**Data-Based Decision Making Workbook**



# **Data-Based Decision Making Key Terms**

1. Data-Based Decision Making - An ongoing, outcomes-driven, system by which educators collect and analyze data for the purpose of informing instructional decisions and continuous improvement.
2. DBDM Process -The specific steps of using data to make informed instructional decisions. The steps include gathering data, analyzing it, making a plan to act on the data, analyzing outcomes, making revisions, then repeating the process.
3. Data - Information, both descriptive and numerical, that can be analyzed and used to make informed decisions.
4. Data Analysis System - An organized purposeful structure for analyzing data.
5. Data Meeting Guidelines - General rules and principles to guide team meetings.
6. Data Meeting Protocol - A series of specific steps and considerations a data team uses to analyze data during meetings.
7. Data Meeting Agenda - A schedule and list of specific items to be discussed and/or acted upon during a data team meeting.
8. Evidence of Learning - Information gathered that affirms learning has taken place.
9. Instructional Action Plan (IAP) - A detailed proposed strategy for improving instruction in order to achieve the best possible student outcomes.
10. Instructional Change - Implementation of a different or revised instructional approach.
11. Method for Examining Instruction - A specific approach used to determine the extent to which instruction is effective in increasing learning for all students.
12. Common problem- A frequently occurring difficulty in achievement or student misconception.
13. Misconception - A misunderstanding based on faulty thinking.
14. Impact of instructional change - The effect or influence resulting from implementation of a different or revised instructional approach.

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# **SAMPLE: DATA MEETING GUIDELINES**

## Data Meeting Guidelines:

* To understand that student outcomes are important for improving achievement
* To understand that looking at data collaboratively provides a method for being accountable for evaluating and modifying our instructional practices to meet student needs
* To understand that students learn better when we work collaboratively

## Guiding Questions:

* What do we expect students to learn?
* How will we know what students are learning?
* How will we respond to students who are not learning?

# **SAMPLE: DATA MEETING PROTOCOL**

#### PRIOR TO THE MEETING

* Data: teachers have up-to-date data and have had time to review for discussion (Classroom Data Analysis Forms are attached)
* Tools: you will need a flip chart or whiteboard to record ideas; markers; and “parking lot” for off-agenda ideas
* Agenda: distribute in advance

#### INTRODUCTION (2 minutes)

* Review the purpose or goal for the meeting
* Review the norms
* Review agenda
* Facilitator commits to staying to the agenda: any off-topic ideas will be placed on the Parking Lot chart to be discussed at the end of the meeting or at a later date

#### SHARING IDEAS (5 minutes)

* Record these ideas where everyone can see them
* Members share successes – you may wish to use Classroom Data Analysis form
* Members identify areas where students were most improved

#### CHALLENGES (5 minutes)

* Record these ideas where everyone can see them
* Determine areas of highest need – you may wish to use Classroom Data Analysis form
* Identify any common areas of need between classrooms

#### PROPOSED SOLUTIONS (10 minutes)

* Record these ideas where everyone can see them
* Brainstorm possible solutions for challenges
* State each possible solution as a concrete, doable intervention

#### ACTION PLAN (10 minutes)

* Examine successful strategies from SHARING IDEAS and ideas from PROPOSED SOLUTIONS
* Select one strategy that everyone will work on between now and the next meeting
* Articulate a goal for the team
* Record the Focus Goal/SMART Goal where everyone can see

#### CLOSING THE MEETING (5 minutes)

* Note what went well and what was difficult during the meeting: how well did the team do based on agreed norms and goals of the meeting?
* Complete the Meeting Summary Form I *or* II

#### PARKING LOT (TBD)

* If time permits, the team may now address the ideas in the Parking Lot
* Any items not discussed may be placed on the agenda at a later time

***Adapted from Solution Tree: Data Driven Meetings: We Can Do It in 40 Minutes by Judy Smith;*** [***www.solution-tree.com***](http://www.solution-tree.com)

# **SAMPLE: DATA MEETING AGENDA**

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| Norms* Promptness
* Be prepared
* Show Respect
* Be present
* Be positive
* Assume positive intent
 | Roles Facilitator:Timekeeper:Recorder/Note taker: | Guidelines* To understand that student outcomes are important for improving achievement
* To understand that looking at data collaboratively provides a method for being accountable for evaluating and modifying our instructional practices to meet student needs
* To understand that students learn better when we work collaboratively
* Guiding Questions:
* What do we expect students to learn?
* How will we know what students are learning?
* How will we respond to students who are not learning?
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| **Items** | **Notes** |
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# **SAMPLE: DATA ANALYSIS FORM**

Is there a pattern to the mistakes students are making?

What did many students have trouble with?

Where are most of the errors happening?

What are the obstacles related to the target?

What are the students’ strengths in addressing the targets?

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| Learning Target or Goal | # students |
| Description of the misconception |

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| Learning Target or Goal | # students |
| Description of the misconception |

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| Learning Target or Goal | # students |
| Description of the strength |

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| Learning Target or Goal | # students |
| Description of the strength |

# **SAMPLE: LINK TO TEACHER PRACTICE FORM**

Directions: Use these reflection questions for help in predicting a link to instruction.

1. Based on the problem we want to solve, what were students’ necessary prerequisite skills and knowledge?
2. How is current instruction supporting students in acquiring or using prerequisite skills and knowledge to undertake the task?
3. What questions can we ask to gather information about students’ knowledge and understanding of the task?
4. What was the criteria used to define success of the task?
5. How can students be involved in defining success criteria or understanding that criteria better?
6. What did our instruction look like around the task?
7. What practice was provided to students?
8. What information about students’ knowledge and understanding did the practice produce?
9. How was the feedback from practice used to advance students’ understanding?
10. How were students involved in the feedback process?

# **SAMPLE: DBDM INSTRUCTIONAL ACTION PLAN TEMPLATE**

**Team:**

**Date:**

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| **Learning Goal** | What should students know and do after implementing the instructional change?(This addresses the common problem that was determined during analysis of the initial student data.) |  |
| **Instructional Change** | How will the problem be solved? What are the specific teacher behaviors that will take place to make the instructional change? (Will be a lesson or set of lessons that includes the practice or strategy for addressing the common problem.)How does the instructional change elicit student thinking at a conceptual level? |  |
| **Evidence of Learning** | What is the student work/product/output that will provide you with the best information about what students know, don’t know and can do? |  |
| **Method for Examining Instruction** | What method will be used to examine instruction?  (examples)* + Lesson Study
	+ Instructional Rounds
	+ Videotaping/Reflection
	+ Teacher Labs
	+ Reflection log
	+ Other option

How will we hold ourselves accountable?When and how will this take place? |  |
| **Impact** **Analysis** | How will the impact of the instructional change be assessed?What (if any) modifications need to be made to our previously developed data analysis system to analyze the impact data?Next steps : (Based on analysis of impact data) |  |

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| **DBDM Essential Function Activities** |
| Directions: Form a mock data-based decision making group. As a team, work through step one in the GAINS process. You’re encouraged to use student data that is meaningful to you, but student data is provided, in case you would prefer to practice with anonymous data. Work through step one of the GAINS process by answering the questions below as though you are in a real data-based decision making group. |
| **Essential Function #1 Activity: Gather and Plan** |
| **Step 1a: Gather as a team using a collaborative structure.**  | **Form a content- or grade-based group with others attending the training.** |
| 1. What kind of group have you formed (Content-based? Grade level? Other type of team)?
2. How often will you meet?
3. Who will create the agenda?
4. How will team roles be determined?
5. How/where will we store meeting documents for easy access for all?
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| **Essential Function #1 Activity: Gather and Plan** |
| **Step 1b: Gather data** | **Bring your own data OR the trainer will provide sample data for mock purposes.**Here is a link to a Google folder that contains folders with different levels and content areas of student data: <https://drive.google.com/drive/folders/1XBBYutUwiEbr7YSqMQ1pVbXyH8SR1cf0?usp=sharing>. |
| 1. Choose a set of student data for your team to review. Skim and scan the data, then answer the questions.

Is the data summative or formative or standardized?What grade level is the data?From what content area is the data? List at least five skills or types of knowledge that students drew upon to complete the assessment.1. Based on the data, what initial assumptions can you make about what students know and don’t know?
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| **Step 1c: Become familiar with the data** | **Dig into the data. Scan it once. Then analyze each piece carefully while taking notes.**  |
| 1. Draw a t-chart on chart paper. Each team member should take a portion of the data and generate sticky notes to add to the t-chart. Each team member should generate at least three KNOW sticky notes, and three “DON’T KNOW” sticky notes.

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| Based on the data, list what students know | List common issues, problems or misconceptions |
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| DBDM Essential Function Activities |
| **Essential Function #2 Activity: Analyze** |
| Directions: Complete each step and answer the questions below as though you are in a real data-based decision making group. |
| **Step 2a: Identify a common problem and relate it to a learning goal or target** | **After digging into the data, collectively discuss the most common issues you discovered.**  |
| 1. As a group, gather the sticky notes that include common issues/problems/misconceptions and prioritize the list from most important to least important. (You may find common problems that aren’t related to learning targets. For example, you may find that students frequently forget to write their last names. While this is an important issue, it’s not related to a content learning goal, target, or standard.)
2. Think about how each issue/problem/misconception is linked to a specific learning goal, target, or standard. Use a new sticky note to write the goal, target, or standard and place it next to the common problem.
3. As a group, decide on the problem you think is the most important to address moving forward. Mark it in some way. (This answer is important because it determines the focus of your instructional action.)
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| **Essential Function #2 Activity: Analyze** |
| **Step 2b: Predict a link to teacher practice (where might the breakdown have occurred?)**  | **This step is painful because we have to examine our teaching patterns. Think through instructional reasons (big or small) that may be contributing to common problems found in the data.** |
| 1. Reflect on what might be happening during instruction that is preventing students from reaching the learning goal. **Use the Sample Link to Teacher Practice Form for guidance.** For example, did we skim over subtraction because we assumed students knew it? Are they are confusing “negative” and “minus?”

Each team member should use sticky notes to list *at least* three potential instructional reasons for the most important common problem (one problem per sticky note). Place them around the common problem.1. As a group, come to a consensus about where the learning breakdown may have occurred. Are you confident you can fairly accurately predict the instructional reason for the common problem? YES or NO. If no, you may need to design a set of formative assessments to gather more information about why students are not mastering the skill/concept/etc. Describe your plan for gathering more data below. Or describe why you are confident in predicting where/how the learning breakdown occurred.
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| **DBDM Essential Function Activities** |
| **Essential Function #3 Activity: Intentionally Act & Analyze Again** |
| Directions:“Stay and Stray” Activity:* Divide the whole group into four smaller groups by numbering off one through four—you may have to adjust the numbers or the directions based on the size of your group.
* Have each small group watch one of the methods for examining instruction videos that are listed below.
* Small group members then discuss and answer the video reflection questions on page 16 of the DBDM workbook and record responses on chart paper.
* Assign each person in the small groups a number. Call out one number. The person with that number will be the “expert” chosen to explain the method for examining instruction that was modeled in their group’s video. They will STAY at a station with the completed chart paper.
* Everyone else moves or STRAYS to the next station. (clockwise)
* Experts share their take aways and new learning around the specific method for examining instruction that is being highlighted.
* Repeat the steps until all four groups have had an opportunity to learn about each of the four methods.
* Debrief all four examining instruction methods with the whole group.
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| **Lesson Study (5:28)** | **Lesson Study (5:28)** | <https://www.youtube.com/watch?v=g48DAG4hJd4> |
| **Instructional Rounds (8:01)** | **Instructional Rounds (8:01)** | https://www.youtube.com/watch?v=uQsPYyvDd3s |
| **Using Video for Professional Development (4:27)** | **Using Video for Professional Development (4:27)** | http://edutopia.org/video/using-video-professional-development |
| **Teacher Labs: Making Professional Development Collaborative (5:16)** | **Teacher Labs: Making Professional Development Collaborative (5:16)** | http://www/edutopia.org/video/teacher-labs-making-professional-development-collaborative |
| **Video Questions: Methods for examining instruction**1. Make a list of the steps needed to design and implement this method (these may not be explicitly outlined in the video)?
2. In terms of revealing impact of instruction, use a Venn diagram to compare and contrast this method with one that you are currently using or one you have used in the past.
3. List at least 5 benefits of utilizing this method to look more closely at instruction.
4. Create a graphic organizer or visual representation to describe how this method might be applied in or adapted for your setting.
5. Create a t-chart, list roadblocks might you encounter when implementing this method on one side and ways to overcome them on the other.
6. Use sticky notes to brainstorm ways you might involve students as you implement the method for examining instruction.
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| **DBDM Essential Function Activities** |
| **Essential Function #4 Activity: Notice and Reflect** |
| Directions: Think about DBDM in your current context; complete the Next Steps Action Plan. |
| Next Steps Action Plan for Data-Based Decision Making |
| Name: Date: District/Building:Brief statement of vision for DBDM: |
| Where are we now?(*current reality)* | Where are we going?(*short- and long- term targets from vision)* | How will I close the gap?*(next steps)* | When | Who |
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