**SIF Data Model Extension Proposal**

**Data Model: Assessment**

**Topic Area: Assessment Scoring Structures**

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|  |
| --- |
| Extension Proposal Version Control |
| Version | Date: | Author/Organization: | Comments |
| 1.0 | July 6, 2011 | Wayne Ostler / Pearson | Initial Proposal |
| 1.1 | Aug 24, 2011 | Wayne Ostler / Pearson | Added migration plan detail |
| 1.2 | Aug 29, 2011 | Wayne Ostler / Pearson | 1. Added repeating ID group to the sub test element with the appropriate use case.
2. Added use case for sub test versioning.
 |
| 1.3 | Sept 19, 2011 | Wayne Ostler / Pearson | Added the standard SIF\_Extended\_Elements and SIF\_MetaData fields to the new object definitions. |
| 1.4 | Dec 12, 2011 | Wayne Ostler / Pearson | Incorporate feedback from tech board design review on Dec 8, 2011.1. Use case number for Rubric use case #1 is miss-numbered,
2. Changing subject to a list should be represented as a delete/add, not a change to the element.
3. Insert references to the Sample data.doc file.
4. Sample XML for Rubric remove reference to score code for score value of 1.
 |
| 1.5 | Feb 22, 2012 | Wayne Ostler / Pearson | Added comment in migration plan about the sif3 prefix. |

# **1 Identification**

|  |  |
| --- | --- |
| Proposed Extension Name | Assessment Definition Objects |
| Submitted by (Project Team or Individual) | Assessment Working Group |
| Date of initial submittal | July 6, 2011 |
|  |  |
| What existing SIF object(s) if any will be affected?  | AssessmentSubTestItemCharacteristics (no changes expected) |
| What is the name of any new object(s)? | AssessmentItemRubric AssessmentScoreTable |

**Status Tracker Phase 1: Documentation and Approval**

*The steps in this initial phase document the proposed extensions to the SIF Data Model to the point where they can be reviewed and approved by the Tech Board as deserving of further effort. Completion of the detailed design and evaluation of the dependencies and migration impacts are left until Phase II.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Template Section** | **Initial Draft Completed****(Owner / Date)** | **Reviewed (R) or Accepted (A)****(Owner / Date)** | **Comments** |
| Rational and Business Case  | Wayne Ostler**Date:** | Tech Board (A)**Date:** | Assign to relevant Project Team(s) |
| Use Case(s) | Assessment Working Group**Date:** | Assessment Working Group**Date:** |  |
| Proposal approval | Assessment Working Group**Date:** | Tech Board (A)**Date:** | Placed in Fast Track or Object Pipeline |

# **2. Proposal**

*This section should be completed by the “Proposal Champion”. A champion is usually one of the authors of the business case (although it may be SIF staff). This individual is responsible for driving the proposal through the qualification and acceptance cycle.*

*The following two subsections must be completed before the process can begin.*

## 2.1 Rational for Extension

*In order to completely represent assessments throughout their lifecycle, the current SIF specification must be expanded. The assessment life cycle consists of the process areas illustrated in the diagram below.*

**Content**

**Development**

**Pre-Test**

**Administration**

**Test**

**Administration**

**Scoring**

**Reporting**

**Post-Test**

**Administration**

* **Content and data reviews**
* **Test form construction**
* **Field testing**
* **Item banking & statistics**
* **Content exchange / interoperability**
* **Planning & blueprinting**
* **Item types**
* **Content development & universal design**
* **Learning standard alignment**
* **Administration planning & scheduling**
* **Registration, assignment,**
* **Form sampling**
* **Online infrastructure readiness assessment**
* **Pre-session planning (paper / online) & setup**
* **Alternate form assignment**
* **Test form delivery**
* **Platform (paper, online, mobile) presentation**
* **Item content & tools**
* **Adaptive testing**
* **Response collection**
* **Proctoring controls**
* **Form content security**
* **Desktop security**
* **Accessibility**
* **Testing anomalies**
* **Computer scoring**
* **Professional scoring**
* **Algorithmic (AI) scoring**
* **Portfolio scoring**
* **Sub test / strand scoring**
* **Attemptedness**
* **Performance levels**
* **Scaling / norming**
* **Growth scores**
* **Range finding**

Assessment

Life Cycle

* **Individual reporting**
* **Diagnostic reporting**
* **Informing & personalizing instruction**
* **Performance on
standards**
* **Dashboard / summary
reporting**
* **Aggregation / disaggregation**
* **Exchanging results / data**
* **Psychometric analysis**
* **Equating**
* **Score tables - scaling, norming**
* **Performance levels / cut
scores**
* **Field test analysis**
* **Aligning results with curriculum / instruction**
* **Program and teacher effectiveness**

*The process areas that this document (Assessment scoring structures) most closely aligns are: 1) Content Development, 2) Scoring, and 3) Reporting.*

*The recent focus of the education industry on open industry standards dictates that assessments become interoperable. The Race-to-the-Top and Common Core Assessment initiatives both suggest that all future developments are based on open industry standards. For Common Core Assessment state consortia (SMARTER Balanced and PARC), the call for fully interoperable content that can be shared across states, vendors, and delivery platforms is being written into RFI/RFPs as a mandatory requirement. Vendors are being asked to describe how their solutions will implement industry standards to support the desired level of interoperability. In order for the SIF specification to provide a viable alternative for representing item and form content, changes must be made.*

*The current 2.x SIF assessment specification has the following limitations that are being addressed by the changes proposed in this document:*

* *Does not properly represent scoring structures for non-multiple choice items (such as essays). Rubrics are not supported.*
* *Does not support feedback options for items or specific response choices.*
* *Does not support the score tables necessary to derive all scoring metrics.*
* *Did not isolate performance level scoring objects to promote reuse.*

*While the changes proposed in this document are not completely comprehensive, they do represent a significant step forward in supporting common assessment structures and processes that exist today and the standard will be well positioned for future expansion. Primarily due to the time commitments required and the planned release schedule, the following areas will continue to remain as open issues and will limit the level of true interoperability that the SIF specification can support.*

* *Does not support scoring of the item types beyond the six item types currently supported.*
* *Does not support longitudinal scoring, such as growth scoring.*
* *Does not support composite scoring across multiple assessments (ex: batteries).*
* *Does not support score conversions that would involve demographic or other data attributes such as district/school codes, weeks of instruction, grade levels, etc.*
* *Does not support final scoring rules for open ended items that may have multiple trait scores or that have received multiple scores from multiple scorers.*
* *Does not support multiple scores from multiple scorers on a specific open ended item. For some programs, an open ended item may be scored more than once, primarily for quality assurance purposes. If the scores are not the same (within some constraints), the item score may be adjudicated by a third expert scorer. Generally, a final score is determined and reported to the test taker, which is support by this standard.*
* *Does not define the scoring quality attributes that are expected from the scorer (ex: inter-rater reliability).*
* *Does not support defining attemptedness business rules (i.e. student must answer at least 3 questions in order to be considered a valid attempt).*

## 2.2 Business Case

*In order to fully represent the scoring structures of an assessment to support the scoring and reporting functions, it is critical that the specification accommodate more scoring rules and constructs.*

*In order to derive all possible score metrics, sufficient scoring tables must be provided so that the base “raw score” can be translated into one or more “derived” scoring metrics. This could include scale scores, vertical scaling (lexiles/quantiles), normed scores, grade level equivalents, mastery levels, etc.*

*The current model supports score ranges for performance levels at the sub-test level but were embedded in the object and could not be reused.*

*Open ended item types require the use of a Rubric to define how a student response is to be evaluated. The Rubric may define multiple score points per item (such as trait scores).*

*Multiple feedback options should be provided to enhance teaching and learning. The assessment content may be designed to provide feedback. Scoring professionals may provide comments or feedback that is valuable to students and educators. Teacher may wish to comment on student performance.*

*These changes will enhance the current specification’s capabilities and position the scoring structures well for future enhancements.*

# 3. Use Cases

*In order to help understand the use cases and the proposed object changes, I have provided a “sample data” document that illustrated specific examples of each object discussed below. You can find this document on the SIF collaboration site at:* [*http://community.sifinfo.org/sites/Assessment/Shared*](http://community.sifinfo.org/sites/Assessment/Shared) *Documents*

*NOTE: To access this document requires a community site login and access to the Assessments site.*

## 3.1 Use Cases - AssessmentSubTest

### Use Case Title: AST-1 AssessmentSubTest - Score Tables

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | The current AssessmentSubTest object contained Performance Levels embedded in the object. These existing structures are being pulled out into a new score table object. This new object will improve versatility and allow for greater reuse of tables or descriptive data across sub-tests.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest is being or has been createdAll AssessmetScoreTables necessary to derive subtest scores exist. |
| **Main Sequence of Events / Action Steps** | 1. The sub test author selects the score tables necessary to derive all subtest scores.
2. The ACMS populates the sub test with the appropriate score table refids.
 |
| **Alternative Sequence of Events / Action Steps** | 1. The sub test author selects an existing sub test and adds or removes score tables from the sub test definition.
2. The ACMS populates the sub test with the appropriate score table refids.
3. It will be the determination of the assessment provider and/or customer if previous administrations of the assessments that use this sub test are to be republished and/or reprocessed.
	1. If existing sections are to be republished, then new versions of the sections that use this item are updated to link to the new version’s refid.
	2. If the change impacted scoring, then rescoring may need to occur.
 |
| **Post Conditions** | The AssessmentSubTest is associated to all necessary AssessmentScoreTables |
| **SIF Mandatory Objects** | PerformanceLevels (list) – removedLowerCut - removedUpperCut - removedScoreTableRefId |
| **SIF Optional Objects** | @ LevelName - removed@ ScoreMetric - removedScoreTables (list) |
| **Open Issues** |  |

### Use Case Title: AST-2 AssessmentSubTest - Subjects

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | An assessment sub test could report against multiple subjects. The current model only supports a single subject identification.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest has been created |
| **Main Sequence of Events / Action Steps** | 1. The author of the sub test identifies which subjects the assessment sub test is targeted.
2. The Assessment Content Management System adds the subjects to the object definition.
 |
| **Alternative Sequence of Events / Action Steps** | 1. The author updates the list of subjects after the assessment sub test has been created.
 |
| **Post Conditions** | An AssessmentSubTest is identified with all subjects that it can report results against. |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

### Use Case Title: AST-3 AssessmentSubTest - Grade Levels

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | An assessment sib test can report results for multiple grade levels. The current model did not provide a method to identify grade levels.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest has been created |
| **Main Sequence of Events / Action Steps** | 1. The author of the assessment sub test identifies which grade levels the sub test is targeted.
2. The Assessment Content Management System adds the subjects to the object definition.
 |
| **Alternative Sequence of Events / Action Steps** | 1. The author updates the list of grade levels after the assessment sub test has been created.
 |
| **Post Conditions** | An AssessmentSubTest has been associated one or more grade levels |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

### Use Case Title: AST-4 AssessmentSubTest – Test Items

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | An assessment sub test may use one or more item results (scores) to determine the sub-test scores or performance levels. Adding reference links to the items that can make up a sub-test. In addition, each item may contribute different score amounts (weights) to the sub-test score calculations depending upon if the item was correct, answered and incorrect or not answered (not attempted).  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest has been createdAll AssessmentItems used in the sub test have been created. |
| **Main Sequence of Events / Action Steps** | 1. The author of the sub test selects all assessment items that are to be included in the section.
2. The Assessment Content Management System adds the item references to the object definition.
 |
| **Alternative Sequence of Events / Action Steps** | 1. The author updates the list of item after the assessment sub test has been created.
 |
| **Post Conditions** | All AsessmentItems that make up the sub-test have been identified and associated with the AssessmentSubTest including the item weights. |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

### Use Case Title: AST-5 AssessmentSubTest – Sub Test Versioning

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | As sub-tests are modified, each new sub test version will generate a new RefId and therefore a new object. In order to properly identify the version of the sub test, a version number has been added to the object definition. The publisher of the sub test will be responsible for identifying the version. The sub test version number and publish date are optional so if a content management system does not maintain versions, then these elements can be missing. |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest has been created, published, and used by test takers. After administration, the sub test is subsequently modified and republished. |
| **Main Sequence of Events / Action Steps** | 1. The provider of the assessment has determined that “substantive” changes to the assessment sub test are required that may impact scoring or reporting of results.
2. The changes to the sub test have been made in the Assessment Content Management System.
3. The Assessment Content Management System updates the sub test version information and assigns a new RefId to the version of the sub test.
4. A new sub test object is published.
 |
| **Alternative Sequence of Events / Action Steps** | Depending upon the nature of the changes made, re-scoring or new reports may need to be generated. These decisions would be determined by the assessment provider and customer.  |
| **Post Conditions** | A new AssessmentSubTest RefId is generated and a new object created. The new object is labeled with the appropriate version number.  |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

### Use Case Title: AST-6 AssessmentSubTest – Sub Test Identifiers

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | The current sub-tests object definition did not support the inclusion of any “local” sub test identifiers that can be used by the scoring or reporting systems. It is very common for sub-tests to have identifiers that are either used by the assessment system to provide links to customer identifiers, used on reports to link to footnotes, or used on data files to identify the sub-test.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring System, Assessment Reporting SystemAssessment Content Management System |
| **Pre Conditions** | An AssessmentSubTest is being created. |
| **Main Sequence of Events / Action Steps** | 1. The customer or the content publisher has specified how sub-tests are to be identified.
2. A sub-test identifier(s) is assigned to this sub-test.
 |
| **Alternative Sequence of Events / Action Steps** |  |
| **Post Conditions** | A new AssessmentSubTest object has been published with the appropriate sub-test identifiers. |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

## 3.2 Use Cases - AssessmentScoreTable

### Use Case Title: ASTbl-1 AssessmentScoreTable New Object

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | The current assessment model embeds the performance levels within the assessment definition and scoring objects. The current model is missing score tables for other score conversions, such as raw-to-scale, norm scoring, grade equivalents, etc. The current model also does not support the reuse of score table ranges or descriptions across assessment objects.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | The assessment program has determined the types of scores to be reported (ex: a scoring scale range and performance levels to be reported). Sufficient item performance data (statistics) are available to compile score tables. |
| **Main Sequence of Events / Action Steps** | 1. The assessment author identifies all score conversion tables necessary to generate all scores for an assessment sub test.
2. The ACMS creates all score table objects with the required information.
 |
| **Alternative Sequence of Events / Action Steps** | None |
| **Post Conditions** | AssessmentScoreTables are created. |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

## 3.3 Use Cases - AssessmentRubric

### Use Case Title: AR-1 AssessmentRubric New Object

|  |  |
| --- | --- |
| **Type (Mandatory or Optional)** | Optional |
| **SIF Version** | SIF Implementation Specification 2.6 |
| **Summary Description** | The current assessment model does not support a Rubric. Rubrics are used to define how an open ended is to be evaluated by a scorer (human or algorithm). The rubric will establish score points that can be assigned and the expectations that a test taker response should exhibit. An open ended test item may require one or more rubrics depending upon the number of scoring traits are being reported for the item. In addition, a rubric may defined standard feedback comments that help articulate the reason a particular score point was assigned.  |
| **Actors:** **Requesting Service****Responding Service** | Assessment Scoring SystemAssessment Content Management System |
| **Pre Conditions** | Learning standards have been identified. Item prompts have been proposed. |
| **Main Sequence of Events / Action Steps** | 1. The assessment author defines all score rubrics necessary to score the items on an assessment.
2. The ACMS publishes all assessment rubric objects.
 |
| **Alternative Sequence of Events / Action Steps** | 1. After scoring processes have begun, adjustments to the rubrics may be required.
 |
| **Post Conditions** | AssessmentRubrics objects have been published. |
| **SIF Mandatory Objects** |  |
| **SIF Optional Objects** |  |
| **Open Issues** |  |

**Status Tracker Phase 2: Execution of Proposed Changes**

*At this point the initial Data Model extension proposal has been accepted by the Tech Board and is either in the object pipeline, or being fast-tracked. The following sections have to be completed and (where indicated) reviewed and approved before this proposal can be reflected in the SIF specification.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Template Section** | **Initial Draft Completed****(Owner / Date)** | **Reviewed I or Accepted (A)****(Owner / Date)** | **Comments** |
| Dependencies  | Project Team / Staff**Date:** | Internal Project Team review |  |
| Object Definition Table | Project Team**Date:** | Tech Board I**Date:** |  |
| Migration Plan | Staff / Project Team **Date:** | Tech Board (A)**Date:** | TB Approval is part of SIF Release cycle |
| Sample XML | Staff / Project Team **Date:** | Optional | Generally provided as part of published specification |

## 4. Impact Assessment

*This section is the first to consider the actual implementation which will address the use cases previously identified. It requires assessing the impacts to both the existing objects and infrastructure, and to previously deployed applications. It would normally be produced by the Project Team (new or existing) assigned to this data model extension by the Tech Board at the time this proposal was approved.*

*In cases where a legacy object (one with no owning Project Team), is being changed, the task of assessing impact may be assigned to a Staff member to drive its completion.*

*The following two subsections must be completed.*

## 4.1 External Object Dependencies and Relation Map

The following is a global view of the Assessment data domain.

### 4.1.1 Object Dependencies and Relationship Map

*The relationship arrows originate in the object that contains the RefId. Orange relationships are proposed new relationships. Red relationships are proposed to be removed. Red objects are new objects.*

#### 4.1.1.1 AssessmentSubTest



#### 4.1.1.2 AssessmentScoreTable



#### 4.1.1.3 AssessmentRubric



## 4.2 Infrastructure / International Dependencies and Relation Map

*Identify any dependencies on infrastructure technologies and / or deliverables from the International Technical Board (ITB) which are planned for a future release.*

*This could include requiring or relying on specific functionality from one or more of the following:*

* *Transport (ex: SOAP conventions)*
* *SIS Functional Profiles*
* *Identity Management Profiles*
* *Global Data Model Metadata*
* *Central Administration or Smart Zone*
* *Zone Services (ex: Assessment)*

|  |  |  |
| --- | --- | --- |
| **Proposed new Object, Element or Attribute** | **Infrastructure or International technology dependency** | **Specifics of dependency** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# **5 Detailed Design**

*Place the detailed element by element, attribute by attribute breakdown of the Data Model Extension here. This work is normally done by members of the assigned Project Team.*

*The values of the “Char” column include one or more of the following:*

* ***M – Mandatory****. Item must appear in every Add Event and Response message for the object*
* ***R – Required****. Item must either appear in an Add Event or “eventually” be included in an Add Event.*
* ***S – Supported****. Item may or may not appear in any message relating to the object. However if its value is supplied / available, it must be included by the sender in Event and Response messages.*
* ***C******– Conditional.*** *Item is required if the included conditions are satisfied*
* ***I –******Immutable.*** *Item value cannot be changed once supplied.*
* ***U –******Unique.*** *Item value is unique from all other objects containing that item (ex: RefId)*
* ***O – Optional****. Item may or may not appear in any message relating to the object. It need not be supported by the sender*

*The “type” of each item is either an XML type (ex: integer) or a named SIF Global Type.*

 *XML Facets can help to further define the value of an item. These can include length, range, and per-type value restrictions. They should be specified if known.*

*Fill out a separate copy of the following table for each affected new or existing SIF object.*

## 5.1 AssessmentSubTest (modified object)

|  |  |
| --- | --- |
| **Object Name:** | **Object Description:** |
| **AssessmentSubTest** | **A psychological construct measured by the assessment. Operationally, a subtest is a class of scores on an assessment. Some assessments may have only one subtest or type of score but most assessments measure more than one psychological construct. The subtest can be based upon items in a section or items that are empirically related. Subtests can also be composites of other subtests that are combined using a particular algorithm. Examples of subtests of an assessment are math total, reading composite, total test, and English composition.**  |
| Element/@Attribute |  Char  | Description  | Type | Other comments |
| @ RefId | M | The GUID that uniquely identifies an instance of the object. | [RefIdType](http://specification.sifinfo.org/Implementation/2.4/CommonTypes.html#RefIdType) |  |
| SubTestVersion | O | This will identify the version of the subtest that this object represents. Note that new versions of subtests must generate new RefIds and therefore a new subtest object. The format of the numbering system is determined by the assessment provider. | Xs:normalizedString | Use Case AST-5 |
| SubTestPublishedDate | O | This will identify the date that this version of the subtest was published (published means made available for use). If a SubTestVersion is provided, then this element should also be provided. | xs:dateTime | Use Case AST-5 |
| SubTestIdentifiers | O | If the authoring system provides for a unique coding system for subtests then this element is used to store that information. | [List](http://www.w3.org/TR/xmlschema-2/#normalizedString) | Use Case AST-6 |
| SubTestIdentifiers/ SubTestIdentifier | MR | Groups the id and type together |  | Use Case AST-6 |
| SubTestIdentifiers/ SubTestIdentifier/ SubTestCode | MR | Any internal or natural identifier for the SubTest used by the assessment system. | xs:string | Use Case AST-6 |
| SubTestIdentifiers/ SubTestIdentifier/ SubTestCodeType | OR | This will designate the type of identifier that is provided for this SubTest. | Values are:Client = assigned by the client.Publisher = assigned by the owner.Internal = internal assessment service provider identifierOther = custom | Use Case AST-6 |
| Name | M | Text name of the subtest.  | [xs:normalizedString](http://www.w3.org/TR/xmlschema-2/#normalizedString) |  |
| ScoresReported | O | This will identify the list of scores to be reported by this sub test. | List | Use case AST-1 |
| @ ScoreMetric | M | The metric or scale used to report the scores. | [NCES0056AssessmentReportingMethodType](http://specification.sifinfo.org/Implementation/2.4/ExternalCodeSets.html#NCES0056AssessmentReportingMethodType) | Use case AST-10144 -Letter grade/mark0490 -Age score0491 -C-scaled scores0492 -College Board examination scores0493 -Grade equivalent or grade-level indicator0494 -ACT score0497 -Normal curve equivalent0498 -Normalized standard score0499 -Number score0500 -Pass-fail0502 -Percentile rank0503 -Proficiency level0504 -Ranking0505 -Ratio IQ's0506 -Standard age score0508 -Stanine score0509 -Sten score0510 -T-score0511 -Z-score0512 -Achievement/proficiency level0513 -Mastery level3473 -Graduation score3474 -Growth/value-added/indexing3475 -International Baccalaureate score3476 -Percentile3478 -Raw score3479 -Scale score3480 -Workplace readiness score9999 -Other |
| ScoresReported/ScoreRange/Minimum | O | Lowest possible score value for this subtest. | [xs:token](http://www.w3.org/TR/xmlschema-2/#token) | Minor clarification |
| ScoresReported/ScoreRange/Maximum | O | Highest possible score value for this subtest. | [xs:token](http://www.w3.org/TR/xmlschema-2/#token) | Minor clarification |
| ScoresReported/ScoreRange/ScoreTableRefId | OR | This identifies the specific score table used by this subtest to generate the score if applicable. Note that the score metric in this object should match the “to score metric” in the score table.  | IdRefType | Use case AST-1 |
| ~~PerformanceLevels~~ | ~~O~~ | ~~Container for performance level elements.~~  | [~~List~~](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#List) | Use case AST-1 |
| ~~PerformanceLevels/PerformanceLevel~~ | ~~OR~~ | ~~Defines cut scores for placing students in appropriate performance levels.~~ |  | Use case AST-1 |
| ~~@ LevelName~~ | ~~M~~ | ~~The name of the performance level.~~ | [~~xs:token~~](http://www.w3.org/TR/xmlschema-2/#token) | Use case AST-1 |
| ~~PerformanceLevels/PerformanceLevel/ CutScores~~ | ~~O~~ | ~~Score bounds for the performance level.~~ |  | Use case AST-1 |
| ~~@ ScoreMetric~~ | ~~M~~ | ~~The metric or scale used to report the scores.~~ | [~~NCES0056AssessmentReportingMethodType~~](http://specification.sifinfo.org/Implementation/2.4/ExternalCodeSets.html#NCES0056AssessmentReportingMethodType) | Use case AST-1 |
| ~~PerformanceLevels/PerformanceLevel/ CutScores/LowerCut~~ | ~~O~~ | ~~Lower bound for the performance level.~~ | [~~xs:token~~](http://www.w3.org/TR/xmlschema-2/#token) | Use case AST-1 |
| ~~PerformanceLevels/PerformanceLevel/ CutScores/UpperCut~~ | ~~O~~ | ~~Upper bound for the performance level.~~ | [~~xs:token~~](http://www.w3.org/TR/xmlschema-2/#token) | Use case AST-1 |
| ~~SubjectArea~~ | ~~O~~ | ~~Content areas covered by the score.~~ | ~~xs:token~~ | Use case AST-2 |
| SubTestSubjectAreas | O | Content areas covered by the score. | [SubjectArea](http://www.w3.org/TR/xmlschema-2/#token)List | Use case AST-2Note: Renamed attributes to imply a list and to not reuse same XML tag that exists in SubjectAreaList |
| SubTestGradeLevels | O | Grade levels for which the score is valid. | [GradeLevels](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#GradeLevels) | Use case AST-3PK Pre-Kindergarten/PreschoolKG Kindergarten010203040506070809101112PG Postgraduate/AdultUN UngradedOtherUnknown |
| AssessmentSubTestRefIds | O | References (possibly recursive) to other SIF AssessmentSubTests. This enables subtests or scores to be composites of other scores creating a parent/child hierachy. If any references are given here, the score is a composite score (it is a parent). The most common composite score is for total test score. The list must be unique. It is also important to note that composite scores may not be simple sums of the subordinate sub test scores. | [List](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#List) |  |
| AssessmentSubTestRefIds/ AssessmentSubTestRefId | MR | A reference to a child AssessmentSubTest by RefId. | [IdRefType](http://specification.sifinfo.org/Implementation/2.4/CommonTypes.html#IdRefType) |  |
| SubTestTier | O | An integer that defines the level or tier of the score in a multi-level arrangement of composite scores. Zero indicates the highest or root level. | [xs:unsignedInt](http://www.w3.org/TR/xmlschema-2/#unsignedInt) |  |
| LearningStandardItemRefIds | O | References to LearningStandardItems that this subtest measures. The list must be unique. If the subtest measures a higher order standard, then only the parent standard should be identified in the list. | [List](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#List) |  |
| LearningStandardItemRefIds/ LearningStandardItemRefId | MR | A reference to a LearningStandardItem by RefId. | [IdRefType](http://specification.sifinfo.org/Implementation/2.4/CommonTypes.html#IdRefType) |  |
| Abbreviation | O | This is the short version of the name ~~of~~ or code identifying the assessment sub test that is often used for quick reference and used in reports.  | [xs:token](http://www.w3.org/TR/xmlschema-2/#token) | Clarifying description.  |
| Description | O | The description element provides an opportunity to pass additional information about the assessment and also be used for describing elements in a test hierarchy. | [xs:string](http://www.w3.org/TR/xmlschema-2/#string) |  |
| NumberOfItems | O | This element records the number of items included on the assessment. This number may be different than the possible score. | [xs:unsignedInt](http://www.w3.org/TR/xmlschema-2/#unsignedInt) |  |
| AssessmentItems | O | This is a list of the items that compose the sub-test and how they are used to compute the sub-test score. | List | Use case AST-4 |
| AssessmentItem | MR | This will bind the RefId and other attributes together in the list. |  |  |
| AssessmentItems / AssessmentItem/ /AssessmentItemRefId | MR | This identifies a specific item that contributes to a sub-test score. | IdRefType | Use case AST-4 |
| AssessmentItems / AssessmentItem/ ItemWeightCorrect | MR | This provides a weighting factor for how the item score is used to compute a sub-test score when the item is correct or partially correct. Item weight of 1 indicates the full item score is used. A weight of .5 would indicate the item only contributes one half of the item score to the subtest. A weight of 0 indicates the item does not affect the sub test score. |  | Use case AST-4 |
| AssessmentItems / AssessmentItem/ ItemWeightIncorrect | MR | This provides a weighting factor for how the item score is used to compute a sub-test score when the item is attempted and incorrect. Item weight should be a negative value if the item subtracts from the score if missed. |  | Use case AST-4 |
| AssessmentItems AssessmentItem/ /ItemWeightNotAttempted | MR | This provides a weighting factor for how the item score is used to compute a sub-test score when the item has not been attempted by the student. Item weight should be a negative value if the item subtracts from the score if not attempted. |  | Use case AST-4 |
| ContainerOnly | O | Indicator describing the purpose of an AssessmentSubTest as being that of a container for the child AssessmentSubTests. There will be no scores within this subtest. | [xs:boolean](http://www.w3.org/TR/xmlschema-2/#boolean) |  |
| SIF\_Metadata | O |   | [SIF\_Metadata](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#SIF_Metadata) |  |
| SIF\_ExtendedElements | O |   | [SIF\_ExtendedElements](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#SIF_ExtendedElements) |  |

## 5.2 AssessmentScoreTable (new object)

|  |  |
| --- | --- |
| **Object Name:** | **Object Description:** |
| **AssessmentScoreTable** | **This object will represent the score conversion tables to be used by the scoring system to derive alternate values. As an example, it is often typical for a scoring system to convert a raw score to a scale score. It is also common for a scoring system to derive a student performance level on an assessment from a total scaled score.**  |
| Element/@Attribute | Char | Description | Type |  |
| @ RefId | M | The GUID that uniquely identifies an instance of the object. | RefIdType |  |
| ScoreTableVersion | O | This will identify the version of the score table that this object represents. Note that new versions of score tables must generate new RefIds and therefore a new score table object. The format of the numbering system is determined by the assessment provider. | Xs:normalizedString |  |
| ScoreTablePublishedDate | O | This will identify the date that this version of the score table was published (published means made available for use). If a ScoreTableVersion is provided, then this element should also be provided. | xs:dateTime |  |
| ScoreTableIdentifiers | O | If the authoring system provides for a unique coding system for score table then this element is used to store that information. | [List](http://www.w3.org/TR/xmlschema-2/#normalizedString) |  |
| ScoreTableIdentifiers/ ScoreTableIdentifier | MR | Groups the id and type together |  |  |
| ScoreTableIdentifiers/ ScoreTableIdentifier/ ScoreTableCode | MR | Any internal or natural identifier for the score table used by the assessment system. | xs:string |  |
| ScoreTableIdentifiers/ ScoreTableIdentifier/ ScoreTableCodeType | OR | This will designate the type of identifier that is provided for this score table. | Values are:Client = assigned by the client.Publisher = assigned by the owner.Internal = internal assessment service provider identifierOther = custom |  |
| ScoreTableName | M | The user defined name of the score table. | [xs:normalizedString](http://www.w3.org/TR/xmlschema-2/#normalizedString) |  |
| FromScoreMetric | M | This indicates the score metric that is being used as the source to derive another score metric. For example, if this score table is using the raw score to derive a scaled score, then this will be the raw score metric (3478).  | [NCES0056AssessmentReportingMethodType](http://specification.sifinfo.org/Implementation/2.4/ExternalCodeSets.html#NCES0056AssessmentReportingMethodType) | 0144 -Letter grade/mark0490 -Age score0491 -C-scaled scores0492 -College Board examination scores0493 -Grade equivalent or grade-level indicator0494 -ACT score0497 -Normal curve equivalent0498 -Normalized standard score0499 -Number score0500 -Pass-fail0502 -Percentile rank0503 -Proficiency level0504 -Ranking0505 -Ratio IQ's0506 -Standard age score0508 -Stanine score0509 -Sten score0510 -T-score0511 -Z-score0512 -Achievement/proficiency level0513 -Mastery level3473 -Graduation score3474 -Growth/value-added/indexing3475 -International Baccalaureate score3476 -Percentile3478 -Raw score3479 -Scale score3480 -Workplace readiness score9999 -Other |
| ToScoreMetric | M | This indicates the score metric that is being derived by this table. For example, if this score table is deriving a scaled score, then this will be the scale score metric (3479).  | [NCES0056AssessmentReportingMethodType](http://specification.sifinfo.org/Implementation/2.4/ExternalCodeSets.html#NCES0056AssessmentReportingMethodType) |  |
| ScoreValues | O | A list of rows that make up the score table.  | [List](http://specification.sifinfo.org/Implementation/2.4/DataModel.html#List) |  |
| ScoreValues/ ScoreRanges | OR | Defines cut scores for placing students in an appropriate performance level. |   |  |
| ScoreValues/ ScoreRanges/ LowerCut | M | Lower bound for the score converstion. The comparison operator for upper bound is “less than or equal to”. In other words LowerCut ≤ StudentScore < UpperCut. The unit used for this value must be represented in the units reported by the FromScoreMetric (i.e. if the score metric reports a percentage, then this value should be a percentage) | [xs:token](http://www.w3.org/TR/xmlschema-2/#token) |  |
| ScoreValues/ ScoreRanges/ UpperCut | M | Upper bound for the score conversion. The comparison operator for lower bound is be “greater than”. In other words LowerCut ≤ StudentScore < UpperCut. The unit used for this value must be represented in the units reported by the FromScoreMetric. | [xs:token](http://www.w3.org/TR/xmlschema-2/#token) |  |
| ScoreValue/ ScoreRanges/DerivedValue | M | This is the derived score value when the from score is within the range specified. The unit used for this value should be represented in the units reported by the ToScoreMetric. | Xs:token |  |
| ScoreValue/ ScoreRanges/ PassFailIndicator | O | If Pass/Fail indicators are used, then this will indicate if this derived score value represents a Passing or Failing level. | [Values](http://www.w3.org/TR/xmlschema-2/#token) are:P = PassF = Fail |  |
| ScoreValue/ ScoreRanges/FeedbackList | O | This provides a list of feedback that can be provided a student when they obtain this score range. | List |  |
| ScoreValue/ ScoreRanges/FeedbackList/Feedback | MR | This bundles the feedback elements together. |  |  |
| ScoreValue/ScoreRanges/FeedbackList/Feedback/DiagnosticStatement | MR | If this derived score can also provide diagnostic statements to the student or teacher, then provide that information here. | Xs:token |  |
| ScoreValue/ScoreRanges/FeedbackList/Feedback/Description | OR | A brief or addition information concerning the derived score can be provided here. | Xs:token |  |
| ScoreValue/ScoreRanges/FeedbackList/Feedback/Source | OR | Indicates the source of this feedback. Values will be determined by the assessment program. | Xs:token |  |
| SIF\_Metadata | O |   | SIF\_Metadata |  |
| SIF\_ExtendedElements | O |   | SIF\_ExtendedElements |  |

## 5.3 AssessmentItemRubric (new object)

|  |  |
| --- | --- |
| **Object Name:** | **Object Description:** |
| **AssessmentRubric** | **This object will represent the scoring rubric used to evaluate responses to open ended items. Rubrics will define how a student response is to be evaluated and what score values should be applied based on that evaluation. Rubrics can be used by human scorers (teachers or professional scorers) or are used to train artificial intelligence engines. An individual item may have multiple rubrics that are used to evaluate different “traits” of the response.**  |
| Element/@Attribute | Char | Description | Type |  |
| @ RefId | M | The GUID that uniquely identifies an instance of the object. | RefIdType |  |
| RubricVersion | O | This will identify the version of the Rubric that this object represents. Note that new versions of the Rubric must generate new RefIds and therefore a new Rubric object. The format of the numbering system is determined by the assessment provider. | xs:normalizedString |  |
| RubricPublishedDate |  | This will identify the date that this version of the Rubric was published (published means made available for use). If a RubricVersion is provided, then this element should also be provided. | xs:dateTime |  |
| RubricIdentifiers | O | If the authoring system provides for a unique coding system for rubrics then this element is used to store that information. | [List](http://www.w3.org/TR/xmlschema-2/#normalizedString) |  |
| RubricIdentifiers/ RubricIdentifier | MR | Groups the id and type together |  |  |
| RubricIdentifiers/ RubricIdentifier/ RubricId | MR | Any internal or natural identifier for the rubric used by the assessment system. | xs:string |  |
| RubricIdentifiers/ RubricIdentifier/ RubricIdType | OR | This will designate the type of identifier that is provided for this rubric. | Values are:Client = assigned by the client.Publisher = assigned by the owner.Internal = internal assessment service provider identifierOther = custom |  |
| RubricName | M | The name of the rubric used by the assessment system. | xs:string |  |
| ScoringGuideReference | O | The location where the full documentation for the Rubric can be found. | URI |  |
| ScoreCodes | M | This list will support the score codes that make up the rubric. | List |  |
| ScoreCodes/ScoreCode/ | MR | The will bundle the attributes for each score code. |  |  |
| ScoreCodes/ScoreCode/ScoreCodeId | OR | Non-numeric score code value. Examples might be:“BL” = blank“OT” = off-topicThe values for this field are determined by the assessment program. | xs:normalizedString |  |
| ScoreCodes/ScoreCode/ScoreCodeValue | MR | Numeric values for the score code. For example a 4 point rubric would typically have the values 1 through 4, plus zero for no score. The non-numeric score codes will likely have a score value of zero. |  |  |
| ScoreCodes/ScoreCode/ScoreCodeDefinition | OR | This provides the definition of the score code or value. For example, if the score code is OT, then this can provide the definition of “Off Topic”.  | xs:string |  |
| ScoreCodes/ScoreCode/ScoreCodeDescriptions | OR | This list will provide the statements that define the expectations to obtain the score value. | List |  |
| ScoreCodes/ScoreCode/ScoreCodeDescriptions/Description | MR | This is the individual statements that define the specific expectations that the response must illustrate in order to achieve this score point. This is a complex content type in order to support math or other subjects that may require non-text representations of expectations. | [AbstractContentElementType](http://specification.sifinfo.org/Implementation/2.4/CommonTypes.html#AbstractContentElementType) |  |
| ScoreCodes/ScoreCode/ScoreCodeComments | OR | This list will provide a set of comment codes that a scorer may use to provide further detail/feedback concerning the score assigned. | List |  |
| ScoreCodes/ScoreCode/ScoreCodeComment | MR | This provide a bundle for the code and description pairs for comment codes. |  |  |
| ScoreCodes/ScoreCode/ScoreCodeComments/ScoreCodeComment/CommentCode | MR | This is the comment code that is likely entered or selected by the scorer and is provided in data files or reports. | xs:string |  |
| ScoreCodes/ScoreCode/ScoreCodeComments/ScoreCodeCommentCommentDescription | MR | This is the description of the comment code. This can be used to provide additional feedback to the student for the score they received.  | [AbstractContentElementType](http://specification.sifinfo.org/Implementation/2.4/CommonTypes.html#AbstractContentElementType) |  |
| SIF\_Metadata | O |   | SIF\_Metadata |  |
| SIF\_ExtendedElements | O |   | SIF\_ExtendedElements |  |

# **6 Migration Plan (for proposed changes to existing objects only)**

*One of the mandatory components of every Data Model Change proposal is the Migration Plan. This section describes the impact of the proposed change to legacy SIF Zones and the techniques, best practices and deployment guidelines designed to minimize that impact. It is normally filled out in coordination with SIF Staff or an experienced SIF Data Modeler.*

*All migration plans have the same overarching goal: allow an existing SIF Zone to migrate to the new change incrementally ... by changing only one component at a time while maintaining at least the previous level of functionality, and “breaking” nothing in the process.*

*Several common strategies (in order of desirability) are:*

***1. Add new elements rather than modify old ones***

*This places a requirement on new agents to support duplicate entries in order to maintain backwards compatibility with agents conforming to earlier versions of the standard. To use this strategy, there must be a clear mapping provided for agent writers to utilize. This would include mapping any new code set values to the collection of previously existing ones.*

***2. Constrain the impact to the ZIS***

*In this case the ZIS will transparently “bridge” between agents supporting this change and earlier versions. To use this strategy, there must be a clear mapping provided for ZIS vendors to utilize, and at least two vendors must “sign off” on this section of the proposal.*

***3. Reduce the impact***

*This approach is effective for changing only those parts of the SIF specification which have been minimally adopted. Start by mapping the set of changed elements against the CSQ matrices to determine the number of existing SIF-certified applications that will be affected. Work with SIF Staff to alert impacted vendors (those with certified, and where known, uncertified products) and identify the number of sites which will be affected. Depending upon the size of the impact, the change may be accepted for a minor release.*

***4. Extended Elements***

*Use the extended element construct to add the new changes. This has the advantage that it standardizes how the functionality will be introduced, but suffers from the disadvantage that conformance to the changes cannot be easily verified, and a further change will be required when moving forward to the next major release. It is the least desirable way to introduce changes into a minor release, and a strong justification for this approach should be prepared.*

***5. Wait until the next major release***

*Defer the proposed change until the next major release because a clear incremental migration strategy for it cannot be constructed.*

**Migration Plan:**

*Using the above techniques or alternative ones, specify the recommended series of incremental component upgrades or deployments (of application, agent or ZIS) which must be performed before the data model changes introduced by this proposal can be successfully incorporated into an existing SIF Zone.*

*The SIF technical board had determined that the proposed breaking changes to the SIF assessment objects in the 2.6 release will be handled as follows:*

1. *The current 2.5 objects will be deprecated in the 2.6 release. Any implementations of the 2.5 objects will continue to work when the 2.6 specification is released.*
2. *The new 2.6 objects will be released as a complete set of new objects and they will all be prefixed with a “sif3:” namespace tag.*

*The following table highlights the breaking changes in 2.6 for those applications that may be “upgrading” from 2.5 to 2.6.*

|  |  |  |
| --- | --- | --- |
| **Component Replaced** | **Increased Functionality (if any)** | **Effect on Legacy components (if any)** |
| AssessmentSubTest | Removing optional performance level elements (list and associated elements). Replacing with new score table object. | Any agent or service that publishes this object will need to remove these elements and, if necessary, replace with references to the new score table object. |
| AssessmentSubTest | Renaming optional SubjectArea element to SubTestSubjectAreas and changing its type to SubjectAreaList. | Any agent or service that publishes this object will need to rename the element and put into the SubjectAreaList format.  |

# **7 Issues**

*List any issues surrounding this proposal which the reviewers or approvers may need to consider.*

1. *We have proposed adding the item bank references to the Assessment object. This identification is primarily to support convenience in searching for an assessment (ex: A teacher may want to search for assessments built from the SAT practice item bank). Secondarily, the item bank is a method for securing assessments as well as items. It is common that pre-built assessments may be packaged with an item bank. Users authorized (or licensed) to access the item bank can then use the pre-built assessments. The argument to remove the item bank references from the Assessment object is that they are redundant and can be derived from the item used to build the forms of the assessment. In addition, adding new items to an assessment from a different item bank would cause a change to the Assessment object.*

# **8 XML Example(s)**

*One or more examples of XML instances representing the items in the proposed extension should be placed here, as part of work done during the detailed design process.*

*The items in green are either new or altered from the prior version. Items in yellow are suggested additions in example data using existing tags to help with clarification.*

## 8.1 AssessmentSubTest

<AssessmentSubTest RefId="90E298F70E094EE2B8B52DFD88006AF2">

 <SubTestVersion>V6.1054</SubTestVersion>

 <SubTestPublishedDate>2011-12-31T15:23:01</SubTestPublishedDate>

 <SubTestIdentifiers>

 <SubTestIdentifier>

 <SubTestCode>R105A</SubTestCode>

 <SubTestCodeType>Client</SubTestCodeType>

 </SubTestIdentifier>

 </SubTestIdentifiers>

 <Name>Reading Comprehension Subtest</Name>

 <ScoresReported>

 <ScoreRange ScoreMetric="0499">

 <Minimum>0</Minimum>

 <Maximum>110</Maximum>

 </ScoreRange>

 <ScoreRange ScoreMetric="3479">

 <Minimum>0</Minimum>

 <Maximum>600</Maximum>

 <ScoreTableRefId>ST1ST1ST1ST1ST1ST1ST1ST1ST1ST1ST1

 </ScoreTableRefId>

 </ScoreRange>

 <ScoreRange ScoreMetric="0503">

 <ScoreTableRefId>ST2ST2ST2ST2ST2ST2ST2ST2ST2ST2ST2

 </ScoreTableRefId>

 </ScoreRange>

 <ScoresReported>

 ~~<PerformanceLevels>~~

 ~~<PerformanceLevel LevelName="Basic">~~

 ~~<CutScores ScoreMetric="0499">~~

 ~~<LowerCut>25</LowerCut>~~

 ~~<UpperCut>50</UpperCut>~~

 ~~</CutScores>~~

 ~~</PerformanceLevel>~~

 ~~</PerformanceLevels>~~

 <SubTestSubjectAreas>

 <SubjectAreaList>

 <SubjectArea>

 <Code>02</Code>

 <OtherCodeList>

 <OtherCode Codeset="Text">Mathmatics</OtherCode>

 </OtherCodeList>

 </SubjectArea>

 <SubjectArea>

 <Code>03</Code>

 <OtherCodeList>

 <OtherCode Codeset="Text">Life and Physical Sciences</OtherCode>

 </OtherCodeList>

 </SubjectArea>

 </SubjectAreaList>

</SubTestSubjectAreas>

 <SubTestGradeLevels>

 <GradeLevel>

 <Code>03</Code>

 </GradeLevel>

 </SubTestGradeLevels>

 <SubTestTier>0</SubTestTier>

 <AssessmentSubTestRefIds>

 <AssessmentSubTestRefId>4710A15C428C48EBBC17CF320B6DCF25

 </AssessmentSubTestRefId>

 </AssessmentSubTestRefIds>

 <SubTestTier>0</SubTestTier>

 <LearningStandardItemRefIds>

 <LearningStandardItemRefId>3E4BEBCA14E54A118051DFA239A65990

 </LearningStandardItemRefId>

 </LearningStandardItemRefIds>

 <Abbreviation>RE065583</Abbreviation>

 <Description>Read emergent-reader texts with purpose and understanding.

 </Description>

 <NumberOfItems>6</NumberOfItems>

 <AssessmentItems>

 <AssessmentItem>

 <AssessmentItemRefId>RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR1

 </AssessmentItemRefId>

 <ItemWeightCorrent>1</ItemWeightCorrent>

 <ItemWeightIncorrent>0</ItemWeightIncorrent>

 <ItemWeightNotAttempted>0</ItemWeightNotAttempted>

 </AssessmentItem>

 <AssessmentItem>

 <AssessmentItemRefId>RRRRRRRRRRRRRRRRRRRRRRRRRRRRRRR2

 </AssessmentItemRefId>

 <ItemWeightCorrent>1</ItemWeightCorrent>

 <ItemWeightIncorrent>0</ItemWeightIncorrent>

 <ItemWeightNotAttempted>0</ItemWeightNotAttempted>

 </AssessmentItem>

 </AssessmentItems>

</AssessmentSubTest>

## 8.2 AssessmentScoreTable

Example 1

<AssessmentScoreTable RefId="ST1ST1ST1ST1ST1ST1ST1ST1ST1ST1ST1">

 <ScoreTableVersion>V1.0</ScoreTableVersion>

 <ScoreTablePublishedDate>2011-01-01T15:23:01</ScoreTablePublishedDate>

 <ScoreTableIdentifiers>

 <ScoreTableIdentifier>

 <ScoreTableCode>T100A</ScoreTableCode>

 <ScoreTableCodeType>Client</ScoreTableCodeType>

 </ScoreTableIdentifier>

 </ScoreTableIdentifiers>

 <ScoreTableName>Raw to scale Math Grade 3</ScoreTableName>

 <FromScoreMetric>3478</FromScoreMetric>

 <ToScoreMetric>3479</ToScoreMetric>

 <ScoresValues>

 <ScoreRanges>

 <LowerCut>0</LowerCut>

 <UpperCut>5</UpperCut>

 <DerivedValue>100</DerivedValue>

 </ScoreRanges>

 <ScoreRanges>

 <LowerCut>5</LowerCut>

 <UpperCut>10</UpperCut>

 <DerivedValue>110</DerivedValue>

 </ScoreRanges>

 </ScoreValues>

</AssessmentScoreTable>

Example 2

<AssessmentScoreTable RefId="ST2ST2ST2ST2ST2ST2ST2ST2ST2ST2ST2">

 <ScoreTableVersion>V1.2</ScoreTableVersion>

 <ScoreTablePublishedDate>2011-01-02T15:23:01</ScoreTablePublishedDate>

 <ScoreTableIdentifiers>

 <ScoreTableIdentifier>

 <ScoreTableCode>T100B</ScoreTableCode>

 <ScoreTableCodeType>Client</ScoreTableCodeType>

 </ScoreTableIdentifier>

 </ScoreTableIdentifiers>

 <ScoreTableName>Proficiency Scale Math Grade 3</ScoreTableName>

 <FromScoreMetric>3479</FromScoreMetric>

 <ToScoreMetric>0503</ToScoreMetric>

 <ScoresValues>

 <ScoreRanges>

 <LowerCut>100</LowerCut>

 <UpperCut>120</UpperCut>

 <DerivedValue> Not Proficient</DerivedValue>

 <PassFailIndicator>F</PassFailIndicator>

 <FeedbackList>

 <Feedback>

 <DiagnosticStatement>The student demonstrates partial understanding…

 </DiagnosticStatement>

 <Description>Optional description goes here…</Description>

 <Source>State</Source>

 </Feedback>

 </FeedbackList>

 </ScoreRanges>

 <ScoreRanges>

 <LowerCut>120</LowerCut>

 <UpperCut>130</UpperCut>

 <DerivedValue>Proficient</DerivedValue>

 <PassFailIndicator>P</PassFailIndicator>

 <FeedbackList>

 <Feedback>

 <DiagnosticStatement>The student demonstrates sufficient understanding…

 </DiagnosticStatement>

 <Description>Optional description goes here…</Description>

 <Source>State</Source>

 </Feedback>

 </FeedbackList>

 </ScoreRanges>

 </ScoreValues>

</AssessmentScoreTable>

## 8.3 AssessmentRubric

<AssessmentRubric RefId="R1AR1AR1AR1AR1AR1AR1AR1AR1AR1AR1AR1”>

 <RubricVersion>V1.0</RubricVersion>

 <RubricPublishedDate>2011-01-01T15:23:01</RubricPublishedDate>

 <RubricIdentifiers>

 <RubricIdentifier>

 <RubricId>R105A</RubricId>

 <RubricIdType>Client</RubricIdType>

 </RubricIdentifier>

 </RubricIdentifiers>

 <RubricName>South Carolina Grade 10 Writing</RubricName>

 <ScoringGuildReference>www.myscoringguide.com/scgr10w</ScoringGuideReference>

 <ScoreCodes>

 <ScoreCode>

 <ScoreCodeId>BL</ScoreCodeId>

 <ScoreCodeValue>0</ScoreCodeValue>

 <ScoreCodeDefinition>Blank</ScoreCodeDefinition>

 <ScoreCodeDescriptions>

 <Description>The essay response area was left blank</Description>

 </ScoreCodeDescriptions>

 </ScoreCode>

 <ScoreCode>

 <ScoreCodeValue>1</ScoreCodeValue>

 <ScoreCodeDefinition>Score value 1</ScoreCodeDefinition>

 <ScoreCodeDescriptions>

 <Description>Topic/subject is clear, though it may or may not be explicitly

 stated</Description>

 <Description>Maintains focus on topic/subject throughout the response

 </Description>

 <Description>Organizational structure establishes relationships between and

 among ideas and/or events</Description>

 </ScoreCodeDescriptions>

 <ScoreCodeComments>

 <ScoreCodeComment>

 <CommentCode>20</CommentCode>

 <CommentDescription>Position</CommentDescription>

 </ScoreCodeComment>

 <ScoreCodeComment>

 <CommentCode>30</CommentCode>

 <CommentDescription>Support</CommentDescription>

 </ScoreCodeComment>

 <ScoreCodeComment>

 <CommentCode>40</CommentCode>

 <CommentDescription>Focus</CommentDescription>

 </ScoreCodeComment>

 </ScoreCodeComments>

 </ScoreCode>

 </ScoreCodes>

</AssessmentRubric>