

# Assessment Analysis:

## SAMPLE Overview Report Introduction

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The assessment tools provided by this department show extensive curriculum and alignment work. It is clear that this department has spent time in a professional learning community that is truly focused on student learning. The collaborative culture is evident through aligned curriculums and common, aligned objectives. The team should be commended for their multi-building alignment work as well as standards alignment work thus far.

Overall, the assessment tools provided are high quality measures of student knowledge. The extensive work that went into creating these tools is evident, as are the thoughtful choices made to align to best practices in education.

The department has a great start in creating valid, reliable measures of student growth and learning. It is evident that the XXXX School District is ahead of many other districts throughout the state of Illinois in terms of assessment design, growth measurements, and a philosophy of education that encourages student learning and growth aligned to high expectations.

What follows in each course report, are suggestions to improve the quality of the assessment as well as the reliability and validity of the data it will give you. Like curriculum, assessments are evolving and ever improving elements of a dynamic classroom.

# Assessment Analysis: Growth Assessments

## Structure of Analysis Form

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- Introduction
  - General Assessment Set Observations
  
- Part 1: Alignment
  - General Alignment Observations
  - Alignment Focus Areas
    - Evidence of common planning and department alignment
    - Are the selected Standards or Learning Objectives clearly reflected in the assessments?
    - Does the assessment prepare students for success on the PARCC assessment?
  
- Part 2: Assessment Construction & Design
  - 2A: Distractor and Data Analysis
  - General Observations
  - Distractor and Data Analysis Focus Areas
    - Do the selected response questions (ex: multiple choice) have classified distractor types which can be analyzed?
    - Multiple Choice: Will “wrong answer” data provide information about student misconceptions?
    - Rubric: Will “wrong answer” data (not perfect score) provide information about student misconceptions?
    - Does this assessment provide information that can affect classroom choices?
  - 2B: Validity and Reliability
  - General Observations
  - Validity and Reliability Focus Areas
    - Does the assessment accurately measure what it was designed to measure? (ex: remove cultural bias, etc.)
    - Are the question written concisely without overly complex vocabulary?
    - Is there a protocol/method to ensure consistency between classes?
    - Do clear rubrics exist for open-ended questions or performance based tasks?

- Part 3: Assessment Complexity
  - General Observations
  - Assessment Complexity Focus Areas
    - Do all the questions match the full range of cognitive demand required by this class?
    - Is this assessment balanced with appropriate amounts of questions at each level of cognitive demand?
  
- Part 4: Design for Growth
  - Introduction to Growth Design
  - General Observations
  - Growth Design Focus Areas
    - Do the questions allow high achieving and low achieving students to adequately demonstrate their knowledge?
    - Are the assessment items mirrored so they produce comparable data? (Data that shows change in understanding)
    - Do the questions allow students to show sustained learning and growth?
    - Do the assessments provide growth information to determine if instructional methods are working or not?

# District Assessment Analysis

## Overview:

### SAMPLE District Report Information

What follows is a brief overview of each of the departments reviewed. All assessment sets provided are only a pretest and a posttest. This will allow for a measurement of growth, but not sustained growth with interim data points. It is highly recommended that teams create formative assessment data points, using the general blueprint of the assessments provided, to measure growth between the pretest and posttest. These data points will provide pivot points to adjust instruction and ensure all students are growing as intended

<b>Art, Music and Theatre Department</b>
<p>Band, Choir, Orchestra:</p> <ul style="list-style-type: none"><li>● Assessment complexity is predominantly recall (more apply in Choir)</li><li>● Mirroring for growth is attempted<ul style="list-style-type: none"><li>○ Some identical questions, some loosely mirrored (flat vs. sharp)</li><li>○ Could improve easily by changing the piece of music on post test to a comparable sample (Band, Orchestra)</li></ul></li><li>● No performance tasks in a performance based course</li></ul>
<p>Ceramics, Drawing, Photography:</p> <ul style="list-style-type: none"><li>● Designed to produce growth data</li><li>● Performance Based Assessments</li><li>● Prompts should be more clear to ensure reliability and comparability for growth</li><li>● Rubric is good, increase reliability easily with some adjustments</li><li>● Improve with more specific</li><li>● Alignment to new visual arts standards not very clear</li></ul>
<p>Speech and Theatre:</p> <ul style="list-style-type: none"><li>● Designed to produce growth data</li><li>● Good, descriptive rubric</li><li>● No specific prompt for speech. This is needed to ensure reliability and comparability</li><li>● Same performance piece for theater.</li><li>● Questionable alignment to CCSS Speaking and Listening, Department may want to consider new arts standards as an alignment option</li></ul>

## **Business FCAS Department**

### Culinary Arts, Consumer Management:

- Mirrored for growth in design
- Variety of cognitive demand
- Variety of questions (including constructed response)
- Rubric must be provided for reliability of data (for point allocation on constructed response)

### Web Design:

- The use of a rubric lends itself well to a growth assessment
- Rubric can be improved (for reliability) by increasing specificity of rubric (almost all links vs most links)
- No test questions or activities were provided, which does not allow for collection of valid/reliable data

## **ELL Department**

### ELL 2, 3, Bridges:

- Mirrored for growth in design
- ELL Department is collaborating with the English Department and utilizing the writing rubric.
- It is recommended for all levels of ELL to have the same test structure, or blueprint. It should include a Reading, Writing, and Speaking and Listening component.

## **English Department**

### English 9, 10 & 11:

- Assessment sets all designed to get growth data; mirrored for growth

- Rubric does an admirable job being able to take the components, or expectations, of the Common Core Writing Standards to develop a rubric that can be consistently used and applied.
- Structure of the assessments are similar to the concept(s) of the PARCC assessment and has the potential to provide comparative data.
- It is recommended to not have two levels of exceeds as that provide an additional range of expectations that are too similar to one another.
- If there are concerns with the performance of students on the assessment, first see if the readings allow for students to meet the demands of the assessment. (Do not look to furbish the rubric until it is agreed upon the rubric was the issue and not the complexity of the texts provided.)

**District Sample TRUNCATED**

## EXAMPLE EXCERPTS

### Assessment Analysis:

#### #1 Assessment Set for Growth--Selected Excerpts

Assessment Set Course & Department:	SAMPLE Science and Industrial Tech Department - Physics Honors Pre-Post
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<b>General Observations</b>	This Physics Honors assessment set covers a large amount of content aligned to first semester expectations. The assessments themselves are individually well written with quality distractors. These assessments have questions at the recall, apply, and evaluate levels of cognitive demand. The preponderant number of questions are at the apply and procedural level (Ex: calculating distance based on acceleration and speed). These questions require students to memorize a formula, or concept and then conduct a procedural application to solve the problem.
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	<p><u>To improve the assessment set, the team might consider important scientific practices, such as modeling, developing explanations, and engaging in critique and evaluation (argumentation) are wonderful ways to increase the complexity of questioning and are underrepresented on this assessment set.</u></p> <p>The assessment set is entirely selected response: multiple choice. This is an intentional choice by the team. However, <u>it is recommended that the team consider adding a constructed response or performance based element to the current assessment set or subsequent growth tools used by the department.</u> A non-selected response section will go beyond measuring students' acquisition of knowledge, application of understanding and good test taking skills. It will show a more complete picture of the students' strengths and weaknesses and give the teacher an idea of where the student is making mistakes/has misconceptions. It is also a great way to increase the range of cognitive demand on an assessment, and ask students to apply knowledge learned in a more complex way.</p> <p><u>It appears the assessments are well mirrored, but not in a 1:1 correlation.</u> (ex: question 4 on the pretest doesn't align with 4 on the post test). It is recommended the team create a document to show question alignment for analysis purposes. This will provide for ease in data analysis and greater validity to growth data.</p>
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## Part 1: Alignment

### 1: Alignment Analysis

<p><b>General Observations</b></p>	<p>The assessment is well aligned to the curriculum documents which are aligned to the NGSS.</p> <p>It would be worth while to examine some of the scientific practices within NGSS such as developing and using models, analyzing and interpreting data, constructing explanations and evaluating information and determine the extent to which these can/should be assessed. Some of the practices are fantastic opportunities to use the content knowledge as a base for</p>
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	<p>application, analysis and questions of more advanced cognitive demand.</p> <p>There is another set of standards, the Common Core: Science and Technical Subjects. The department may have come to a decision about the extent to which they wish to have their assessments aligned to expectations and rigor of the Common Core Reading for Science and Technical Subjects.</p>
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<b>Element</b>	<b>Comments</b>
Evidence of common planning and department alignment.	There is a high level of evidence of department planning and engagement in alignment work. The existence of specific Common Curriculum, goals, and understanding and knowledge indicates work that has been done in the areas of determining what “all students should know and be able to do” as well as the skills that have the greatest impact.
Are the selected Standards or Learning Objectives clearly reflected in the assessments?	As a whole, the questions are representative of the knowledge standards being assessed.
Does the assessment prepare students for success on the PARCC assessment?	Because the NGSS are not represented on the PARCC assessment, alignment to the Common Core Reading for Science and Technical subjects would prepare students for the PARCC assessment. There is little to no evidence of students practicing cold reads of scientific abstracts or experiments and analyzing the texts, hypotheses, theories or data. Thus it is unlikely that the assessment practices are preparing the students for the PARCC assessment.

## Part 2: Assessment Construction & Design

### 2.A: Distractor and Data Analysis

<b>General Observations</b>	<p>The Physics Honors pretest and posttest questions and question answer choices are well written and do not immediately lend themselves to tilt student performance data in one direction or the other.</p> <p>In general, for the questions on this set, there are no immediate concerns with the options presented to students, however, pending assessment implementation, data analysis and student feedback, such issues can potentially arise to be immediately addressed.</p>
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### 2.B: Validity and Reliability

General Observations	<p>In general, the Physics Honors assessment set appears to have a high level of validity and reliability.</p> <p><u>Within each assessment the validity and reliability is very high.</u> The questions asked are written in a way to obtain intentional information about student knowledge in a particular area in a repeatable way. The questions appear to be written in a way they will measure what the assessment writing team intended to measure.</p> <p><u>Between the two assessments, growth data should be valid and reliable as well.</u> The assessment set has clear objectives for the questions and those objectives are mirrored in a comparable form and level of complexity.</p> <p>Once the assessments are administered, it will be important to look at student responses to be assured that questions designed to a particular level of difficulty are, in fact, as designed.</p> <p>An administration plan and policy for the department greatly increases the reliability of the results.</p>
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## Part 3: Assessment Complexity

### 3: Assessment Complexity Analysis

General Observations	<p>The curriculum documents are aligned to NGSS and written with a section for both knowledge and skills/practices. Using Bloom's Taxonomy as a ruler for measuring the complexity of a question, the majority of questions on the exams are of the remember/understand and recall level or the apply and procedural level. The apply questions are typically involving a procedural application of a concept (ex: the acceleration of an object down a frictionless incline). Thus, these questions require students to memorize and apply a procedure or formula or rule in order to solve. While these questions are very important, when these types of questions are repeated over and over they become "drill style" questions rather than more analytical. Therefore, the students depth of knowledge is limited to remembering how to do a skill rather than understand the mathematics or physics behind the concept.</p> <p>Measuring attainment of terms and fundamental physics procedures and problems is important as a first step to understanding physics. The assessment does a great job of designing scenarios or quality application questions.</p> <p>These application based questions that touch on some of the scientific practices as recommended by NGSS and CCSS. However, it is recommended that the team consider more assessment items involving other more complex scientific practices also in NGSS; tasks such as developing explanations, and engaging in critique and evaluation (argumentation), and constructing explanations.</p>
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## Part IV: Assessment Set Designed for Measuring Growth

### 4: Growth Design Analysis

<p><b>General Observations</b></p>	<p>There is a genuine effort to make the assessments similar mirrored, yet not identical which should be commended. In general, this assessment is a good example of a mirrored assessment for growth.</p> <p>It is clear there is an apparent correlation between the pretest and posttest questions.</p> <p>In most instances the mirroring is exemplary. The assessment authors chose comparable compounds or scenarios (ex: Force 5F, Mass 2M is acceleration of...vs Force 4F, Mass 3M is acceleration...).</p>
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Element	Comments
<p>Do the questions allow high and low-achieving students to adequately demonstrate their knowledge?</p>	<p>This assessment is designed well allowing low and high achieving students to adequately demonstrate some knowledge.</p> <p>An assessment with a large number of recall or procedural questions can be problematic when measuring growth. If some higher-achieving students quickly memorize terms/relationships, or have them memorized prior to the course, it will be difficult for the educator to demonstrate sustained growth with students. Asking more conceptual and application based questions will increase the range of cognitive demand and allow for more application of knowledge over time. It will also allow for the higher achieving students to have more “reach” questions.</p>
<p>Are the assessment items mirrored so that they produce comparable data? (Data that shows change in</p>	<p>As mentioned previously, it is clear there is a 1:1 correlation between the pretest and posttest questions. By design, it should provide good growth data. The aligned questions are both of the same domain of content.</p> <p>In general this assessment is an exemplary sample of a mirrored assessment.</p>

understanding)	As a general note, there can be slight question to the purity of alignment in an assessment when the scenario has more than one variable. If we ask procedural, or application or calculation problems it is best to keep as much the same as possible (ex: change the numbers but keep the operation the same). This issue was not noted in this assessment, but can be a common problem.
Do the questions allow students to show sustained learning and growth?	Due to the fact that there are only two data points one would not be able to tell if students had some growth and then declined or forgot material, if growth was sustained over the entire instructional interval. It is important that teachers administer formative assessments throughout to see if students are reaching towards appropriate growth goals.
Do the assessments provide growth information to determine if instructional methods are working or not?	Because the assessment set lacks interim formative assessments, the teacher will not be able to gather information about instructional effectiveness. Teachers will not be able to make instructional decisions based on data beyond the baseline assessment from this set. That being said, the individual teachers can design additional mirrored formatives to be administered during the instructional interval. It is advised that the teachers construct and administer multiple, formative assessments throughout the instructional interval that can provide learning feedback to affect classroom choices.

# EXAMPLE EXCERPT

## Assessment Analysis:

### #2 Assessment Set for Growth--Selected Excerpts

Assessment Set Course & Department:	- Math Department - Geometry
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**General Observations**

The Geometry assessment set is designed to provide data about student learning and can provide good information about growth in understanding over time.

It is evident that there was some collaboration of creating assessments with department goals in mind across all buildings. In general some additional curriculum work may need to be done in order to fit the eight mathematical practices, Common Core State Standards, and the PARCC assessment.

Educational research has called for a drastic overhaul in mathematic education. We can see much of this through the CCSS and PARCC through frameworks for the mathematics classroom. While the frameworks for the high school classroom are yet to be released by PARCC, they have released some important tools that can be used when creating curriculum and creating assessments. If the team decides to restructure the curriculum to fit PARCC, it is recommended that the team use the Geometry Evidence Statement PBA, Geometry Evidence Statement EOY, and Geometry Performance Level Descriptors (PLD) provided by PARCC as their starting place.

The Geometry assessment set provided is a great example of how to mirror an assessment to show growth. The teacher can take data from both assessments and check to see if a specific skill was mastered. The assessment set has a good balance of conceptual and procedural problems, however, it could use a few application based problems. The conceptual questions addressed on the assessment set will show if the students have a deeper understanding of geometry and the theorems applied.

The assessment set is the only math assessment set to provide a performance based section. This section of the assessment will go beyond measuring students acquisition of knowledge or good test taking skills. It will show a more complete picture of students strengths and weaknesses and give the teacher and idea of where the student gets lost in the process.

## Part 1: Alignment

### 1: Alignment Analysis

<p><b>General Observations</b></p>	<p>It is evident that there was a collaborative creation of the course with department goals in mind across all buildings. These items combine to form the strong base of a PLC team based approach to instruction and lay the groundwork for effective instruction, learning and assessment.</p> <p>In regards to CCSS alignment, the assessments do not expose all aspects of the new Common Core Standards and do not have many connections to the standards for mathematical practice. If the school proceeds with the CCSS adoption, they may want to do an inventory of their curriculum in terms of what standards are taught in what subject areas.</p> <p>PARCC has listed Performance Level Descriptors (PLD) for each subject area. While creating a curriculum or writing an assessment, it is recommended that each teacher reference the PLD as a guide to writing assessment questions measuring performance of CCSS as well as be successful on the PARCC assessment.</p> <p>PARCC has also listed the Evidence Statements for Geometry and it is recommended that those also be considered as valuable tools for curriculum and assessment development.</p>
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Element	Comments
<p>Does the assessment prepare students for success on the PARCC</p>	<p>Portions of the assessment do prepare students for the PARCC assessment.</p> <p>However, some elements of PARCC assessment frameworks that are missing. It is highly recommended that the Geometry team looks at the curriculum and makes adjustments to meet</p>

assessment?	<p>the standards addressed in PARCC. Some good tools to look at would be the Evidence statements for the Performance Based Assessment (PBA), the evidence statements for End of Year Assessment (EOY) and the Performance Level Descriptors. Once the team looks at these items it will be evident that some alignment adjustments will need to be made to help students practice and prepare to perform at a level 5: Distinguished Command on the PARCC assessment.</p> <p><u>Specifically, some of what the assessment set lacks is: similarity in trigonometry, modeling and applying trigonometric ratios related to density and design problems, drawing transformations and geometric constructions.</u> These topics are all in sub claim A of the performance level descriptors for Geometry. Because a syllabus, course outline or standards were not submitted it can only be assumed it is assessed or taught at a different time.</p>
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