MLR 4: Information gap

Purpose: To create a need for students to communicate (Gibbons, 2002).

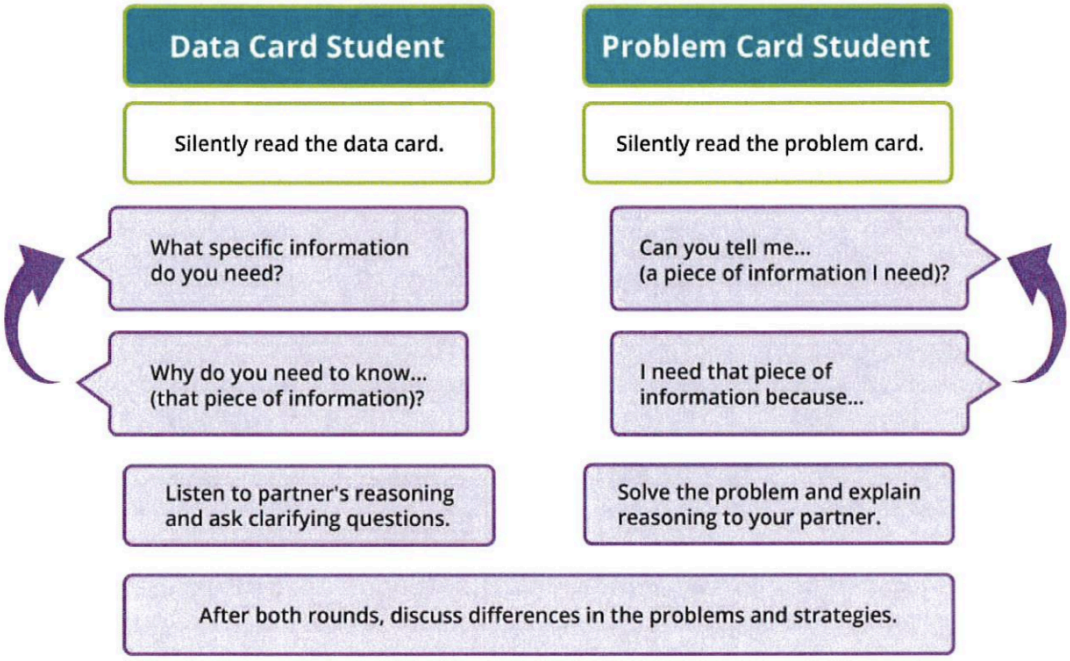
This routine allows teachers to facilitate meaningful interactions by giving partners or team members different pieces of necessary information that must be used together to solve a problem or play a game. With an information gap, students need to orally (and/or visually) share their ideas and information in order to bridge the gap and accomplish something that they could not have done alone. Teachers should model how to ask for and share information, clarification, justification, and elaboration. This routine cultivates conversation.

Example - Info Gap Cards

In one version of this activity, Partner A has the general problem on a card, and Partner B has the information needed to solve it on the "data card." Data cards can also contain diagrams, tables, graphs, etc. Partner A needs to realize what is needed and ask for information that is provided on Partner B's data card. Partner B should not share information unless Partner A specifically asks for it. Neither partner should read their cards to one another nor show their cards to their partners. As they work the problem, they justify their responses using clear and connected language.

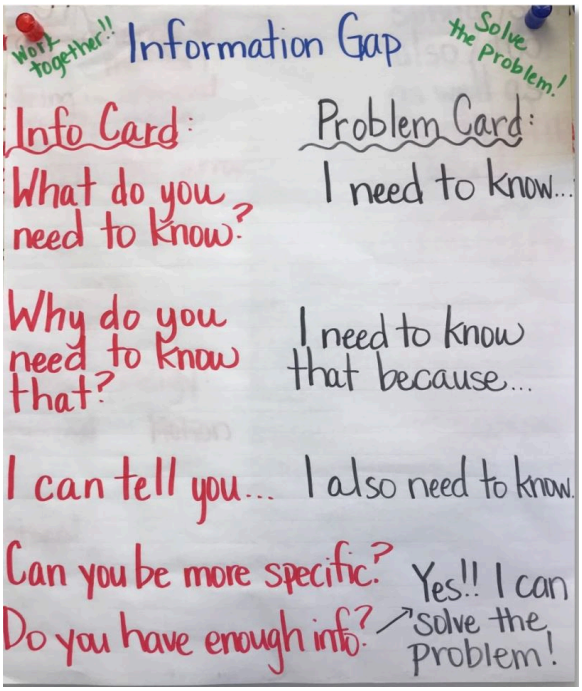
1. READ, then THINK-ALOUD: The problem card partner (Partner A) reads his or her card silently and thinks aloud about what information is needed. Partner B reads the data card silently.
2. QUESTION 1: Partner B asks, "What specific information do you need?" Partner A needs to ask for specific information from Partner B.
3. QUESTION 2: When partner A asks, Partner B should ask for justification: "Why do you need that information?" before telling it to Partner A.
4. EXPLANATIONS: Partner A then explains how he or she is using the information to solve the problem. Partner B helps and asks for explanations, even if he or she understands what Partner A is doing.
5. FOLLOW-UP: As a follow-up step, have both students use blank cards to write their own similar problem card and data card for other pairs to use.

Template for making your own Information Gap cards.



If you have the PROBLEM Card:

1. Silently read your card and think about what information you need to answer the question.
2. Ask your partner for the specific information that you need.
3. Explain to your partner how you are using the information to solve the problem.
4. Solve the problem, and explain your reasoning to your partner.



If you have the DATA Card:

1. Silently read the information on your card.
2. Ask your partner **"What specific information do you need?"** and wait for your partner to *ask* for information. Only give information that is on your card. (Do not figure out anything for your partner!)
3. Before telling your partner the information, ask **"Why do you need that information?"**
4. After your partner solves the problem, ask them to explain their reasoning and listen to their explanation.

Original 2nd grade Problem: *Felix had 38 bookmarks. Then he made 25 more. How many bookmarks does Felix have now?*

Bookmarks: Data Card	Bookmarks: Problem Card
• Felix made 38 bookmarks on Monday. • Felix made 25 more bookmarks on Tuesday.	On Monday Felix made some bookmarks for the Craft Fair. On Tuesday he makes some more bookmarks. How many bookmarks did Felix make for the Craft Fair?

Original 3rd grade Problem: *Helen and Martin are raising money for the food bank. Helen raised $12 for the food bank. Martin raised 6 times as much money as Helen. How much money did they raise altogether?*

Comparing Money Raised: Data Card	Comparing Money Raised: Problem Card
• Helen raised $12 for the food bank. • Martin raised 6 times as much money as Helen.	A pair of friends raised money for the food bank. How much money did Helen and Martin raise altogether?

Original 4th grade Problem: *Hallie goes to the county fair. She goes on four rides, plays two games, and buys a hot dog. If the entrance ticket to the fair costs $8, rides cost $5 each, games cost $2.50 each, and hot dogs cost $4 each, how much money does Hallie spend at the fair?*

County Fair: Data Card	County Fair: Problem Card
• One ticket to the fair costs $8.00 • One ride costs $5.00 • One game costs $2.50 • One hot dog costs $4.00	Hallie goes to the county fair. She goes on four rides, plays two games, and buys a hot dog. How much money does Hallie spend at the fair?

Original 7th grade Problem: *Bill and Doug are bicycling toward each other on the same road. They are 36 miles apart. Suppose Bill averages is 17 miles per hour and Doug 13 miles per hour. How many hours will it take for them to meet one another?*

Bicycling: Data Card	Bicycling: Problem Card
● Bill and Doug begin 36 miles apart. ● Bill rides 17 miles per hour. ● Doug rides 13 miles per hour.	Bill and Doug are bicycling toward each other on the same road. How many hours will it take for them to meet one another?

2nd Grade: Print this page for your students. **1 page per six students (3 pairs).**

Bookmarks: Data Card	**Bookmarks: Problem Card**
• Felix made 38 bookmarks on Monday. • Felix made 25 more bookmarks on Tuesday.	On Monday Felix made some bookmarks for the Craft Fair. On Tuesday he makes some more bookmarks. How many bookmarks did Felix make for the Craft Fair?

Bookmarks: Data Card	**Bookmarks: Problem Card**
• Felix made 38 bookmarks on Monday. • Felix made 25 more bookmarks on Tuesday.	On Monday Felix made some bookmarks for the Craft Fair. On Tuesday he makes some more bookmarks. How many bookmarks did Felix make for the Craft Fair?

Bookmarks: Data Card	**Bookmarks: Problem Card**
• Felix made 38 bookmarks on Monday. • Felix made 25 more bookmarks on Tuesday.	On Monday Felix made some bookmarks for the Craft Fair. On Tuesday he makes some more bookmarks. How many bookmarks did Felix make for the Craft Fair?

3rd Grade: Print this page for your students. **1 page per six students (3 pairs).**

Comparing Money Raised: Data Card	Comparing Money Raised: Problem Card
• Helen raised $12 for the food bank. • Martin raised 6 times as much money as Helen.	A pair of friends raised money for the food bank. How much money did Helen and Martin raise altogether?

Comparing Money Raised: Data Card	Comparing Money Raised: Problem Card
• Helen raised $12 for the food bank. • Martin raised 6 times as much money as Helen.	A pair of friends raised money for the food bank. How much money did Helen and Martin raise altogether?

Comparing Money Raised: Data Card	Comparing Money Raised: Problem Card
• Helen raised $12 for the food bank. • Martin raised 6 times as much money as Helen.	A pair of friends raised money for the food bank. How much money did Helen and Martin raise altogether?

4th Grade: Print this page for your students. **1 page per six students (3 pairs).**

County Fair: Data Card	**County Fair: Problem Card**
• One ticket to the fair costs $8.00 • One ride costs $5.00 • One game costs $2.50 • One hot dog costs $4.00	Hallie goes to the county fair. She goes on four rides, plays two games, and buys a hot dog. How much money does Hallie spend at the fair?

County Fair: Data Card	**County Fair: Problem Card**
• One ticket to the fair costs $8.00 • One ride costs $5.00 • One game costs $2.50 • One hot dog costs $4.00	Hallie goes to the county fair. She goes on four rides, plays two games, and buys a hot dog. How much money does Hallie spend at the fair?

County Fair: Data Card	**County Fair: Problem Card**
• One ticket to the fair costs $8.00 • One ride costs $5.00 • One game costs $2.50 • One hot dog costs $4.00	Hallie goes to the county fair. She goes on four rides, plays two games, and buys a hot dog. How much money does Hallie spend at the fair?

7th Grade: Print this page for your students. **1 page per six students (3 pairs).**

Bicycling: Data Card	Bicycling: Problem Card
• Bill and Doug begin 36 miles apart. • Bill rides 17 miles per hour. • Doug rides 13 miles per hour.	Bill and Doug are bicycling toward each other on the same road. How many hours will it take for them to meet one another?

Bicycling: Data Card	Bicycling: Problem Card
• Bill and Doug begin 36 miles apart. • Bill rides 17 miles per hour. • Doug rides 13 miles per hour.	Bill and Doug are bicycling toward each other on the same road. How many hours will it take for them to meet one another?

Bicycling: Data Card	Bicycling: Problem Card
• Bill and Doug begin 36 miles apart. • Bill rides 17 miles per hour. • Doug rides 13 miles per hour.	Bill and Doug are bicycling toward each other on the same road. How many hours will it take for them to meet one another?

TEMPLATE: Print this page for your students. **1 page per six students (3 pairs).**
http://bit.ly/MLR4template

NAME_OF_ACTIVITY: Data Card	NAME_OF_ACTIVITY: Problem Card
• Data goes here • Data goes here • Data goes here	The problem stem with the data goes here. Don't forget the question?

NAME_OF_ACTIVITY: Data Card	NAME_OF_ACTIVITY: Problem Card
• Data goes here • Data goes here • Data goes here	The problem stem with the data goes here. Don't forget the question?

NAME_OF_ACTIVITY: Data Card	NAME_OF_ACTIVITY: Problem Card
• Data goes here • Data goes here • Data goes here	The problem stem with the data goes here. Don't forget the question?