



Innovations in Science Map,  
Assessment & Report Technologies

# I-SMART

## PILOT USER GUIDE

*Participation in the I-SMART pilot does not replace a student's participation in any other assessment program.*

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ASSESSMENT SYSTEMS (ATLAS)

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## Finding Help

When the information in this manual and resources from the I-SMART Pilot webpage (<https://ismart.works>) or the state Dynamic Learning Maps® (DLM®) webpage do not lead to solutions, these contacts can provide additional support.

HINT: Print this page and keep it handy!

Topics	Contact
<ul style="list-style-type: none"><li>• Kite® Student Portal installation</li><li>• General computer support</li><li>• Internet availability</li><li>• Display resolution</li><li>• Issues with sound, headphones, speakers, etc.</li></ul>	Local technology representative
<ul style="list-style-type: none"><li>• Using Student Portal and Educator Portal</li><li>• Assessment questions</li><li>• Test invalidation requirements</li><li>• Assessment window dates</li></ul>	<a href="mailto:kite-support@ku.edu">kite-support@ku.edu</a> Service Desk at 1-855-277-9751
<ul style="list-style-type: none"><li>• Data issues (rosters, enrollment, etc.)</li></ul>	Local assessment coordinator

## When contacting the Service Desk

- **Do not send any Personally Identifiable Information (PII)** for a student via email. Sending is a federal violation of the Family Education Rights and Privacy Act (FERPA). PII includes information such as a student's name or state identification number. Each state has unique PII requirements. Check with your assessment coordinator to find out what student information can be legally emailed in your state.
- **Do send**
  - your contact information (email address and name)
  - your school name (include the district if contacting state-level personnel)
  - error messages, including the testlet number if applicable to the problem

## **AUDIENCE**

This document is intended for teachers of students participating in the I-SMART pilot. Most of the participating teachers already serve as test administrators for the Dynamic Learning Maps® (DLM®) alternate assessment. Note that much of the information about administering the I-SMART assessment is similar to administering DLM assessments. As such, this document will refer users to DLM resources accordingly. The appendix to this document provides information for the few participating teachers who are not familiar with DLM test administrator procedures.

## **I-SMART OVERVIEW & PURPOSE**

I-SMART is a four-year research and development project funded in late 2016 by the United States Department of Education Office of Elementary and Secondary Education, Enhanced Assessment Grant Program. The Maryland State Department of Education leads the project in collaboration with representatives from state departments of education in Missouri, New Jersey, New York, and Oklahoma, as well as advisors. The Center for Accessible Teaching, Learning, and Assessment Systems (ATLAS) at the University of Kansas manages the project.

The purpose of the I-SMART project is to improve achievement of multidimensional science standards for students with and without disabilities through accessible, learning map model-based assessments and score reports. I-SMART integrates DLM science learning map model neighborhoods with cross-disciplinary content in ELA and mathematics.

## **PARTICIPATION & ENROLLMENT**

Teachers recruited for participation in the I-SMART pilot teach in Missouri, New Jersey, New York, and Oklahoma. These states are among the consortium partners for the DLM alternate assessment. Most students who will participate in the I-SMART pilot are students with the most significant cognitive disabilities, who participate in the DLM alternate assessments. Since the I-SMART assessment will be delivered in Kite® Student Portal just like the DLM assessments, these participating students will be automatically enrolled in the I-SMART assessment in Kite Educator Portal. However, testlets will not be available until enrollment data is entered and the student is rostered to the teacher for science. Please note that participating in the I-SMART pilot does not replace a student's participation in the DLM science alternate assessment or other state assessments.

Essential Elements for science are in grade bands: elementary (grades 3-5); middle (grades 6-8); and high school (grades 9-12). Each state decides in which grades science is assessed. Participation in the I-SMART pilot will follow those state decisions (e.g., if the state assesses science at grade 5, students in grade 5 may be included in the I-SMART pilot and will be assessed on the elementary grade band Essential Elements).

## **ACCESSIBILITY**

Teachers may activate needed accessibility features in a student's Personal Needs and Preferences (PNP) Profile within Kite Educator Portal, just as is done for the DLM assessments. However, braille is not available for the I-SMART pilot, so students who are blind and respond only via braille are not eligible to participate in the pilot. Students who are blind or who have significant visual impairments but use computer-provided or human read aloud of text and images and/or a human scribe to mark answers in Student Portal are eligible to participate.

## **KITE SUITE**

I-SMART test administration will be conducted via the Kite system, using both Educator Portal and Student Portal.

- Consult the Educator Portal User Guide under the Manuals and Blueprints tab of the applicable state's page of the DLM website for instructions on using Educator Portal. A brief discussion of Educator Portal as it pertains to I-SMART is provided below.
- If additional directions regarding test administration are needed, including guidelines on allowable and unallowable practices, consult the DLM Test Administration Manual, which is also found under the Manuals and Blueprints tab of your state's page of the DLM website.
- Reminder: Student Portal is available for download under the Kite Suite tab on the DLM website ([www.dynamiclearningmaps.org](http://www.dynamiclearningmaps.org)). Local technology coordinators are typically responsible for installing Student Portal on school-owned computers and tablets used for delivering assessments to students. Verify that installation has occurred and is functioning properly before attempting to assess a student.

*Hint: When logging into Educator Portal to access student data regarding I-SMART, click the dropdown menu beside Assessment Program at the top of the dashboard and select I-SMART (Figure 1).*



Figure 1. Screenshot of the Educator Portal dashboard

## BACKGROUND REGARDING THE CONTENT & DESIGN

The science content covered in the scope of the I-SMART pilot is a portion of a set of Essential Elements (EEs), which are DLM's alternate content standards. EEs for science are linked to the *Framework for K-12 Science Education* and the Next Generation Science Standards (NGSS). For a short description about how the EEs for science were developed, consult the [Development of DLM Essential Elements for Science PDF](#) from the DLM website. Otherwise, understand that I-SMART addresses science EEs teachers are already teaching in relation to the DLM alternate assessment for science. More specifically, two EEs were selected for each grade band to be included in this pilot. Depending on the grade band, the selected EEs measure two of the three assessed science domains: physical science, life science, and Earth and space science.

Teachers experienced in administering the DLM science assessment know there is a full learning map model for English language arts and mathematics, including individual skills and understandings called nodes that reflect varying degrees of difficulty and complexity called linkage levels, which align to the EEs. However, DLM science EEs do not currently have the nodes detail. Therefore, an expanded learning map model with nodes was developed for the EEs selected for the I-SMART assessment to provide an

interconnected representation of ways in which students can develop knowledge, skills, and understandings. Remember, the nodes represent skills. The arrows in the learning map model represent the order of learning from one node and/or linkage level to another.

I-SMART uses neighborhood maps. Each neighborhood map represents one EE and includes the DLM science map with connected foundational, ELA, and mathematics nodes. The neighborhood describes how students can develop the knowledge and skills needed to master an EE. For I-SMART, the linkage levels are Initial, Distal (high school only), Precursor, and Target. Each linkage level contains four nodes in a cluster, or mini progression. Adjacent linkage levels have one overlapping node in common. The item writers used the neighborhood maps to create testlets; I-SMART will be posting the neighborhood maps on the project website in the future.

Like the DLM alternate assessment, the I-SMART pilot will consist of testlets, which are short assessments with conceptually related items that assess a single linkage level per testlet. For I-SMART, students will take two testlets, but both testlets will be administered within a single assessment session with a break in between. Both testlets will assess the same Essential Element but at different linkage levels. The assessed Essential Elements are provided in the following table. Linkage level information for these Essential Elements can be obtained using the Currently Tested Essential Elements for Science document on the Educator Resource Page for Science, which is located on the state pages of the DLM website under the Resources for Educators and District Staff tab.

Table 1. *I-SMART Pilot: Assessed Essential Elements*

<b>Grade Band</b>	<b>Domain</b>	<b>Essential Element</b>	<b>General Description</b>
3-5	Life Science	EE.5.LS2-1	Students describe the movement of matter in plants, animals, decomposers, and the environment.
3-5	Physical Science	EE.5.PS1-3	Students make observations and measurements to identify materials based on their properties (e.g., weight, shape, texture, buoyancy, color, or magnetism).
Middle School	Life Science	EE.MS.LS2-2	Students use models of food chains/webs to identify producers and consumers in different ecosystems.
Middle School	Physical Science	EE.MS.PS1-2	Students interpret and analyze data on the properties (e.g., color, texture, odor, and state of matter) of substances before and after chemical changes have occurred (e.g., burning sugar or burning steel wool, rust, evanescent tablets).

Grade Band	Domain	Essential Element	General Description
High School	Life Science	EE.HS.LS2-2	Students use graphical representations to explain the dependence of an animal population on other organisms for food and their environment for shelter.
High School	Earth & Space Science	EE.HS.ESS3-3	Students analyze data to determine the effects of a conservation strategy on the level of a natural resource

*Note:* Students will be randomly assigned two testlets that assess one of the Essential Elements for their grade band.

### **I-SMART INNOVATIVE TESTLETS**

The I-SMART team developed an innovative testlet (short assessment) design that incorporates evidence-centered design concepts and embedded Universal Design for Learning (UDL) principles:

- multiple means of engagement
- multiple means of representation
- multiple means of action and expression

For more information about UDL, visit [the CAST website \(http://www.cast.org/\)](http://www.cast.org/).

I-SMART testlets begin with a phenomena-based engagement activity, which introduces a construct-relevant choice, followed by a wonder question with alternating sections of science and narrative items. UDL options are incorporated throughout the innovative testlet design based on linkage level.

Testlet items will be mostly single-select multiple choice, although there may be other types of items, including drag and drop (Figure 2).



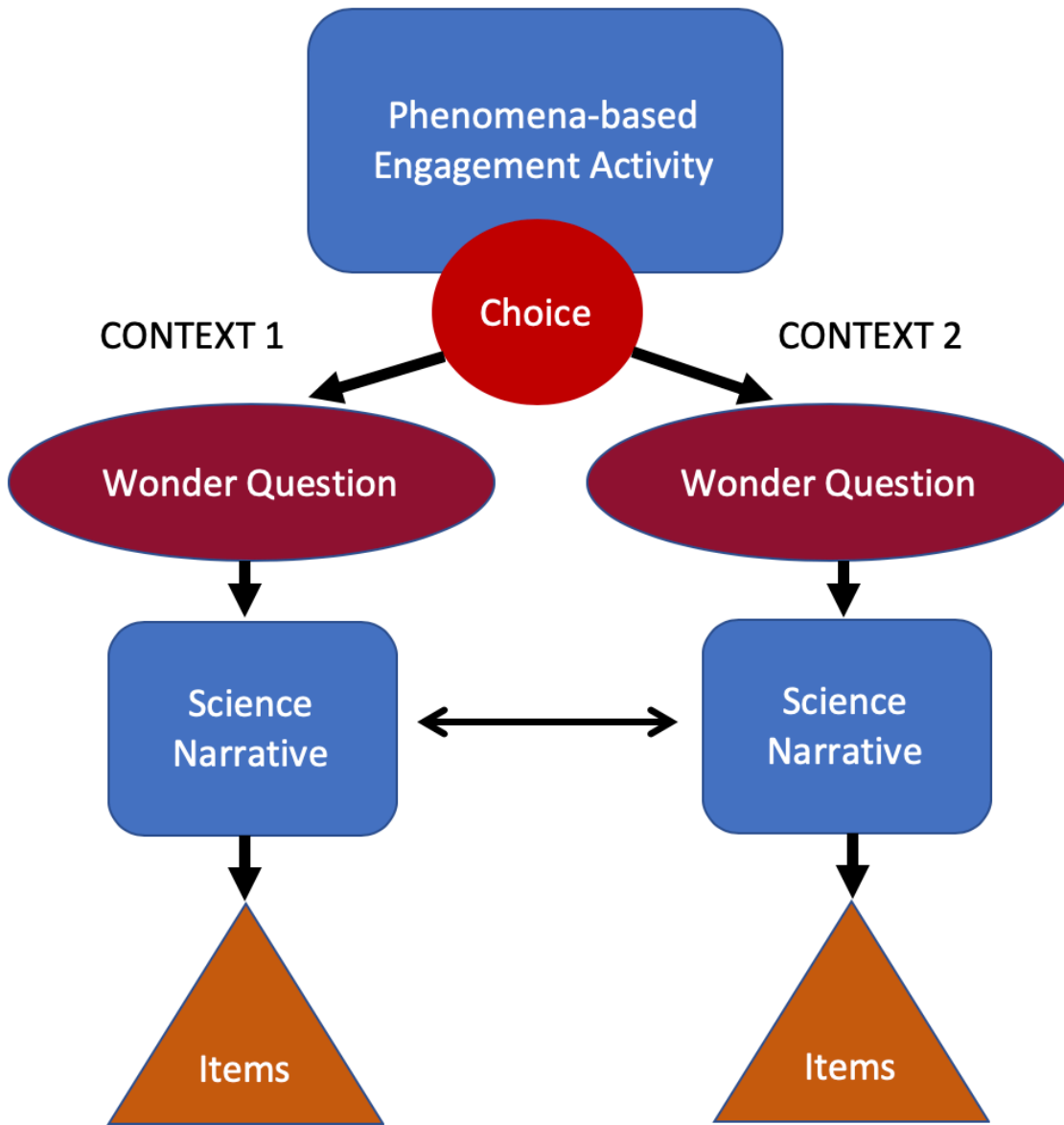
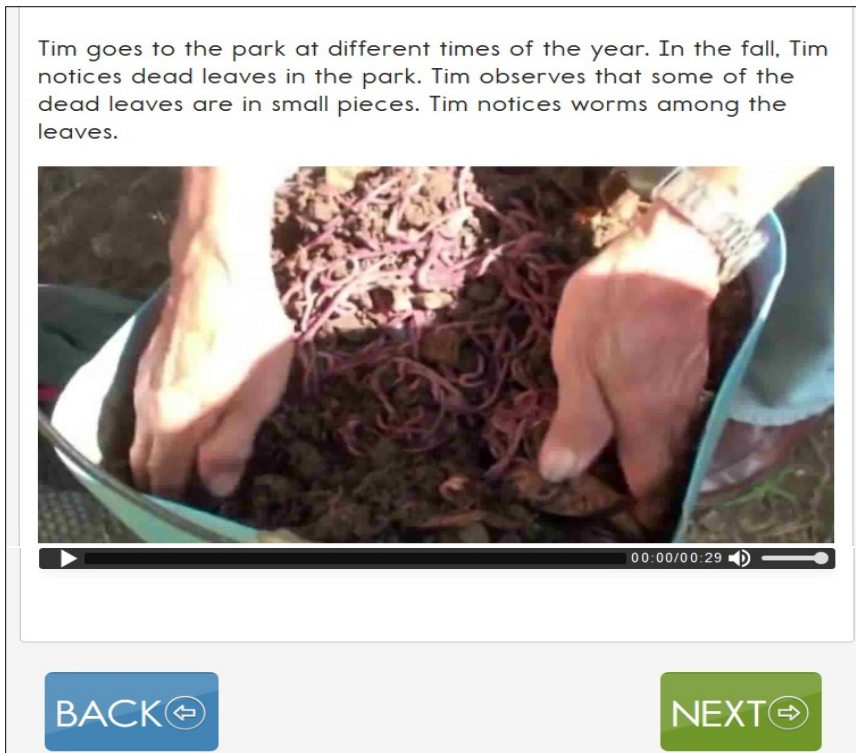
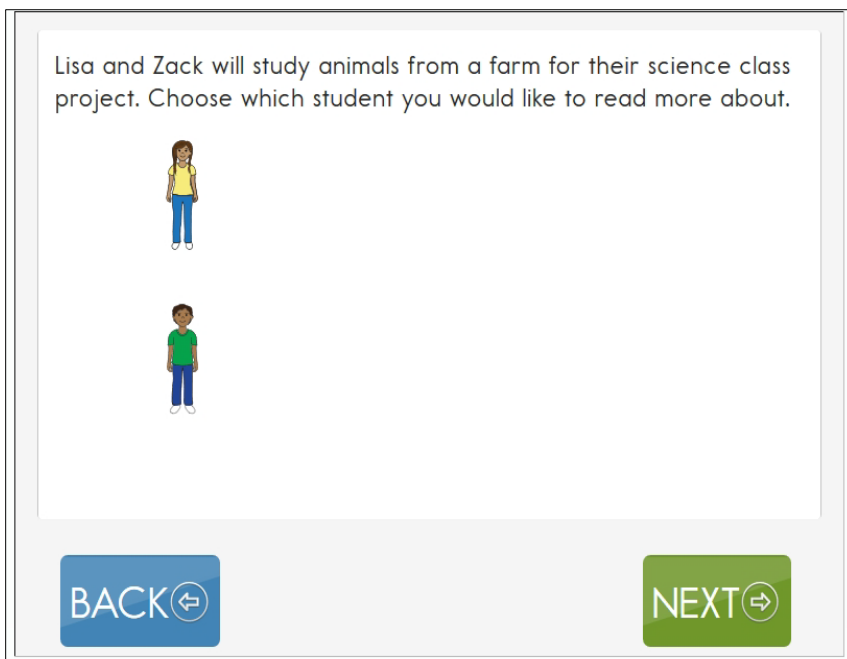


Figure 2. I-SMART Testlet Structure

The following images (Figures 3- 8) are examples of an engagement activity, choice, wonder question, and science narrative as they would appear to a student in Student Portal.



*Figure 3.* Screenshot of an Engagement Activity around Science Phenomenon  
*Note:* Not all engagement activities are videos.



*Figure 4.* Screenshot of a Choice  
*Note:* Target level testlets do not include a choice component.

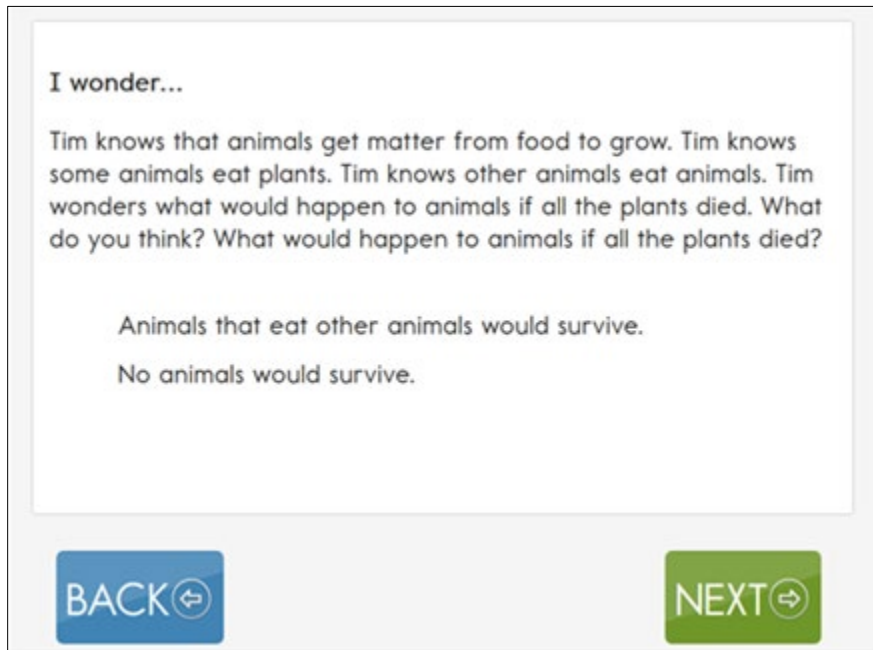


Figure 5. Screenshot of a Wonder Question

Note: Initial level testlets do not include a wonder question. Also, students should select a response even though their answer is not scored.

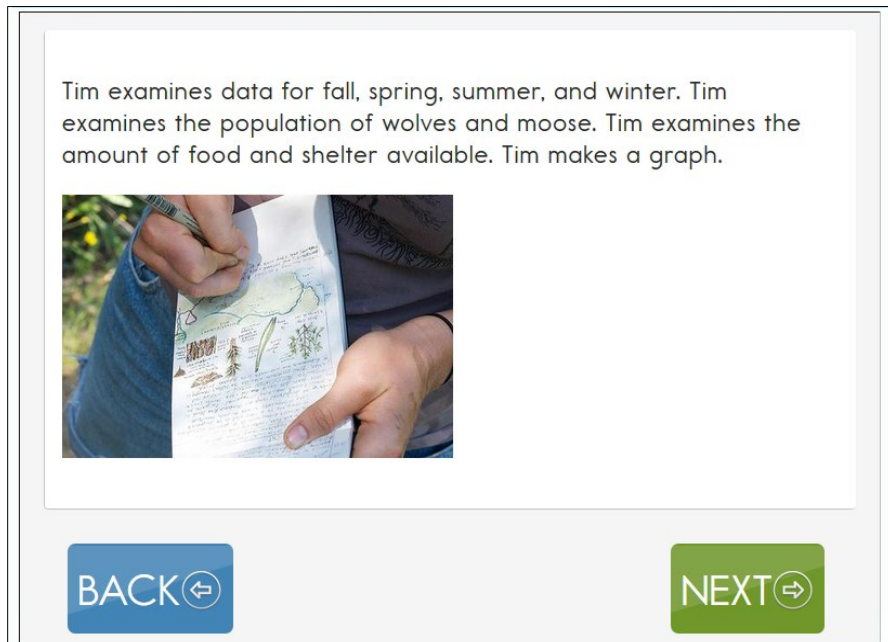


Figure 6. Screenshot of a Science Narrative

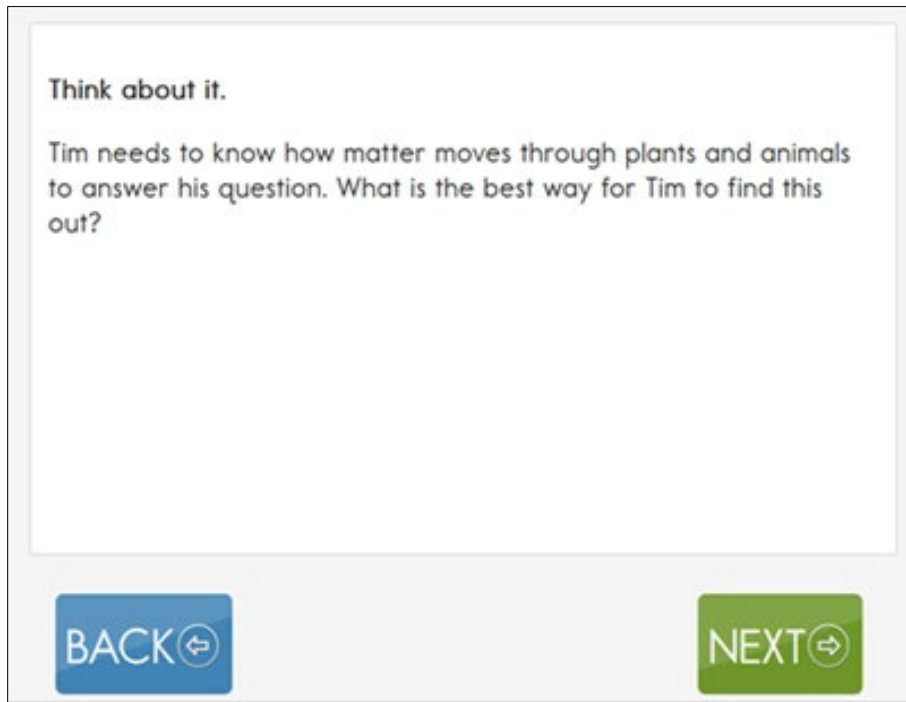


Figure 7. Screenshot of Executive Function (answer provided on the following screen)

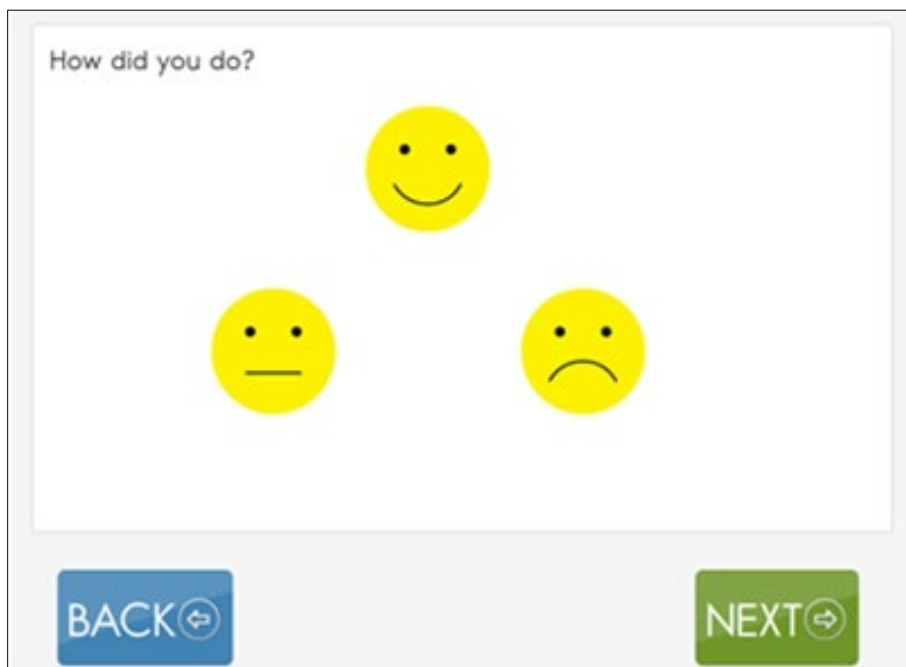


Figure 8. Self-Regulation (Note: the student's answer is not scored.)

## PILOT SCOPE

The I-SMART window will be open from January 22, 2019 to March 1, 2019. Each student will be administered two testlets which each contain 14-16 items. The testlets will both measure the same EE but at two different linkage levels, one that matches the student's current skills and one that is either slightly higher or slightly lower than their current skill level. These testlets are intended to be taken within a single testing session, although it is acceptable to take a break between the two testlets as needed to prevent fatiguing the student. The expected total test administration time is 60 minutes, which includes the student completing both testlets and the teacher completing a survey, per student.

Testlet assignment will be based on the First Contact survey information. Therefore, a student's First Contact survey must be completed before attempting to administer the I-SMART testlets. Note that this is the same First Contact survey used for the DLM alternate assessment. Therefore, if the First Contact survey has already been completed for the current school year's DLM assessment administration, it will not need to be resubmitted for the I-SMART pilot. Also, ensure any accessibility features a student needs have been selected in the student's Personal Needs and Preferences Profile in Educator Portal.

## REASONS TESTLETS MAY NOT BE AVAILABLE

1. The student's First Contact survey has not been completed.
2. The student has not been rostered to the teacher for science.

## TESTLET INFORMATION PAGE

As with DLM testlets, students' I-SMART testlets will have accompanying Testlet Information Pages (TIPs) for the teacher to access in Educator Portal and use to prepare for administering the testlets to the student. The TIPs will be located in the Test Management section (Figures 9-10). *Note: There is no materials collection list for I-SMART, and materials used in I-SMART testlets may be different that those used for the DLM science assessment.*

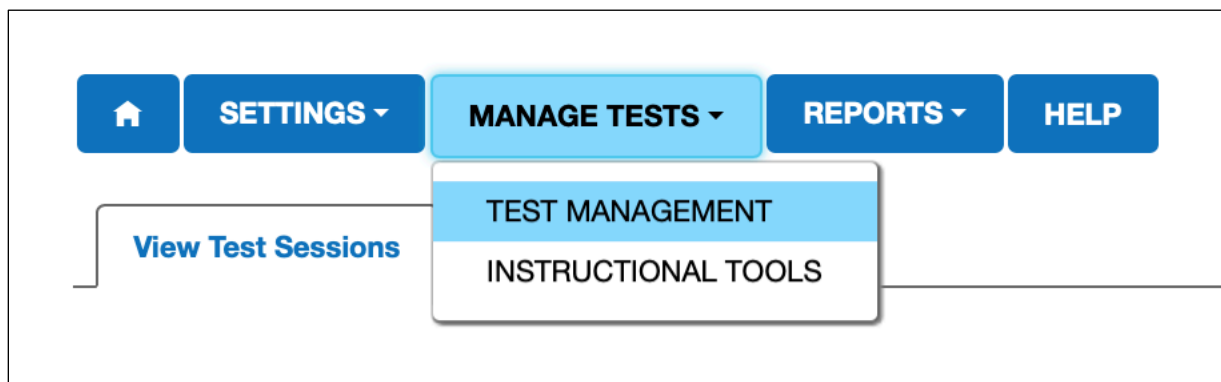


Figure 9. Screenshot of Educator Portal menu

■	Actions	Test Session Name	Tickets	Test Information	Assessment Name
<input type="checkbox"/>					I-SMART

Figure 10. Screenshot of Test Management section of Educator Portal showing the location of the TIP pdf (The student's personally identifiable information (PII) has been masked.)

## TEACHER SURVEY

Each I-SMART testlet ends with a two-question survey for the teacher to complete. Additionally, once both testlets have been completed there will be a slightly longer final survey for the teacher to complete in Student Portal that will take 5 to 10 minutes to complete per student. While voluntary, the survey is important because it includes questions about student engagement, interaction with the testlet as intended, ease of use, device and accessibility feature familiarity, testlet difficulty, and social-emotional contextual factors that may have impacted the student's responses to testlet items. Responses to this survey will be used to inform improvements as the I-SMART assessments are developed further.

## RECAP – QUICK REFERENCE

- Each student completes two testlets
  - Administered in Student Portal
  - Both testlets assess the same EE but at different linkage levels
  - UDL features built into the test design, including choice and self-regulation
  - No impact on other assessments the student takes
- Each teacher completes one final survey per student
  - Delivered in Student Portal after the student has completed the second testlet
  - Optional, but provides an opportunity to voice input/feedback to help in further test development
- Expected total test administration time per student (including completing the teacher survey): 60 minutes

## CHECKLIST FOR I-SMART TESTLET ADMINISTRATION

1.	Send parental notification letter (accessed on the <a href="#">I-SMART website</a> – ismart.works/pilot).
2.	Ensure the student has been rostered to you for science. (Contact the local assessment or district coordinator if rostering has not occurred or if corrections are needed.)
3.	Complete the First Contact survey (if not already completed) and activate any needed accessibility features in the student’s Personal Needs and Preferences Profile in Educator Portal.
4.	Ensure Student Portal has been installed on the intended testing device and that it functions properly.
5.	Retrieve the I-SMART Testlet Information Page (TIP) in Educator Portal and use it to gather materials and make necessary preparations.
6.	Administer the I-SMART testlets in Student Portal.
7.	Complete the teacher survey in Student Portal.

## RESULTS

Formal Individual Student Score Reports will not be provided for the I-SMART pilot at this point in the project. Remember that as a pilot, the assessment is still being developed and analyzed. Remember also that student performance on I-SMART testlets does not impact the student’s results on the DLM alternate assessment for science nor any other assessment the student takes. However, the test administration process itself will provide teachers with a good idea of how a student performed on the I-SMART testlets, and the teacher will have the opportunity to provide feedback via the teacher survey. Student performance and teacher feedback will be used to inform improvements as the I-SMART project is developed further. In particular, results will be used to develop a tracking tool/dashboard that will allow teachers to more easily keep track of instruction provided on Essential Elements and the linkage levels assessed for each student.

# APPENDIX

## **PILOT GROUP 2 – OPTION AVAILABLE IN SOME I-SMART STATES**

Students who do not qualify for Dynamic Learning Maps alternate assessments and are performing below grade level

The second, smaller group of students who may participate in the I-SMART project are students who are **not** eligible for the DLM alternate assessment; these students may or may not have disabilities but perform significantly below grade level. These students exhibit a variety of cognitive characteristics, including difficulties with abstract, inferential, or symbolic thinking; multi-step problems; and grade-level vocabulary, especially words with multiple meanings. Please note that participating in the I-SMART pilot does not replace a student's participation in any general education assessments.

### **GETTING STARTED**

First, send the parent notification letter home with the student(s).

Next, complete the [student screening survey](#) for each student. The survey will be used to help the system assign testlets appropriately and will contain questions about students' science academic skills and mastery of available test content as well as other background information that can be used to confirm eligibility. Users can also access the link to the screener from the pilot website, [ismart.works/pilot](http://ismart.works/pilot).

Information collected from the survey will be used to set up the student's test in the Kite test administration system, which is the same system used by the DLM alternate assessment.

Once the test administration system is set up, the teacher will receive an email with their Educator Portal account information.

### **GROUP 2 ACCESSIBILITY OPTIONS**

Teachers enable accessibility supports in Educator Portal that students will use in Kite Student Portal (see the section Setting Accessibility Options and Retrieving Usernames and Passwords in Educator Portal below). The following accessibility options are available for students:

- Magnification
- Color Overlay
- Inverted Color Choice
- Masking
- Color contrast
- Auditory Calming
- Spoken Audio (read aloud)
- Single Switches

Accessibility supports used by students during regular instruction and that are outside of the test administration system may be used as well (e.g., separate setting, adaptive equipment, etc.).



## Human Read Aloud for Students who are Blind or Visually Impaired

Testlet Information Pages (TIPs) provide Alternate Text for test administrators who will deliver human read aloud that includes descriptions of graphics. TIPs are available in Educator Portal (see the section Setting Accessibility Options and Retrieving Usernames and Passwords in Educator Portal below).

## TEST ADMINISTRATION

Like the students who take the DLM alternate assessment, Group 2 students will complete their I-SMART testlets in Kite Student Portal, but the user interface will be similar to something that a student in Group 2 might use as part of their general assessment experience. Kite Student Portal is available for download, and multiple browsers under the Kite Suite tab of the [DLM website](#) typically downloaded on school-owned computers/tablets by a local technology coordinator. Otherwise, the structure and procedures described earlier in this document will apply to this group of students.

### Kite Student Portal - Technology Practice

Optional technology practice tests are available to help students become familiar with Kite Student Portal. The practice tests can help the student learn to navigate, use tools, answer items, and submit tests.

To access the technology practice tests, launch Student Portal, log in with one of the generic usernames and passwords below (Table 2 and Table 3) and select **Practice First** (Figure 11).

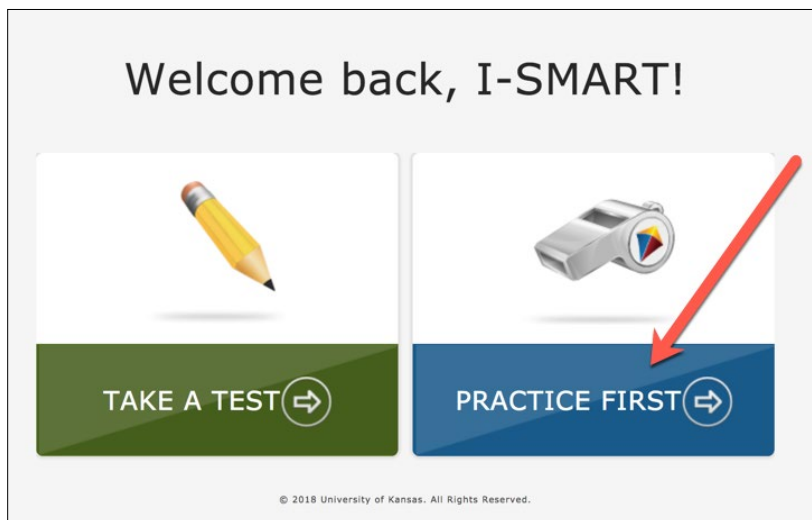


Figure 11. Screenshot of the I-SMART Practice Test

Table 2. I-SMART Practice Logins – No Accessibility Settings Enabled

Grades	Username	Password
All	ismart.practice	FUN66

Table 3. I-SMART Practice Logins – Read Aloud and other Accessibility Options Enabled

Grades	Username	Password
All	pnp.ismart.practice	SEAM9

## **ORIENTATION FOR TEACHERS UNFAMILIAR WITH THE KITE SUITE**

Teachers of students in Group 2 may not have familiarity with the Kite Suite. If you are unfamiliar with the Kite Suite, read this section carefully for additional information.

Teachers will receive an activation email from [kite-support@ku.edu](mailto:kite-support@ku.edu) once an Educator Portal account has been created. Teachers should be on the lookout for this email and check the spam folder if they have not. Once received, teachers will follow the instructions in the email to activate the account and set the password. Users should never share Educator Portal credentials with anyone.

Users can access Educator Portal at [educator.kiteaai.org](http://educator.kiteaai.org). Upon logging in for the first time, teachers will be prompted to sign the electronic Test Security Agreement. Teachers will read the test security standards listed in the agreement and then select the statement below the standards to indicate that they have read them and AGREE to follow them. Finally, teachers will type their name into the name field, click **Save**, and then exit the agreement.

Note: The system is designed to restrict access to student data until the teacher has completed the security agreement.

### Setting Accessibility Options and Retrieving Usernames and Passwords in Educator Portal

1. Login to [Educator Portal](#).
2. Set Student Personal Needs and Preferences (PNP) Profile options, if needed.
  - a. Go to Settings.
  - b. Go to Students.
  - c. Select PNP options, if needed.
3. Get usernames and passwords
  - a. Go to Test Management.
  - b. Get the Usernames and Passwords.
  - c. Access Testlet Information Pages (TIPs) for students who are blind or visually impaired.

### Launching Tests in Student Portal

1. Launch Student Portal (available for download and multiple browsers under the Kite Suite tab of the [DLM website](#); typically downloaded on school-owned computers/tablets by local technology personnel).
2. Login using the student's Username and Password (from Step 3 above). Remember: Teachers do not have credentials for Student Portal. Teacher credentials are for Educator Portal only.

## CHECKLIST FOR I-SMART GROUP 2 TESTLET ADMINISTRATION

The following table lists the general steps for participating in the I-SMART Pilot for Group 2.

<b>1.</b>	Send parental notification letter (accessed on the <a href="#">I-SMART website</a> – <a href="http://ismart.works/pilot">ismart.works/pilot</a> ).
<b>2.</b>	Complete the <a href="#">Group 2 Screening Survey</a> . I-SMART staff will enter the student's information into Educator Portal and create an educator account for you. Watch for login information in your email.
<b>3.</b>	Login to <a href="#">Educator Portal</a> to set any needed accessibility features in the student's Personal Needs and Preferences Profile in Educator Portal. (TIPs pages provide human read aloud graphics descriptions for students who are blind or have visual impairments.)
<b>4.</b>	Ensure Student Portal is installed on the intended testing device and that it functions properly.
<b>5.</b>	Administer the I-SMART testlets in Student Portal.
<b>6.</b>	Complete the Teacher Survey in Student Portal.

## GLOSSARY

<b>Educator Portal (EP)</b>	Educator Portal (EP) is the administrative application where staff and educators manage student data and retrieve reports. Users can access EP via <a href="https://educator.kiteaai.org">https://educator.kiteaai.org</a> . For information on working within EP, see the Data Management Manual and the Educator Portal User Guide on the DLM website.
<b>engagement activity</b>	An activity at the beginning of a testlet that describes a scenario, taps prior knowledge or experience, and/or introduces the concept to be addressed.
<b>Essential Elements (EEs)</b>	Specific statements of knowledge and skills linked to the grade-level expectations identified in K-12 grade-level standards for English language arts and mathematics. Essential Elements in science are linked to the National Research Council's Framework for K-12. Essential Elements build a bridge from the content in the grade-level standards to academic expectations for students with the most significant cognitive disabilities.
<b>First Contact (FC) survey</b>	A survey used to collect background information about students who are eligible for the DLM alternate assessments. The survey goes beyond basic demographic information and includes questions on communication, assistive technology devices, motor and sensory impairments, and academic performance. Core questions from the FC are used to determine a student's first testlet, or initialization, into the assessment.
<b>Kite Student Portal</b>	A secure customized interface used to deliver assessments to students. All students taking the DLM alternate assessment will have unique accounts in Kite Student Portal. Test administrators do not have accounts in Student Portal. See the DLM Test Administration Manual for more information about Student Portal.
<b>linkage level</b>	An incremental level of complexity toward the learning target where an assessment was developed for that particular EE. Science has three linkage levels: Initial, Precursor, and Target. Linkage levels are always related directly to grade-level EEs but at different levels of cognitive complexity. The Target level is most closely related to the grade-level expectation.
<b>Personal Needs and Preferences (PNP) Profile</b>	Student-specific information that informs Kite Student Portal about an individual student's personal needs and preferences. The PNP Profile includes information the system needs to make the student's user interface compatible with their accessibility needs. In Educator Portal, the PNP Profile includes information about display enhancements, language and braille, and audio and environmental supports. Educators who know the student provide the information in the Profile.
<b>testlet</b>	Short for instructionally relevant testlet. A testlet begins with an engagement activity and is followed by several items that together increase the instructional relevance of the assessment and provide a better estimate of a student's knowledge, skills, and understandings than can be achieved by a single assessment item.