

# **Using RITES Investigations:**

**A Report Based on a Survey of Cohort 1 Teachers, Spring 2010**

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## **Introduction**

The Rhode Island Technology Enhanced Science (RITES) project is a five-year initiative funded primarily by a \$12.5 million grant from the National Science Foundation's Math and Science Partnerships program (NSF award #0831974). Core partners are: the University of Rhode Island, Rhode Island College, Johnston (RI) Public Schools, and the Rhode Island Department of Education. Supporting partners include Brown University, the Community College of Rhode Island, the Rhode Island Economic Development Corporation, and the Concord Consortium. Project evaluation is being provided by the Education Alliance at Brown University.

During the first three years of the project, which began in September 2008, teams of teachers, faculty, researchers, and instructional designers are creating curriculum materials in the form of "Investigations." Each Investigation consists of computer-based materials for students that address specific RI science standards through guided inquiry using probes for laboratory investigations, computational models to provide virtual environments, and other software tools. The first set of nine Investigations was developed for use during the 2009-2010 academic year.

In order to learn more about the use of the RITES Investigations a number of research and evaluation activities have been conducted, including visits to selected classrooms by staff of the Education Alliance, and a meeting at which RITES teachers presented posters about their use of an Investigation. This document is a report on a survey of the cohort 1 RITES teachers (whose participation began in the summer of 2009) that was conducted during the spring of 2010. These science teachers had agreed to use a RITES Investigation during the 2009-2010 school year.

Additional information about the RITES project can be found on the Web (see, for example, <http://rites.concord.org>).

## **Procedure**

An experienced researcher at the Concord Consortium, Andrew Zucker, developed the survey that is the subject of this report. He consulted with other team members on the RITES project and revised the draft survey in response to comments and suggestions. The survey was designed to take only a few minutes to complete. It was implemented as an online survey using the web-based SurveyMonkey software system ([www.surveymonkey.com](http://www.surveymonkey.com)).

One RITES teacher pilot-tested the survey, in part to determine how long it would take to answer the questions. It took about 10 minutes to respond to the 20 items on the survey, most of which are in the form of multiple-choice questions. (See Appendix B for a printed copy of the survey.)

The RITES Project Manager, Howard Dooley, conducted a separate online survey of cohort 1 teachers that asked, among other things, when teachers planned to use an Investigation with students. Using teachers' responses to that question, Dr. Zucker sent a succession of emails to cohort 1 teachers asking them to complete the online survey about using a RITES Investigation, trying to time this request to immediately follow the date when each teacher said they planned use the materials in a classroom. Dozens of email requests and reminders were sent out over a period of several months. Following a final request to complete the survey that was posted on the RITES online site for participating teachers (RIEPS), the survey was closed June 11, 2010.

### **Response Rate**

There were 94 cohort 1 teachers, all of them drawn from middle or high schools in the six cohort 1 Rhode Island school districts (Cranston, Coventry, Johnston, Lincoln, Scituate, and Woonsocket). The 39 completed survey represent a response rate of 41 percent.

There are a variety of reasons why more than half of the cohort 1 teachers did not respond to the survey. Some teachers were not able to use an Investigation with students due to technology problems in the school where they taught. (For example, Woonsocket middle and high schools faced difficult challenges with the technology infrastructure.) A few teachers used Investigations only with paper-and-pencil, which meant that many survey items were not applicable to them. Other teachers may have felt that the posters they prepared for an April RITES meeting provided sufficient information about their use of an Investigation.

In some respects the survey respondents represent the universe of cohort 1 teachers reasonably well. For example, respondents taught students in all grades from 6 - 12, and as a group the teachers who responded used all nine of the Investigations. At the same time, there is no way to know how representative the respondents' experiences and opinions are of the full set of cohort 1 teachers who used an Investigation.

### **Findings**

#### ***The Respondents' Schools***

Ten of the twelve participating schools were represented among the respondents. There were no respondents from Johnston High School or Woonsocket High School. Exhibit 1 shows where the 39 respondents taught.

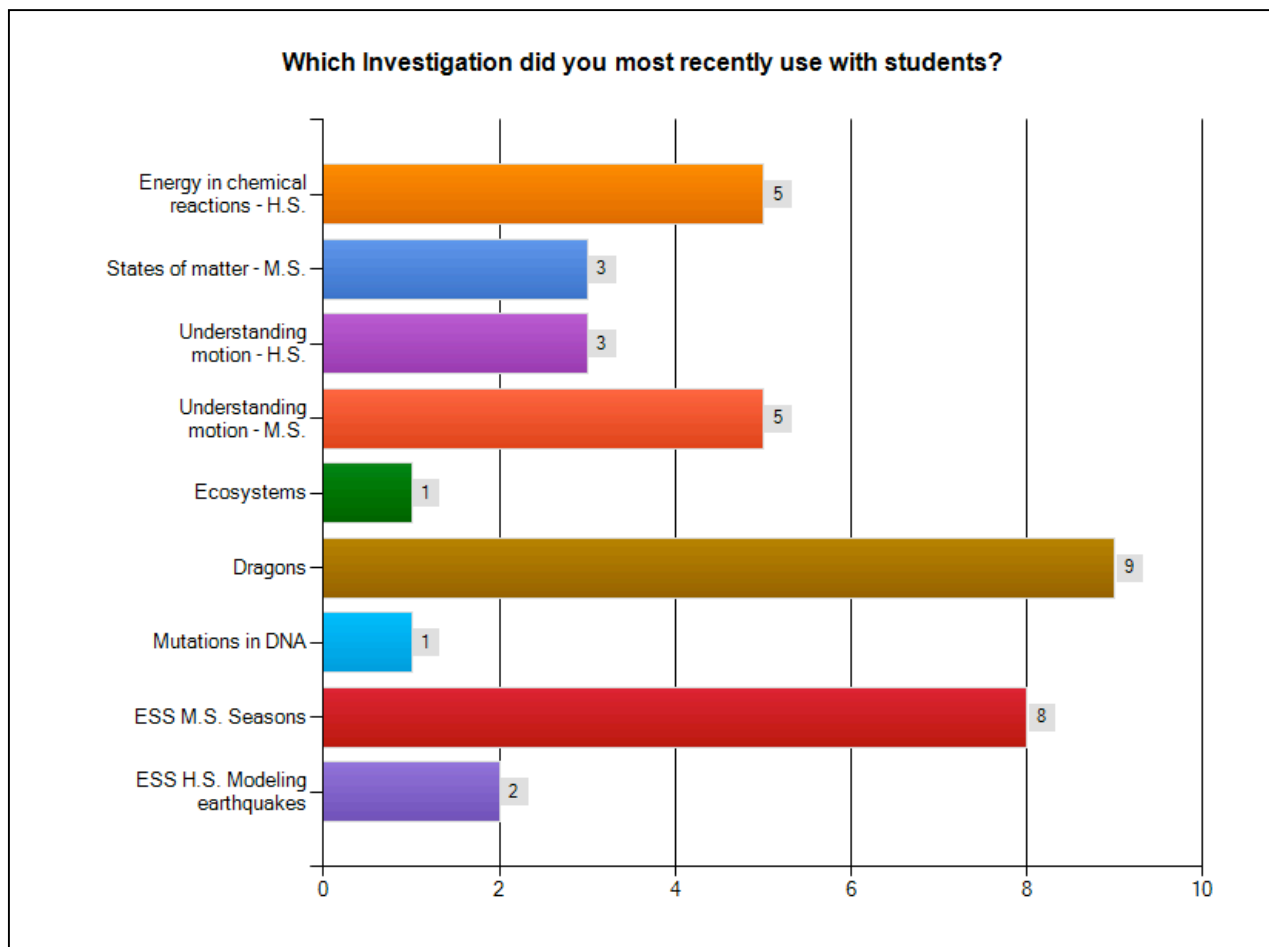
**Exhibit 1: In which school do you work?**

<b>School</b>	<b>Number of Respondents</b>
Coventry High School	8
Coventry: Alan S. Feinstein Middle School	8
Cranston High School	4
Cranston: Hugh B. Bain Middle School	1
Johnston High School	0
Johnston: Ferri Middle School	7
Lincoln High School	1
Lincoln Middle School	3
Scituate High School	3
Scituate Middle School	2
Woonsocket High School	0
Woonsocket Middle School	2
<i>Total</i>	<i>39</i>

### ***Who Used the Investigations and Which Ones?***

Two respondents skipped the question asking which Investigation they used. As a group, the other 37 respondents used all nine of the Investigations, as shown in Exhibit 2. “Seasons” for middle school students and “Dragons” were the two most frequently used Investigations.

**Exhibit 2**



There was a large variation in the number of sections with which a teacher used an Investigation, with one-third of the teachers reporting use with only a single section or class, while 10% of the teachers used an Investigation with five different sections. (See Exhibit 3.) Altogether, the 39 teachers reported using an Investigation with 101 sections of students, or an average of about 2.6 sections per teacher.

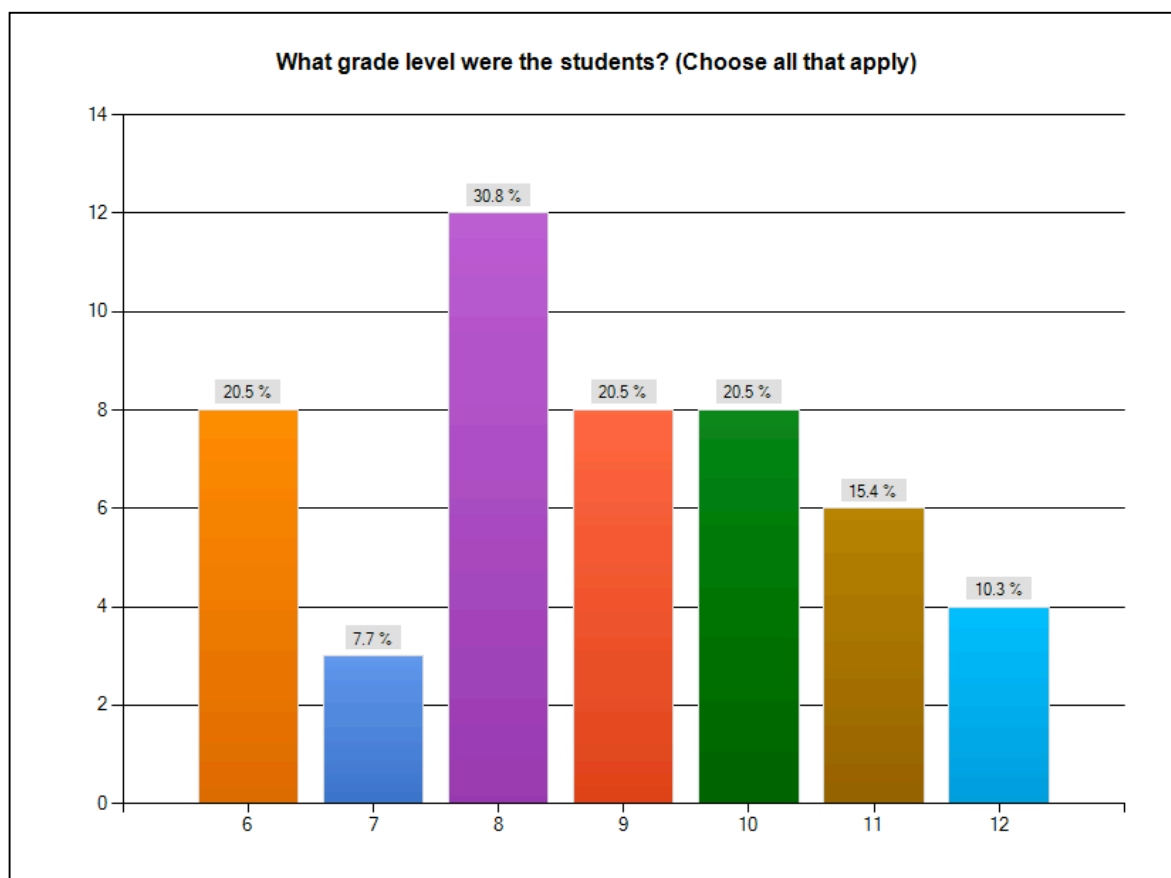
Classes using Investigations included General Science, Physical Science, 8th Grade Science, Biology, Chemistry, Earth and Space Science, and Foundations of Physics. Some of the sections were honors; most were not. A few respondents were Special Education teachers who would have helped selected students, rather than a whole class, to use an Investigation.

**Exhibit 3: With how many different classes or sections did you use this Investigation?**

Number of Sections per Teacher	Number of Teachers
1	13
2	9
3	2
4	11
5	4

The distribution of students by grade level is shown in Exhibit 4. It is difficult to derive the percentages of students by grade level who used an Investigation because of variations in class sizes and other factors. However, Exhibit 4 suggests that perhaps half of students were in grades 6-8 and half in grades 9-12.

**Exhibit 4**



***How Were Investigations Used?***

Teachers used the Investigations in many ways. Twenty-one teachers (about 54% of the respondents) had small groups of students use computers to run an Investigation, while 18

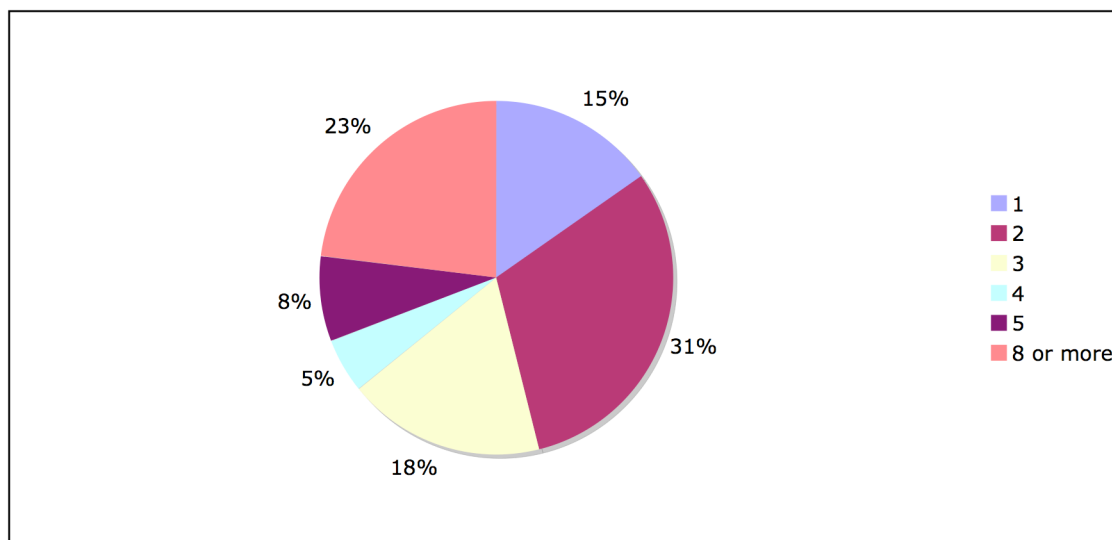
teachers (46%) used a computer projector to show an Investigation to the whole class. Sixteen teachers (about 44%) had students use printed copies of an Investigation.

Twenty-four teachers (slightly more than 60%) presented an Investigation in only one of these ways: 10 teachers indicated they *only* used small groups of students at a computer, 8 teachers *only* presented with a computer projector, and 6 used *only* printed copies. Nine teachers used two methods of presenting an Investigation, and six teachers used three methods.

Not surprisingly, having students individually using a computer for an Investigation was the least frequent instructional approach, with only 5 teachers (about 13%) indicating they did so. In schools where every student uses a laptop, such as middle schools in Maine, it would presumably be more common to find students engaged individually with a computer, but there are few such schools in Rhode Island, and none among the 12 cohort 1 schools.

There was an unexpectedly large variance in the number of class periods spent with an Investigation. Although teachers most commonly reported spending two periods on an Investigation (31%), almost one-fourth of the teachers reported spending 8 or more periods. (See Exhibit 5.)

**Exhibit 5: How many periods did the class work on this Investigation?**



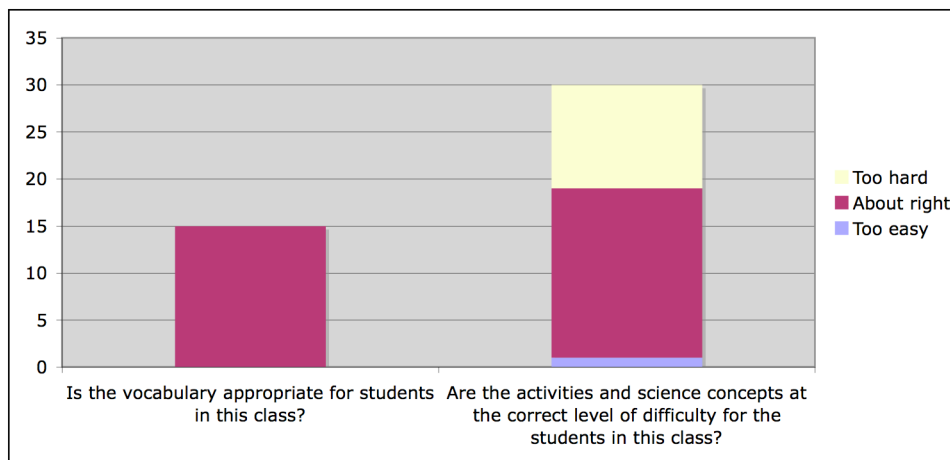
Teachers were asked which of the activities in an Investigation they used with students. The majority of teachers reported using all of the activities; however, a large minority reported using fewer, sometimes as few as one activity.

### ***Teachers' Reports of Students' Experiences***

Teachers were asked whether the vocabulary used was appropriate for their students, and whether the activities and concepts were too easy, about right, or too hard. The data are shown in Exhibit 6. It is evident that the vocabulary was considered appropriate for students, and that a majority of teachers also thought the difficulty level of the concepts and activities was about

right. However, a significant number of teachers (37% of those responding to this item) thought that the concepts and activities in the Investigation they taught were too hard for their students.

**Exhibit 6: Please rate these two aspects of the Investigation**

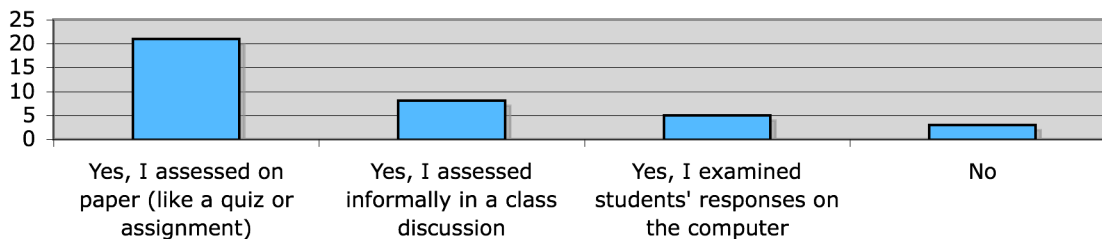


Almost all teachers felt that their students were either moderately engaged (74%) or highly engaged (24%) with the Investigations. Similarly, the great majority of teachers thought that the quality of science questions students asked as they used an Investigation were either about the same as usual (68%) or better than usual (24%).

Students and teachers often encountered technical problems as they used Investigations, with 61% of teachers reporting “many technical difficulties,” 28% reporting “some technical difficulties,” and only 11% reporting “no technical difficulties.” Appendix A shows comments about technical difficulties that were provided by 22 of the teachers.

Students’ work using the Investigations was usually assessed by the teacher in some way (as shown in Exhibit 7). Interestingly, only five teachers reported that they examined students’ responses on the computer, a capability that was built into each Investigation.

**Exhibit 7: Did you assess students’ work on this Investigation?**



Overall, despite technical difficulties the students experienced, teachers believed that the Investigations worked well for students. Among the 36 teachers who answered the question, 19% thought the Investigation worked “very well” for their students, 64% thought it worked



“well,” and 17% responded “not well.” Comments on this topic from 18 teachers are included in Appendix A.

### ***Teachers’ Own Experiences***

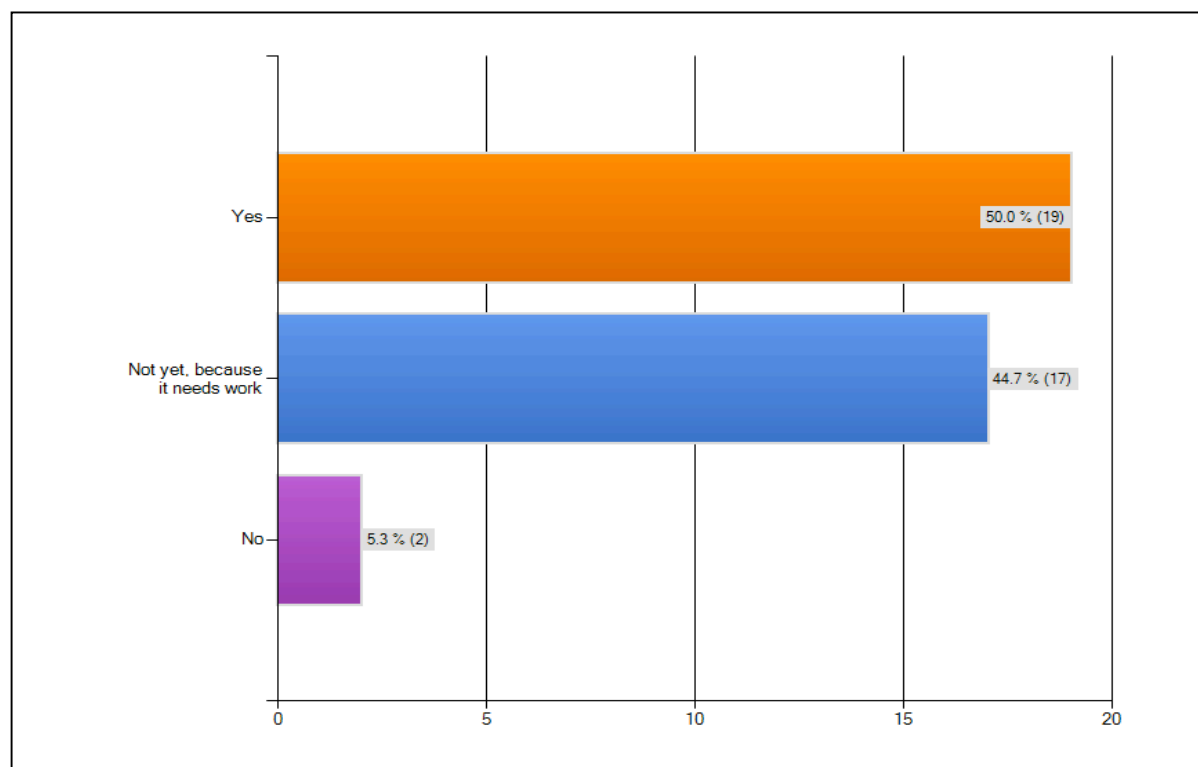
Sixteen of the 39 teachers (41%) reported that they were able to use and manage the Investigation “easily” or “very easily.” Twenty-one teachers (54%) indicated “it was a bit of a challenge,” while only 2 teachers (5%) found it “very difficult” to use and manage the Investigation.

Regarding the Teacher Guides and Teacher Notes developed for the Investigations, more than half the teachers (53%) found them “useful” (47%) or “very useful” (5%). At the same time, about 40% of the teachers did not use the Guides or Notes at all. Only 8% reported these tools were “not very useful.”

Teachers expressed concern about how long it took students to use an Investigation. Nearly 40% of teachers reported that the Investigation was “much too long” and another 26% indicated it was “a little long.” Only one teacher reported that the Investigation was “a little short,” while the remaining teachers (32%) said the length was “just right.”

Teachers were asked a question intended to reflect their overall opinion of the Investigation they used. Their responses are shown in Exhibit 8. (Optional comments related to this item are included in Appendix A.)

**Exhibit 8: Would you recommend this Investigation to a colleague?**



### Further Information about Investigations

In order to explore the relationship between the Investigation a teacher used and his or her decision whether to recommend the Investigation to a colleague, the data from two survey items were cross-tabulated. Results are shown in Table 1 below. Few conclusions seem obvious, except perhaps that teachers believe the Dragons activity is promising but needs additional work.

**Table 1: Recommend to a Colleague, by Investigation**

	Would you recommend this investigation to a colleague?			Totals
	No	Not yet, because it needs work	Yes	
Dragons		7	2	9
Ecosystems				
Energy in chemical reactions - H.S.		3	2	5
ESS H.S. Modeling earthquakes			2	2
ESS M.S. Seasons	2	2	4	8
Mutations in DNA			1	1
States of matter - M.S.		1	2	3
Understanding motion - H.S.		1	2	3
Understanding motion - M.S.		2	3	5
(blank)		1	1	2
Totals	2	17	19	38

A cross-tabulation of Investigation by judgments of how well the Investigation worked for students who used it is shown in Table 2. Understanding Motion – M.S. had a higher proportion of teachers judging that it worked “very well” for students than any other Investigation.

**Table 2: How Well the Investigation Worked for Students, by Investigation**

	Overall, how well do you think this Investigation worked for students?			Totals
	Not Well	Well	Very Well	
Dragons	2	7		9
Ecosystems		1		1
Energy in chemical reactions - H.S.		4		4
ESS H.S. Modeling earthquakes	1	1		2
ESS M.S. Seasons	2	3	2	7
Mutations in DNA			1	1
States of matter - M.S.	1	2		3
Understanding motion - H.S.		3		3
Understanding motion - M.S.		1	3	4
(blank)		1	1	2
Totals	6	23	7	36

## **Discussion**

It is evident that teachers judged many aspects of the Investigations to be “on target,” including the vocabulary used and the extent to which students were engaged with the activities. Teachers were willing to recommend the recommendations to a colleague, or at least withhold judgment and wait until the Investigations were improved. Very few teachers reported that they would not recommend Investigations to a colleague. At the same time, taken as a group Investigations were rated by teachers as requiring longer to teach than they would like, and many teachers and students reportedly encountered technical difficulties using the Investigations.

One purpose for designing and conducting this teacher survey was to help inform the resource teams that design and develop Investigations. The author hopes that the findings reported in this paper will be useful to the resource teams as existing Investigations are revised and new ones are developed.

## **Appendix A: Responses to open ended items**

### ***Item 13: Did students experience technical difficulties?***

Program took a long time to load. Some students lost data from one day to the next.

Signing onto the Investigation from the RIEPS site proved difficult. We had to refresh numerous times. Some student work was not saved.

I was experiencing them so figured one computer was enough stress let alone 15 of them.

The program took half the class period to load the first time and the same thing happened after the Christmas break - too much down time. Student work was not saved from one session to the next on some computers. Text boxes did not expand as students typed.

Some computers did not work. Computer not available for each student

Didn't use computers because I was told it took too long

Teacher could not log on to the rites

Data was not saved all of the time--some students were not able to log in.

Computers wouldn't load, steps missing from procedure

Did not use teh RITES software, used Logger Lite instead.

It took 1 hour to load the investigation, the computers froze up while completing the investigation, frustration levels ran very high. However, students felt it would be worthwhile if all technology was functioning properly

Tried to access RITES on several occasions but it was blocked then when we finally got in it took up to 20 minutes to load the java and sometimes it never finished. That is when I just made my own lab using one of the sensors.

RIEPS is no longer being used in Coventry, so freshmen students do not have a log in and password to use to access RITES on their own

We had to go with hard copies of the investigations which we had to receive from Concord C.

I'm not sure yet since we haven't worked in small groups yet. I've been able to use it ok myself.

Computers took a long time to load the program

I could not access the States of Matter investigation for my Fundamentals of Chemistry class as all but 3 students were associated with Mr. [name] and not me.

Could not upload the computers. We ended up printing out copies and using pen and paper.

There were no technical difficulties since I was not able to get computers for the duration of the lesson

Many students were linked to another teacher, some to no teacher at all. Students ran the investigation in the teacher mode and answers were not saved.

Server did not always save their work, motion sensors sometimes flatlined because of space issues

VERY Confusing for teachers and students...from JAVA loading properly to logging on investigations through RIEPS. In order to use probes properly, we had to log into RIEPS with our account. Student accounts did not work!

**Item 15: Overall, how well do you think this Investigation worked for students?**

It was very useful having them compare the graphs to each other. I put them side by side on my handout vs. different pages on the screen version so they could really compare.

I think the effectiveness of the investigation was compromised because of the time limitations in the Ferri schedule. It took 3 to 4 class sessions to finish so the work was choppy.

Though they enjoyed the activity it would have been difficult and more confusing if there had not been pre teaching of the concept prior to the investigation.

Some parts good but too lengthy

Only slightly

Its a great investigation-Part 2 is above grade level and not in middle school GSE's-love the models

Unable to access student answers after they entered them and logged off because they were deleted from the system, no teacher access, email, etc to view student responses

The activity did not save therefore it was very difficult for some students

Too many questions/activities in one application; Description of "fancy tail" was not defined, so students did not know what to look for in terms of a phenotype

In a prior investigation, to start the genetic unit, the students used the PTC paper to review phenotypes and genotypes so this i

Some of the activities are in too much depth and take too long for this age group. I think it goes "well" in the sense that everyone is trying, but we should not spend three weeks on this one concept.

It was difficult to gage how well the investigation worked. It would have been better if students could have done the investigation in small groups. It was also difficult because of the problems we experienced. There was a lot of down time for the students.

The investigation worked well for the class that could access the investigation. It was very frustrating for my Fundamental students that could not access the investigation. Also, I went back to access work through a student's login and his work was not saved. I have not had the opportunity to access the work through my teacher login.

Computer did not set-up in a timely manner, activiy was confusing. The pocedure did not match up to what actually needed to be done.

I still need to view their saved responses

The scenario of the dragons was seen as childish and students from both classes had trouble understanding what to do at each prompt. Aside from XY linkage students have not learned about polygenetic traits, incomplete dominance and other exceptions to basic Mendelian genetics. I think a lot of the teachable components went right over their heads. I plan to use the PTC paper investigation and think that this will more closely align with the instruction. I did notice that the mRNA/amino acid chart in the investigation is the box style while the reference sheet for the science NECAP tests is the three layered circle chart. I want them to be familiar with only one when I introduce translation and protein synthesis. Can this be changed on RITES to incorporate the chart used on the NECAP? Thanks

#14 I did all three choices.

This depends. Since I used the "Understanding Motion MS" as a culminating activity, my ELL students knew what they were doing. If I gave them a short intro only to the activity, then I would say probably, NOT WELL.

**Item 20: Do you have other comments or suggestions to help improve this Investigation or the software overall?**

The lessons were engaging, but very time consuming.

As long as the prior knowledge is taught (terms like position vs. distance) and magnitude for example. The intervals on the graph should possibly be frozen so the students can't change the zero, etc.... it got screwed up easily. Also in one class the velocity time graph wouldn't record accurately with the sensor when it worked well with another class?

One major glitch we found was that the text boxes did not expand as the students typed. This was very frustrating for them. I commented in the discussion forum and understand this is being worked on.

While all of the activities were useful, I found that most activities need more than one day to complete, discuss, etc.

Still waiting for the suggestions made over the summer to be implemented

Make it easier to access

Resolve logging in problems for students. Some of my students were listed on the class list for another science teacher in the building, thus I was missing their names in my class lists for the investigation.

The investigation needs to be rewritten. The steps are unclear. Materials are listed that were not mentioned in the procedure. Students weren't sure how to hold the earth (rotate or not).

Downloads take too long, computer freezes up at times

Once the technology is corrected, the investigations will be valuable tools.

Its not as user friendly as it should be. I would have used the force lab, motion lab, and maybe the temperature lab too but I couldn't access anything. Some sort of printable version would be good in case the on-line stuff doesn't work. We could just print the sheets and then run the lab with the probe anyway.

Shorten the investigation to one small concept ex the atom, periodic table, types of chemical reactions, etc... then have a lab to do with this section because you can utilize it better.

Find another source for operating RITES as RIEPS will be obsolete in some districts; Smaller investigations with handouts to be used with an entire class instead of all work done on the computer

Software -so we can use it as a self paced investigation especially for the inclusion class

We need to examine more carefully just how much time we want to spend on concepts and how much students are expected to really understand. The "solar insolation" thing is great--but do 13-year-olds need to know that? What is the purpose of teaching in middle school things that many of us did not learn until college? There is a lot known about what students can grasp based on their cognitive development. This should be taken into account when planning the depth of each lesson.

Our students could not log on to the RIEPS system and it would have been better if they could.

It would be helpful to have a counter when the dragon breeds so students can keep track of how often a certain trait appears.

The investigation itself was not the difficulty. Trying to access as a teacher over the last month was frustrating. Numerous attempts were made before being informed of installation issues, accepting cookies, school blocking screencast from RITES sites, etc.

Many computer problems. Confusing procedure in Kevin's idea. Model of seasons not clear. A flashlight did not do the job properly. I think a lamp without a shade would have been a truer representation of the sun. There is a better activity we use in our science class that shows this concept clearly. I will bring it with me on Saturday the 10th.

The software needs to be accessible to the students outside of class.

Since I did the investigation as a whole class presentation I wished there was a word or PDF file that accompanied the investigation that was easy to print and use for students to follow along,

I think there is potential. A few (minority of my kids) said they liked thinking about the answers and discussing in small groups. I also look forward to getting rid of RIEPS as the portal entry for students.

This investigation was too complicated to use as an introductory activity, but the beginning was too basic to use as an enrichment activity. I'd like to see it divided into two clear investigations- one to use as an introductory inquiry activity, and one to use as an enrichment inquiry activity after the students have a solid understanding of basic Mendelian genetics.

Like my other comments, the whole process of logging in and setting up the investigation through RIEPS was challenging. Thankfully, we have several teachers involved in RITES and we could use their usernames and passwords to access the investigations to use both types of motion probes that we have. The Vernier motion probe and PASCO motion probe. If we logged in as an anonymous user, we could not use our current PASCO probes because we could not change the setting. This was very frustrating. We should have ordered two or three more vernier motion probes but unfortunately, we did not. I also had to divide my ELL students into two groups to make the activity feasible. I have currently 34 ELL students. I also have, thankfully, a certified ELL instructor that helps us! The investigations themselves are good as far as science content and they do mirror the RIGSEs for the most part. My opinion is that these investigations should be authored by those individuals that author teenage "gaming" programs. Such as HALO games and GRAND THEFT AUTO with lots of graphics and sound that lead to great stimulation. This is what gets kids excited and it's what they want! Let's not ignore this! Some of my students liked these simulations but were not "over the top" about them. These investigations do not give that experience to them as they go home and play a more stimulating game. Teenagers are looking for a game, (we call them investigations) a game that WOWs them to the point of them not wanting to leave the classroom to play the "game"..... I also think that the grant needs to supply hardware computers as well as probes and materials. There is way too much discrepancy between the types of computers in our school at least. Most of our computers are old and need repair. We have three very good district technology people who are maxed out with the amount of work our district needs as far as repairing the district's technology. Many computer labs need work not only in my school but also at Cranston West. Our district has had the pleasure of having grants come our way that has purchased computers for the students but these machines are outdated, need memory, and are not the "top-of-the-line" hardware. (DELL). The most we get out of computers is about 3 years tops...then they are basically useless... I do see the value of RITES in our district and I am still excited about its potential, I just would like an easier way to log in and use the investigations. I hope this helps!


## **Appendix B: Survey Items**





## 1. Teacher


### \* 1. What is your name?

### \* 2. In which school do you work?


 Coventry High School


 Johnston High School


 Scituate High School


 Coventry: Alan S. Feinstein Middle School


 Johnston: Ferri Middle School

 Scituate Middle School


 Cranston High School

 Lincoln High School

 Woonsocket High School

 Cranston: Hugh B. Bain Middle School

 Lincoln Middle School

 Woonsocket Middle School

## 2. Investigation

### 3. Which Investigation did you most recently use with students?

☐ Energy in chemical reactions - H.S.

☐ States of matter - M.S.

☐ Understanding motion - H.S.

☐ Understanding motion - M.S.

☐ Ecosystems

☐ Dragons

☐ Mutations in DNA

☐ ESS M.S. Seasons

☐ ESS H.S. Modeling earthquakes

### 4. With how many different classes or sections did you use this Investigation?

☐ 1

☐ 4

☐ 2

☐ 5

☐ 3

☐ More than 5

### 5. What is the name of the class that used this Investigation (e.g., Advanced Biology, or Physics I)? (If you used the Investigation in more than one class choose one.)

### 6. What grade level were the students? (Choose all that apply)

☐ 6

☐ 7

☐ 8

☐ 9

☐ 10

☐ 11

☐ 12

### 3. How it was used

#### 7. In what way did you use the Investigation? (Choose all that apply)

- ☐ Whole class, with a computer projector
- ☐ Small groups of students, with computers
- ☐ Individual students, with computers
- ☐ Printed copies of activities

#### 8. How many periods did the class work on this Investigation?

☐ 1

☐ 6

☐ 2

☐ 7

☐ 3

☐ 8

☐ 4

☐ 9

☐ 5

☐ 10 or more

#### 9. Which activities in this Investigation did students use? (If they used all activities please enter "all".)

	5
	6

## 4. Student experience

### 10. Please rate these two aspects of the Investigation:

	Too Easy	About Right	Too Hard
A. Is the vocabulary appropriate for students in this class?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. Are the activities and science concepts at the correct level of difficulty for students in this class?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 11. Were the students engaged and interested using this Investigation?

- ☐ Highly Engaged
- ☐ Moderately Engaged
- ☐ Not Very Engaged

### 12. Did the class ask good questions about the topic as they used the Investigation?

- ☐ Yes, better than usual
- ☐ About the same as usual
- ☐ No, less so than usual

### 13. Did students experience technical difficulties using this Investigation (e.g., the screen froze)?

- ☐ There were many technical difficulties
- ☐ There were some technical difficulties
- ☐ There were almost no technical difficulties

Comments (optional)

### 14. Did you assess the students' work on this Investigation?

- ☐ Yes, I assessed on paper (like a quiz or assignment)
- ☐ Yes, I assessed informally in a class discussion
- ☐ Yes, I examined students' responses on the computer
- ☐ No

### 15. Overall, how well do you think this Investigation worked for students?

☐ Very Well

☐ Well

☐ Not Well

Comments (optional)

## 5. Teacher experience

### 16. How well were you, the teacher, able to use and manage this Investigation?

- ☐ Very Easily
- ☐ Easily
- ☐ It Was a Bit of a Challenge
- ☐ It Was Very Difficult

### 17. From your perspective, was the whole Investigation designed to take the correct amount of time?

- ☐ Much Too Long
- ☐ A Little Long
- ☐ About Right
- ☐ A Little Short
- ☐ Much Too Short

### 18. How useful were the Teacher's Guide and the Teacher Notes?

- ☐ Not applicable; I did not use them
- ☐ Very useful
- ☐ Useful
- ☐ Not Very Useful

### 19. Would you recommend this Investigation to a colleague?

- ☐ Yes
- ☐ Not yet, because it needs work
- ☐ No

### 20. Do you have any other comments or suggestions to help improve this Investigation or the software overall?

	5
	6