

# Barstow Community College

# INSTRUCTIONAL PROGRAM REVIEW

(Refer to the <a href="Program Review Handbook">Program Review Handbook</a> when completing this form)

PROGRAM:	Natural Science and Mathematics A.S.: Biology					
Academic Year:	2015-2016	FULL PROGRAM REVIEW	Date Submitted:	October 19, 2015		
Academic Year:		ANNUAL UPDATE #1	Date Submitted:			
Academic Year:		ANNUAL UPDATE #2	Date Submitted:			
	Ву:					
Faculty Lead:	Beverly Rann	еу				
Members:	Beverly Rann	ey, Bret Sage				

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Annual Update #1
Annual Update #2

# 1. Program Mission and Vision

#### A. Program Mission

Biology examines the biosphere, its life forms, and its natural phenomena. Biology helps students develop an appreciation and understanding of the scientific method, and apply logical, quantitative, and qualitative reasoning in solving problems and analyzing arguments. Our mission is to empower our students to achieve their personal goals and contribute to their professional growth through the use of innovative educational tools to learn biology.

#### **B. Program Vision** (Where would you like the Program to be three years from now?)

Our vision is to achieve and maintain excellence in student learning and success in biology courses. We envision increasing the number of Math & Natural Science graduates by 10% over the next three years from the number of Class of 2015 graduates, implementing a pre-nursing certificate to better capture the number of students we serve and demonstrate what phenomenal work we do helping students complete basic allied health requirements, and increasing the diversity of our course offerings by adding 2 courses over the next three years to the current offerings.

#### C. Describe how mission and vision align with and contribute to the College's Mission and Vision

Our mission and vision align with and contribute to the College's Mission and Vision by offering students a solid foundation in pre-allied health fields and biological fields of study.

Barstow Community College's Mission is a statement of commitment to provide our students, community, and military population with the educational tools to achieve personal goals and professional growth through traditional and distance education courses, programs, and pathways designed to enhance student success, leadership development, and career opportunities, enabling all in the community to thrive in a changing global society.

Within Biology, we align our mission with that of the College's Mission by offering courses to meet the pre-requisites to area nursing programs, fulfilling general education course requirements, and building a community outreach program with the Barstow College Science Club. We do this by offering a solid selection of fundamental laboratory-based biology courses such as anatomy, physiology, microbiology and concepts in biology, as well as several electives for our students. Our laboratory environment promotes community through peer-to-peer interactions and one-on-one time for students and instructor to interact. With a variety of pedagogical approaches offered by the faculty, students can select course sections which match their individual learning style.

# 2. Program Description and Overview

Assume the reader does not know anything about the Program. Describe the Program, including—but not limited to—the following:

#### A. Organization, including staffing and structure

Our Biology Department is staffed by two full-time faculty, several adjunct faculty, an instructional science laboratory assistant, and a student worker.

#### B. Who do you service (including demographics)?

We serve students seeking general education classes, transfer biology classes, and classes to meet the basic requirements of allied health students, particularly nursing. We also serve students interested in continuing their education but may not be pursuing a degree. We also serve high school students in the Transitional College program.

#### C. What kind of services does your unit provide?

We provide learning opportunities and community service opportunities through outreach events in conjunction with the Science Club. We serve our students through online learning opportunities, face-to-face course delivery and with day and evening course offerings.

#### D. How do you provide them?

Learning opportunities arise in classes through pedagogical approaches such as direct instruction and peer-to-peer learning. Community service opportunities arise through participation with Science Club activities.

#### E. Does the program have a degree or certificate?

We are part of the Associates of Science: Natural Science and Math degree

# 3. Program Data

#### A. PERFORMANCE DATA

Discuss the program's performance on the specific data items listed below:

#### 1) Full-time/Part-Time Faculty Ratio

6.41:2.2 or 2.91 FT to 1 PT
The Percentage of FT LOAD: 74.5%
Percentage of PT LOAD: 25.5%

	TRADITIONAL FT:PT	ONLINE FT:PT
	BIO 1 1.00:0.75	0.90:0.75
	BIO 2 0.96:0.94	
	BIO 4 0.96	
2) Course Completion Boto	BIO 5 0.94	
2) Course Completion Rate	BIO 8 0.97	
	BIO 10 1.00:0.89	0.96
	BIO 10L 1.00	
	BIO 11 0.89:0.96	0.92:0.91
		ONLINE
	TRADITIONAL	
3) Course Success/Retention Ra	0.78 (FT) 0.82 (PT)	0.66 (FT) 0.58 (PT)
3) Course Success, Neterición Na		
4) 14 (0.01) (57777 5)		
4) WSCH/FTEF Ratio:		
520.16 or 99% overall	100	000
Full-tir	me:  439	836
Part-tir	me:  347	1508
	0.0 (FT) 0.74 (PT)	O 64 (ET) O 94 (DT)
5) Fill Rate	0.9 (FT) 0.74 (PT)	0.64 (FT) 0.84 (PT)

#### Reflect on the data above:

The Biology discipline shows strong performance and possibly a need for additional faculty if the program is going to expand over the next three years. The two full-time faculty members are carrying approximately 75% of the course loads with a strong part-time contribution of 25% of the load. We have strong course completion rates and strong success/retention rates. We are especially strong in retaining students in our face-to-face formats while we could improve our retention rates in online classes. However, asking faculty to improve retention rates without knowing why students dropped our classes is difficult: we encourage students to drop when they communicate with faculty that they can no longer meet the demands of academic discourse because their personal lives have become overwhelming. As a discipline, we prefer our students to withdraw to failing the course and some students will withdraw if they cannot earn a B or higher due to the rigorous demands or perceptions thereof for nursing programs. Our efficiency rating is 99% overall and the breakdown of that number reflects interesting dichotomies. Our part-time faculty are carrying a huge load of the online course offerings while less in the face-to-face format. Our full-time faculty are approaching optimal efficiency in the face-to-face format but we have room to improve if we are willing to have more part-time faculty teach the online courses so that we have more room in our respective loads to carry face-to-face classes. However, it was unclear from the data if

summer semester is counted as taught by full-time or part-time faculty and how that changes the numbers for our efficiency. Our fill rates are excellent for face-to-face formats when coupled with our course completion and success rates: the majority of our students who start our biology classes successfully complete them, which is different from national trends. We believe that this is because students can pick between different teaching pedagogies offered by instructors, the support instructors offer students through additional tutorials and office hours, and the strong tutorial support offered to students through the Student Success Center and Tutorial Center.

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_	<b>OUTCOMES (PLOS) AND STUDENT LEARNING OUTCOMES (</b>	CIOCI
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1)	List your	Program	Level Outcomes	(PLOs)	

Please see attached.

2) Summarize the progress you have made on Program Level Outcomes.

In Spring 2015, we developed PLOs for Biology, which we promptly revamped during Fall 2015. We are looking at ways to systematically and objectively measure these PLOs. Our PLOs are modeled on program learning outcomes from other California community colleges and universities. We would like to identify objective assessments to administer in BIOL 2 and BIOL 8 to capture student progress through our program in meeting our PLOs.

3) Summarize the progress made on course-level outcomes and assessments; use specific data, if possible.

We continue to have excellent course-level outcomes as seen in part from the data in 3A. A program-wide assessment would better compare apples to apples when we view outcomes for the sections.

4) Describe any program, course, and/or instructional changes made by your program as a result of the outcomes assessment process.

We are more cognizant of the need to reflect on our pedagogical approaches to assessing PLOs.

5) Reflecting on the responses for #2 and #3 above, what will you implement for the next assessment cycle?

We will discuss the need for program-wide assessment tools, identify potential tools, and pilot as appropriate an assessment tool once identified.

#### C. SUPPORTING ASSESSMENT DATA (See Handbook for additional information)

1) Provide a list of any additional measures (not included in 3.A.) that you have chosen to gauge your program's effectiveness (e.g.: transfers, degrees, certificates, satisfaction, student contacts, student headcount, Perkin's data, etc.).

The Biology Department has no additional measures that we use to track our effectiveness. We are in the process of gaining approval for a biology certificate.

1a	a) If this is a CTE program ending with a certificate or degree, include data on employment opportunities,
	compliance with advisory recommendations, and fiscal viability of program. (Include labor market and demand
	information using resources in CTE and the PR Handbook.)

2) Summarize the results of the measures listed in #1 above:

We need to find a way to track the effectiveness of biology and to that end, we are pursuing a certificate for pre-nursing students.

3) What did you learn from your evaluation of these measures, and what improvements have you implemented, or do you plan\*to implement, as a result of your analysis of these measures? (\*List any resources required for planned implementation in #10: Resources.)

We plan to implement a certificate program. However, this will only partially measure our effectiveness as it still will not capture general education students.

#### D. TWO YEAR SCHEDULING PLAN

1) What is the program's Two-Year Scheduling Plan?

We are working on finalizing a two-year scheduling plan in biology. We are still discussing how often we want to offer BIOL 10, BIOL 10L, and BIOL 1 in a face-to-face setting both on the main campus and at Ft. Irwin.

2) What changes, if any, have been made since the last Program Review?

In the last program review, we mentioned that BIOL 10L is offered only in the fall and BIOL 8 is offered only in the spring. This year we offered BIOL 8 in the fall and plan to do so continuously from this point forward. We would like to see BIOL 10 and BIOL 10L offered every semester either on the main campus (summer, fall) and/or on the Ft. Irwin campus. We like it when we are able offer F2F versions of BIOL 10 and BIOL 10L in tandem as it increases student success.

3) How effective has the Two-Year Scheduling Plan been in meeting student needs and educational goals? If this is a degree or certificate pathway, can students complete in two years?

Our current plan seems to be effective in meeting student needs and educational goals and students can complete our proposed pre-nursing certificate in two years.

4) Reflecting on the responses above, what are the goals for the next program review cycle?

For this cycle of program review, our goals are to find or develop additional assessment measures to track effectiveness and to finalize a two-year schedule that meets our students' needs, allows for growth of our discipline, and encourages our faculty to invest in new or renewed course offerings.

#### 4. Curriculum

A. List any <u>new</u> courses or program changes since the last program review. Be sure to include if any new courses have approved prerequisites or corequisites.

We have no new courses at this time. We are considering adding zoology and botany courses.

B. Verify currency of curriculum: Other than above, what changes have been made in the curriculum since the last full program review? (*Updates, delivery mode changes, archives, deletions, revisions, etc.*)

We have updated curriculum to reflect current SLOs.

1) CURRICULUM CURRENCY: Verify that all Transfer Level Courses are current and aligned for transfer. (May require reviewing ASSIST or meeting with Articulation Officer.)

In reviewing ASSIST, it appears that our Transfer Level Courses are current and aligned for transfer.

2) CURRICULUM DEVELOPMENT: Verify that all textbooks on Course Outlines of Record (COR) are up to date. Normally, textbook editions should be within five years for articulation. (Contact Articulation Officer for additional information.)

All textbooks are up to date.

C. List any courses not in full compliance with appropriate guidelines, including ASSIST, C-ID, Curriculum Committee, prerequisite validation, etc. (NOTE: Any courses that have not been updated in the past six years may not be in compliance. See Curriculum Manual or Articulation Officer for additional information, if necessary.)

We appear to be in compliance.

D. Curriculum Development: What is the plan for maintaining the currency and viability of your curriculum (including all modes of delivery)?

We plan to maintain the currency and viability of our curriculum by participating in content-specific professional development (e.g.: National Association of Biology Teachers conferences), reviewing peer-reviewed research on biology education, and participating in appropriate webinars/seminars offered through our professional organizations and as recommended by Barstow Community College (e.g., participating in Student Success (re)Defined workshops). We would like to explore the feasibility of implementing a Biology AS Transfer degree as we recognize that there is a STEM magnet middle school in Barstow (the STEM Academy) and we would like to be in a position to offer these students an associate's degree in biology after they complete high school.

#### **5. Internal Factors** (see Handbook for additional information)

**A. Strengths:** Current aspects of the program or department that serve it and its future well. These aspects include what it does well, what it's known for, what it takes pride in, and so forth. Strengths represent competencies or characteristics that the department or program may wish to enhance or preserve actively, even aggressively.

Our greatest strengths are our people. We have committed and involved faculty, highly qualified adjuncts, a dedicated lab assistant, and excellent student workers. Our faculty are committed to student success as demonstrated through our course schedules, our participation in Student Success Initiatives (such as attending Supplemental Instructor training over the summer and Student Success (re)Defined workshops). In addition, our faculty pursue community outreach through Science Club which also engages our students in science education, public speaking, and science communication. We also play well with other departments when it comes to cooperatively scheduling use of the lab facilities.

Our biology classes continue to fill and many close during registration. We are now offering our three core pre-nursing classes (BIOL 4, BIOL 5, and BIOL 8) both spring and fall semesters. We offer online and night classes for introductory course work.

**B.** Weaknesses: The program or department's *internal* vulnerabilities. These are areas that, if not addressed, could become liabilities, or could contribute to an erosion of the department's capacities and future growth. They represent areas where the organization needs to improve if it is to be successful for the long term.

Weaknesses? We don't recognize weaknesses in the biology discipline. We recognize opportunities for growth! We have an opportunity to discuss with our Academic Senate representative our perception that we could offer even more classes and serve a greater diversity of students if we hired a third full-time faculty member. We have an opportunity to implement a certificate correlated with completion of our current biology courses, which will better assess student success. We have an opportunity to advocate for more professional development opportunities including travel to conferences, attendance at Webinars, and networking with other community college faculty. We have an opportunity to expand our course offerings as we work to identify the feasibility of a biology AS transfer degree.

#### **6. External Factors** (see Handbook for additional information)

**A. Opportunities:** Current trends and events occurring **outside** the department that, if taken advantage of, are likely to have a positive effect on its long-term success. Examples may include: realistic training opportunities; industry trends; revenue-generation opportunities; development of new tools or technology to help manage workload.

There are several areas of opportunities for us to explore during this review cycle including: fully utilizing publisher-based online learning platforms to engage students with course materials, identifying appropriate objective measures to gauge program success, and participating in professional organizations' conferences to maintain currency in our curriculum.

Allied health fields continue to have high demand forecasts from the Bureau of Labor: Employment of registered nurses (whom we help prepare with basic nursing requirement courses) is projected to grow 19% from 2012 to 2022 (<a href="www.bls.gov/ooh/healthcare/registered-nurses.htm">www.bls.gov/ooh/healthcare/registered-nurses.htm</a>) due to increased emphasis on preventative care, higher rates of chronic conditions, and the needs of the baby boomer generation. This suggests that we should continue to expand our basic nursing requirement courses as necessary. With environmental science and protection occupations also expected to grow 19% over 2012-2022, adding thousands of new jobs to the economy, we might also consider expanding our environmental science course offerings by adding a field ecology course, geographic information systems (GIS) or biostatistics course to complement our environmental biology course.

**B.** Threats: Current trends and events occurring *outside* the department or program that could jeopardize its success represent potential threats. Examples may include: state, regional, or institutional economic/budget climate; loss of support services; seasonal fluctuations in workload.

The overall weak state of the economy, though improving, may be a threat to our growth if it prevents us from hiring additional faculty or participating in professional development programs.

# 7. Continuing Education/Professional Development

A. What continuing education and/or professional development activities have program/unit members attended during the current cycle?

We have attended several professional development activities over the last year: C3M Reading Apprenticeship for deeper understanding in STEM, American Association for the Advancement of Science webinars, and webinars hosted by National Association of Biology Teachers.

B. How did this benefit your department and the College?

These activities benefited our department by allowing us to discuss current pedagogical practices and topics. It benefited the College because professional development activities make us better teachers and individuals by opening us up to new ideas on how to inspire, reach, and engage our students.

C. What are the plans for continuing education and/or professional development in the upcoming cycle?

We are going to maintain our memberships in professional organizations and we're going to write BAPs for attending at least one professional development conference each year because attending in-person allows networking, sharing of ideas, and professional recharging to happen.

# 8. Prior Goals/Objectives

- Briefly summarize the progress your program has made in meeting the goals and objectives identified in the most recent Program Review or Annual Update. (Include measurements of progress or assessment methods.)
- If the program does not have prior goals and objectives, please explain.

The previous goals from the last Program Review are more visionary than complete-able: we will always continue to expand and/or revise the curriculum as necessary to meet the dynamic needs of our students—we are educators, this is what we do. We will always support flexible, research-based pedagogies designed to improve student learning and achievement—again, this is what we do (it is in our DNA) but what we need is financial support to attend conferences to learn how to best implement these pedagogies ("Active Learning improves student success in introductory biology courses" Great! Do I have to teach them to sing the Mitosis Song? No? Then what and how?) The goals continue in this vein and we are committed to always supporting the dynamic needs of our students using research-based pedagogies, encourage the use of the Student Success Center and all tutoring programs available on campus, seek out ways to improve our online delivery of biology, and advocate for increased funding for updating our facilities. These are not action items that we can complete because they are always in progress and process. To the end that those goals were doable, we've done them and will continue to do them. We are proposing a set of goals for the next program review cycle that we think are more realistic because we will know whether we have completed them or not—that makes them achievable mile markers for our program.

# 9. Goals/Objectives/Actions (ACTION PLAN)

- A. GOALS: Formulate Program Goals to maintain or enhance program strengths, or to address identified weaknesses.
- B. ALIGNMENT: Indicate how each Goal is aligned with the College's Strategic Priorities.
- C. OBJECTIVES: Define Objectives for reaching each Goal.
- **D.** ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE: Create a coherent set of specific steps (Actions/Tasks) that must be taken to achieve each Objective.
- E. OUTCOMES: State intended Outcomes and list appropriate measures and assessment methods for each Outcome.
- \*\*ADDITIONAL INFORMATION: This area provides for the additional communication of information necessary to further "close the loop" on the goal or action plan, as it relates to Institutional Planning. This may include references to other institutional documents, such as governing or compliance documents (i.e. Board Policy, Administrative Procedures, Title V), institutional planning documents (i.e. Strategic Plan, Educational Master Plan, Facilities Plan, Technology Plan), or Board, Presidential, Supervisory or Departmental recommendations or goals, etc. (See Handbook for additional examples.)

Complete the following table with your Program's **ACTION PLAN**, which must include a **minimum of 3 goals**:

				ACTION PLAN		
GOAL		ALIGNMENT WITH BCC STRATEGIC PRIORITIES		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#1	Development and implementation of certificate	List all that apply: Plan and implement instructional programs based on student	#1	Find out the status of our certificate	Talk to Dean Shreve	The result of this conversation will inform what steps we need to take next.
		learning needs and career paths (Priority 2) Facilitate student growth and	#2	Provide any necessary data to administrators	Read and analyze proposed certificate	Submit any comments or revisions to administrators, resulting in an acceptable certificate.
		development by assisting students to set, monitor, and evaluate educational goals (Priority 3)		Enroll students in certificate track.	Promote the advantages to students of completing the certificate.	We will be better able to capture how many students successfully complete our biology courses even if they do not complete an associate's degree from Barstow CC.
	Additional Information:					
#2	Increase content-specific professional development conference attendance	List all that apply: Attract, develop, and retain excellent employees	#1	Provide administrators with conference information and data to support requests.	Complete Budget Allocation Proposal	PR and BAP will be reviewed by administration, resulting in feedback that will be implemented into forms.
		Provide students a successful college learning		Submit a revised Budget Allocation Proposal to administration.	Read and analyze Program Review and Budge Allocation Proposal suggestions.	Upon resubmission, an acceptable and approvable BAP will be generated.
		experience	#3	Respond to requests for further clarification of discipline needs.	Revise and research data to support participation in content-specific professional development conferences.	BAP will be approved!
	Additional Information:					
#3	Increasing course offerings	Provide students with a	#1	Identify biological areas to increase course offerings in	Discuss among faculty and identify career paths students may chose based on increased offerings	These conversations will lead to pinpointing the specific courses we wish to develop
		successful college learning experience	#2	in the assessment cycle	Understand the Curricunet procedures required of new courses; talk to Kyri Freeman	We will be able to submit a viable course outline for approval.
			#3	Gain approval of the course	Talk to Dean Shreve and expect submissions to Curriculum Committee and the Chancellor's Office	We will be able to offer new and exciting courses to students.

	ACTION PLAN							
GOAL		ALIGNMENT WITH BCC STRATEGIC PRIORITIES OBJECTIVE		ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT			
	Additional Information:							

# 10. Resources Required

List all significant resources needed to achieve the objectives shown in the table above, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal #	BAP If No, indicate funding nated Cost Required? Yes source
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Ar	nnual Update #1		Acade	mic Year:			
1.	Progress on Program	Leve	el Outcomes (PLOs) and St (from #	tudent Learn #3B of full P		iLOs)	
A)	List your Program Lev	el O	outcomes:				
В)	Summarize the progre	ess y	you have made on Progran	m Level Outo	comes (PLOs):		
C)	Summarize the progre	ess y	you have made on course	level outcor	nes and assessm	ients (SLOs):	
D)	Describe any program outcomes assessment		ourse, and/or instructional ocess.	l changes ma	ide by your prog	ram as a result of the	
E)	Reflecting on the resp	ons	ses for B) and C) above, wh	hat will you i	mplement for th	ne next assessment cycle?	
2.	GOALS AND OB	JEC	TIVES (Taken From #9-	Action Plan	nof FULL Prog	gram Review)	
	GOAL		OBJECTIVE	ACTIONS/TA	ASKS REQUIRED EVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT	
#1	certificate	#1					
		#2					
		#3					
Goa	ıl #1 Annual Upda	te:	(Assess progress made	toward goal	attainment)		
ı							

	GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#2	Increase transferability	#1			
		#2			
		#3			
Goa	ıl #2 Annual Upda	te:	(Assess progress made	toward goal attainment)	

	GOAL	OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT
#3		#1		
		#2		
		#3		

Goal #3 Annual Update: (Assess progress made toward goal attainment)

# 3. Resources Required

List all significant resources needed to achieve the objectives shown in your action plan, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal # #	Resource Required	Estimated Cost	BAP Required? Yes or No	If No, indicate funding source
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PROGRAM REVIEW: Natural Science and Mathematics A.S.: Biology

An	nual Update #2		Acade	mic Year:					
1.	Progress on Program Level Outcomes (PLOs) and Student Learning Outcomes (SLOs)  (from #3B of full PR)								
A)	List your Program Level Outcomes:								
В)	) Summarize the progress you have made on Program Level Outcomes (PLOs):								
C)	Summarize the progress you have made on course level outcomes and assessments (SLOs):								
	Describe any program, course, and/or instructional changes made by your program as a result of the outcomes assessment process.								
E)	Reflecting on the resp	ons	ses for B) and C) above, w	hat will you ir	mplement for th	e next assessment cycle?			
2.	2. GOALS AND OBJECTIVES (Taken From #9Action Planof FULL Program Review)								
	GOAL		OBJECTIVE		ASKS REQUIRED VE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT			
#1	Development of certificate	#1							
		#2							
		#3							
Goa	Goal #1 Annual Update: (Assess progress made toward goal attainment)								

#2

#3

	GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT			
#2	Increase transferability	#1						
		#2						
		#3						
Goal #2 Annual Update: (Assess progress made toward goal attainment)								
	GOAL		OBJECTIVE	ACTIONS/TASKS REQUIRED TO ACHIEVE OBJECTIVE	OUTCOMES, MEASURES, and ASSESSMENT			
#3		#1						

Goal #3 Annual Update: (Assess progress made toward goal attainment)

# 3. Resources Required

List all significant resources needed to achieve the objectives shown in your action plan, including personnel, training, technology, information, equipment, supplies, and space. Every request for additional resources must support at least one objective.

Also list any resources required to implement planned improvements noted in 3.C.3)

**IMPORTANT:** A **BUDGET ALLOCATION PROPOSAL** must be completed and submitted for **EACH** new resource requested.

Goal # #	Resource Required	Estimated Cost	BAP Required? Yes or No	If No, indicate funding source
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PROGRAM REVIEW: Natural Science and Mathematics A.S.: Biology