* when you open Yenka itself, and they are linked to through our website.
- **Tutorial:** a model that explains how to use a particular aspect of the Yenka software. These can be found under *Getting Started* in the *Content* tab of Yenka.

Since the Yenka Mathematics titles are simulators, they will help you to cover other areas of the curriculum too. The final column of the table gives some possible *examples* of how you, or the students, can use Yenka Mathematics to create your own models and cover a wider scope of material. You may wish to look at the *tutorials*, and [training videos](#) provided on the website, to explore more of the potential uses of the software, and show you how to create your own models.



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## Measurement Standard

Area	Indicator	Product	Content (Model)	Example
<i>Use Measurement Techniques and Tools</i>	3. Derive a formula for the surface area of a cone as a function of its slant height and the circumference of its base.	Yenka 3D Shapes		Use a <i>cone</i> from <i>3D Shapes</i> . Ask students to unfold it into its net, and use instructions from the <i>Presentation object</i> to lead them through the steps to derive the formula for surface area.
	4. Calculate distances, areas, surface areas and volumes of composite three-dimensional objects to a specified number of significant digits.	Yenka 3D Shapes	- <a href="#">Combined volume</a> See also: - <a href="#">Area of rectangles and triangles</a>	
	5. Solve real-world problems involving area, surface area, volume and density to a specified degree of precision.	Yenka 3D Shapes	Related model: - <a href="#">Wallpapering</a>	

## Data Analysis and Probability Standard

Area	Indicator	Product	Content (Model)	Example
<i>Data Collection</i>	1. Design a statistical experiment, survey or study for a problem; collect data for the problem; and interpret the data with appropriate graphical displays, descriptive statistics, concepts of variability, causation, correlation and standard deviation.	Yenka Statistics		Yenka can be useful for this in several ways. Students can record their collected data in an <i>Empty data set</i> , and then use the <i>summary statistics</i> , and an appropriate <i>graph</i> to display and explain their findings. Alternatively they could use one of the prepared <i>Example data sets</i> to save time collecting the data themselves.

<i>Statistical Methods</i>	4. Create a scatter plot of bivariate data, identify trends, and find a function to model the data.	Yenka Statistics	Related model: - <a href="#">Correlation</a> and tutorial: - <a href="#">Finding correlations</a>	This can be done quickly on Yenka Statistics for a variety of data, either using an <i>Example Dataset</i> or importing data to an <i>Empty data set</i> , and adding a <i>Scatter graph</i> to the model.
	6. Use technology to compute the standard deviation for a set of data, and interpret standard deviation in relation to the context or problem situation.	Yenka Statistics	- <a href="#">Calculating standard deviation</a>	
	7. Describe the standard normal curve and its general properties, and answer questions dealing with data assumed to be normal.	Yenka Statistics	- <a href="#">Comparing normal distributions</a>  Tutorial: - <a href="#">Generating data using distributions</a>	
	8. Analyze and interpret univariate and bivariate data to identify patterns, note trends, draw conclusions, and make predictions.	Yenka Statistics		Students can investigate some of the <i>example datasets</i> in Yenka Statistics, which include univariate and bivariate data. They can interact with the <i>summary statistics</i> and <i>graphs</i> to learn how to analyse data, interpret its defining features, make predictions etc. Alternatively they can import their own data and use the tools in Yenka to analyze it.

If you have any questions about Yenka or this document, please contact [Esther Droop](#) or visit [www.yenka.com](http://www.yenka.com)