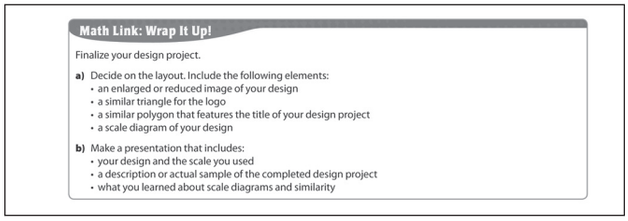
Math Link: Wrap It Up!


Math Link: Wrap It Up!

Finalize your design project.

a) Decide on the layout. Include the following elements:
- an enlarged or reduced image of your design
- a similar triangle for the logo
- a similar polygon that features the title of your design project
- a scale diagram of your design

b) Make a presentation that includes:
- your design and the scale you used
- a description or actual sample of the completed design project
- what you learned about scale diagrams and similarity

***MathLinks 9*, page 163**

Suggested Timing
80–100 minutes

Materials
- grid paper
- ruler

Blackline Masters
Master 1 Project Rubric
Master 8 Centimetre Grid Paper
Master 9 0.5 Centimetre Grid Paper
BLM 4–1 Chapter 4 Math Link Introduction
BLM 4–6 Section 4.1 Math Link
BLM 4–8 Section 4.2 Math Link
BLM 4–10 Section 4.3 Math Link
BLM 4–12 Section 4.4 Math Link
BLM 4–14 Chapter 4 Math Link: Wrap It Up!

Specific Outcomes
SS3 Demonstrate an understanding of similarity of polygons.
SS4 Draw and interpret scale diagrams of 2-D shapes.

Planning Notes

Introduce the problem and clarify the assessment criteria. Emphasize the importance of using the same scale factor for each element of the project design and drawing each element to scale.

Consider showing students a completed design project to give them an idea of what is expected. If so, highlight each of the features that need to be included. You may wish to provide **Master 8 Centimetre Grid Paper** and **Master 9 0.5 Centimetre Grid Paper** to students for their diagram.

After students have completed the design project, consider having them take turns to present their presentation to a classmate and provide feedback to each other. Have students incorporate the feedback before making their presentation to the class.

Assessment	Supporting Learning
Assessment *of* Learning	
Math Link: Wrap It Up! This chapter problem wrap-up gives students an opportunity to demonstrate their understanding of scale diagrams and similar triangles and similar polygons. **Master 1 Project Rubric** provides a holistic descriptor that will assist you in assessing student work on this Wrap It Up! Page 222 in this TR provides notes on how to use the rubric for this Wrap It Up!	• You may wish to have students review the work they have completed in the Math Links in each section before they begin. • If students have not completed the Math Links earlier, they will need to do so. Provide them with **BLM 4–1 Chapter 4 Math Link Introduction**, **BLM 4–6 Section 4.1 Math Link**, **BLM 4–8 Section 4.2 Math Link**, **BLM 4–10 Section 4.3 Math Link**, and **BLM 4–12 Section 4.4 Math Link**. • You may wish to have students use **BLM 4–14 Chapter 4 Math Link: Wrap It Up!**, which provides scaffolding for the chapter problem wrap-up.

The chart below shows the **Master 1 Project Rubric** for tasks such as the Wrap It Up! and provides notes that specify how to identify the level of specific answers for the project.

Score/Level	Holistic Descriptor	Specific Question Notes
5 (Standard of Excellence)	❑ Applies/develops **thorough** strategies and mathematical processes making **significant** comparisons/connections that demonstrate a **comprehensive** understanding of how to develop a complete solution ❑ Procedures are **efficient and effective** and may contain a **minor mathematical error** that does not affect understanding ❑ Uses **significant** mathematical language to explain their understanding and provides **in-depth** support for their conclusion	• provides a complete and correct solution Note: The response may contain a minor error that does not affect the overall response.
4 (Above Acceptable)	❑ Applies/develops **thorough** strategies and mathematical processes for making **reasonable** comparisons/connections that demonstrate a **clear** understanding ❑ Procedures are **reasonable** and may contain a **minor mathematical error** that may hinder the understanding in one part of a complete solution ❑ Uses **appropriate** mathematical language to explain their understanding and provides **clear** support for their conclusion	Demonstrates one of the following: • provides a complete and correct response to part a); the presentation for part b) includes most required elements but may have weak communication or lack organization • provides a complete response to both parts of the question with a minor error in one of the bullets for part a)
3 (Meets Acceptable)	❑ Applies/develops **relevant** strategies and mathematical processes making **some** comparisons/connections that demonstrate a **basic** understanding ❑ Procedures are **basic** and may contain a **major error or omission** ❑ Uses **common** language to explain their understanding and provides **minimal** support for their conclusion	Demonstrates one of the following: • provides a complete and correct response to bullets 1, 2, and 3 in part a) • provides a correct response to bullet 4 in part a), based on an incorrect bullet 1, 2, or 3 in part a) • provides partially correct answers to all parts of the question
2 (Below Acceptable)	❑ Applies/develops **some relevant** mathematical processes making **minimal** comparisons/connections that lead to a **partial solution** ❑ Procedures are **basic** and may contain **several major mathematical errors** ❑ Communication is **weak**	Demonstrates one of the following: • correctly completes two of bullets 1, 2 or 3 in part a) • provides partially correct answers to bullets 1, 2, and 3 of part a)
1 (Beginning)	❑ Applies/develops an **initial start** that may be **partially correct** or could have led to a correct solution ❑ Communication is **weak or absent**	• provides a completed or correct initial start to bullets 1, 2, or 3 of part a)