Name: Kent Morales Date: 9/12/12

Lesson Title/Subject: Biology/ Investigation and Experimentation Grade(s): 9-12

Anticipated length of time for this lesson: 65 minutes

At what point in the sequence of the unit is this lesson? Check one:

 at the beginning of the unit of study

 between the beginning and the end of the unit of study

x at the end of the unit of study

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| PART A: DESCRIBE YOUR STUDENTS |

Grade Level: 9-12

Content Area: Biology

Subject Matter: Scientific Method, Experimental Procedure, Graphing

Age range of students:14-17

Total Number of Students: 28

Number of Male Students:17 Number of Female Students:11

Percentage of students receiving free or reduced lunch:0

Areas in which students live (check all that apply) Urban x Suburban Rural

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| Ethnicity of students(give numbers) | 6 African American or Black3 American Indian/Alaskan Native1 Asian or pacific Islander10 White8 Hispanic or Latino Other (Specify)  |
| Language proficiency of students (give numbers) | 28 Fluent English Proficient0 English Learner |
| Identified special need categories represented (give numbers) | 3 Specific learning Disability Speech/Language Impaired Hard of Hearing Visually Impaired Deaf Orthopedically Impaired Deaf-Blind Emotionally Disturbed1 Other Health Impaired Mental Retardation Multiple Disabilities Autistic Brain Injury Established Medical Disability (0-5years) |

ENGLISH LANGUAGE LEARNER(S): There are no ELL’s in the class, though there are several Redeignated English Language Proficient Students. My goal with these students is to have them actively participate in class review discussion, and also to contripute orally or in writing in group review activity.

STUDENTS with IEPs: Oscar is the IEP student in the class. I will check regularly for understanding.

OTHER STUDENTS: Which students will require additional support with this lesson? Alexis suffers from test-taking anxiety. I will check in with her to monitor her progress preparing for the upcoming test. Frank is a high-achiever with some difficulty focusing, and he requires regular checks for comprehension. Lorrie is a 504 student with a medical condition. She will be permitted immediate access to the restroom if requested.

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| PART B: LINK THE LESSON TO STANDARDS |

ACADEMIC CONTENT STANDARD(S): What academic content standard(s) does this lesson address?

Investigation and Experimentation

b. Identify and communicate sources of unavoidable experimental error.

c. Identify possible reasons for inconsistent results, such as sources of error or uncontrolled conditions.

 d. Formulate explanations by using logic and evidence.

 f. Distinguish between hypothesis and theory as scientific terms.

UNIT of STUDY: Describe the UNIT of STUDY that addresses the standards above. Investigation and Experimentation: Students are learning the basics of scientific inquiry.

STUDENTS WITH IEPs: Identify the IEP goals for this subject area that will be addressed in this lesson. Students will participate actively in group learning exercises.

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| PART C: PLAN THE LESSON |

ACADEMIC LEARNING GOALS (outcomes/objectives) For This Lesson: What specifically do you expect students to know or be able to do as a result of the lesson? (Goals/outcomes/outcomes must be observable and measurable.)

1. Students will be able to demonstrate understanding of the subject matter by orally answering questions related to completed work.

2. Students will work in a small group to write three sample test questions.

LANGUAGE GOALS (outcomes/objectives) For EL Learners: What specific behaviors will the students demonstrate to show they have met the ELD standard(s)? (Outcomes must be observable and measurable.)

1. The students will participate in review discussion orally, and will work in a group with other English Learners and Native speakers to write three sample test question. Teacher will also assist with the writing and speaking portions of the exercise.

STUDENT LEARNING GOALS (outcomes/objectives) for STUDENTS with IEPs: Describe how the Academic Learning Goals will be modified for students with IEPs (if necessary).

1.Students will work with sympathetic peers to create a low anxiety cooperative group exercise.

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| PART D: COMPONENTS OF THIS LESSON |
| Think about the sequence of this lesson. Describe your plans for instruction in the order in which they will be implemented. Under “Instructional Strategies,” explain what you will do to present the content to the students. What will you do/say? Under “Student Activities,” explain what the students will do during instruction. |

INTO-STUDENT ACTIVITIES: How will students be engaged during the introduction to the lesson? Consider grouping, pair work, guided practice, individual work, etc.

1. The teacher will prompt the students to write down the day’s agenda.

2. The teacher will ask students to take out homework to be checked off.

3. The teacher will have a student who missed the quiz due to illness will make up it.

THROUGH-INSTRUCTIONAL STRATEGIES:

1. List the steps of your lesson presentation.

4. The teacher will ask the students to clear their desks except for the homework.

5. The teacher will lead a review of the homework assignment, asking students to provide answers from their work, and utilizing other students to clarify answers when needed.

6. The teacher will designate three students to hand back graded work to the students which will serve as the foundation for the first part of the day’s lesson.

7. The teacher will lead a review of the corrected assignments, asking students to provide answers from their work, and utilizing other students to clarify answers when needed.

8. The teacher will hand back the corrected quiz.

9. The teacher will lead a review of the quiz, asking students to provide answers from their work, and utilizing other students to clarify answers when needed.

10. The teacher will collect the quizzes, since students from other classes may not have taken the quiz yet.

11.The teacher will number the students off from 1-4 to form 7 groups, and indicate to the class where each group should meet in the lab area. Before going to their station, the teacher will explain that the group is to work together to create 3 very difficult, multi-part test questions. One student will act as scribe, and all students will contribute to the process.

12. The teacher will ask the students to return to their desks.

13. The teacher will guide the students to present their group’s questions and help solve others.

B. What strategies will you use to check for understanding?

The teacher will select students at random to participate in review discussion. The teacher will circulate throughout the lesson to check individual student’s participation in group activities and ask questions to assess understanding. Teacher will also check content of student worksheets to assess understanding.

Through-Student Activities: How will students be engaged during each part of the lesson? Consider grouping, pair work, guided practice, individual practice; application, etc.

1. The students will write down the day’s agenda.

2. The students will take out homework to be checked off.

3. A student who missed the quiz due to illness will make up it.

THROUGH-INSTRUCTIONAL STRATEGIES:

1. List the steps of your lesson presentation.

4. The students will clear their desks except for the homework.

5. The students will provide answers from their work when called upon, and help to clarify answers when needed.

6. Three students will hand back graded work.

7. Students will provide answers from their work, and clarify answers when needed.

8. The students will receive the corrected quiz.

9. Students will provide answers from their quiz, and clarify answers when needed.

10. Students will hand back the quizzes, since students from other classes may not have taken the quiz yet.

11.The students will listen to teacher’s instructions for group activity, then go to the lab area when excused.

12. After completion of the task, the students will return to their desks.

13. The students will present their group’s questions and help solve others.

BEYOND-INSTRUCTIONAL STRATEGIES:

1. How will you close the lesson?

The teacher will pass out a review sheet that the students will begin for homework and bring to the next class to complete.

B. Describe any informal/formal assessments used.

Students will be assessed through informal questioning and evaluation of their worksheets as the teacher circulates throughout the classroom.

BEYOND-STUDENT ACTIVITIES:

What are students expected to do before the next lesson or class? Describe homework, if any.

Students will begin work on Unit Review Handout.

MATERIALS/TECHNOLOGY/RESOURCES:

What materials (supplies, equipment, teaching aids) need to be prepared and available? How will you use aides/volunteers in this lesson, if available? What technology links are made in this lesson?

 Students will be used to hand back work to shorten transitions. Unit review handout has been prepared.

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| PART E: ADAPTATIONS |

ENGLISH LANGUAGE LEARNERS: Explain how your lesson plan is adapted according to each of the following components of the SIOP model: Preparation, Building Background, Comprehensible Input/Strategies, Interaction, Practice/Application, Review/Assessment.

Pictures and academic vocabulary have been incorporated into the worksheets to make content comprehensible and develop academic English. Teacher will call on Redesignated ELP’s during review so that they may practice speakin the academic content. Teacher will model proper usage of academic content. During the cooperative group exercises, the teacher will check to ensure that the Redesignated ELP’s are able to participate in the discussion and will provide additional support if needed (rephrasing, modeling correct grammar, questioning).

STUDENTS with IEPS:

List the specific accommodations/adaptations that you have made for your students with IEPs. Explain how these accommodation/adaptations provide access to the Academic Content Standards.

Students will work with sympathetic peers to create a low anxiety cooperative group exercise. More active participation in cooperative group exercises will allow IEP students to activate higher cognitive functions and obtain more content.

Are there other students for whom you want to make adaptations? Explain these adaptations.

Adaptations aren’t necessary for these activities, though teacher will check frequently for understanding with those students. Students will also be paired with students who can provide additional support during group exercise.