

Math Link: Wrap It Up!

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 You have arrived at the final step of your research project. You will assess your project.

Step 6

- Use the rubric you developed to assess your research project. Identify your project's strengths and weaknesses.
- Identify two things you liked about your project. Identify one thing you would do differently next time.
- Have a classmate who read or watched your presentation assess your project using the rubric. Ask for constructive feedback on how to improve the project.

MathLinks 9, page 443

Suggested Timing

40–50 minutes

Blackline Masters

Master 1 Project Rubric
 BLM 11–12 Research Project Rubric
 BLM 11–13 Sample Research Project Rubric
 BLM 11–14 Chapter 11 Math Link: Wrap It Up!

Specific Outcomes

SP3 Develop and implement a project plan for the collection, display and analysis of data by:

- formulating a question for investigation
- choosing a data collection method that includes social considerations
- selecting a population or a sample
- collecting the data
- displaying the collected data in an appropriate manner
- drawing conclusions to answer the question.

Planning Notes

As a result of working through the Math Links and section 11.4, students have completed the research project. The Wrap It Up! provides students an opportunity to self-assess their project using the rubric they developed.

As a class, read the Wrap It Up! Have students use the rubric to help identify the strengths and weaknesses of their project, two things they liked about their project, and one thing they would do differently next time. For part c), have students work with a classmate and assess each other's project using the same rubric. Have them provide constructive feedback on how to improve the project. Alternatively, if you are having students present their project to the whole class, consider having the class complete a rubric for each presentation. You might, distribute copies of the completed rubric on **BLM 11–12 Research Project Rubric** or **BLM 11–13 Sample Research Project Rubric**, if using. You might further direct students to identify two things they liked about each presentation and one area for improvement.

You may wish to assess the research project using a combination of students' completed self assessment and your assessment to determine a summative grade. If so, share **Master 1 Project Rubric** with students so that they will know what is expected.

Assessment	Supporting Learning
Assessment of Learning	
<p>Math Link: Wrap It Up! This chapter problem wrap-up gives students an opportunity to self-assess their research project. It is important that students include the following areas in their self assessment: planning, performing, recording, analysing, and presenting the project.</p> <p>Have students self-assess their project using the rubric they developed. Alternatively, Master 1 Project Rubric provides a holistic descriptor that will assist you in assessing student work on this Wrap It Up! Page 595 in this TR provides notes on how to use the rubric for this Wrap It Up!</p>	<ul style="list-style-type: none"> • You may wish to have students double check the flow chart to ensure that they have completed all the requirements for the research project. • You may wish to have students use BLM 11–14 Chapter 11 Math Link: Wrap It Up!, which provides scaffolding for the chapter problem wrap-up.

The chart below shows **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)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops thorough strategies and mathematical processes making significant comparisons/connections that demonstrate a comprehensive understanding of how to develop a complete solution <input type="checkbox"/> Procedures are efficient and effective and may contain a minor mathematical error that does not affect understanding <input type="checkbox"/> Uses significant mathematical language to explain their understanding and provides in-depth support for their conclusion 	<ul style="list-style-type: none"> • provides a complete and correct project that may contain minor errors that do not hinder the final project and presentation
4 (Above Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops thorough strategies and mathematical processes for making reasonable comparisons/connections that demonstrate a clear understanding <input type="checkbox"/> Procedures are reasonable and may contain a minor mathematical error that may hinder the understanding in one part of a complete solution <input type="checkbox"/> Uses appropriate mathematical language to explain their understanding and provides clear support for their conclusion 	Demonstrates one of the following: <ul style="list-style-type: none"> • provides a complete response with some weak or missing justification in at most three parts • provides a complete response but lacks organization and is difficult to follow; the presentation in Step 5 may have been minimal
3 (Meets Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops relevant strategies and mathematical processes making some comparisons/connections that demonstrate a basic understanding <input type="checkbox"/> Procedures are basic and may contain a major error or omission <input type="checkbox"/> Uses common language to explain their understanding and provides minimal support for their conclusion 	Demonstrates one of the following: <ul style="list-style-type: none"> • provides a correct and complete response to Steps 1, 2, and 3, and a start to Step 4 • provides a complete and correct response to Steps 1, 3, and 4 • provides partially correct responses to all steps • provides a complete response and presentation with no explanations or justifications
2 (Below Acceptable)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops some relevant mathematical processes making minimal comparisons/connections that lead to a partial solution <input type="checkbox"/> Procedures are basic and may contain several major mathematical errors <input type="checkbox"/> Communication is weak 	Demonstrates one of the following: <ul style="list-style-type: none"> • provides a correct response to Steps 1 and 2; may have chosen the rubric in the resource but does not communicate this in their response; makes some correct starts to Step 3; however, major errors or omissions prevent the work from progressing • provides a correct and complete response to Step 1 and a correct description of how they will display and analyse the data in Step 3
1 (Beginning)	<ul style="list-style-type: none"> <input type="checkbox"/> Applies/develops an initial start that may be partially correct or could have led to a correct solution <input type="checkbox"/> Communication is weak or absent 	<ul style="list-style-type: none"> • provides a complete response to Step 1 with some weak communication but does demonstrate understanding of the basic requirements for Step 1