

ICA 3-1

With your team, compose a plan to build the longest bridge possible using the K'Nex™ pieces provided by your instructor. The longest part of your bridge will be defined as the longest stretch of K'Nex pieces that are not touching another surface (table, floor, chair, etc.).

During the planning phase (15 minutes), your team will only be allowed to connect as many pieces as your team has hands. For example, a team of four will only be allowed to have eight K'Nex pieces connected together at any one moment. In addition, every team member must have their hand on a K'Nex piece if it is connected together during planning. As soon as your team has finished the planning phase, disconnect all K'Nex pieces and place them in the provided container. The container will be shaken before you begin, so do not bother attempting to order the pieces in any way.

During the building phase (60 seconds), the restriction on the number of connected pieces goes away, but your team will not be allowed to talk. Your instructor will say go, and then stop after 60 seconds has elapsed. At the end of the building phase, your team must step away from the bridge and remove all hands and other body parts from the K'Nex bridge. If any pieces falls after time is called, you are not allowed to stabilize the structure in any way.

Materials:

- Any set of K'Nex™ parts can be used. Below is the list of standard parts we use in a K'Nex kit for various activities throughout the text. Each team is given a set of parts listed. See Master Materials List for purchasing information.
- We use Ziploc quart-size freezer bags to store the parts for each team.

ICA 3-2

With your team, come up with a plan to build the tallest tower possible using the K'Nex™ pieces provided by your instructor. The tallest portion of your tower will be defined as the longest stretch of K'Nex pieces that are not touching another surface (table, floor, chair, etc.).







During the planning phase (15 minutes), your team will only be allowed to connect as many pieces as your team has hands. For example, a team of four will only be allowed to have eight K'Nex pieces connected together at any one moment. In addition, every team member must have their hand on a K'Nex piece if it is connected together during planning. As soon as your team has finished the planning phase, disconnect all K'Nex pieces and place them in the provided container. The container will be shaken before you begin, so do not bother attempting to order the pieces in any way.

During the building phase (60 seconds), the restriction on the number of connected pieces goes away, but your team will not be allowed to talk. Your instructor will say go, and then stop after 60 seconds has elapsed. At the end of the building phase, your team must step away from the tower and remove all hands and other body parts from the K'Nex tower. If any pieces fall after time is called, you are not allowed to stabilize the structure in any way.








Materials:

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Rods:

Quantity	Color	Size	Picture	Part Number
4	gray	7-1/2 in		90955
6	red	5-1/8 in		90954
8	yellow	3-7/16 in		90953
10	blue	2-1/4 in		90952
12	white	1-5/16 in		90951
20	green	3/4 in		90950








Connectors:

Quantity	Description	Picture	Part Number
4	Silver Metallic Connector		909091
4	Blue Connector		90907
6	Circular standard white connector piece with eight rod connections.		90908
8	Semi-circular standard yellow connector piece with four rod connections.		90906
8	Triangular Green connector piece with four connections.		90905
9	Triangular, standard red connector piece with three rod connections		90904
9	Orange Connector		90902

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