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Geometry Enhanced By Video Technology

Watch the United Streaming video clips that comprise the Many-Sided World of Geometry, Program 1: Geometry Basics. Below is a list of 5 mathematical concepts taught in the video. I have referenced the content and process strand for each of the concepts listed.

Five Mathematical Concepts

This fast-paced video concentrates on a single content strand, geometry. Within geometry, this video presents the most basic elements which are used to create shapes, and introduces the concepts of proofs. Five of the many mathematical concepts introduced are noted below.

Content	Process Strands	Example
Inductive & Deductive Reasoning	Reasoning & Proof; Connections	Inductive reasoning is introduced with a concrete example. From the recognition of patterns we observe, we expect that pattern to continue. But, just because we have observed it reoccurring regularly is not proof that is will always occur. Deductive reasoning, on the other hand, is proving that something we observed is actually true by examining specific causes and effects and examining all the reasons and aspects of why something occurs. This has many connections to other areas of math as well as to other disciplines.
Geometric Elements (Points, Lines, Planes and Space)	Communication; Representation; Connections	Points, lines, planes and space are all defined and illustrated in this video. The symbols used to identify unique elements are demonstrated as well. These elements are the building blocks of shapes, and are used not only in geometry, but to demonstrate other information and phenomena as well.
Congruency	Connections	The difference between congruency and equal is explained. Elements are congruent when their measurements are equal. This applies to many different elements. The symbol for congruency is also introduced.
Bisection	Connections	Another concept that is defined in the video and used with various elements, such as lines, segments and angles.
[Euclidian] Postulates	Reasoning & Proof; Connections	Postulates are defined as assumptions we accept without proof. Six Euclidian postulates are quickly presented. These form the basic rules of Euclidean geometry. The concept of postulates will surface in other mathematical studies and disciplines.