Overview of STEM Scale-Up Program Evaluation

Purpose: To provide STEM regional managers, teacher/leaders, and Scale-Up program service providers an overview of the evaluation tasks in support of the Iowa STEM Monitoring Project (ISMP). Two submissions are expected from *all* schools/organizations implementing a STEM Scale-Up program. In addition, student surveys are expected from *some* schools/organizations (selected schools will be notified). Please contact us to discuss specific circumstances or questions about completing the evaluation tasks:

Erin Heiden: 319-273-6506(p), erin.heiden@uni.edu;
Mitch Avery: 319-273-7451(p), mitchell.avery@uni.edu

Instructions for completing the evaluation tasks can be found at http:/iowastem.gov/scale-monitoring

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Student Survey Coordinated by the Center for Social & Behavioral Research at the University of Northern Iowa

Purpose: To assess student interest in STEM topics/careers ***before and after*** participating in a Scale-Up program

Required From: Selected classrooms (who will be notified by email) of students who participated in a Scale-Up program directly or indirectly through their teacher's participation in a STEM professional development.

Method: The student survey is administered **at the beginning** of the school year **and at the end** of the Scale-Up program. Teacher/leaders will be provided with an information letter for parents, a script to read to students, and the one-page student questionnaire. Two versions of the questionnaire are provided to accommodate elementary and middle/high school aged students.

Timeframe: Selected Scale-Up classrooms will have students complete the student survey **before starting** the Scale-Up program, **and on the last day** of the Scale-Up program. Completed questionnaires with cover page must be postmarked by May 30, 2016 to:

UNI CSBR, Attn: Iowa STEM Monitoring Project, Cedar Falls, IA 50614-0402

Educator Survey Coordinated by the Research Institute for Studies in Education at Iowa State University

Purpose: Gather information from educators about Scale-Up program implementation and outcomes

Required From: All educators implementing a Scale-Up program

Method: An online survey (web-link will be provided)

Timeframe: Complete the educator survey within two weeks after the Scale-Up program ends. Educator survey must be completed by May 30, 2016.

Student Participant List Coordinated by Iowa Testing Programs at the University of Iowa
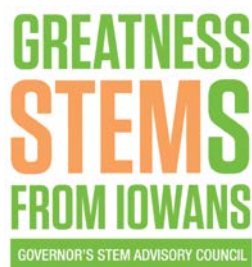
Purpose: To provide the name of Scale-Up student participants AND 1) their 10-digit, state-issued, studentID, and 2) demographic information (date of birth, gender, school information) to enable Iowa Testing Programs to link Scale-Up participants to their Iowa Assessments scores

Required From: Any Scale-Up program directly implemented with students in grades K-12 or indirectly impacting students through their teacher's participation in a Scale-Up professional development program

Method: An Excel template is provided to compile student participant information. To protect student information, the Student Participant List is uploaded directly to Iowa Testing Programs using a secure, password-protected, web-based system.

Timeframe: Participant lists must be uploaded no later than May 30, 2016

Additional Information: To protect student information, the only people who see the individual names of students on the participant lists are the Scale-Up teacher who fills it in and Iowa Testing Programs. This is the same information that is shared between the school and Iowa Testing Programs when students take the Iowa Assessments. Individual student information is never shared with the STEM Advisory Council, STEM regional managers, or ISMP evaluation staff. Iowa Testing Programs uses the student list to link names to students' math and science scores, compiles the scores of all the students, and reports de-identified and summarized results (e.g. average scores, national percentile rank, and STEM interest).

Instructions for STEM Scale-Up Program Evaluation

Purpose: To provide educators of Iowa STEM Scale-Up programs with specific instructions regarding evaluation tasks in support of the Iowa STEM Monitoring Project (ISMP). Two submissions are expected from *all* schools/organizations implementing a STEM Scale-Up program. Student surveys are expected from *some* schools/organizations (selected schools will be notified). Please direct questions to the UNI Center for Social and Behavioral Research:

Erin Heiden - 319-273-6506(p), erin.heiden@uni.edu;
Mitch Avery - 319-273-7451(p), mitchell.avery@uni.edu

Instructions for completing the evaluation tasks can also be found at www.iowastem.gov/scale-monitoring.

I. Student Survey – Administer at the beginning and at the end...

Student Survey data collection is coordinated by the Center for Social & Behavioral Research at the University of Northern Iowa.

> ***New for 2015-2016: Approximately one-half of Scale-Up programs across Iowa will be asked to complete a student survey at the beginning and at the end of their Scale-Up program. You will be notified by email at the start of the school year if you are selected to do this part of the evaluation. Questions about the student survey? Contact Erin Heiden.

Note: The following materials will be provided to you, and are also available at iowastem.go/scale-monitoring. You are responsible for making copies for your students.

- ➢ A notification letter to send home to parents before students complete the questionnaire
- ➢ A one-page student questionnaire (Two versions provided to accommodate different grade levels)
- ➢ A script to read to students when you administer the survey
- ➢ Cover page with your contact information to return completed questionnaires directly to UNI

Beginning of the year STEM Student Survey – Due September 30, 2015

1. Send home the notification letter to parents about the STEM Scale-Up Student Survey at the beginning of the school year

2. Schedule a time to administer the pre-test student survey as close as possible to the start of the school year prior to beginning the STEM Scale-Up program (Recommended by September 30)

3. Choose the version of the survey most appropriate for the grade level of your students, and make copies

4. Before handing out the student survey, read the script out loud to students

5. Hand-out the one-page student questionnaire

6. After students complete the questionnaire, collect and place in an envelope

7. Complete the cover page and send the cover page with questionnaires to UNI:

UNI CSBR
Attn: Iowa STEM Monitoring Project
Cedar Falls, IA 50614-0402

<u>End of year STEM Student Survey – Due May 30, 2016</u>

1. Schedule a time to administer the end of year (post-test) student survey on the last day of the STEM Scale-Up program (or as close as possible to the end date).

2. Choose the version of the survey most appropriate for the grade level of your students, and make copies

3. Before handing out the student survey, read the script out loud to students

4. Hand-out the one-page end of year student questionnaire

5. After students complete the questionnaire, collect and place in an envelope

6. Complete the cover page and send the cover page with questionnaires to UNI:

> UNI CSBR
> Attn: Iowa STEM Monitoring Project
> Cedar Falls, IA 50614-0402

II. Educator Survey - Submit at the end

Educator Survey is coordinated by the Research Institute for Studies in Education, Iowa State University

1. Go to http://iowastem.gov/scale-monitoring

2. Click the "Educator Survey" link to go to the online survey

3. Answer each question in the online survey

Deadline: As soon as possible after the last day of the STEM Scale-Up program.
All surveys must be completed by May 30, 2016.

III. Student Participant List - Submit at the end

Student Participant List data collection is coordinated by Iowa Testing Programs at the University of Iowa.

Note: A Student Participant List is required from any Scale-Up program directly implemented with students in grades K-12 or indirectly impacting students through their teacher/leader's participation in a Scale-Up professional development program.

1. Go to http://iowastem.gov/scale-monitoring

2. Download the "Student Participant List (Excel template)"

3. Enter each STEM Scale-up student participant's **full first-name and last-name** (No abbreviations or nicknames, please); *AND*

   a. The student's **10-digit, state-issued student ID number;**

   b. The student's **school district, school building name, birthdate, and gender**

   > *Note: The state-issued, studentID is a unique 10-digit number assigned by the Iowa Department of Education; it is not the student's social security number or local school ID. If you do not have access to studentID numbers, you may be able to get assistance from your building's guidance counselor or principal. All students in public and accredited non-public schools are required to use the Iowa Department of Education's StateID system. In some cases, it may not be possible to provide the Scale-Up participant's state-issued-studentID, particularly if your Scale-Up program was implemented in an out-of-school setting. If the student's state-issued-studentID is unknown, please be sure to include student's name, school, birthdate and gender.*

4. Upload the completed Excel document

    Note: Since this document contains protected student information, it must be submitted directly from the school/club/organization to Iowa Testing Programs at the University of Iowa. Do not submit this document to the STEM Regional Manager, STEM programming service providers, or anybody else.

    a. Go to http://iowastem.gov/scale-monitoring

    b. Click on "Upload the Student Participant List Here"

        i. The link will take you to Iowa Testing Programs at the University of Iowa. (Direct link: itp.education.uiowa.edu/stem/)

        ii. Enter access code: 7d5yT#X&RN38@4T (Effective 2015-2016)

Deadline: Submit as soon as possible after the end date of the Scale-Up program. Student participant lists must be uploaded no later than May 30, 2016.

University of Northern Iowa and
Iowa Governor's STEM Advisory Council
STEM Scale-Up Program Student Survey

Information and Parental Notification

Dear Parent:

Your child is taking part in a program funded by the State of Iowa to increase interest and achievement in science, technology, engineering, and mathematics (STEM). To find out about the ways this and similar programs may impact interest in STEM among youth, we are conducting a survey of youth at the beginning of the school year and at the end. The survey is sponsored by the Iowa Governor's STEM Advisory Council. The content of the survey includes questions related to youth interest in STEM and interest in someday pursuing a STEM career. Iowa will use the information to improve and enhance STEM programs for youth. The student survey is being managed by the University of Northern Iowa.

There is very little or no risk to your child for participating. Your child's privacy is protected, student names or other identifying information are not collected on the student surveys, and any reports of findings are for large groups of students combined without the names of schools being mentioned. Your child will not receive any special benefits for taking part in the survey, although results may help similar children in the future. We would like as many students as possible that take part in Scale-Up programs to respond to the survey as this enhances the quality of the findings, but participation is voluntary. Your child is free to stop answering questions at any point in the survey, as well as decide not to participate at all. No action will be taken against you or your child if your child does not participate.

If you have questions about the project, you can contact Dr. Erin Heiden, University of Northern Iowa, at 319-273-2105. You can also contact the office of the Human Participants Coordinator, University of Northern Iowa, at 319-273-6148, for answers to questions about the rights of research participants and the participant review process.

If you do not wish for your child to take part in this survey, please inform your child's teacher or Erin Heiden at the University of Northern Iowa.

Teacher/Leaders – Please read to students before administering the student survey

6TH THROUGH 12TH GRADE

SCRIPT for program leader/teacher announcement (STUDENT ACTIVITY):

You are participating in a science, technology, engineering, and math program. Organizers of the program are curious how the program impacts student attitudes. To find out, I am asking you to complete a short questionnaire. You are under no obligation to complete the questionnaire and your decision will have no impact on your standing in this class in any way. Do not write your name on the questionnaire. When you have finished, place it face-down on your desk. When everyone is done, I will come around with an envelope for you to place your sheet in.

SCRIPT for teacher announcement (TEACHER PROFESSIONAL DEVELOPMENT):

Students, I am participating in a program about teaching science, technology, engineering, and math. Organizers of the program are curious how teacher participation in the program impacts student attitudes. To find out, I am asking you to complete a short questionnaire. You are under no obligation to complete the questionnaire and your decision will have no impact on your standing in this class in any way. Do not write your name on the questionnaire. When you have finished, place it face-down on your desk. When everyone is done, I will come around with an envelope for you to place your sheet in.

K THROUGH 5TH GRADE

SCRIPT for program leader/teacher announcement (STUDENT ACTIVITY):

You are taking part in a science, technology, engineering, and math program. Organizers of the program are curious how the program impacts students. To find out, I am asking you to answer a few questions. You do not have to answer the questions and nothing bad will happen if you don't answer them. Do not write your name on the sheet. When you have finished, put it face-down on your desk. When everyone is done, I will come around with an envelope for you to put your sheet in. *[If necessary for age group, read questions and responses to students.]*

SCRIPT for teacher announcement (TEACHER PROFESSIONAL DEVELOPMENT):

Students, I am taking part in a program about teaching science, technology, engineering, and math. Organizers of the program are curious how the program impacts students. To find out, I am asking you to answer a few questions. You do not have to answer the questions and nothing bad will happen if you don't answer them. Do not write your name on the sheet. When you have finished, put it face-down on your desk. When everyone is done, I will come around with an envelope for you to put your sheet in. *[If necessary for age group, read questions and responses to students.]*

Iowa STEM Scale-Up Program
Cover Page for Student Surveys

School/Club/Organization Name:_____

If school-based, name of school district:_____

Name of person submitting questionnaires:_____

Email:_____

We will send you an email confirmation when we receive your surveys.

Address (street, city, ZIP):_____

_____

County:_____

Iowa STEM Region (NW, NC, NE, SW, SC, SE):_____

Name of STEM Scale-Up Program (Check all that apply):

☐ A World in Motion
☐ Curriculum for Agricultural Science Education (CASE)
☐ Defined STEM
☐ Engineering is Elementary in Iowa (EiE)
☐ FIRST Tech Challenge
☐ Hyperstream and VREP
☐ Kidwind: Wind Power & Renewable Energy

☐ National STEM League: TEN80
☐ Pint Size Science: 1 and 2
☐ Project Lead The Way (PLTW) Computer Science and Software Engineering
☐ Project Lead The Way (PLTW) Engineering
☐ Project Lead The Way (PLTW) Gateway
☐ Project Lead The Way (PLTW) Launch
☐ Spatial-Temporal (ST) Math

Approx Start Date of Scale-Up Program:_____

Approx End Date of Scale-Up Program:_____

Number of student participants:_____

Number of completed questionnaires:_____

Please return forms to: UNI CSBR
                            Attn: Iowa STEM Monitoring Project
                            Cedar Falls, IA 50614-0402

<u>Beginning of the Year Student Survey</u>
Early Elementary School Range

To be completed before starting Scale-Up Program

These questions are about your interest in science, computers, and math. You do not have to answer the questions. You can stop at any time. If you decide to stop, nothing bad will happen. If you choose not to answer the questions, please sit quietly until everyone is done.

1. Are you... _____ Boy

   _____ Girl

2. How old are you? _____ Years

3. How much do you like <u>math</u>?

1	☺	I like it a lot
2	😐	It's okay
3	☹	I don't like it very much

4. How much do you like <u>science</u>?

1	☺	I like it a lot
2	😐	It's okay
3	☹	I don't like it very much

5. How much do you like using <u>computers</u> and technology?

1	☺	I like it a lot
2	😐	It's okay
3	☹	I don't like it very much

6. How much do you like to create and build things?

1	☺	I like it a lot
2	😐	It's okay
3	☹	I don't like it very much

7. When you grow up, how much would you like to have a job where you use science, computers, or math?

1	☺	I would like it a lot
2	😐	It would be okay
3	☹	I would not like it very much

8. What is the first letter of your middle name? _____

9. How many older brothers and sisters do you have? _____

10. What is the first letter of your mother's name? _____

11. What color is your mother's car?

    _____

End of the Year Student Survey
Early Elementary Version

To be completed after finishing Scale-Up Program

These questions are about your interest in science, computers, and math. You do not have to answer the questions. You can stop at any time. If you decide to stop, nothing bad will happen. If you choose not to answer the questions, please sit quietly until everyone is done.

1. Are you..._____ Boy

   _____ Girl

2. How old are you? _____ Years

3. How much do you like math?

   1 ☺ I like it a lot

   2 😐 It's okay

   3 ☹ I don't like it very much

4. How much do you like science?

   1 ☺ I like it a lot

   2 😐 It's okay

   3 ☹ I don't like it very much

5. How much do you like using computers and technology?

   1 ☺ I like it a lot

   2 😐 It's okay

   3 ☹ I don't like it very much

6. How much do you like to create and build things?

   1 ☺ I like it a lot

   2 😐 It's okay

   3 ☹ I don't like it very much

7. When you grow up, how much would you like to have a job where you use science, computers, or math?

   1 ☺ I like it a lot

   2 😐 It's okay

   3 ☹ I don't like it very much

8. What is the first letter of your middle name? _____

9. How many older brothers and sisters do you have? _____

10. What is the first letter of your mother's name? _____

11. What color is your mother's car?

    _____

Beginning of the Year Student Survey
Middle School / High School Version

To be completed before starting Scale-Up Program

These questions ask about your interest in science, computers, and math. You do not have to answer the questions. You can stop at any time. If you decide to stop, nothing bad will happen. If you choose not to answer the questions, please sit quietly until everyone is done.

1. Are you... _____ Boy

   _____ Girl

2. How old are you? _____ Years

3. How interested are you in math?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

4. How interested are you in science?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

5. How interested are you in computers and technology?

   1   Very interested w
   2   Somewhat interested
   3   Not at all interested

6. How interested are you in designing, creating, and building machines and devices (also called engineering)?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

7. As an adult, how interested would you be in having a job that uses skills in science, technology, math, or engineering?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

8. What is the first letter of your middle name? _____

9. How many older brothers and sisters do you have? _____

10. What is the first letter of your mother's name? _____

11. What color is your mother's car?

   _____

End of the Year Student Survey

Middle School / High School Version

To be completed after finishing Scale-Up Program

These questions ask about your interest in science, computers, and math. You do not have to answer the questions. You can stop at any time. If you decide to stop, nothing bad will happen. If you choose not to answer the questions, please sit quietly until everyone is done.

1. Are you... _____ Boy

   _____ Girl

2. How old are you? _____ Years

3. How interested are you in math?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

4. How interested are you in science?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

5. How interested are you in computers and technology?

   1   Very interested w
   2   Somewhat interested
   3   Not at all interested

6. How interested are you in designing, creating, and building machines and devices (also called engineering)?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

7. As an adult, how interested would you be in having a job that uses skills in science, technology, math, or engineering?

   1   Very interested
   2   Somewhat interested
   3   Not at all interested

8. What is the first letter of your middle name? _____

9. How many older brothers and sisters do you have? _____

10. What is the first letter of your mother's name? _____

11. What color is your mother's car?

   _____

Iowa STEM Scale-Up Program_Student Participant List
Download this Excel Template at http://iowastem.gov/scale-monitoring
Upload the completed student participant list to Iowa Testing Programs at University of Iowa
Use the following link: itp.education.uiowa.edu/stem/
And access code: 7d5yT#X&RN38@4T (Effective 2015-2016)

Contact Information	Instructions
	2015-2016 Scale-Up Programs
Scale-Up Program Name:	**A World in Motion (AWIM)** **National STEM League: TEN80**
	CASE for Ag **SCI Pint Size Science**
Scale-Up StartDate	**Defined STEM** **PLTW: Comp Sci & Software Eng.**
	Engineering is Elementary **PLTW: Engineering**
Scale-Up EndDate	**FIRST Tech Challenge** **PLTW: Gateway**
	HyperStream and VREP **PLTW: Launch**
Teacher/Leader Name:	**KidWind: Wind Power /Renewable Energy Spatial-Temporal (ST) Math**
	Contact Information: Enter name of the teacher or leader who conducted the Scale-Up Program and contact information
Email Address:	School District Name: Name of the school district the youth attends
	School Building Name: Name of the school building the youth attends
School District or Organization	**Student Participant Name:** Enter full first-name and last-name of each youth participant (No abbreviations or nicknames please)
School Building	**10-digit-state-issued-studentID:** Enter the unique 10-digit number assigned by the Iowa Department of Educaiton to all students in public and accredited non-public schools; it is not the student's social security number or local school ID. (See Notes.)
	Birthdate: Enter birthdate using mm/dd/yyyy format
STEM Hub Region:	**Notes:** Add rows as needed for additional participants.

Note1: The state-issued, studentID is a unique 10-digit number assigned by the Iowa Department of Educaiton; it is not the student's social security number or local school ID. As a teacher/leader, you may not have access to students' 10-digit, state-issued studentIDs. If you do not have access to your students' studentID number, you may be able to get assistance from your building's guidance counselor or principal. All students in public and accredited non-public schools are required to use the Iowa Department of Education's StateID system, so every student should have one. In some cases, it may not be possible to provide the Scale-Up participant's state-issued-studentID, particularly if your Scale-Up Program was implemented in an out-of-school setting. If the student's state-issued-studentID is unknown, please be sure to include student's name, school, birthdate and gender.

Note2: Since this document contains protected student information, it must be submitted directly from the school/club/organization to Iowa Testing Programs at the University of Iowa. Do not submit this document to the STEM Regional Manager, STEM programming service providers, or anybody else.

FirstName(Full)	LastName	10-digit-state-issued-StudentID	Male /Female	Birthdate (mm/dd/yyyy)	School District Name	School Building Name