Norman Public Schools

Science Curriculum Adoption

Helen Powers

University of Oklahoma

Table of Contents

Executive Summary

Norman Public Schools are committed to providing a "rigorous work-ready, college-ready curriculum for all students" (Simmons, 2013) and to maintaining rigorous standards and high academic achievement. Every sixth year, school districts in the state of Oklahoma have the opportunity to review curriculum options and adopt curriculum for a given content area that meets the needs and academic goals of the district. This project outlines Norman Public School's plan to review available science curriculum packages and select new curriculum.

Project Goals

Project goals include:

- Evaluating the currently adopted curriculum and other available options
- Choosing the most effective curriculum package that reflects the goals of the district
- Training staff on the selected curriculum
- Implementing the chosen curriculum package
- Evaluating the use and effectiveness of the curriculum

Timeline and Budget

The proposed project will take an estimated two years to complete, including one year of use and evaluation. The project will commence in October 2013, be fully implemented August 2014, and undergo evaluation throughout the 2014-2015 school year. The estimated total cost of this project is $962,239.55

Critical Issues and Resource Analysis

This portion of the document examines the critical issues surrounding resources allocated to this project. Human resources for this project include a team of 34 elementary science educators, one SME, and presenters from various curriculum-publishing companies. Technology resources, including presentation equipment and classroom equipment will be utilized to complete the project. Other resources examined include the use of space, the design of the project, and intangibles.

Assessment and Evaluation Plan

The assessment and evaluation plan has been developed to ensure that project goals are being met to the specified standards. Five critical issues are being evaluated: team member participation, staff training, delivery of curriculum materials, curriculum effectiveness, and teacher satisfaction with the curriculum. A variety of   evaluation tools will be utilized including teacher surveys, student grades, and use of consumable materials. The data collected will be used to determine whether or not project goals are being met and to inform decisions regarding the effectiveness of the project.

Risk Analysis

The risk analysis identifies all the key potential risks that could affect the outcome of this project. Risks identified include task risks, personnel risks, and other project risks. A table summarizing the key risks has been included. Key task risks include those that could impede progress toward completion of curriculum

evaluation, curriculum selection, staff training, receipt of materials, material

distribution, and data analysis. A contingency plan has been developed in the event

that any key team members are unable to fulfill their role for an extended period of

time. Key team members have been identified as project manager, science

curriculum coordinator/SME, and core team members (site representatives). Other

project risks include those not related to tasks or personnel.

Project Proposal

Problem Statement

Norman Public Schools are dedicated to providing teachers with the resources they need to help develop their students into lifelong learners, while ensuring that Common Core State Standards and goals of the C^3 Initiative are achieved. In order to do this, teachers need to be equipped with the most up to date materials and information. Unfortunately, standards and content frequently undergo changes. If Norman Public Schools does not adopt ever improving curriculum that meet the rigorous standards of the district and state, the district could fall behind in its pledge to prepare students for College, Career, and Citizenship. By undergoing the proposed review, adoption, and implementation procedure for the core area of science education, congruencies between the current curriculum and future can be realized. The proposed procedure will also satisfy the state requirement for curriculum review every 6th year.

Goals

This project will allow Norman Public Schools to provide its students and teachers with the necessary tools for a rigorous work-ready, college-ready science curriculum. The overall goals of the project include:

- Evaluating the currently adopted curriculum and other available options
- Choosing the most effective curriculum package that reflects the goals of the district

- Implementing the chosen curriculum package

The process proposed for completing the stated goals will be completed by August 2014.

Systemic Role

This project is closely aligned with the mission of Norman Public Schools to provide a "rigorous work-ready, college-ready curriculum for all students" (Simmons, 2013). Norman Public Schools are dedicated to maintaining rigorous standards and high academic achievement. This is accomplished by keeping the curriculum used in the classrooms progressive and enabling teachers and students to be forward thinking. Norman Public Schools Superintendent Dr. Joe Siano asserts that, "Norman Public Schools and the community from where we all draw our strength, is innovative, collaborative, and always has an eye to the future" (Simmons, 2013). Specific to this project, Norman Public Schools administrators and educators believe that "Science education should involve students with appropriate experiences through which science concepts are developed and provide opportunities for students to extend their thinking skills as they apply these scientific concepts" (Patterson, n.d.).

Global Strategy

In order to accomplish the overall stated goals of this project, a team of science educators representing each elementary site and grade levels K-5 in the district and the district science curriculum coordinator will be assembled. The assembled team will be presented with the various options available for science

curriculum. The subject matter expert, Jeffrey Patterson, science curriculum coordinator, will determine options based on his expertise, experience, and research. The team will be provided with criteria (Common Core State Standards and Oklahoma Academic Standards) against which to evaluate the available curriculum options. Through collaboration, the team will decide which of the options appropriately realize the missions of Norman Public Schools and the provided criteria, narrowing the list of available curriculum options. The short-listed curriculum options will be presented to all elementary science educators district wide. District science educators will evaluate the short-listed curriculum options, then choose – through the process of a district-wide vote – which curriculum option best fits the needs of the district and the classroom. Once the processes of evaluating and selecting a curriculum have been completed, a process for implementing the selected curriculum will begin. The implementation process will include educator training on the use of materials, delivery of materials, and follow-up evaluations on the effectiveness of teacher implementation of the curriculum.

Timeline and Budget

The proposed project will take an estimated two years to complete. One academic school year will utilized to review, choose, and implement a curriculum option. The subsequent academic year will be utilized for use and evaluation. The project will commence in August and be fully implemented for the 2014-2015 school year. Evaluation of the chosen curriculum will occur throughout the 2014-2015 academic year and will be completed in May 2015. The proposed project

requires approximately 1,531 personnel hours, distributed among 36 team members. Items to consider for the project budget include costs associated with the various curriculum options, human resource costs, final cost of the adopted materials, and administrative/facility costs. Costs associated with the various curriculum options would include travel costs for presenters and costs of sample materials. Human resources could be secured on a volunteer basis, however, if available funds allow, costs could potentially include a stipend for team members. The final adopted curriculum and associated materials will need to be purchased for each district classroom. Finally, administrative and facility costs will include miscellaneous costs such as copies and facility utilities (heating/air, electricity, etc.).

Resource Analysis

Extensive resources are required to complete a project of this complexity. Human resources will include an assembled team consisting of the district science curriculum coordinator and site and grade level representatives. In order to have equal balanced representation, the team will include 1 science curriculum coordinator (SME), 1 project manager, and 2 representatives from each elementary site (17), one representing primary grades (K-2) and one representing intermediate grades (3-5) for a total of 36 team members.

Technology resources will be required for curriculum presentations. These resources will include a computer capable of running presentation software (e.g. PowerPoint), presentation software, a compatible projector, and an interactive whiteboard as a projection surface and to demonstrate any interactive capabilities

of curriculum options. An Internet connection will also be made available to allow

access to any online features offered in the potential curriculum packages.

Along with the presentation of potential curriculum packages, sample

materials will be made available to team members for evaluation. Sample materials

could include textbooks, software, online features, and consumables.

Finally, miscellaneous administrative resources such as access to copiers,

printers, paper, writing utensils, and facilities will be available.

Global Risk Analysis and Management Plan

In the event that the currently available curriculum options fail to meet the

rigorous standards of Norman Public Schools, the assembled team will be tasked

with adapting and making minimal updates to the current curriculum to meet the

needs of the district administrators and educators.

Technical difficulties will be anticipated and managed by utilizing the current

IT staff employed by Norman Public Schools.

Slack time will be included in the master project time line, along with soft

internal deadlines to manage any issues that arise with the project time line. A

carefully analyzed budget will be strictly adhered to, however, reallocation of funds

within in the budget can occur to allow for any unforeseen expenses and

underestimation of project costs.   Reallocation will require approval by the issuer of

the funds.

Implementation issues will be carefully considered and planned for.

Implementation issues could include any facility or technological restrictions that

would prevent the chosen curriculum from being effectively implemented and

utilized. By compiling a team of diversified subject matter experts who are aware of the facilities used to teach science at their individual sites, the team will be able to anticipate and prevent any potential difficulties that could arise during the implementation of the chosen science curriculum.

Evaluation Plan

A multi-faceted evaluation plan will be utilized to ensure that the newly adopted curriculum is effectively implemented into every classroom across the district. Surveys will be distributed to science educators upon the completion of each unit of instruction to evaluate the efficacy of the implemented curriculum. Specifically, the survey will solicit feedback on the practicality, ease of use, and perceived effectiveness in meeting prescribed state standards. Surveys will be administered and completed using a simple online survey tool. At the end of each unit of instruction, student grades will be examined and analyzed to evaluate the effectiveness of the curriculum in achieving the district's missions of extending students' scientific thinking skills and application of scientific concepts. Finally, use of consumable materials will be monitored and analyzed to evaluate the effectiveness of the educator training on the use of the curriculum and associated materials.
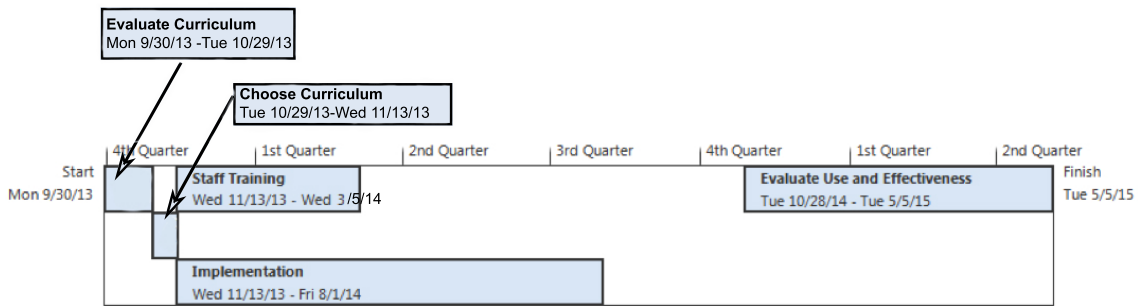
Timeline and Budget

Tasks

Figure 1: Timeline Overview

Task 1 – Evaluate Curriculum. The first task of the project is to evaluate

the current curriculum and other curriculum options.   This task will take

approximately one month to complete. In terms of human resource hours, this task

requires approximately 400 hours to complete. The initial subtasks required for

completing this task include obtaining sample materials from the curriculum

company, scheduling presentations, and assembling the project team. No more than

one hour should be required to complete each of these tasks (for a total of 3 hours).

Once the initial three tasks have been completed, an initial project team meeting will

take place. This meeting will last approximately 90 minutes and involves 36 team

members, resulting in a total of 54 hours. Following the initial team meeting,

presentations by the curriculum companies will take place. These presentations

will occur on two consecutive days, and will last 4 hours each day for all 36 team

members for a total of 288 hours. Finally, a summary and review meeting will occur

for all 36 team members, lasting approximately 90 minutes for a total of 54 hours.

The purpose of this meeting is to narrow down the available curriculum choices to

two. Additionally, one hour has been allotted for preparation for both the initial and

summary/review meeting for a total of 2 hours. Upon completion of task 1, task 2

can begin.

Task 2 – Choose Curriculum. The second task is to choose the most

appropriate curriculum.   Presenting the narrowed options to the entire staff of

elementary science teachers and soliciting their opinions through an online

administered vote will accomplish this. The team members will give presentations

to elementary science educators at their school sites. Presentations, the

administration of the online vote, and determining the results of the vote will take

approximately two weeks to complete. In terms of human resource hours,

presentations given will last approximately 1 hour. 34 team members are involved

in the presentations for a total of 34 hours.   Once a curriculum has been chosen,

task 3 – staff training can begin.

Task 3 – Staff Training. The next task is to train the staff on the use of the

chosen curriculum. Team members will work with other team members of the same

grade level to prepare and present training for the newly adopted curriculum to

science educators of the same grade level. The trainings will be conducted monthly,

after school, during time allocated for staff meetings/development. Linearly, this

task requires 81 days until completion. The first session of training will be an

overview of the units of study. The following sessions (four) will each focus on a

specific unit of instruction. Each session will be approximately 90 minutes. 34 team

members will be required for the presentations resulting in a total of 255 hours.

Following training, the curriculum will be ready to be implemented into the

classroom.

Task 4 – Implementation. This task involves ordering and receiving materials, then distributing materials to the elementary sites. This task can begin upon completion of task 2 and can occur simultaneously with task 3. From the time the materials are ordered to final delivery to classrooms is approximately 188 days. This amount of time is not necessarily required, but has been allotted to account for potential order and delivery delays and risks. As soon as the curriculum has been chosen, materials can be ordered, even though they will not be delivered to individual school sites and classrooms until the following summer. This task will require 680 hours to complete.

Task 5 – Evaluate Use and Effectiveness. Finally, use of the curriculum will be evaluated. Student achievement data as well as surveys collected from science educators will be used to determine the effectiveness of the chosen curriculum in meeting the goals of the district. From start to finish, this task will require approximately 136 days. Evaluation data will be collected at 3 different times during the initial year of use. Following the collection of the data, 90 minute meetings will be held for team members to analyze and draw conclusions from the data. This is a total of 162 human resource hours.

The Gantt chart in Appendix 1 is a visual representation of the project timeline. Critical tasks (the critical path) are highlighted in yellow. Downward pointing arrows indicate deadlines. Diamonds accompanied by a date indicate completed milestones. Human resources utilized for each task are listed next to each task.

Budget

Funding for district textbook adoption is provided by the state. Districts are provided a list of approved (by the state textbook committee) published materials from which they can choose a curriculum that best fits the needs and goals of the district (OK State Textbook Committee, 2013). The cost of purchasing materials for use in classrooms will be provided by the state, contingent on the district choosing an approved publisher. The district will allocate costs related to Norman Public School's process of choosing a curriculum package.   Norman Public Schools Foundation will provide special funding for this project in the form of a grant, in order to allow the district to uphold its rigorous academic standards.   The project must be completed within the proposed budget. Additional funds cannot be made available. In the event that the project begins to outgrow the projected budget, cuts will have to be made in order to cover increased costs. If adjustments to the budget need to be made (i.e. reprogramming funds), a request will need to be made to and approved by Norman Public Schools Foundation.

Grant funds are dispersed to NPS Curriculum Adoption Committee upon award of the grant. NPS Curriculum Adoption Committee is comprised of district curriculum coordinators for each academic subject area. Access to funds is provided to the curriculum coordinator whose curriculum is up for adoption, in this case, the Science Curriculum Coordinator.   The science curriculum coordinator will make all grant funded purchases for this project.

District personnel costs have been calculated based on the average salary of a Norman Public Schools elementary teacher. The average salary is $41,938. This

equates to $30.84/hour. This project is requiring 1,531 total hours of personnel time, for a total of $47,216.04 in district personnel costs. One presenter from each of the four publishing companies will be compensated a flat $250 for their presentation, totaling $1,000. Presenters will also be compensated for their travel at $0.50/mile assuming approximately 60 miles of travel round trip for a total of $120.

The bulk of the cost of this project comes from purchasing adopted curriculum materials. This cost has been calculated assuming an approximate cost of $900 per grade level, multiplied by 6 elementary grades (K-5), multiplied by 17 elementary schools for a total of $918,000. Sample materials will be purchased for approximately 25% of the full cost or $1,350.

Finally, facilities can be utilized at a cost of $20/hour (D. Calhoun, personal communication, September 19, 2013). This project is anticipated to require 39 hours of facility use for a total of $780. $100 has been allocated for miscellaneous office supplies such as paper, use of a copier, etc.

Table 1: Expenses

Personnel	
District	$47,216.04
Publisher	$1,000.00
Direct Costs*	
Curriculum	$918,000.00
Indirect Costs	
Travel	$120.00
Facility	$780.00
Sample Materials	$1,350.00
Misc. Office Supplies	$100.00
Total	**$968,566.04**

*Funding Source: OK Dept. of Education

Critical Issues and Resource Analysis

Human Resources

  Needs and Assets. Human resources for this project include a team of 34 elementary science educators. This team is comprised of two science teachers, one primary (grades K-2) and one intermediate (grades 3-5) from each of 17 elementary school sites within Norman Public School District. This assembly of teachers is designed to provide a cross-section of the unique needs for the variety of ages, populations, and socio-economics of students served by Norman Public Schools. The team will also include Jeffrey Patterson, science curriculum coordinator. Mr. Patterson will serve as an SME for this project. Mr. Patterson's experience working in the field of science education and as curriculum coordinator will be utilized in preparing agendas for and providing expert input during discussions. His expertise will be integral during the evaluation of potential curriculum in their relation to the missions of Norman Public Schools and science education.

  Other human resources will include presenters from a variety of curriculum publishers. These presenters are specially trained and knowledgeable of the materials they are presenting. They will be able to answer any specific questions from team members and demonstrate the utility and value of their particular product.

  Negotiables. The proposed human resources for this project are significant. Optimally, the team will consist of two teachers from each elementary school site, one each from primary and intermediate grades. One teacher per site is absolutely

essential to ensure equal representation of each site on the team. Presenters

representing the curriculum publishers could also be negotiated. However,

eliminating presenters comes with significant costs.

Constraints. 94% of the core team members are current elementary

teachers. Demands on their time are high. Besides their daily teaching

responsibilities, many are also members of a variety after school committees,

including the Elementary Science Advisory Board (core team). However,

involvement with this team is completely voluntary, and members fully understand

the responsibility and associated time commitments. In the event that another

commitment takes precedence over scheduled team meetings, the absentee can

arrange a temporary replacement or they can be apprised of the outcomes of the

meeting both through the minutes and from fellow team members. Care has been

taken in the scheduling of meetings that no other district elementary committee

meetings will occur at the same time as team meetings.

Organizational Issues and Intangibles. Selecting and implementing new

science curriculum is a high priority for Norman Public Schools. Each year, school

districts across the state are required to review the current curriculum for a given

subject and adopt a curriculum that will be used for the following six years. A

different core subject area is up for adoption each year so there is no competition

for resources. Also, Norman Public Schools, through science education is dedicated

to providing all students with a "rigorous work-ready, college-ready curriculum."

(Simmons, 2013) Since this project falls directly in line with realizing the overall

goals of the district and upholding the district's educational values, the commitment

of human resources to this project will be fully supported by district leaders as well as team members.

Possible Substitutes/Tradeoffs. Presenters will be brought in as experts on the curriculum materials created by the companies that they represent. Their function will be to be answer questions from team members and illustrate the manner in which their product reflects the goals and values of the district. Rather than having representatives from the curriculum company present materials, sample materials could be sent to the district for examination by the team. However, eliminating presenters comes at the cost of additional time required to review and evaluate the material.

Time

Needs and Assets. The proposed timeline stretches throughout the entire academic year, with an additional academic year for full implementation and evaluation. The timeline considers the academic calendar, accounting for school breaks and other scheduled district functions. It also accounts for the demanding nature of teachers' schedules.

It is important that adequate time is given for review of possible curriculum packages in order to allow team members and all science educators the opportunity to choose the option that most accurately reflects the needs and values of science education in the district. An entire academic year has been allotted for full implementation and evaluation of the curriculum. This time is important because it allows science educators the opportunity to fully engage with the chosen curriculum and draw conclusions based on actual and meaningful experiences. Additionally,

collecting data throughout an entire academic year as opposed to a single collection event increases the validity of the data and allows those examining the data to see trends in the data.

Finally, it is essential that the implementation procedure is followed and completed by deadline. Unless the curriculum is properly implemented on time, educators will be unable to utilize the materials to teach science to their students.

Negotiables. The current proposed timeline for the project would be optimal in meeting the goals of the project. However, some flexibility can be negotiated. What is non-negotiable are the raw value of time of meetings, the proposed critical path, or order to complete project objectives, and project deadlines. It is essential that all training for implementation of the chosen curriculum package be completed before teachers are no longer on contract for the summer.

Constraints. Several constraints on time exist in this project. For example, team members' responsibilities and workload aren't uniform throughout the year. Certain times of the school year (e.g. testing) produce a greater strain on time that team members have available to commit to this project. Unforeseen events, such as schools closures due to weather could also affect this project. In the event of unforeseen events, modifications could be made to the academic calendar or the academic day, making it necessary to modify the proposed timeline.

Organizational Issues and Intangibles. Because of the high priority of this project in maintaining and supporting the needs and values of the district, a compressed timeline will be accommodated both by district officials, team

members, and science educators if the need arises. Also because of the importance

of this project being completed efficiently and on schedule, deadlines are inflexible.

Precedence will be given to this project over all but the most critical functions of the

district.

       Possible Substitutes/Tradeoffs. While deadlines are inflexible for this

project, other proposed times could be negotiated if necessary. Meeting times are

proposed to occur after school. These scheduled meetings could also potentially

occur on professional development days or during school hours. The tradeoffs for

conducting meetings during school hours would include disruption of students'

schedules and additional costs in the form of substitutes. Meetings could potentially

occur less frequently.   The tradeoff for fewer meetings is longer meetings in order

to conduct the same business. Longer meetings could result in a decrease in

efficiency and participation.

Technology

       Needs and Assets. Technology needs for this project include standard

presentation equipment (internet connected computer, projector, and microphone)

and equipment that is available in all Norman Public Schools classrooms. Since the

equipment will be utilized as an aid to curriculum presentations, only one

centralized set of equipment is required. All classrooms in the district are equipped

with computers, a projector, an interactive whiteboard, microphones, document

cameras, and student response clickers. This equipment will be made available

during curriculum presentations to allow the presenters to demonstrate to the team

how their product can utilize the equipment that teachers currently have available.

The Internet needs to be accessible in order for presenters to demonstrate online resources provided by the curriculum. The Internet will also be utilized to notify team members of meetings, administer an online vote, administer online surveys, and to notify participants of the results of the vote and surveys.

IT staff need to be available to troubleshoot any technical difficulties that arise during presentation of curriculum materials, administration of online vote and surveys, and e-mail notifications.

In addition to classroom and presentation equipment, standard office equipment, such as computers with word processing software and copiers, will be utilized to prepare materials (agendas, etc.) for meetings and training sessions.

Negotiables. While presentation equipment (computer and projector) is optimal for expeditious and informative meetings, a lack of this equipment can be negotiated. Printed handouts can be used in lieu of projections to overcome a lack of technological resources. In addition, IT support could be waived on the chance that no technical difficulties will occur or in favor of relying on the technical abilities of the team members.

Constraints. One of the constraints of relying on technology to complete any portion of a project is the very real possibility that the technology will not function as required. It is because of this possibility that IT staff will be made available to correct any problems, allowing the project to continue as scheduled.

Also, the technology being utilized throughout this project is made available in conjunction with use of the meeting space. This space, and the technology, is available on a first come, first served basis. In order to overcome the constraint of

shared technology, meetings and training sessions for which the equipment is needed is scheduled as far in advance as possible.

Organizational Issues and Intangibles. IT staff are a district resource, and are shared between district offices and individual school sites. It is anticipated that in the event of IT failure or issues, priority will be given to supporting the school sites, as their role in educating students is a critical function of the district.

Possible Substitutes/Tradeoffs. Additional technology that could be utilized in this project is video conferencing. The use of Skype or a similar video conferencing tool would allow for synchronous meeting while eliminating the need for travel for both presenters and team members. However, the potential for technology problems will rise significantly with the use of this technology. Also, the capability for demonstrating the utility of the product decreases.

Environment

Needs and Assets. Space required for this project includes a centralized location for team members to attend meetings. This centralized location is the district offices. Conference rooms are available that are both large enough to accommodate the team and equipped with all of the technology requirements for this project. Space will also be required for grade level training sessions that will occur after the adoption of a curriculum package. These spaces will also need to be large enough to accommodate grade level teachers and be equipped with necessary technology. Training sessions will utilize six (one for each grade level) school site libraries.

In addition to meeting spaces, space will also be required to receive materials once ordered and to hold them until they can be dispersed. The district warehouse will be utilized for this need.

Negotiables. Some issues concerning the use of space could be negotiable. Optimally, all meetings and trainings will occur in fully equipped conference rooms capable of holding all team members. A space to accommodate all participants is the absolute essential. A centralized location is optimal to allow for unimpeded interaction with each other and the materials. However, this could be negotiated. The large team could meet as smaller teams at varying locations or meetings could be conducted virtually. Ideally, the space will be scheduled to allow for potential meeting run over. However, since the meeting space is a limited resource, this may not be possible.

Constraints. Since the conference rooms at the district office are a shared space and used for a variety of district gatherings, availability of the space could be limited.   Shared spaces are scheduled on a first come, first served basis. It is essential to schedule meetings and book the space as early in the project as possible. Some flexibility in the schedule could be allowed, but given the priority of this project, scheduling use of the space should not be an issue.

Travel to the centralized location for meetings and trainings could be a constraint for some team members. Travel time could be affected by uncontrollable events such as traffic or weather. When scheduling meeting times, it will be important to allow adequate time for travel. For example, meetings should not be scheduled for 3:15 p.m. when teachers are relieved of their students at 3:00 p.m.

Organizational Issues and Intangibles. District spaces are scheduled on a first come, first served basis. Priority is given to those who schedule the space first. In considering this, spaces will be scheduled as early as possible in the project. Some flexibility in scheduling dates of meetings and trainings can be allowed. If necessary, alternate spaces could be considered for use, given that they meet the essential requirements of the space.

Possible Substitutes/Tradeoffs. A classroom or library at a school site could possibly be used as a meeting space instead of a conference room. This could potentially interfere with regular operations at these sites.

Design

Needs and Assets. The central focus for the design of this project is the need for input from all elementary science educators in the district. Allowing teachers the opportunity to voice their opinions and concerns, and ultimately decide which curriculum to teach enhances their autonomy in the classroom. It increases the likelihood of buy-in and the likelihood that teachers will enthusiastically and effectively implement the materials into their teaching.

Training has been designed to cover each unit of study by grade level. This allows the full scope of the materials to be explored in depth and allows teachers access to the information and content that is applicable to the grade level that they teach.

Negotiables. Making a decision on the curriculum to be used and reviewing the materials before selection are non-negotiable. The means to achieving these goals could be negotiable. Optimally, all elementary science educators in the district

would have the opportunity to have the materials presented to them by the curriculum company. Also, all elementary science educators would have the opportunity to thoroughly review the materials and make an informed vote. In addition, all elementary science educators within the district would participate in the online administered vote.

Constraints. Possible constraints to the design of this project include any issues that could arise from teachers' unions. These issues would need to be discussed and addressed with union representatives. Also, since the district is a public institution, public perception on the process of selecting new materials could be a potential constraint. It will be important for the public to be confident that the teachers responsible for choosing materials have been thoroughly informed and will make the most appropriate decision both for upholding the goals and values of the district and for educating children.

Organizational Issues and Intangibles. There is a desire within the organization for curriculum adoptions to occur in a uniform manner. This ensures that all subject areas receive similar resources and input when choosing new materials. Some flexibility and variance is to be expected due to the unique nature of each subject area. However, care should be taken to adhere to the general process.

Possible Substitutes/Tradeoffs. The possibility exists for the design of this project to include a smaller team to conduct the initial review of materials. A smaller team could make the initial narrowing down process more efficient. With larger teams discussions and participation can become difficult to manage.

However, limiting the size of the team also limits the rich variety of experiences and

expertise that will be beneficial when undertaking this task.   A smaller team also

limits the scope of the variety of ages, populations, and socio-economics of students

represented.

The current design of the project timeline calls for teacher training for newly

adopted curriculum to occur once monthly. This could possibly be compressed,

with the tradeoff of potential cognitive overload.

Currently, the design of this project recommends that the project team meet

with presenters from various curriculum-publishing companies to discuss the

merits of each of the curriculum options. The presenters could possibly only meet

with the science curriculum coordinator, who would then disseminate the

information to the team. The tradeoff for this substitution would be introducing

possible biases of the curriculum coordinator to the project.

Budget

Needs and Assets. In order to successfully complete this project, a budget of

$963,000 is required. This includes approximately $42,000 in personnel costs,

$918,000 in curriculum materials and approximately $2,200 in indirect costs that

include travel, office supplies, facilities, and sample materials. The cost of

curriculum materials is provided through state funds. Other costs associated with

this project have been funded through a grant by Norman Public Schools foundation.

This budget is non-negotiable. Aside from the cost of adopted curriculum materials,

which is funded by the state, the only funds available are those that were submitted

to the grant foundation and awarded.

Constraints. The biggest constraint on the budget is the fact that it is non-negotiable. Once grant funds have been awarded, no additional funds can be made available to the project. It is imperative that realistic estimates are submitted to the grant foundation, and that the proposed budget is strictly adhered to.

Organizational Issues and Intangibles. While curriculum adoption is a very high priority for Norman Public Schools, the majority of funds for this project are outside of the district's control. The cost of the adopted curriculum is borne by the Oklahoma Department of Education and is subject to political appropriation processes. Extenuating circumstances impacting this process and the resulting appropriation could have an adverse affect on funds available for the adopted curriculum. While this is not seen as likely, in the event that the full, anticipated allocation is not available for this project, the team would then have to limit its selection options based on curriculum cost.

The Norman Public Schools Foundation provides the cost of this project that is not funded by the Oklahoma Department of Education via grant. As an outside organization, independent from the district, this foundation will require accurate reporting of expenditures for curriculum adoption. Maintaining a positive relationship with this foundation is a very high priority for the district and as such, district projects are expected to be good stewards of awarded funds.

Possible Substitutes/Tradeoffs. In the event that the project begins to outgrow the projected budget, cuts, or tradeoffs within the budget, will have to be made in order to cover increased costs. If adjustments to the budget need to be made (i.e. reprogramming funds), a request will need to be made to and approved

by Norman Public Schools Foundation. Areas for consideration in the event of reprogramming funds include travel expenses and personnel costs attributable to training.

Trainers from curriculum publishing companies will be reimbursed $0.50/mile travelled. Conducting presentations virtually can potentially eliminate this cost. However, conducting virtual presentations incurs a unique set of problems including an increased possibility of technology failure, limited access to the materials, and an inability for the presenter to accurately demonstrate the capabilities of the product.

Five, ninety-minute sessions of training for grade level educators are included in the project. While this is optimal for workload considerations, there are inefficiencies realized by spreading the training out over five sessions versus doing it in one session.   If training is conducted in one session, the seven and a half hours required could possibly be reduced to six hours, when considering the amount of time devoted to "house keeping" agenda items at the beginning of each session. This reduction in training time equates to a reduction in personnel costs.

Intangibles

This project is closely aligned with the mission of Norman Public Schools to provide a "rigorous work-ready, college-ready curriculum for all students." Norman Public Schools are dedicated to maintaining rigorous standards and high academic achievement. This is accomplished by keeping the curriculum used in the classrooms progressive and enabling teachers and students to be forward thinking.

A "rigorous work-ready, college-ready curriculum" (Simmons, 2013) is not easily quantifiable. Emphasis will have to be placed on stakeholders' perception of the adopted curriculum.

Assessment and Evaluation Plan

The following five activities will be evaluated at varying points throughout

the duration of this project. The table below presents an overview of each of these

activities, handoffs and deliverables, evaluation checkpoints, deadlines for

completing the evaluation, and responsible parties.

- Active core team member participation

- Staff training

- Delivery of materials

- Effectiveness of curriculum

- Teacher satisfaction with curriculum

Table 2: Overview of Assessments

Team Member Participation	
Deliverables	Selection of two curriculum options for full staff consideration
Handoff	Once selected, two options are presented to full staff for district wide vote
Evaluation Checkpoints	10/1/13; 10/2/13; 10/29/13;
Evaluation Deadline	10/31/13
Responsible Parties	Jeffrey Patterson
Staff Training	
Deliverables	Completed evaluation forms
Handoff	Full implementation into curriculum
Evaluation Checkpoints	11/20/13; 12/4/13; 1/8/14; 2/5/14; 3/5/14; 5/22/15
Evaluation Deadline	5/22/15
Responsible Parties	Jeffrey Patterson and core team
Delivery of Materials	
Deliverables	Curriculum materials
Handoff	Integration of materials into classroom

	by teachers
Evaluation Checkpoints	8/1/14
Evaluation Deadline	8/20/14
Responsible Parties	Jeffrey Patterson and core team
Effectiveness of Curriculum	
Deliverables	84% of students passing science with a grade of 70% or higher
Handoff	No handoff will occur; curriculum has been implemented, but data will be retained for future curriculum adoption
Evaluation Checkpoint	10/28/14; 12/30/14; 3/3/15
Evaluation Deadline	3/25/15
Responsible Parties	Jeffrey Patterson and core team
Teacher Satisfaction with Curriculum	
Deliverables	Data collected from administered teacher surveys
Handoff	No handoff will occur; curriculum has been implemented, but data will be retained for future curriculum adoption
Evaluation Checkpoint	10/31/14; 1/30/15; 3/27/15
Evaluation Deadline	3/30/15
Responsible Parties	Jeffrey Patterson and core team

Activity 1 – Team Member Participation

Objective Statement: During scheduled team meetings, at least 95% of team members will be present and actively participating.

Active team member participation is essential for this project to be completed effectively and within the specified timeline. The assembled team consists of 34 elementary science educators, representing each of the 17 elementary school sites within Norman Public Schools. This evaluation will occur concurrently with the initial phase of this project, beginning with the first curriculum presentation, October 1, 2013 and will be completed October 29, 2013. Team

member participation will be evaluated at four individual meetings for a total of

approximately 12 hours. A deadline of October 30, 3013 has been set for this

evaluation. The resources required for this evaluation include the team members

and the space used for hosting the scheduled meetings. Active team member

participation will be evaluated by collecting attendance data at the commencement

of each meeting. Team member participation can be considered successfully

completed if 95% of the team (or their proxies) is present at all scheduled meetings

and the team successfully narrows the choice of curriculum options to two to be

considered by the full elementary science education staff. If an individual team

member is consistently not participating in/attending meetings, then they will be

asked to step down from the team and a replacement from their site will be

recruited. If the team is unable to collaboratively narrow down the curriculum

options to two, the decision will revert to a majority vote. Jeffrey Patterson will

serve as tiebreaker if necessary.

The preceding objective will be measured by collecting attendance data and

by successfully achieving goals for the meeting, outlined in meeting agendas. For

each scheduled meeting, team members will be required to sign in with their name,

employee ID number, and school site. A sample sign in form can be found in

Appendix B.

Activity 2 – Staff Training

Objective Statements: Elementary science educators will consume curriculum

materials at a rate consistent with the training received. Core team members will

prepare and present curriculum-training sessions that address the needs of participants.

Upon selection of a science curriculum, elementary science educators will need to be trained on using the curriculum materials effectively in their classrooms. The proposed plan calls for an initial training session that will serve as an overview of the features of the curriculum. Following the initial training session, additional training sessions will be completed for each of unit of study. Five training sessions are scheduled to occur once monthly, beginning November 20, 2013 and concluding March 5, 2014. Each session will last approximately 90 minutes. The overall effectiveness of the staff training will be evaluated along with each individual training session. Immediately following each training session, participants will be asked to fill out a brief questionnaire evaluating their perceived effectiveness of the training and offering their insights into what was useful and what they would appreciate being offered in future sessions. The team members responsible for presenting the training will review and reflect on the feedback in preparation for future training sessions. Core team members will be responsible for collecting and analyzing feedback from participants. Based on the feedback they receive, a plan for future training sessions will be developed. This plan will be submitted to Jeffrey Patterson for approval and signoff. See Appendix C for a sample feedback form.

In addition to feedback from training participants, the effectiveness of the training will be evaluated by monitoring the use of consumable materials in the curriculum. This part of the evaluation will occur with end of the year inventories and orders. A deadline of May 22, 2015 has been set for this phase of the evaluation.

Inventory forms and materials order forms will be the collection instruments for this data. These collection instruments will be developed upon selection of a curriculum option.   Individual science educators at each site will complete inventory and order forms. The forms will then be collected and compiled by site representatives on the core team. Compiled forms will be submitted to Jeffrey Patterson for analysis. Over or under use of consumable curriculum materials will indicate the need for further training.

The resources required for this phase of the evaluation include the core team members serving as curriculum trainers, centralized areas within 6 elementary sites (one per grade level, K-5) to serve as grade level meeting spaces, and presentation equipment.

Activity 3 – Delivery of Materials

Objective Statement: Elementary science educators will receive at least 90% of necessary curriculum materials on or before August 1, 2014.

Once curriculum options have been put to the entire elementary science education staff for a vote and a decision on a curriculum package has been made, the process for ordering and distributing materials can begin. This is a critical juncture within the project: without materials, teachers will be unable to teach the curriculum to their students. It is crucial that the correct materials are ordered, the correct materials are received, that the materials are shipped to individual school sites, and that teachers receive the correct materials. In order to allow more than sufficient time for this process to occur, materials should be ordered immediately following the outcome of the district wide vote. This should occur no later than

November 13, 2013. Materials will be distributed to sites and teachers the following summer, allowing ample time to correct any order mistakes. Beginning July 21, 2014, curriculum materials will be shipped to elementary sites. This should be completed by July 25, 2014. Once materials have been received at the sites, team members will work to distribute the materials within their building. Materials should be distributed no later than August 1, 2014, again allowing time to correct any mistakes within the order before the beginning of the school year.

Evaluation of this task will be completed by checking received materials against order forms and packing slips at three separate receiving events: initial receipt of materials by Jeffrey Patterson, receipt at individual sites by core team members, and receipt by classroom teachers.   Upon each receiving event, the responsible party will assess the accuracy of the order against order forms and packing slips. Any discrepancies should be reported to Jeffrey Patterson via a core team member for immediate correction. If no discrepancies are found, the responsible party can sign off on the delivery and return all packing slips to Jeffrey Patterson as documentation of receipt of curriculum materials. This phase of the project can be considered successfully completed if order accuracy is at least 90%. If 90% accuracy is achieved, teachers will be able to begin teaching with the materials they have while any order corrections are made. If 90% accuracy is not achieved, the three built in checks and slack included in the timeline should be sufficient to identify and correct any errors before the beginning of school deadline (August 20, 2014).

Resources required for this phase of the evaluation include human resources (Jeffrey Patterson, core team members, and teachers) and costs associated with ordering and shipping materials.

Activity 4 – Effectiveness of Curriculum

Objective Statement: At least 84% of elementary science students will achieve an average science grade of 70% or better.

Once teachers have been trained on the use of the curriculum and received their materials, they will be able to begin teaching science using the adopted curriculum package. As the materials are being used, it will be important to evaluate their effectiveness in meeting the district's goals of extending students' scientific thinking skills and application of scientific concepts (Patterson, n.d.). This will be accomplished through the collection and analysis of students' grades in science. At the end of each grading period, teachers will submit their students' grades to their site team representatives. A collection form has been created to simplify the process of gathering student grades (see Appendix D). Core team members will then meet to compile, analyze, and draw conclusions from the data. The curriculum will be considered effective if 84% of students are passing science with a grade of 70% or better (based on the standard bell curve). If the curriculum is found to be ineffective, interventions will be implemented in an attempt to improve students' grades until the curriculum can be reevaluated and different materials adopted. Decisions made based on the findings in the data will be approved and signed off by Jeffrey Patterson.

Data will be collected on Tuesdays at the end of each grading period. Team members will then meet to go over the data collected. Data collection dates are October 28, 2014, December 30, 2014, and March 3, 2015. Dates for data analysis are October 29, 2014, January 28, 2015, and March 25, 2015. The evaluation data collected in this phase of the project will be retained to help inform future science curriculum adoption decisions.

Resources required for this phase of the evaluation plan include human resources (core team members), a centralized meeting facility to accommodate a meeting scheduled to analyze collected data, and student data.

Activity 5 – Teacher Satisfaction with Curriculum

Objective Statement: At least 85% of aggregated teacher responses will reflect "satisfaction" with the chosen curriculum option. "Satisfaction" will be defined as a rating of 3 or higher on 5 point Likert scale type items.

The final phase of evaluation for this project includes assessing teacher satisfaction with the chosen curriculum. The purpose of this evaluation is to solicit feedback from teachers about the practicality, ease of use, and perceived effectiveness of the curriculum in meeting prescribed state standards Feedback will be gathered using a series of Likert scale type items. Participants will be asked to rate their feelings toward the item by assigning a value of 1 (strongly disagree) through 5 (strongly agree). (See Appendix E for specific survey items).

Soliciting teacher feedback is not only a valuable source of information, but also fosters teacher autonomy and buy in by ensuring that the value of their opinions and feedback extends beyond the selection of materials. Teacher

satisfaction with the curriculum will be evaluated at three different points,

coinciding with the end of the grading periods. Feedback will be solicited through

an online survey. The surveys will be administered on the following dates: October

27, 2014, January 26, 2015, and March 23, 2015. Teachers will have 5 days to

complete and submit the online survey. The core team will meet on November 3,

2014, February 2, 2015, and March 30, 2015 for approximately 90 minutes to

analyze the data. Since the curriculum has already been selected and implemented,

immediate interventions will be implemented in an attempt to improve teacher

satisfaction with the materials if the data indicate a need. Otherwise, data will be

retained for reference when undergoing future curriculum selection processes.

Jeffrey Patterson will approve any decisions made based on the findings in the data.

Resources required for this phase of the evaluation plan include technological

resources to administer online surveys, human resources (Jeffrey Patterson and the

core team) to analyze data collected from the online surveys, and facilities for

meetings to analyze the data.

Risk Analysis

Task Risks

Six tasks within the project have been identified as having an increased potential for incurring risk. Each task is presented along with an analysis of the intensity and impact on the project and proposed prevention measures. The six tasks are as follows:

- Curriculum Evaluation

- Curriculum Selection

- Staff Training

- Receiving Materials

- Material Distribution

- Data Analysis

Curriculum evaluation. The initial task in this project is the evaluation of potential curriculum options. The team has been tasked with assessing various available curriculum options and selecting two that will be presented to the entire elementary science education staff for consideration. The primary objective for this project is the selection of a science curriculum. This objective cannot be completed, and therefore the project will be considered unsuccessful, if the initial milestone of evaluating curriculum options is not achieved. Failure to meet the stated deadline for this task will result in the entire project timeline being adjusted backward as the project cannot proceed until this task is completed.

Possible risks associated with this task include publisher representatives (curriculum presenters) having their travel delayed or possibly cancelled and failure

to have sample curriculum materials available for team review. Measures can be

taken to prevent these potential risks from being realized. Dates and times for

scheduled curriculum presentations need to be confirmed with both the publishing

companies and the individual presenters one week prior to presentation.

Provisions can also to be made to allow for the possibility of virtual presentations

(e.g. Skype). Two weeks prior to the initial presentation, shipment of sample

materials will be confirmed with the publisher. Digital copies of the materials will

also be obtained if available.

In the event that one or more of the possible risks associated with this task

does occur, steps can be taken to ensure that the task is completed with as little

impact to the overall project as possible. If the scheduled publisher representatives

cancel their presentations, meetings scheduled for presentations can be

restructured to allow for in depth review and analysis of sample materials (if

available) by the team. If a publishing company fails to provide sample materials or

a representative to present their materials (i.e. presentation is cancelled and sample

materials aren't delivered), that curriculum option can be excluded from

consideration by the team. A replacement option could be chosen, if the timeline

allows for scheduling a presentation and ordering and receiving sample materials.

At the cost of restructuring the timeline and pushing deadlines, and thus the entire

project back, scheduled curriculum review meetings can be rescheduled until all

resources are made available.

Curriculum selection. Once curriculum options have been evaluated by the

team and have been narrowed to two options, the next task, choosing a science

curriculum, can begin. Failure to complete this task will result in an unsuccessful

project. Subsequent tasks cannot begin until this task is completed, therefore, any

delays or failure to complete the task by the stated deadline will result in the entire

project being delayed.

In order for this task to be completed, all district elementary science

educators are asked to complete an online administered poll indicating their choice

for a new science curriculum. Two potential risks could affect whether or not this

task is completed successfully. Internet issues could arise preventing teachers from

being able to complete the poll or teachers could simply not participate in the poll.

Once the poll is created, it will be administered to a sample population (the core

team) to determine functionality and spot any potential issues. The poll will be

reset before distribution to the staff. In order to encourage teacher participation in

the online poll, a reminder will be sent via e-mail one day prior to the poll opening.

Site administrators will also be encouraged to remind their teachers to participate.

The online poll will be made available for 7 days so that teachers have ample time to

participate even if technical issues arise. IT staff will be made available to

troubleshoot any reported issues. Should unresolvable technical issues arise, a

paper ballot can be administered at the next regularly scheduled staff meeting.

While teacher participation in the selection process is encouraged, a majority can be

determined and a selection made with even minimal cooperation. In the unlikely

event that no teachers participate in the selection, the decision will revert back to

the core team and will be decided by a majority vote. In the event that a vote by the

core team results in a tie, Jeffrey Patterson, Science Curriculum Coordinator, will

make the decision.

Staff training. Once a curriculum option has been selected, elementary

science educators will need to be trained in its use in order to use the materials

effectively. If this task is overlooked or missed, teachers will be unfamiliar with the

materials and unprepared to utilize the materials with their students. Core team

members will assume the task of preparing and providing training sessions to fellow

grade level science educators. For example, core team members who are third

grade teachers will work together to prepare presentations over third grade

materials for other third grade teachers. The risk associated with this task is that

team members will be unavailable to present the training on the dates and times

scheduled. In order to alleviate this risk, the grade level presentation teams will

consist of more than one member. In addition, grade level teams will become

familiar with adjacent grade level materials so that they will be available to fill in

should the need arise. Jeffrey Patterson will also be available to serve as an

emergency fill in. In the event that planned prevention measures fail and training is

unable to be provided to the staff, the staff will be responsible for familiarizing

themselves with the materials.

Receiving Materials. After the staff has chosen a curriculum option, the

process of implementing the chosen curriculum can begin. Curriculum materials

will be ordered and received. If materials are not received, the staff will be unable

to use the curriculum in the prescribed manner. Risks associated with this task are

primarily logistical. They include failure of the publisher to ship the materials,

failure of the carrier to deliver the materials, and incorrect materials being ordered,

shipped, or delivered. Steps will be taken in order to alleviate some of this risk.

It is necessary to ensure that the correct materials are ordered and

received initially. Jeffrey Patterson is responsible for compiling and submitting

order forms to the publishing company. The core team will be utilized to validate

the accuracy of the order. Upon placement of the order, an estimated ship date will

be obtained from the publisher. One week prior to the estimated ship date, the date

will be confirmed. Jeffrey Patterson will use available technology to monitor and

track the shipment of the materials. Upon arrival of the materials, the shipment will

be audited using both packing slips and copies of the submitted order forms. In the

event that issues do arise with the order, shipment, and delivery of materials,

substantial slack time has been included in the project timeline. If incorrect or no

materials are received and the slack time allotted is not adequate to correct errors,

teachers will revert back to use of the former curriculum until errors are resolved.

Material distribution. Upon receipt of accurate curriculum materials,

materials will be distributed to grade level science educators. Core team members

are responsible for receiving the materials at their site and ensuring that correct

materials are distributed. If grade level teachers do not receive the correct

materials, they will be unable to utilize the curriculum in the prescribed manner. As

materials are distributed it is possible that they are distributed incorrectly (e.g. 4th

grade receives 2nd grade materials) and that the materials distributed are of poor

quality. In order to prevent any impact on the project associated with these risks,

core team members will perform quality spot checks as they work to distribute

materials at their site. In addition, individual grade level teachers will be required

to audit and sign off on their delivery. Should these prevention measures fail and

poor quality materials are delivered to teachers, materials will be returned to the

publisher for replacement. Adequate time should be included in the project timeline

to allow for this potential risk to be addressed should it arise. Adequate time should

be allowed for return and replacement of materials before the commencement of

the school year. However, while awaiting replacement, it may be necessary for

same grade level teachers to combine and share resources. It is necessary that

materials be distributed on schedule according to the timeline to allow for potential

correction of inaccurate grade level distribution.

Data analysis. The final task is analysis of collected data to determine the

effectiveness of the chosen curriculum. Failure to complete this task results in

administrators being unable to determine whether or not the selected teaching

materials have been effective in meeting the goals and standards set forth by both

the district and state. Data is to be collected electronically. Teachers will submit

student grades and complete a satisfaction survey. Potential issues with this task

include teachers failing to submit data, internet/data collection issues, and changes

in personnel (teacher turnover). Site administrators will be encouraged to remind

their staff to submit the required data. An e-mail reminder will also be sent to all

elementary science educators reminding them of the upcoming data submission

requirement.

In order to alleviate any potential internet/data collection issues,

instruments will be distributed to a sample population (the core team) once created.

This will allow for any functionality or content issues to be reported and resolved before distribution to the entire staff.

Some teachers will leave the district upon completion of the academic year. Attempts will be made to collect data from teachers who will be leaving the district, however, it is anticipated that this task will be low priority for them. The deadline for data submission has been set before the end of the teacher contract in an attempt to alleviate this risk.

Should teachers fail to submit adequate data, conclusions will be drawn from the data that was able to be collected. However, it should be documented that the data was incomplete and the conclusions may be unreliable. This should be taken into consideration when any decisions regarding the use of the curriculum are made. If technological issues prevent teachers from completing the satisfaction survey or submitting their grades, paper collection instruments will be distributed and collected at the next regularly scheduled staff meeting.

Personnel Risks

The project team consists of Helen Powers, project manager, Jeffrey Patterson, science curriculum coordinator – acting as subject matter expert, and 34 elementary science educators representing each elementary school site in the district and each grade level. The following examines the potential risks and implications to the project should any part of the team become incapacitated or otherwise unable to fulfill the duties assigned.

Helen Powers – project manager. Should Helen Powers become incapacitated and unable to fulfill the role of project manager, Jeffrey Patterson will

assume the duties of project manager. Risks to the project should Helen be unable

to continue as project manager include lack of detail in planning and maintaining

project documents and deadlines, and the potential for missed deadlines, putting the

project behind schedule due to a lack of guidance or reduced oversight. Preparation

for this possibility includes involving Jeffrey Patterson in all aspects of managing the

project, including scheduling and decision-making, so that he can seamlessly step in

if necessary. It will also be important to make Jeffrey Patterson aware of the

possibility of acting as project manager and describing in detail what

responsibilities that will entail.

Jeffrey Patterson – science curriculum coordinator and SME. In the

event that Jeffrey Patterson becomes unable to fulfill the role of subject matter

expert for the project, two individuals have been assigned to take his place. The first

will be a curriculum coordinator from another subject area. Their expertise and

familiarity with the adoption process and working with curriculum publishers will

help to offset the loss of Mr. Patterson's specific expertise. Additionally, a veteran

science educator from the team will work with the replacement curriculum

coordinator as a technical advisor, familiar with science education specifically.

Several potential risks to the project exist if Jeffrey Patterson cannot

serve as SME for the team. Each of the project tasks that he's involved in (see

project timeline, Appendix A, for details) have the potential to be affected. This

could result in project setbacks and delays and possibly endanger the completion of

tasks and ultimately the project. The quality of the project also has the potential to

suffer from the lack of Mr. Patterson's very specific expertise. The proposed

curriculum coordinator replacement will make decisions and carry out project tasks in accordance with the proposed timeline, under the advisement of a veteran science educator. In preparation for the possibility of Mr. Patterson being unable to fulfill his requirements, the replacement curriculum coordinator and veteran science educator will be informed of their pending responsibilities. In an attempt to keep them apprised of project progress, detailed meeting minutes and status updates will be cc'd to the curriculum coordinator that will fill in. The veteran science educator that will serve as technical advisor to the acting curriculum coordinator will already be a member of the team, and so will have specialized knowledge of the project to assist in making the transition as seamless as possible.

Core team. In the event that any individual member of the core team becomes unable to continue in their role as a team member, a replacement will be made from their site and grade level (primary or intermediate) in order to maintain the established representation. No immediate risks to the project exist in this case. The team can continue to function and progress on the project can be made in the absence of an individual team member. There will be a time cost associated with getting the replacement team member apprised of the project to date. Detailed minutes and notes from each meeting and each phase of the project will be kept and be made available to any replacement team members in an attempt to assist with team acclimation.

Additional Project Risks

In addition to the task and personnel risks outlined above, other risks could potentially affect the outcome of this project. One of the major risks is that

stakeholders not directly involved in the project will be unsatisfied with the outcome of the project. If parents and students are unhappy with the chosen curriculum, the cost is the perceived credibility of the district. Every attempt must be made to make the selection process as transparent as possible. A strong rationale (i.e. alignment with goals and standards) is a requirement for all decisions made throughout the adoption process. Project team members, administrators, and individual classroom teachers need to know and be able to articulate rationales to stakeholders. One possible mechanism for keeping all stakeholders informed of project rationales and progress is publication on the district website or other local publications. If preventive measures fail and stakeholders are unhappy with the outcome of the project, formal complaints made to district administrators will be archived and considered in future adoption cycles.

Another potential risk is the event of inclement weather. Should the district find it necessary to close school because of poor weather conditions, adjustments to the project timeline and schedule may need to be made. The event of inclement weather is unforeseeable. In order to mitigate the impact of the realization of this potential risk on the project, additional slack time will be included in the project timeline.

Summary of Key Risks

The following table summarizes key potential risks. These risks have been identified as those potentially having the most influential impact on the outcome of the project.

Table 3: Summary of Key Risks

Risk	Why/How	Dependencies
Inability to evaluate curriculum options	-Delay or cancellation of publisher presentations -Failure to obtain sample materials	Project cannot proceed until task is completed. The succeeding task – choosing a curriculum option – is dependent upon completion of this task. Delays force schedule and timeline backward.
Inability to choose a curriculum option	-Technical issues surrounding the online polling tool -Teachers failing to participate in the poll	Project cannot proceed until task is completed. The succeeding task – implementing the curriculum – is dependent upon completion of this task. Failure to complete this task results in an unsuccessful project. Delays force schedule and timeline backward.
Failure to receive and distribute materials	-Logistical issues in ordering, shipping, and receiving -Inaccuracies in the order placed -Inaccuracies in the materials received -Inaccuracies in distributing materials	Successful implementation of the curriculum is dependent upon this task being completed.

References

Botswick, K., & Stafford-Najibi, W. (n.d.). *Adoption process – overview.* Retrieved 9-20-13 from http://oktextbooks.ok.gov/overview.html

Botswick, K., & Stafford-Najibi, W. (n.d.). *School district information - timeline.* Retrieved 9-20-13 from http://oktextbooks.ok.gov/timeline.html

Botswick, K., & Stafford-Najibi, W. (n.d.). *School district information - qualifications.* Retrieved 10-24-13 from http://oktextbooks.ok.gov/qualifications.html

Norman Public Schools 2013 – 2014 Calendar. (2013). Retrieved 9-20-13 from http://www.norman.k12.ok.us/assets/files/13-14%20Draft%201%20BOE%20Approved.pdf

Norman Public Schools 2013-14 Teacher Compensation Schedule. (2013). Retrieved 9-20-13 from http://www.norman.k12.ok.us/index.php?staff-compensation-schedules

Norman Public Schools 2014 – 2015 Calendar. (2013). Retrieved 9-20-13 from http://www.norman.k12.ok.us/assets/files/14-15calendar.pdf

Oklahoma Textbook Committee – Science. (2006-2012). Retrieved 9-20-13 from http://oktextbooks.ok.gov/textbook_pdf/scik12.pdf

Patterson, J. (n.d.). *Mission statement for elementary science.* Retrieved 9-7-13 from http://www.norman.k12.ok.us/assets/files/Elementary%20mission%20statement.pdf

Simmons, S. (2013). *Curriculum and programs.* Retrieved 9-7-13 from http://www.norman.k12.ok.us/index.php?d-curriculum

Appendix B: Meeting Sign in Form

Date:		
Meeting: Science Curriculum Adoption		
EID	**Name**	**Site**

Appendix C: Training Feedback Form

Training Participants: Please take a few minutes to reflect on the training you just received and answer the following questions. Your feedback is highly valued and will be used to inform future training sessions.

1. Overall, I felt this training was _____. (Please explain your answer).

2. What was the most useful aspect of this training?

3. How could future training sessions be improved?

4. Do you have any specific questions or concerns regarding the training you just received?

Appendix D: Student Data Collection Form

Teachers: Please fill out the following form with the overall average (% grade) earned in science for each of your students. Submit the completed form to one of your site science representatives.

Student	Science Grade
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

Student	Science Grade
19	
20	
21	
22	
23	
24	
25	

Appendix E: Expert Feedback Report

Keri Bostwick is currently serving as chairperson for the Oklahoma State Department of Education Textbook Adoption Committee. Along with this role, Ms. Bostwick has taught in Bartlesville Public Schools for the last 15 years. She also recently took on additional responsibilities as the director of the Master's of Education program at Oklahoma Wesleyan University.

It is Ms. Bostwick's role as chairperson on the state Textbook Adoption Committee that led me to contact her regarding my project. The governor, with consent of the Senate, appoints members of the Textbook Adoption Committee (Bostwick, 2013). The assembled committee then elects a chairperson and co-chairperson to serve for one year. Ms. Botswick's professionalism, expertise, and dedication to the profession led her fellow committee members to elect her as chairperson.

Ms. Bostwick lives and works in Bartlesville, so our communication for this assignment was electronic. I contacted Ms. Bostwick, and she readily agreed to assist me with my project. Immediately after her consent, I sent her my revised documents for general review and feedback. Then I began preparing specific questions that I sent the following day. Based on her feedback, I had a couple of follow up questions that I sent and she quickly responded to.   The questions I sent and Ms. Bostwick's responses can be found at the end of this document.

Overall, Ms. Boswick thought my documents were clear and well organized. However, she did raise some concerns and offer suggestions for their improvement. She noticed the omission of holidays and testing in my timeline. She also pointed

out that travel costs for presenters and the cost of sample materials would be the

responsibility of the publisher, and not the district. Since textbook companies are

for profit companies, they are more than willing to provide services like that in

order to make a sale. She suggested adding a section in the budget for publisher

costs.

I asked Ms. Bostwick if anything appeared to missing from the plan. She once

again pointed out the need to allow for school holidays and state testing in the

timeline. She also raised some questions that I failed to address in the critical issues

document. For instance, the plan prescribes a vote of team members to narrow the

selection choices down to two to be presented to the entire staff. Once the two have

been presented, the final selection is made by a district wide vote. In neither case

did I plan for what to do in the event of a tie. I also need to consider what efforts

will be made to encourage teacher participation in the vote and the role of the

district and site level administrators.

In addition, Ms. Bostwick suggested that I specifically define the role that the

science curriculum coordinator plays in this project. She felt that I was

underutilizing his expertise and his role as liaison between science educators and

district level administration. Since he is the expert on the goals of the district and

the state objectives, she suggested that he take on a more active, less administrative

and facilitative role. I followed up this feedback with a request for specific

suggestions on the role the curriculum coordinator should play. She suggested

perhaps an initial review and weeding out of the available materials.

Ms. Bostwick also had positive feedback to offer on my project. Specifically, she noted that my developed plan is realistic for accomplishing the goals and that the plan for technology was thorough and complete.   She also applauded my attention to detail, saying that typically districts won't have such a comprehensive plan for textbook adoptions.

Finally, I asked Ms. Bostwick what the key factors are for executing a successful textbook adoption and what her suggestions would be for managing a textbook adoption successfully. She suggested that one of the most important factors for success in this situation is to have buy-in, from the team, the district teachers, and site administrators. She emphasized the importance of the attitudes of site administrators. Personal investment in projects like this happen in a top down manner. If the project is important to administrators and they are invested in its success, then a committed attitude will be present throughout their building. Her specific suggestions for a successful project include developing and sticking to a clear, detailed timeline.   She also recommended facilitating productive, professional discussions among team members. It is important that meetings stay focused and respectful.

I found the correspondence with Ms. Bostwick exceptionally helpful to my project in a couple of ways. First of all, I really appreciate and respect her professionalism and passion for teaching. Out of respect of her time and willingness to help me, I wanted to be sure that the documents I sent her for review were polished and as close to perfect as I could attain. After receiving feedback both from my peers and Dr. Hardre, I knew that my documents needed modifications in order

to be more presentable. Having to send them to a person that I respect for review served as motivation to me to revise and improve my work.

Also, Ms. Bostwick was very positive, but direct in her feedback. I appreciate that her assessment of my work was honest, but not overly critical or complimentary. Because of her experience, she was able to offer practical suggestions that I can easily incorporate into my plan.

Specifically, I will revise my timeline and budget document to reflect major dates in the district calendar (i.e. holidays and testing). While I did consult the calendar and account for these dates by not scheduling any meetings or deadlines, it is not clearly reflected in the document that this has been done. Also, the budget will be adjusted to reflect publisher costs in addition to district costs and State Dept. of Education costs. In addition, I would like to revise my documents to clearly define and communicate the roles of all stakeholders involved. I failed to consider the role of site administrators and did not take full advantage of the expertise that Jeffrey Patterson, the district science curriculum coordinator has to offer. Another issue that I did not consider and will revise my documents to address is how to encourage teacher participation in the district wide vote and what to do in the event of a tie. Ms. Bostwick indicated to me how important administrator and teacher buy-in is with projects like this. Buy-in or the perceived utility and importance of this project is something that I took for granted when planning and developing my documents. I assumed that this project would be important to teachers because it affects what they teach, but this may not necessarily be the case. I definitely need to consider this issue more carefully and address it in revisions of the document. One

way I am considering addressing this is through more clearly defining the role of the

curriculum coordinator and affording him more of a say in the final selection under

conditions in which teachers are apathetic toward the selections. However, this

may not be the most effective approach, as it could diminish the teachers' sense of

autonomy.

Overall, I found having an additional source of feedback for this project

especially useful. Being able to choose an individual with experience specific to my

project made the assignment even more beneficial. I feel very fortunate that I was

able to communicate with an expert with as much background, professionalism, and

dedication to the teaching community as Ms. Bostwick. She was genuinely

interested in advising me on my project, and her specific, straightforward feedback

is evidence of her willingness to help.

Questions for Feedback

**What is your general feedback for the documents? Concerns? Strengths?
Suggestions?**
Overall the documents are clear and well organized. You clearly
communicated your ideas, plan, and means for completing the plan. The district
would be lucky to have such a professional, detailed plan! Typically, a project like
this won't have all of the formal components you prepared (i.e. proposal) since it is
required by law to occur. Your proposed timeline allows for plenty of time for the
selection and implementation process to occur, however it doesn't seem to include
holidays and testing. Be sure that you check your district's calendar and explain any
allowances that you include. Your budget included travel costs and sample
materials. Textbook companies are for profit organizations. They are usually more
than willing to provide these services in an attempt to gain your district's business.
Also, the timeline chart is difficult to interpret.

(**follow up question:** even though travel and sample materials may not need to be
covered by the state or district, they're still a cost that is incurred for this project.
How would you recommend denoting that in the budget document?)

Your budget table has two sections currently, district and state costs. I would add another section for publisher costs.

Does anything seem to be missing? Are there any critical issues or risks (potential pitfalls) that I overlooked?

Again, accounting for holidays and testing. Also, is there a plan to encourage district teachers to participate in the vote? What happens in the event of a tie? Will you solicit the opinions of site administrators?

Are any additional technological resources used during an adoption that weren't mentioned?

I think you covered everything. The two big ones are presentation equipment and e-mail. You were very thorough in accounting for all of the technological needs specific to your plan.

Does the plan seem feasible? What specific changes to the plan would you suggest?

Yes it seems feasible. I would suggest giving the curriculum coordinator more of an active role in the selection. He is your expert on the needs of the district and the state objectives.
(**follow up question:** Do you have any specific suggestions for the role the coordinator should take?)

Maybe an initial review of the materials and weeding out of materials that don't meet the state and district goals. Make sure you define his role explicitly; he is serving as the representative of the district administration.

What are the key factors in executing a successful textbook adoption?

Buy in from your teachers and facilitating active participation and positive attitudes. Support/buy in from administrators is also important – their attitudes toward the process will influence the attitudes of their teachers.

What are your suggestions for managing an adoption successfully?

Develop a clear timeline and stick to it. Facilitate productive,

professional discussions among your teachers. Do what you can to make sure that

discussions stay on the topic at hand and are respectful.